



SIVARAJAVEL IAS ACADEMY

AN IDEAL INSTITUTE FOR CIVIL SERVICE EXAMS

the **CATALYST**

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DISQUALIFICATION

OF MP's AND MLA's



MARCH 2023

The CATALYST

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The CATALYST is a monthly magazine for current affairs which tries to give aspirants an in-depth comprehension of certain topics which appeared in different sources over the month. The Magazine has been designed in such a way that the reading experience is enriching and insightful for the readers.

The contents have been grouped into a thematic structure to help aspirants focus on the overall

GS syllabus.

Section I contains theme based Current affairs Analysis:

- I. Within the Sub themes first few topics will be Prelims oriented followed by indepth coverage of Mains Topics.
- II. Essay will be resumed post Prelims
- III. The last section will have Questions for practice*.
- IV. Fact Sheet and Quotes have also been provided

**New sections will be added or removed based on the new updates we include in the forthcoming issues.*

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SIVARAJAVEL IAS ACADEMY

AN IDEAL INSTITUTE FOR **CIVIL SERVICE EXAMS**

the **CATALYST**

From the Editor's Desk

Dear Readers,

I believe that your preparation is on track. Through the recent conversations with aspirants, I could sense a sort of growing anxiousness and insecurities among them. Many aspirants feel demotivated due the test scores. I would like to bring your attention to these factors;

- 1. Tests are meant for revision and not a parameter to judge your competence.*
- 2. The present test environment is different from UPSC Exam hall.*
- 3. While some Practice questions may be tough at the microscopic levels, UPSC Prelims is macroscopically relevant. Institutes may set more than 3000+ questions but only 100 will be set by UPSC.*
- 4. Till your prelims Exam you will be continuously improving your preparation levels. There is no need for panic.*

This Month's Book summary is on the thought provoking book; As a man thinketh". Our thoughts are powerful enough to affect our results and outcomes. Keep Calm and do what you can in the remaining days. Reach out to us if you have any doubts. I also welcome Ms. Elavenil.M as our newest team member.

In this March Issue (From March 1 to March 30, 2023, Current Affairs), we have covered a range of topics with special emphasis on **Disqualification of MP's, Active NAM, Foreign Trade Policy, Terms in Sikhism, India's AI Roadmap etc. etc. Continue to follow our telegram group t.me/srvias for Prelims Revision**

We are constantly motivated by the reception given by our dear readers. We aspire to enrich the forthcoming issues. All feedback is welcome and suggestions to improve the magazine can be sent to sivarajaveliasacademy@gmail.com.

Sincerely,
P.Mohan

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POLITY & GOVERNANCE

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and basic structure. Salient features of the
Representation of People's Act.*

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THE COMPETITION (AMENDMENT) BILL 2022

Why in the News?

The Lok Sabha recently cleared the Competition (Amendment) Bill, 2022. The Bill aims at bringing in greater regulation - particularly for Big Tech firms - by introducing deal value threshold for approvals by the Competition Commission of India (CCI) and enabling cartels to avail of the CCI's settlement mechanism.

Key Features of the 2022 Bill

It was introduced by the Ministry of Finance to amend the Competition Act, 2002 to bring it in line with modern development of new technology, digital market. The 2002 Act establishes the Competition Commission of India (CCI) for regulating market competition.

Later, the Bill was referred to the Parliamentary Standing Committee on Finance for further scrutiny.

Expansion of scope of the combinations (mergers, acquisitions, or amalgamation of enterprises) to include transactions with a value above Rs. 2000 crores (from Rs. 2000 crores earlier).

Reduction in the time period for approval of combinations from 210 days to 150 days.

Modification in the definition of control for the purpose of classification of combinations.

The Bill modifies the definition of control as the ability to exercise material influence over the management, affairs or strategic commercial decisions.

Expansion of the scope of Anti-competitive agreements.

Under the Act, anti-competitive agreements include any agreement related to production, supply, storage or control of goods/services, which can cause an appreciable adverse effect on competition in India.

The Bill adds that enterprises or persons not engaged in identical or similar businesses shall be presumed to be part of such agreements.

Settlement and Commitment in anti-competitive proceedings.

The Bill permits CCI to close inquiry proceedings if the enterprise offers - settlement (may involve payment), commitments (may be structural or behavioural in nature).

The manner and implementation of settlement and commitment may be specified by CCI through regulations.

More scrutiny on Big Tech giants:

As per the Bill, CCI members have to be qualified in the field of technology to add investigative strength and professional knowledge of the regulator.

The Bill also seeks to introduce knowledge and experience in the field of technology as additional criteria for the members of the selection committee.

News Summary Regarding the Bill Cleared by the Lok Sabha

A major change in the Bill (that awaits the Rajya Sabha's nod) is the provision relating to penalties that the competition watchdog (CCI) can levy.

Presently, the CCI can impose a penalty of up to 10% of a company's average turnover in the "relevant market."

Now, the phrase "turnover" will refer to the "global turnover derived from all the products and services by a person or an enterprise".

According to the experts, this is a highly contentious provision that will result in higher penalties for global multi-product companies.

The introduction of deal value thresholds will bring transactions involving 'asset lite' and 'low revenue' companies (which were previously not notifiable) under the CCI's scrutiny.

Moreover, the settlements and commitments mechanism will

Ensure swift correction of anti-competitive behaviour and practices in the market and

Spare willing and legally compliant companies to face the rigours of an extensive investigation.

The actual implementation of these changes will hinge on the regulations that the CCI will

issue, following the Bill's enactment.

STRONGER COMPETITION LAW

Salient Features of Competition (Amendment) Bill, 2022

- Permit CCI to seize documents and records during probes
- CCI approval needed if value of the transaction over Rs 2,000 crore
- Assessment in 150 days
- Reduce litigations through penalty
- Incentivise parties during an investigation with lesser penalty



CENTRAL BUREAU OF NARCOTICS

Why in news?

Preventive and Intelligence cell, Central Bureau of Narcotics (CBN), New Delhi achieved a major breakthrough in busting pan-Delhi level drug syndicate involved in supply of various types of narcotics, psychotropic and synthetic drugs for high profile parties.

About

CBN is affiliated with India's Department of Revenue, Ministry of Finance.

It is not a statutory body.

It is regulated by the Central Board of Indirect Taxes and Customs.

The key responsibilities are to **prohibit opium trading** and production and to grant permits for the manufacture of authorised synthetic medicines.

The headquarter is in **Gwalior**.

Organization

Narcotics Commissioner of India: The

Central Bureau of Narcotics (CBN) is administered by the Narcotics Commissioner of India, a **member of the Indian Revenue Service (IRS)** and the Joint Secretary to the Indian Government.

Deputy Narcotics Commissioners: Three Deputy Narcotics Commissioners (DNC), who are in charge of the units in the opium-growing states of Madhya Pradesh, Rajasthan, and Uttar Pradesh, assist the Narcotics Commissioner of India.

Officers of the Indian Revenue Service make up the Central Bureau of Narcotics' Class I officers (Customs & Central GST).

Preventative & Intelligence Cell (P&I Cell): There is a Preventative & Intelligence Cell (P&I Cell), which is led by superintendents (Group 'B' Gazetted Officers). They are tasked with carrying out the NDPS Act's search, seizure, and other related obligations.

Officers report to the Deputy Narcotics Commissioner in charge of their respective Units.

Responsibilities

They supervise the lawful production of opium poppies in 22 districts in Madhya Pradesh, Rajasthan, and Uttar Pradesh.

They Investigate cases under the NDPS Act 1985 and file complaints in the Court.

They issue permits for the production of

synthetic narcotics.

They issue import certificates and export authorizations for the export and import of narcotic drugs and psychotropic substances.

They issue No Objection Certificates (NOC) for a limited number of Precursor Chemicals import/export.

Narcotic Drugs and Psychotropic Substances Act, 1985

The Narcotic Drugs and Psychotropic Substances Act, or NDPS Act forbids the manufacture, possession, use, sale, purchase, transportation, storage, and/or transportation of any narcotic drug or psychotropic substance.

The Act applies all across India, as well as to all Indian nationals living abroad and to anybody travelling on ships or aircraft with an Indian registration.

The Act is intended to meet India's commitments under the Single Convention on Narcotic Drugs, Convention on Psychotropic Substances, and United Nations Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances.

TRANSIT ANTICIPATORY BAIL

A transit anticipatory bail is sought when a case against a person has been or is likely to be filed in a state different from the one in which the person is likely to be arrested. The purpose of transit bail is to allow the person bail, so they can approach the appropriate court in the state in which the case has been filed for anticipatory bail.

In the absence of transit anticipatory bail, the result would be that another state's police could arrest a person from their home state without them having the opportunity to apply for anticipatory bail at all. The procedure to be followed in transit anticipatory bail is exactly the same as of any

other anticipatory bail application. The concept of transit anticipatory bail is not codified in Indian law but has found its identity through judicial practice and legal precedents.

What is Bail?

Bail is a written permission from a court that allows a person charged with a criminal offence to be out of jail, while they can wait out for their trial.

Ordinary bail: It is granted just after arrest of the accused. Here the police custody is an inevitable concomitant for arrest for offences that are non bailable.

Bailable offence	Non-bailable offence
The police officer in charge has the power to grant bail to the person accused. An offence is regarded as bailable if the punishment for that offence is less than 3 years. It is the right of the accused to be released on bail in such an offence. This right is subject to certain conditions.	The police officer cannot grant bail to the accused. Only the magistrate can authorize the bail in a non-bailable offence. Any offence is said to be non bailable when the punishment is more than 3 years. A person can still be granted bail in a non-bailable offence. In such cases it is up to the discretion of the court as to grant bail or withhold.

Anticipatory bail: Anticipatory bail is granted in anticipation of the arrest and can be thus used at the time of arrest. The need of anticipatory bail arises on the case to avoid false cases for the purpose of disgracing or for other mala fide intentions by getting the framed/ victims detained; Where there is likelihood of the accused getting absconded or misusing the rights and liberties.

DEFAMATION, DISQUALIFICATION AND THE BALANCE OF REPUTATION AND FREEDOM OF SPEECH

GS-II Indian Constitution—significant provisions and basic structure. Salient features of the Representation of People's Act.

Context

Congress party leader Rahul Gandhi was **disqualified** as a Member of Lok Sabha from the date of his conviction in the **criminal defamation case** over his 'Modi surname' remark. A notification in this regard was issued by the Lok Sabha Secretariat today. Gandhi is an MP from Kerala's Wayanad district.

Defamation

Defamation in India is a **civil wrong and a criminal offense**. Defamation refers to the act of making a false statement that harms the reputation of an individual or an entity, such as a business or organization. It is considered a violation of a person's right to reputation, which is protected under Indian law.

Under Indian law, defamation can be categorized into two types - civil defamation and criminal defamation.

Civil defamation: A person can file a civil defamation suit against another person for **making false statements** that have caused harm to their reputation. The burden of proof lies with the plaintiff, who must prove that the statements made by the defendant are false and

have caused damage to their reputation.

Criminal defamation: In addition to civil defamation, defamation is also a criminal offense under the Indian Penal Code. Under Section 499 of the IPC, defamation is defined as any statement that harms the reputation of another person. The person making the statement can be punished with imprisonment of up to two years or a fine, or both. ***The allegation should be made with malice intent*** to defame another or at least the knowledge that the publication is likely to defame another is essential. It has to be proved beyond reasonable doubt that the act was being done to lower the reputation of another.

It is important to note that truth is a defense against defamation in India. If the statement made by the defendant is true and can be proven, then it cannot be considered defamatory.

In addition to defamation, India also has laws prohibiting hate speech, which refers to any speech or expression that promotes hatred or violence against a particular group or community. Hate speech is considered a criminal offense

under Indian law and can be punishable with imprisonment and fines.

Defamation – World Wide

India and other major democracies have taken two different approaches in the area of defamation law. In the U.K. and U.S., defamation law has been transformed.

The U.S. Supreme Court's 1964 ruling in **New York Times Co. v. Sullivan** transformed the law of defamation around the world, **tilting the balance in favor of uninhibited, robust and wide-open speech**. Erroneous statements or even vehement, caustic and sometimes unpleasantly sharp attacks on government and public officials were inevitable in a free debate, the court ruled. The First and Fourteenth Amendments to the U.S. Constitution were used to extend constitutional protections in favor of free speech and bar elected officials from seeking compensation, even for false comments made about their official actions unless those statements were made with "actual malice."

In 2009, the U.K. Parliament abolished the

offense of criminal defamation. The 2013 U.K. Defamation Act introduced a requirement for claimants to show that they had suffered serious harm before suing for defamation. It also introduced a defense of “responsible publication on matters of public interest” and new statutory defenses of truth and honest opinion.

Defamation and Article 19(1) -

Article 19(1) (a) of the Constitution of India states that, **all citizens shall have the right to freedom of speech and expression**. The philosophy behind this Article lies in the Preamble of the Constitution, where a solemn resolve is made to secure to all its citizen, liberty of thought and expression.

The freedom of speech under Article 19(1) (a) includes the right to express one's views and opinions at any issue through any medium, e.g. **by words of mouth, writing, printing, picture, film, movie etc.**

This right is, however, not absolute and it allows Government to frame laws to **impose reasonable restrictions** in the interest of sovereignty and integrity of India, security of the state, friendly relations with foreign states, public order, decency and morality and contempt of court, **defamation** and incitement to an offence. The leeway granted under Article 19(2), along with criminal provisions

(under Sections 499 and 500 of the Indian Penal Code) allow for both civil and criminal defamation to be litigated upon in India.

Right to free speech is not absolute. It does not mean freedom to hurt another's reputation which is protected under Article 21 of the constitution.

Right to Reputation

Right to reputation has been an integral part of Article 21 of the Constitution. Every individual has a **right to live a dignified life**. Reputation and honour are connected with dignity and thus, constitutes an **inalienable part of human life**. Even, the apex court has time and again reiterated the important role that reputation plays in an individual's life and how the right to reputation is an inextricable part of the right to life under Article 21 of the Constitution.

Apart from the Constitution of India, there are various **international conventions** as well which recognize Right to Reputation as an integral part of human existence.

Article 12 of the Universal Declaration on Human Rights, 1948 explicitly states about the importance of reputation and honour. Further, **Article 19 of the International Covenant on Civil and Political Rights** mentions the right to reputation. Furthermore, **Article 8 and Article 10 of the European Convention for the**

Protection of Human Rights and Fundamental Freedom provides for the right to respect for private and family life and freedom of expression.

The right to reputation and the right to free speech often clash with each other for the reason that right to free speech of an individual may violate the right to reputation of another individual.

Privileges of the members of Parliament

Right to free speech is in fact considered as an essential prerequisite for the efficient discharge of Parliamentary duties. The privilege has been given to the members on the grounds that **putting restrictions on their right to free speech would not allow them to speak out their mind and to express their views for the fear of saying anything wrong**. No civil or criminal proceedings can be initiated against any member of Parliament for any speech made within the Parliament.

Privileges do not extend to the activities undertaken outside the House on which the legislative provisions would apply without any differentiation. The Supreme Court's judgement came on a petition filed by the Lokayukta in Madhya Pradesh against a decision of the speaker of the state legislative assembly to initiate action against the anti-corruption body alleging breach of privilege

Landmark Judgements on Defamation

The courts in India have seen a variety of defamation cases. Of these, the following are some landmark cases which has interesting facts or has an important court ruling.

D.P.Choudhary v/s. Manjulatha: A publication was made in the local newspaper, Dainik Navjyothi that the plaintiff a 17 year old college girl ran away with a boy after she went out of the house by saying she was having lectures. This false news item had adverse effects on her and ruined her marriage prospects. It was actionable per se and she was awarded damages of Rs.10000/- by way of general damages.

Mahendra Ram Vs. Harnandan Prasad: A letter written in Urdu was sent to the plaintiff. Therefore he needed another person to read it to him. It was held that since the defendant knew the plaintiff does not know Urdu and he needs assistance, the act of defendant amounted to defamation.

Ram Jethmalani Vs. Subramanian Swamy: The court held Dr.Swamy for defaming Ram Jetmalani by saying that he received money from a banned organization to protect the then Chief Minister if Tamil Nadu from the case of assassination of Rajiv Gandhi.

Arun Jaitley Vs. Arvind Kejriwal: The court held that statements made by Arvind Kejriwal and his five other leaders to be defamatory. The matter was sort out when all the defendants apologized for their actions.

R a m d h a r a V s . Phulwatibai: - The plaintiff, a widow of 45 years was imputed that she is a keep of the maternal uncle of the plaintiff's daughter in law. The court held that more than vulgar abuse it was an imputation up on her chastity and hence it constitutes defamation.

Chintaman Rao Vs. The State of Madhya Pradesh: The Supreme Court explained the meaning of "reasonable restrictions" imposed in Article 19 (2). It implies intelligent care and deliberation and that is required in the interests of the public.

T.V.Ramasubha Iyer Vs. A.M.A.Mohideen: Defendants published a statement without any intention to defame the defendants. It related to a particular person carrying on business of Agarbathis to Ceylon has been arrested for the offence of smuggling. The plaintiff was also a person carrying on similar business and since his reputation was damaged, the court awarded him damages.

Shreya Singhal Vs.

Union of India:It is a landmark judgement regarding internet defamation. It held unconstitutional the Section 66A of the Information Technology Act, 2000 which punishes for sending offensive messages through communication services.

Disqualification Constitutional/Legal Provisions

Article 102(1) of the Constitution of India prescribes for disqualification for being, a member of either House of Parliament upon following conditions:

if he holds any **office of profit** under the Government of India or the Government of any State, other than an office declared by Parliament by law not to disqualify its holder;

if he is of **unsound mind** and stands so declared by a competent court;

if he is an **undischarged insolvent**;

if he is **not a citizen** of India, or has voluntarily acquired the citizenship of a foreign State, or is under any acknowledgement of allegiance or adherence to a foreign State;

if he is so disqualified by or under any **law made by Parliament**

The final decision regarding the disqualification based on these grounds lies with the President of India.

The Parliament has also prescribed several **additional disqualifications** of a member of the legislature in the RPA, 1951.

Article 191 is similarly worded for the disqualification of MLA s and MLCs.

Article 102(2) also states that a person shall be disqualified for being a member of either House of Parliament if s/he is so disqualified under the **10th Schedule**.

The final decision regarding the disqualification based on these grounds lies with the Speaker of the house

Provisions that Deal with Disqualification under the RPA, 1951-

The disqualification is triggered for conviction under certain offences listed in **Section 8(1)** of RPA, 1951.

This includes **specific offences** such as promoting enmity between two groups, bribery, and undue influence or personation at an election.

Section 8(2) of RPA, 1951 also lists offences that deal with hoarding or profiteering, adulteration of food or drugs and for conviction and sentence of **at least six months** for an offence under any provisions of the Dowry Prohibition Act.

Section 8(3) of RPA, 1951 is the provision under which Rahul Gandhi has been disqualified.

Section 8(4) of RPA, 1951 stated that the disqualification

takes effect only “after three months have elapsed” from the date of conviction.

Within that period, lawmakers could **file an appeal** against the sentence before the High Court.

However, in the landmark 2013 ruling in ‘**Lily Thomas v Union of India**’, the SC **struck down Section 8(4)** of the RPA as unconstitutional.

This is what has allowed the **Lok Sabha Secretariat to immediately disqualify** Rahul Gandhi.

However, the Court in Lily Thomas case clearly spelt out that **when an appellate Court stays the conviction and sentence**, the disqualification will be lifted and the **membership will be restored** to the disqualified MP.

ARC Recommendations –

1. Section 8 of the Representation of the People Act, 1951 needs to be amended to disqualify all persons facing charges related to grave and heinous offences and corruption, with the modification suggested by the Election Commission.

2. Appropriate legislation may be enacted under Article 102(e) of the Constitution spelling out the conditions for disqualification of membership of Parliament in an exhaustive manner. Similarly, the States may also legislate under Article 198 (e)

Examining Section 8(3)

of the RPA

A surface view of Section 8(3) of the RPA highlights that the moment conviction and sentence of member of the legislature are announced by the trial court, his seat in the legislature shall fall vacant under **Article 101(3)(a)**.

However, a closer reading of Section 8(3) of the RP Act will reveal that the words “**shall be disqualified**” used therein **cannot mean instant disqualification**.

But Section 8 (3) **does not specify which authority shall disqualify** the sitting member of legislature.

S/he however, cannot be the Secretary General of a House of Parliament or Secretary of a state legislature, but the **President**.

Article 103 states that the **President of India is the authority** who decides that a sitting member has become subject to disqualification in all cases which come under Article 102(1).

Therefore, the Lok Sabha Secretariat cannot perhaps declare a sitting MP disqualified without referring the case to the President under Article 103 for a declaration.

Examining Scope of Article 103

There are **differences of opinion** on the **scope of Article 103**, with some arguing that this Article can be invoked only when a **dispute arises on the fact of disqualification** and

not otherwise.

But this Article covers **disqualification arising on conviction** for different offences under Section 8 of the RPA 1951.

Hence, it could be inferred that **reference to the President** on the question of disqualification of a sitting Member who has been convicted for an **offence covered by Section 8 is a constitutional requirement**.

The SC, in **Consumer Education and Research Society vs Union of India (2009)**, upheld this while stating that the President performs adjudicatory and declaratory functions.

Hence, in cases where **adjudication is not required**, the **President can simply declare** that the sitting Member has become subject to disqualification.

But the **intervention of the President is essential under Article 103** even in cases where a sitting member has been convicted and the disqualification is supposed to take effect from the date of conviction.

Lily Thomas v. Union of India

In 2005, a PIL was filed before the Apex Court by a Kerala-based lawyer Lily Thomas and NGO Lok Prahari, through its General Secretary SN Shukla, **challenging Section 8(4) of the RPA** as “ultra vires” to the Constitution,

which protects convicted legislators from disqualification on account of their appeals pending before the higher courts.

This plea sought to **clean Indian politics of criminal elements** by barring convicted politicians from contesting elections or holding an official seat. It drew attention to Articles 102(1) and 191(1) of the Constitution. The plea argued that these provisions empower the Centre to add more disqualifications.

Before this judgment, convicted MPs could easily file an appeal against their conviction and continue holding their official seats.

In 2013, the Supreme Court of India **upheld the constitutionality of Section 8 of the Representation of the People Act** in the case of Lily Thomas v. Union of India. The case involved a challenge to the validity of Section 8 on the grounds that it violated the right to equality under Article 14 of the Constitution.

The court held that the purpose of Section 8 was to ensure that persons with a criminal record were not elected to public office, and that this was a legitimate aim in a democracy. The court also held that the classification of persons with a criminal record as a separate class for the purposes of disqualification was reasonable and did not violate the right to equality.

Limitations of Lily Thomas Judgement

This judgment held that that **Parliament cannot enact a temporary exemption** in favour of sitting members of the Legislature.

But **Article 103 itself provides an exception** in the case of sitting Members by stating that the disqualification of sitting Members shall be decided by the President, thereby the Constitution itself making a distinction between the candidates and sitting Members.

This was **ignored by the Lily Thomas judgment** while the **Court struck down the three months window** given to the sitting members to enable them to appeal against their conviction.

Further, such a **temporary exemption** in favour of sitting members of the legislature is a **reasonable requirement** as they are not placed in the same situation as a candidate.

A sudden disqualification will cause a lot of dislocation apart from the fact that the constituency will lose its representative.

Turnaround at 2018 Lok Prahari case

In the Lok Prahari case, a three judge-bench of the top court, of which Jus. D Y Chandrachud was also a part, in 2018 had termed as “**untenable**” the **disqualification if the conviction of a lawmaker is stayed by an appellate court**.

“It is untenable that the disqualification which ensues from a conviction will operate despite the appellate court having granted a stay of the conviction. The authority vested in the appellate court to stay a conviction ensures that a conviction on untenable or frivolous grounds does not operate to cause serious prejudice.

As the decision in Lily Thomas has clarified, a stay of the conviction would relieve the individual from suffering the consequence inter alia of a disqualification relatable to the provisions of sub-sections 1, 2 and 3 of Section 8 of the RP Act,” the 2018 verdict had said.

Plea in SC

A Ph.D. student from Kerala on March 25 urged the Supreme Court to remove “criminal defamation” as a ground to “automatically” expel parliamentarians.

The offence of criminal defamation must be excepted from the sweep of the judgment in Lily Thomas... The freedom of speech and expression enjoyed by a Member of the

Parliament is an extension of the voice of millions of his supporters. If criminal defamation, which technically has a maximum punishment of only two years, is not removed from the sweeping effect of the judgment in Lily Thomas, it will have a chilling effect on the right of representation of the citizens

While the First Amendment to the Constitution was brought in 1951, it did not specifically include criminal defamation in Article 19 (2) as a reasonable restriction to the freedom of speech and expression

The operations of Lily Thomas are being blatantly misused for wreaking personal vengeance in political parties. The present scenario provides a blanket disqualification, irrespective of the nature, gravity, and seriousness of the offences, allegedly against the Member concerned

Conclusion

Defamation is a knotty issue, and remains a polarising subject, used and abused by some, and deeply affecting professions and trades of others.

Although judicial precedent has tried to sort some questions out, there are fundamental constitutional questions around the criminal offence and civil tort of defamation that are as yet unresolved.

“With the tools of democracy, democracy was murdered and lawlessness made “legal.” Raw power ruled, and its only real goal was to destroy all other powers besides itself.” — Eric Metaxas,

The idea that democracies can contain the seeds of their own destruction is explored by scholar Mark Chou, who writes, “democratic failure is a prospect that remains very much entrenched both within the idea and ideal of democracy itself.” The anti-democratic choice is always, tragically, democratically possible.

It is the day to look every piece of legislation with its letter as well as its own spirit.



INTERNATIONAL RELATIONS



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US RECOGNIZED MCMAHON LINE AS INTERNATIONAL BORDER

A bipartisan resolution was passed by the US, formally recognizing the McMahon Line as the international boundary between China and India's Arunachal Pradesh.

The resolution rejected China's claim that the state belongs to its territory and instead acknowledged Arunachal Pradesh as an integral part of India. Furthermore, the resolution expressed support for India's sovereignty and territorial integrity.

About the McMahon Line

The McMahon Line serves as the *de facto* boundary between China and India in the Eastern Sector. It specifically represents the boundary between Arunachal Pradesh and Tibet, from Bhutan in the west to Myanmar in the east.

The McMahon Line was drawn during the Simla Convention of 1914 which was officially described as the Convention Between Great Britain, China, and Tibet.

According to the Shimla Treaty, the McMahon Line is the clear boundary line between India and China. Due to this, the Tawang region of Arunachal Pradesh became part of India.

China's stand on McMahon Line

Now China neither approved nor accepted the McMahon Line.

According to China, Tibet has always been a part of its territory, so the representatives of Tibet are not authorised to accept any agreement without Chinese consent.

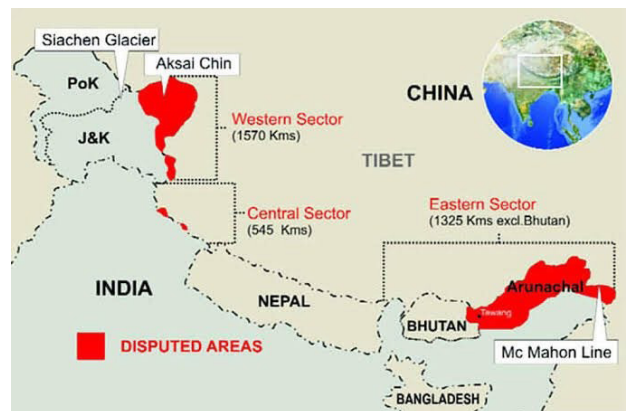
China also argues that China was not involved in the Simla Agreement, therefore the Shimla Agreement is not binding on it.

India's stand on McMahon Line

India recognizes the McMahon Line and considers it to be the 'Actual Line of Control (LAC)' between India and China.

India believes that when the McMahon Line was established in 1914, Tibet was a weak but independent country, so it has every right to negotiate a border agreement with any country.

Also, when the McMahon Line was drawn,



Tibet was not ruled by China. Therefore, the McMahon Line is the clear and legal boundary line between India and China.

Even after the Chinese occupation over Tibet in 1950, the Tawang region remained an integral part of India.

IMF'S BAILOUTS TO SRI LANKA

WHY IN NEWS?

Sri Lanka has secured a \$3bn (£2.4bn) bailout from the International Monetary Fund (IMF) as it faces its worst economic crisis since independence.

BAILOUT:

In a general sense, a bailout means extending support to an entity facing a threat of bankruptcy. Countries seek IMF bailouts when they are facing macroeconomic risks, currency crises and need assistance to meet external debt obligations, to buy essential imports and push the exchange value of their currencies.

PROS AND CONS OF BAILOUT:

Pros	Cons
Ensures survival of country amid turmoil	can result in reduced government spending and higher taxes
ensuring that essential industries and economic systems remain up and running	It can also create a sense of dependency on external funding

OTHER LENDING INSTRUMENTS:

Stand-By Arrangements (SBAs) and Standby Credit Facility (SCF)

Extended Fund Facility (EFF) and Extended Credit Facility (ECF)

Precautionary and Liquidity Line (PLL)

Flexible Credit Line (FCL)

Policy Coordination Instrument (PCI)

Policy Support Instrument (PSI)

The Resilience and Sustainability Facility (RSF)

LENDING MECHANISM:

Lending mechanism

Stand-By Arrangements (SBAs)

Standby Credit Facility (SCF)

Extended Fund Facility (EFF)

Extended Credit Facility (ECF)

Purpose

Address short-term or potential BoP problems for the emerging and advanced market economies in crises
Similar to SBAs. Address the BoP problems for low-income countries

Medium-term support to countries facing protracted BOP problems

Similar to EFF. Medium-term support to low-income countries facing protracted BOP problems

SOLOMON ISLANDS

China boosts South Pacific influence with a contract to develop a key port in the capital Honiara of Solomon Islands.

The island has become the unlikely epicentre of a diplomatic tussle between China and the U.S. after it signed a secret security pact with China in 2022.

About Solomon Islands

It is a country in Melanesia in the south-

western Pacific Ocean, consists of 6 major islands and over 992 smaller islands.

It is an archipelago of tropical volcanic islands and coral atolls.

The Solomon Islands achieved independence from the British as a republic in 1978.

Honiara is the capital of and largest city in the Solomon Islands.



SAUDI ARABIA JOINS SCO

WHY IN NEWS?

The Saudi Arabian government has taken a significant step towards joining the Shanghai Cooperation Organization (SCO), a regional

alliance dominated by China and Russia.

ABOUT:

The Shanghai Cooperation Organization (SCO) was established in June 2001 by China,

Russia, and several Central Asian countries including Uzbekistan, Kazakhstan, Kyrgyzstan, and Tajikistan.

It is an alliance that focuses on politics, economics, and security in the Eurasian region and is currently the largest regional organization in the world.

The SCO consists of eight full members, four observer states, and several dialogue partners, including Turkey.

In 2017, Pakistan and India were granted full membership. Iran, an SCO observer state since June 2005, was granted permanent membership in September 2021, and a year later, signed a memorandum of commitment to formally join as a full member.

SIGNIFICANCE:

- The importance of SCO lies in the fact that it covers around 40% of the world's population, almost 20% of the world's GDP, and 22% of the global landmass. It includes some of the world's leading energy-rich nations.
- By 2007, the SCO had managed to initiate over twenty large-scale projects related to energy, telecommunications, and transportation.
- The Shanghai Cooperation Organisation consolidates the world's four nuclear powers – Russia, China, India, and Pakistan into a single regional organisation. This establishes a source of balance for power and political instability globally.

SIGNIFICANCE OF SCO FOR INDIA:

- Provided the increasing influence of SCO in the Eurasian region, India can benefit in the long term by associating itself with the SCO and its areas of interest for national benefits.

Strategic Balance

- For India, the role of the SCO can be catalytic to achieve regional integration

with other Asian countries and achieve stability across borders. SCO can also promote better connectivity across its area.

- Given India's decline in engagement with the SAARC, BBIN, and RCEP, India can benefit from improving trade, energy, and transportation through SCO.

Security concerns

Since SCO has now started dabbling into drug trafficking control, India can use this influence to work on anti-drug trafficking measures and also tackle arms control.

The SCO has a strong stance on terrorism and has been actively involved in bringing back stability in Afghanistan.

There is a concern of national security and terrorism that can be addressed through other member nations of the SCO.

Deal with Pakistan & China

Through the SCO, India can independently engage with China and Pakistan peacefully in a forum and discuss its security concerns.

This also allows India to engage with China and Pakistan without the intervention of Western states.

Strengthen ties with Russia

Russia and China are the leading member nations of the SCO.

India can deepen its ties and relationship with Russia through this platform, again without Western intervention.

Connect with other Asian nations

SCO is a very convenient channel for India to re-establish its relationship with neighbouring countries, especially on the basis of shared heritage and civilizational ties.

India can also significantly capitalise on the concerns raised by Russia over the growing Chinese dominance of Asian nations.

INDIA-GERMANY RELATIONSHIP

GS-II Bilateral, regional and global groupings and agreements involving India and/or affecting India's interests.

Background

Germany is one of India's most important partners in Europe owing to the strength of bilateral relations, as also Germany's key role in the EU.

India was among the first countries to establish diplomatic ties with the Federal Republic of Germany after the Second World War.

India and Germany have a 'Strategic Partnership' since May 2000, which has been further strengthened with the launch of Inter-Governmental

Consultations (IGC) in 2011 at the level of Heads of Government which allows for a comprehensive review of cooperation and identification of fresh areas of engagement.

India is among a select group of countries with which Germany has such a dialogue mechanism.

The 5th IGC was held in New Delhi on November 01, 2019. The 6th IGC was scheduled to be held in May 2021 but was postponed due to the pandemic situation. It is now expected to be held in 2022.

As the 6th and 4th largest economies in the world respectively, India and Germany share a robust economic and developmental partnership. Besides the economic

interest, both countries have a shared interest in upholding democratic values, the rules-based international order, multilateralism as well as the reform of multilateral institutions.

On March 7, 2021, India and Germany marked the 70th anniversary of the establishment of diplomatic relations. The anniversary was commemorated through several events held in the year 2021-22.

As part of the celebrations, commemorative stamps were issued by both countries on June 10, 2021.

A turning point in India Germany relations

It is no secret that India's relationship with Germany has traditionally lagged behind its relations with its other European partners such as France.

Benign mutual neglect coupled with Germany's primary focus on China are factors, but this appears to be changing rapidly. Indeed, the Russian invasion has been a watershed moment in Germany's security policy, resulting in the abandonment of decades of post-war pacifism towards strategic matters.

This is evident in Germany's pledge to boost

defence spending to 2% of GDP and provide special funding to bolster the country's military.

Russia's war and China's assertive posturing have brought into question Germany's approach of Wandel durch Handel (change through trade), prompting a deep rethink of its energy and trade dependencies towards diversifying economic relations.

As ties with Russia and China enter uncharted waters, Europe's increasing prioritisation of values-based partnerships with like-minded countries can advance India-German cooperation.

In this context, the German government's coalition agreement in 2021 refers to relations with India among its top foreign policy priorities.

Mr. Scholz's visit has built on German Foreign Minister Annalena Baerbock's visit to India in December 2022, and the 6th India-Germany Intergovernmental Consultations, a biannual format of engagement that commenced in 2011, to expand cooperation in defence, trade, clean energy, migration, digital transformation, and the Indo-Pacific.

His visit assumes greater importance as India holds the G-20 presidency this year and seeks to avoid geopolitics

hampering cooperation in the forum.

Discussions on the Russia-Ukraine conflict and its global repercussions were centre stage as the war continues.

Prime Minister Narendra Modi has reiterated India's commitment to contribute to any peace process.

In a departure from Germany's previous Asia policy that centred around China, Mr. Scholz first visited Japan after assuming office in 2021, and later invited Mr. Modi for the 6th Inter-Governmental Consultations to Berlin.

This enhanced political outreach to Asia is part of Germany's overall strategy for the Indo-Pacific region which mentions India as a key partner. For Germany, the stability of supply chains and trade routes linking Asia to Europe assumes critical importance given its status as Europe's economic powerhouse and its reliance on exports.

In an interview preceding his India visit, Mr. Scholz expressed Germany's intent to enhance its strategic involvement in the region through greater military deployment.

Germany's symbolic gesture of sending its frigate Bayern to the Indo-Pacific in 2021, with a stopover in Mumbai (January 2022), was a demonstration of this.

A recent agreement on

India-Germany triangular cooperation involving development projects in third countries is also an important step in this direction.

Defence links

As New Delhi attempts to diversify from its military dependence on Russia and Berlin reassesses its long-standing arms exports policy, Germany could become an important defence partner for India.

The meetings included discussions around co-development of military hardware and tech transfers, and a deal worth \$5.2 billion where Germany would jointly build six conventional submarines in India could be underway. Besides, the first ever France-India-Germany military exercise drill is slated to take place in 2024 towards enhanced security and defence collaboration.

Yet, it is important for the two countries to set realistic expectations in the security realm.

Despite their common concerns regarding stability in the Indo-Pacific, Germany does not share a border with China, India has territorial conflicts with the country. And despite the lack of German trust in China, Mr. Scholz's visit there in November 2022 demonstrated how intertwined German industry is with Chinese markets.

But even while Mr. Scholz emphasises the difficulties in 'decoupling' from China, it is encouraging that Germany is drafting a new official China strategy amidst a wider national security strategy.

India and Germany also cooperate in multilateral forums, as part of the G-4 grouping pushing for United Nations Security Council reform, and as evident in Germany's invitation to Mr. Modi to attend last year's G-7 summit.

Trade and technologies

Germany is India's largest economic partner in the European Union (EU). Thus, trade naturally figured high on the agenda boosted by the relaunch of the India-EU free-trade agreement negotiations where the Chancellor, travelling with his high-powered business delegation, stated he would "get personally involved".

Collaboration in clean energy and green technologies has emerged as the central pillar in the partnership, with the launch of a Green and Sustainable Development Partnership last year and cooperation in the area of green hydrogen.

The subject of mobility and migration was also under focus given Germany's shortages of skilled manpower; where technically skilled Indians could help plug this gap.

While economics

comprises the bulk of the partnership, it is refreshing to witness relations steadily evolve into a more wholesome partnership.

Divergent positions on the war have not undermined India's regular political

engagements with Europe and convergence in areas such as the Indo-Pacific that are cementing the strategic dimension of the partnership.

An intensification of the Russia-China axis could further embolden this alignment.

Against the backdrop of volatile geopolitical shifts, emerging multipolarity, and Europe's enhanced courtship of India, India's ties with Germany could be vital in shaping a new global order.

IRAN-SAUDI RELATIONS

GS-II Bilateral, regional and global groupings and agreements involving India and/or affecting India's interests.

China's big geopolitical card in West Asia, the Saudi-Iran detente announced is an ambitious new gambit that seeks to secure long-term economic interests as well as lay the foundations for political influence in the region, to rival the role that the United States has traditionally played.

Scene setter for Xi's third term

The March 9 announcement of the deal came when the National People's Congress, the Chinese parliament, was in session.

As expected, the session confirmed President Xi Jinping's third term.

The Iran-Saudi deal appeared to usher in with a bang Xi's new 24-character slogan for China: Be calm, be determined; seek progress and stability; be proactive and go for achievements; united under the Communist Party; dare to fight.

China was clearly "proactive" in pursuing an "achievement" in a region dominated by US influence. Unlike the Palestinian issue,

the Saudi-Iran conflict is not an intractable problem.

Beijing, new to international peace-making, sensed what observers have described as a "low risk, high impact" opportunity to establish its diplomatic and political credentials in West Asia, a region where it has high economic stakes.

The two countries severed ties in 2016 after mobs stormed the Saudi embassy in Tehran, in revenge against the execution of a prominent Saudi Shia cleric and political dissident, Sheikh Nimr

From 2014, the two countries had been at each other's throats in a proxy war in Yemen, where Iran is backing the Houthi rebels, and the Saudis lead a coalition of Gulf states backed by the US.

A UN-negotiated truce came into effect in April 2022, and the fighting has not resumed even after the six-month ceasefire lapsed last October.

No one believes this deal will end all differences between the Sunni monarchy and Shia

republic.

The modest hope is that the deal sealed in Beijing may lead to a lasting peace in Yemen, and also end proxy Saudi-Iran hostilities in Lebanon, Syria and elsewhere in the region.

It is significant that China is also a signatory to the deal, called "joint trilateral statement", projecting itself almost as a guarantor of the terms: resumption of diplomatic relations and reopening embassies and missions within two months; respect for the sovereignty of states and the non-interference in internal affairs of states; agreement to implement the Security Cooperation Agreement of April 2001, and the May 1998 General Agreement for Cooperation in the Fields of Economy, Trade, Investment, Technology, Science, Culture, Sports, and Youth.

The Saudi-Iran pact shakes up the region by driving a wedge into the Arab-Israeli alliance that came about as a result of the Trump Administration brokered Abrahamic Accords.

Last year's Saudi-Russia

agreement in OPEC to cut back oil production to keep prices high, and Russia's outreach to Iran to buy drones equipped with long-range missiles may now develop into a four-way alignment.

As Xi heads to Moscow likely next week for a meeting with President Vladimir Putin, there is speculation if he will attempt to make peace in Europe, even though that is hardly in China's interests.

The state-owned Global Times noted cryptically that "the fact that China can be a peacemaker reflects the kind of peace that more countries around the world are looking for".

China's role is said to have begun in December 2022, during Xi's visit to Riyadh, where the Saudis requested Beijing's facilitation, frustrated that five rounds of talks hosted by Baghdad since 2021 and attempts by Oman had reached a dead end.

In February 2023, Iranian Prime Minister Ebrahim Raisi visited China and met Xi. The negotiations that began after this culminated in the signing on March 9.

Both Saudi and Iran had compelling reasons to normalise relations.

For Saudi, the frosty relations with the Biden Administration; the absence of American security guarantees against Iran as made clear by the Trump administration after the Houthis successfully targeted its

oil facilities in 2019; and China's rising profile in West Asia at a time of lowering American engagement in the region.

For Iran, which signed a long-term strategic agreement with China in 2021, the isolation that came with the nuclear sanctions; more importantly, the coming together of archenemy Israel with the UAE and Bahrain in the Abrahamic accords with the apparent silent support of the Saudis; plus its own domestic difficulties with the uprising of women against hijab rules. Last August, Iran normalised relations with UAE and Kuwait. Saudi was the next step

World's response

The US welcomed the agreement immediately despite its confrontational relations with China, saying if it brought lasting peace, it did not matter who brokered it.

At the same time, it sought to play down the assessment of diminished US influence in the region. Sections of the US establishment are betting that this pact of "three autocracies" will fail.

Saudi's deal for 121 Boeing aircraft earlier this week, an apparent balancing act with the US, has also brought cheer in Washington.

In Israel, the deal was a clear setback for Prime Minister Binyamin Netanyahu's foreign policy.

He claimed credit for the 2020 Abrahamic Accords,

and projected himself as the only Israeli leader who could bring together an Arab-Israeli coalition against Iran.

The new pact has heightened Netanyahu's domestic political troubles, with opposition leaders blaming his ultra far-right government for alienating Arab friends.

The Israeli PM was to visit the UAE in January soon after taking office, but the trip was cancelled amidst rising tensions over his government's plans to expand settlements in the West Bank, and a cabinet minister's tension-provoking visit to the Al Aqsa complex.

Last week, the UAE welcomed the Saudi-Iran pact as "an important step in the region towards stability and prosperity".

India's week-long silence

Delhi, taken aback at China's new avatar like the rest of the world, took a week to break its silence on the deal brokered by its principal adversary in a region where it has invested much diplomatic energy over the last decade. "We have seen the reports regarding this.

India has good relations with various countries in West Asia and we have abiding interests in the region," MEA spokesman Arindam Bagchi said in response to a question at the weekly briefing.

And in what could be read as a message to China on

the LAC problems, he added: “India has always advocated dialogue and diplomacy to resolve differences”

China's big-ticket

diplomacy in the region is sure to impact the I2U2 (Israel-India-UAE-US) grouping. It calls for India to work on its ties to the region independently of

the US (for instance with Iran), and in ways that project its civilisational and cultural links and the positive contributions of the Indian diaspora.

ACTIVE NAM

GS-II Important International institutions, agencies and fora - their structure, mandate.

At the recently-held Munich security conference, a major concern of the members of the North Atlantic Treaty Organization (NATO) was the reluctance of the Global South to align itself with the G-7 on the war in Ukraine.

Although the vast majority of countries across the world condemn the Russian invasion and would like the war to come to an end (as shown in the United Nations vote on the subject in February 2023), very few countries in Asia, Africa and Latin America support the political and economic sanctions on Russia imposed by the G-7.

The right side of history and ANA

The answer to these questions is very simple. The developing world, and especially Africa, Asia and the Middle East/West Asia, has been the site of many wars, including those of the proxy kind, in the course of the past 70 years.

None of them was elevated to the category of a unique war that demanded a global involvement to bring it to an end. Suddenly, a war erupts in Europe, and this means that all

bets are off, and all countries should chip in to support Ukraine.

Yet, as India's External Affairs Minister S. Jaishankar has put it, “Europe has to grow out of its mindset that Europe's problems are the world's problems, but the world's problems are not Europe's.”

Unable to come to terms with the fact that developing nations are unwilling to wage economic war against Russia (let alone provide Ukraine with weapons and ammunition, as the United States and Germany recently tried to induce Latin American countries to do), northern leaders are quite at a loss as to what to do.

A recent call by Ukraine's President to African leaders to meet with him over a teleconference turned out to be a fiasco: only four out of 55 showed up. The Foreign Minister of Ukraine has gone so far as to call on the Latin American and Caribbean nations “to leave behind their so-called neutrality and put themselves on the right side of history”.

Yet, at this particular juncture, what is the

right side of history ?

As the international system undergoes major shifts and we find ourselves on the verge of a second Cold War, this time between the U.S. and China, the last thing developing nations need to do is to take sides, allowing themselves to become “the plaything of others” to use Jawaharlal Nehru's famous phrase.

It is in this context that the concept of Active Non-Alignment (ANA) has come to the fore.

ANA originated in 1919 and was developed in 2020 in response to the U.S.-China struggle for primacy, in which Latin America was caught in the middle. It was a bit of a manifesto calling for Latin American countries not to give in to pressures from either Washington or Beijing and to stick to their own interests.

It took a page from the honourable tradition of the Non-Aligned Movement (NAM), but adapted it to the imperatives of the new century, impelled by the urgency of the Latin American crisis.

And the key word is “active”. It is easy to do as you are told. It is much more

challenging to embrace agency and come up with a fine-tuned and sophisticated diplomacy that looks at issues on a case-by-case basis.

And that is what ANA is all about. As it turns out, more than a future-oriented proposal, it is an approach that is already being applied in practice. Latin American governments had no difficulty in participating one week in December 2021 in the China-Community of Latin American and Caribbean States (CELAC) ministerial forum in Mexico City, and the next one in the Democracies Summit in Washington DC, seeing no contradiction in doing so.

Neither have they dithered when it has come to rejecting entreaties to ban the Chinese telecom company, Huawei, from their 5G telecom development. So much so that ANA has been referred to as “the region’s most significant foreign policy development since the end of the Cold War”.

In its year-end balance of 2022, Foreign Policy Magazine called it “the year of Non-Alignment”.

India’s difficult balancing act

Moreover, reactions in the Global South to the war in Ukraine show that ANA is not limited to Latin America.

ANA arose in the context of the U.S.-China spat, and the conflict with Russia has its own features, but shares others, including a certain dynamic of

“the West vs. the Rest”.

India plays a key role in it, having taken a clear stand of non-alignment on the war, despite its closer ties with the U.S. in recent years, and its membership in the Quadrilateral Security Dialogue (“the Quad”).

As host and chair of this year’s G-20, India is managing the difficult balancing act of keeping this important informal group of developed and developing nations, that was instrumental in handling the 2008-09 financial crisis, on a steady course, despite the tensions this entails, as became evident in the

G-20 Finance Ministers meeting held in Bengaluru recently. Seventeen African countries abstained in the United Nations General Assembly vote to condemn the Russian invasion of Ukraine.

And South Africa, the African continent’s most developed economy, took this independence from the G-7 one step further by scheduling a naval exercise with the Russian Navy and also China off the country’s Indian Ocean coast that was held close to the very anniversary of the Russian invasion of Ukraine.

A role for BRICS

Moving forward, there is little doubt that the BRICS group — that in many ways embodies the New South that has emerged in the new century — has the potential to play a critical role in furthering some

sort of a mediated solution to the Ukraine conflict.

Brazil, under the leadership of its President Luiz Inacio Lula da Silva, has indicated its interest in promoting a peaceful solution.

China has come up with its own peace plan. In turn, precisely because of its pivotal position, very much holding the balance in the international balance of power, India is in a privileged position to act as a peace broker.

This is what ANA is all about. Not passive neutrality, as some would have us believe, but embodying a pro-active attitude aimed at solving problems and generating the badly needed solutions our troubled world needs.

In the end, what we have on the table are two very different proposals to deal with this tragic war that has brought so much mayhem and suffering to the people of Ukraine.

One of them is “to do what it takes” to bring about a Ukrainian victory and “weaken Russia permanently”; the other is to look for a mediated outcome, a peace agreement that would necessarily entail a compromise solution acceptable to both parties.

As to which one will prevail will depend in part on the ability of the Global South not to let itself be drawn into this conflict, but rather aim for a mediated outcome.

This article is adapted from

a paper the writer presented at a conference held at the India International Centre, “Connected Histories, Shared Present : Cross-Cultural Experiences between Latin

America and the Caribbean and India”.

Jorge Heine is a research professor at the Pardee School of Global Studies, Boston University, and a former

Ambassador to India.

His recent book is ‘Latin American foreign policies in the New World Order: the Active Non-Alignment option’.





SOCIETY & SOCIAL JUSTICE

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ARE EDUCATED WOMEN
LIKELY TO MARRY LATER?

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5. CADAVER ORGAN TRANSPLANTS

MISSION ANTODAYA SURVEY

Why in the News?

Union rural development and Panchayati raj minister Giriraj Singh on Thursday launched Mission Antyodaya Survey 2022-23, which will shed light on how government schemes have benefited rural India and what is the current economic situation of the country's villages.

The Department of Rural Development has been conducting Mission Antyodaya Survey(MAS) across all Gram Panchayats in the country since 2017-18 with the purpose of transforming

About

The Department of Rural Development has been conducting Mission Antyodaya Survey across all Gram Panchayats in the country since 2017-18 with the purpose of transforming lives and livelihoods of people on measurable outcomes through convergence of various schemes. **Annual survey in Gram Panchayats** across the country is an important aspect of **Mission Antyodaya framework**.

The survey aims to lend support to the process of participatory planning for Gram Panchayat Development Plan (GPDP) which will improve service delivery, enhance citizenship, create pace for an alliance of people's institutions, and groups and improve governance at the local level. The preparation of GPDPs is a comprehensive exercise that uses both primary and secondary data for preparing the final plan document for any GP.

MA Survey presents secondary data to carry out gap analysis. MA Survey data will also serve as a key input in the preparation of block and district plans.

The village-wise survey is expected to be conducted over a period of one month involving Community Resource Persons (CRPs). The survey

is being conducted to collect village level data on 183 indicators under 216 data points of 21 sectors.

The survey questions have been categorized into five stratum: (i) Panchayat Infrastructure; (ii) Panchayat Services; (iii) Village Infrastructure; (iv) Village Services; and (v) Village Practices.

A total of 26 Central Government Ministries / Departments have been consulted for finalization of the questionnaire. The questionnaire has been translated in 13 regional languages. The Ministry, in consultation with NIC-DRD, has developed the android mobile application with geo-tag feature for 36 assets in villages. The Ministry has also set up in-house HelpDesk for smooth resolution of queries related to the questionnaire and mobile application.

'Mission Antyodaya'

It was adopted in the Union Budget 2017-18.

It is a convergence and accountability framework aiming to bring optimum use and management of resources allocated by 27 Ministries/ Department of the Government of India under various programmes for the development of rural areas.

It is envisaged as a state-led initiative with Gram Panchayats as focal points of convergence efforts.

The Ministry of Panchayati Raj and the Ministry of Rural Development act as the nodal agents to take the mission forward.

It aims to eradicate poverty in its multiple dimensions among rural households.

Annual survey in Gram Panchayats across the country is an important aspect of Mission Antyodaya framework.

It is carried out coterminous with the People's Plan Campaign (PPC) of the Ministry of Panchayat Raj .

Its purpose is to lend support to the process of participatory planning for the Gram Panchayat Development Plan (GPDP).

It helps to assess the various development gaps at the gram panchayat level, by collecting data regarding the 29 subjects assigned to panchayats by the Eleventh Schedule of the Constitution.

Objectives

Ensuring effective use of resources through convergence of various Government Schemes with Gram Panchayats as the basic unit of planning.

Work with a focused micro plan for sustainable livelihood for every deprived household.

Conduct an annual survey on measurable outcomes at Gram Panchayat level to monitor the progress in the development process across rural areas.

Supporting the process of participatory planning for Gram Panchayat Development Plan (GPDP), which will improve service delivery, enhance citizenship, create pace for an alliance of people's institutions and groups and improve governance at the local level.

Encourages partnerships with a network of professionals, institutions and enterprises to further accelerate the transformation of rural livelihoods.

SUKANYA SAMRIDDHI YOJANA

Why in the News?

PM Modi congratulates India post for opening more than 10 lakh Sukanya Samriddhi Account in two days.

About

Scheme under Ministry of Women and Child Development

Small deposit scheme for girl child, launched as a part of the 'Beti Bachao Beti Padhao' campaign, which would fetch an attractive interest rate and provide income tax rebate.

The scheme offers a higher interest rate than PPF.

Benefits

Interest rate on deposits Compounded annually with option for monthly interest payouts to be calculated on balance in completed thousands.

As applicable under section 80C of the IT Act, 1961, the scheme has been extended Triple

exempt benefits i.e. there will be no tax on the amount invested, amount earned as interest and amount withdrawn.

Eligibility

Only for girls below the age of 10 years with a longer lock in period.

The account can be opened at any India Post office or branch of authorised commercial banks.

Parents or legal guardians can open deposits on behalf of a girl child (including adopted girl child) for up to 2 daughters aged below 10.

Minimum of Rs 250 of initial deposit with multiple of Rs 150 thereafter with annual ceiling of Rs.150000 in a financial year.

Maximum period upto which deposits can be made 15 years from the date of opening of the account.

The account shall mature on completion of 21 years from the date of opening of account or on the marriage of Account holder whichever is earlier.

LEPROSY

Why in news?

The Union Health Ministry has formulated the National Strategic Plan and Roadmap for

Leprosy 2023-2027 for achieving zero cases of leprosy infection by 2030.

About

Leprosy

Leprosy is an ancient disease with its earliest remains discovered at the Indus Valley Civilization. Despite India being declared “Leprosy Eliminated” in 2005, the country still accounts for over half (52%) of the world’s new leprosy patients.

Leprosy or Hansen’s disease is a chronic infectious disease caused by a bacillus, *Mycobacterium Leprae* (m leprae), which multiplies slowly and has a long incubation period, on an average, 5-7 years.

Symptoms may occur within 1 year but can also take as long as 20 years or even more.

It is an ancient disease and has been endemic in India. Infection can lead to involvement of the nerves, respiratory tract, skin, and eyes. The nerve damage may result in a lack of ability to feel touch, pressure, pain, heat and cold, which may lead to the loss of parts of a person’s extremities from repeated injuries or infection.

An infected person may experience muscle weakness and poor eyesight. Persons affected and their families also experience stigma and discrimination. There was no effective treatment for leprosy till the discovery of Multi-drug therapy (MDT) in the 1980s. Early diagnosis and treatment may prevent damage to the soft tissues and bones of hands, feet and face. Since the introduction of MDT, the incidence and prevalence of the disease has remarkably decreased.

National Leprosy Eradication Programme (NLEP)

National Leprosy Eradication Programme (NLEP) was launched in 1983 with the objective to eradicate the disease through early case detection, reduction in the quantum of infection in the population and reduction in sources of infection.

It is an integrated programme with convergence with other health programmes. NLEP has introduced various innovative strategic initiatives since 2016 to strengthen the programme

at the sub-national level.

The government is successful in achieving prevalence rate 1 case per 10,000 population at national level in 2005. It is a matter of great concern that India has nearly 52 per cent of the total cases of Leprosy worldwide.

National Strategic Plan & Roadmap for Leprosy (2023-27)

The strategy and roadmap will aid in advancing the campaign against leprosy, to stop transmission, by speeding case detection efforts and maintaining a robust surveillance infrastructure.

As India is progressing towards leprosy eradication, a need of strong Anti Microbial Resistance surveillance system is required to gear up the system. These guidelines will provide the technical guidance in developing and sustaining a robust surveillance system for AMR surveillance in leprosy patients.

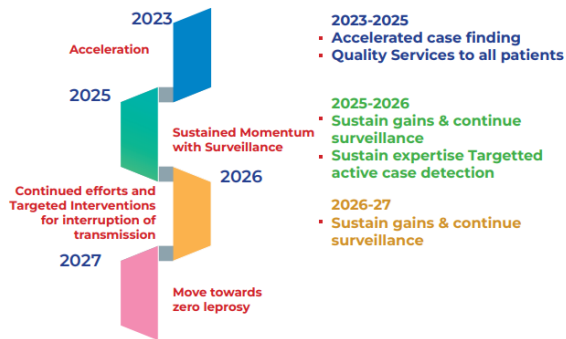
Nikusth 2.0 is an integrated portal for leprosy case management under National Leprosy Eradication Programme (NLEP). It will aid in efficient data recording, analyzing and reporting of the data in the form of indicators and a real time dashboard at center, state and district levels.

Vision: Leprosy free India with zero infection and disease, zero disability, zero stigma and discrimination.

Goal: Accelerate towards achieving Interruption of Leprosy Transmission in India.

Specific objectives:

1. Strengthen leadership, commitment, and partnerships
2. Acceleration of Case Detection
3. Provision of Quality Services
4. Enhanced measures for Prevention of Disease, Disabilities, Stigma, Discrimination and Violation of Human Rights
5. Digitalization of Surveillance Systems



WHO NTD Roadmap 2030

The WHO has unveiled a Non Transmissible Diseases roadmap of 2021 to 2030. The NTDs prioritized by WHO are a diverse set of 20 diseases including leprosy with a singular commonality: their devastating impact on impoverished communities, living predominantly in tropical and subtropical areas.

NATIONAL DIGITAL LIBRARY OF INDIA

Finance Minister Nirmala Sitharaman has proposed a national digital library for children and adolescents along with strengthening of the National Book Trust, for building a “culture of reading” and to make up for pandemic time learning losses.

Ministry of Education under its National Mission on Education through Information and Communication Technology has initiated the National Digital Library (NDL) project to develop a framework of virtual repository of learning resources with a single-window search facility. It is being developed at IIT Kharagpur.

National Digital Library

National Digital Library of India (NDLI) is a project of the Ministry of Human Resource Development under the aegis of National Mission on Education through Information and Communication Technology (NMEICT). It is developed by IIT Kharagpur. The objective of NDL is to make digital educational resources available to all citizens of the country to empower, inspire and encourage learning.

NDL is the Single Window Platform that collects and collates metadata from premier learning institutions in India and abroad, as well as other relevant sources. It is a digital repository containing textbooks, articles, videos, audio books, lectures, simulations, fiction and all other kinds of learning media. It makes quality learning resources available to all learners and has 1.7 Crore content from more than 160 sources, in over 200 languages.

Salient features

Educational materials are available for users ranging from primary to post-graduate levels.

NDL has been designed to benefit all kinds of users like students (of all levels), teachers, researchers, librarians, library users, professionals, differently abled users and all other lifelong learners.

Information can be personalized based on the education level, choice of language, difficulty level, media of content and such other factors. This is thus like a ‘customised service’ provided

Union Budget 2023-24

National Digital Library for Children and Adolescents

A National Digital Library for children and adolescents will be set up for facilitating availability of quality books

States will be encouraged to set up physical libraries at panchayat and ward levels and provide infrastructure for accessing the National Digital Library resources

To build a culture of reading, the National Book Trust, Children's Book Trust **will be encouraged to provide and replenish non-curricular titles in regional languages and English** to these physical libraries

The poster features the Prime Minister of India, Narendra Modi, and a group of smiling children, one of whom is holding a tablet.

in a 24x7 integrated environment where learners can find out the right resource with least effort and in minimum time.

Repository hosts contents from multiple subject domains like Technology, Science, Humanities, Agriculture and others.

More than 60 types of learning resources are available - books, articles, manuscripts, video lectures, thesis, etc.

Items are available in more than 400 languages.

Repository integrates contents from different Indian Institutional Repositories.

CADAVER ORGAN TRANSPLANTS

Recently, the Ministry of Health and Family Welfare has modified National Organ Transplantation Guidelines, allowing those

The patient will be allotted a unique ID by NOTTO upon registering. This will help in charting a 'One Nation One Policy,' for organ donation and

The tweaks in policy

According to officials familiar with the matter, the guidelines are likely to undergo following changes:

UPPER LIMIT CHANGED:

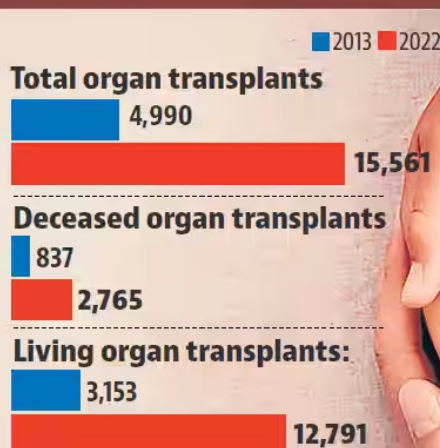
The Centre has removed the upper age limit as life expectancy has increased, and a 65-year-old is no longer considered a very old patient.

NO DOMICILE REQUIREMENT:

A citizen can now register for organ donation in any state; previous requirement of registering in the state of domicile has been removed

NO REGISTRATION FEES:

The Centre has asked state governments to stop taking fees to register a patient for organ transplants



Since health is a state subject, the Centre has begun consultation with states to bring them on board with the changes

above 65 years of age to receive an organ for transplantation from deceased donors.

The Elderly can now register to receive organs from deceased donors. Previously, NOTTO (National Organ and Tissue Transplant Organisation) guidelines barred them. This violated the Right to Life of elderly. Preference will still be given to younger recipients, those above the age of 65 will not be completely barred from the process.

A patient irrespective of domicile State can register in any other State for a transplant (previously a domicile certificate was necessary).

transplantation. Health Ministry has intimated states to stop charging registration fees to patients.

Status of Organ Donation in India:

India conducts the third-highest number of transplants in the world. Every year, an estimated 5-2 lakh people need a kidney transplant. Organs from deceased donors accounted for nearly 18% of all transplants in 2022 in the country. Telangana, Tamil Nadu, Maharashtra, Gujarat, and Karnataka account for more than 85% of the total deceased donations. A study shows over 40% of those in need of kidney transplants worldwide are

over the age of 65. As per the Health Ministry, the number of organ transplants has increased by over three times from 4,990 in 2013 to 15,561 in 2022. India has an organ donation

rate of about 52 per million population. In comparison, the organ donation rate in Spain is 49.6 per million population which is the highest in the world.

ARE EDUCATED WOMEN LIKELY TO MARRY LATER?

GS-II Issues relating to development and management of Social Sector/Services relating to Health, Education, Human Resources.

Context

National Family Health Survey-5 (NFHS) data shows that higher education levels could play a greater role than wealth in delaying a woman's marriage in today's Indian Society.

Highlights of NFHS-5

The median marriage age of a woman who has completed over 11 years of schooling is 23 compared to 6 for a woman with less than five years of schooling.

The data also reflect wide variations between the marital age of rural and urban women, and Dalit and upper-caste women.

Social evils like the dowry system, poverty, and caste biases remained a major reason for girls' fluctuating age of marriage.

Factors responsible for early marriages of girls in India

Poverty is the greatest determinant of early marriage.

Societal barriers: It is believed that Marriage is a woman's primary economic security.

Lack of Literacy

Norms associated with fertility

Wrong perception of providing social security

to daughters from societal offenses.

Laws that prescribe minimum age for marriage in India

The Hindu marriage act (1955), Indian Christian marriages act (1872) and special marriages act (1954) prescribed the minimum age of marriage as 18 years for the bride and 21 years for the groom.

Prohibition of Child Marriage Act, 2006 prohibits marriage below 18 years for women and 21 years for men.

Impacts of early marriages

Multiple diseases: The nutritional needs are high in late adolescence (15-19 years) and a fair measure of adolescent girls suffer from multiple forms of undernutrition, from chronic energy deficiency, and iron deficiency to micronutrient deficiency. Marriage and delivery during adolescence drain their already poor nutritional reserves and also lead to child stunting and mortality to multiple diseases at a later stage.

The toll on mental health: Psychologically, women married as children are more likely to suffer from symptoms related to post-traumatic stress disorder (PTSD) and symptoms of depression.

Low access to education: Marriage dramatically limits a girl's access to education.

Domestic violence: According to the International Council of Research On Women (ICRW), women with low levels of education and married adolescents between the ages of 15-19 years old are at a higher risk of domestic violence than older and more educated women.

Factors responsible for changing trends of marriage

To reduce maternal deaths: Increase in the marriageable age of girls will help in lowering maternal deaths and improving nutrition levels in the near term by putting more girls in college and enabling them to achieve greater financial independence in the long term.

To keep the population in check: Helpful in controlling the population as it may help in keeping the population in check.

Improved health: It would be helpful for Children's health and Women's overall development as the children who are born to mothers who tend to get married at an early age may develop health problems.

Equality: Increasing the age of marriage will make the

marriage age equal for both men and women.

Women's Health: Increasing the Marriage age can reduce Mortality Rates and can reduce diseases like anemia among them. (young mothers are more susceptible to anaemia)

Enormous opportunities: Increasing women's legal marriage age will give more power and legal support to all women so that they can choose the opportunities to educate and empower themselves, before being burdened with marriage and motherhood.

Increased participation in the labour force: India will get a large labour force by increasing the marriageable age. In India Female labour force participation is too low compared to the world average.

Impact of education in the age of marriage for women

Education can have a significant impact on the age of marriage for women in India.

In general, women who receive more education tend to marry later than those who do not.

One reason for this is that education can provide women with **greater economic opportunities and financial independence**. Women who have access to education and training are more likely to enter the workforce, earn higher wages, and become financially self-sufficient. This can make them less reliant on marriage as a means of financial support and give them more control over their lives.

Additionally, education can increase women's awareness of their rights and empower them to make informed decisions about their own lives.

Women who are educated are more likely to understand the risks associated with early marriage, such as increased likelihood of domestic violence, limited opportunities for personal and professional growth, and higher rates of maternal mortality and morbidity.

This knowledge can lead them to delay marriage until they are ready and better equipped to handle the responsibilities that come with it.

Way forward

It is important to note that despite the positive impact of education on the age of marriage for women in India, cultural and societal norms still play a significant role in determining when and whom a woman will marry.

In many parts of the country, early marriage is still seen as a cultural tradition and a way to ensure a woman's safety and security.

Therefore, there is a need for concerted efforts to change these deeply ingrained attitudes and beliefs to further promote the education and empowerment of women in India.

"There is no tool for development more effective than the education of girls." - Kofi Annan

Economic Development & Agriculture



What's Inside?

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GS-III Effects of liberalization on the economy, changes in industrial policy and their effects on industrial growth.

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DIGITAL PUBLIC INFRASTRUCTURE

GS-III Indian Economy, Investments

1. NANO LIQUID DAP (DI-AMMONIUM PHOSPHATE) FERTILIZER
2. HALLMARK UNIQUE IDENTIFICATION (HUID) NUMBER
3. FOOD IRRADIATION
4. VDA UNDER PMLA AMBIT
5. PM MITRA SCHEME
6. CONTINGENT CONVERTIBLES / AT1 DEBT BONDS
7. SMALL SAVINGS SCHEMES
8. RBI VRR AUCTION

NANO LIQUID DAP (DI-AMMONIUM PHOSPHATE) FERTILIZER

Why in the News?

The Government recently approved the launch of nano liquid DAP (di-ammonium phosphate) fertilizer in India and has been notified in the Fertilizer Control Order (FCO).

About nano liquid DAP fertilizer

DAP fertilizer is a concentrated phosphate-based fertilizer. It provides phosphorus nutrition throughout the crop growth and development cycle. Nano-DAP is jointly manufactured by Indian Farmers Fertiliser Cooperative (IFFCO) in association with a private player Coromandel.

Nano-DAP will be sold at Rs 600 per bottle of 500 ml. One bottle will be equivalent to one bag of DAP, which currently costs Rs 1,350.

Expected benefits

DAP is the second most consumed fertilizer in the country after urea.

Out of the estimated annual consumption of around 10-12.5 million tonnes, local production is around 4-5 million tonnes, while the rest has

to be imported.

Nano-DAP will help to bring down India's fertilizer import bill.

It is also expected to contribute to bringing down the annual subsidy on non-urea fertilizers.

What is a Fertilizer Control Order(FCO)?

FCO Order has been issued under the Essential Commodities Act 1955. It is administered by the Department of Agriculture Cooperation, Govt. of India. The FCO lays down,

what substances qualify for use as fertilizers in the soil;

product-wise specifications;

methods for sampling and analysis of fertilizers;

the procedure for obtaining a license/registration as a manufacturer/dealer in fertilizers;

conditions to be fulfilled for trading thereof;

HALLMARK UNIQUE IDENTIFICATION (HUID) NUMBER

From April 1, the sale of gold jewellery will not be allowed without a Hallmark Unique Identification (HUID) number.

About hallmarking of gold

The Bureau of Indian Standard (BIS), which operates gold and silver hallmarking scheme in India, defines hallmarking as the "accurate determination and official recording of the proportionate content of precious metal in precious metal articles." So, it is a "guarantee of purity or fineness" of precious metal articles.

The government, through a notification, notified two categories i.e., (i) gold jewellery/gold artefacts; and (ii) silver jewellery/silver artefacts,

under the purview of hallmarking.

So, hallmarking in India is available for the jewellery of only two metals—gold and silver.

Exemptions

A certain category of jewellery and items will be exempted from the mandatory requirement of hallmarking.

Export and re-import of jewellery as per Trade Policy of Government of India — Jewellery for international exhibitions, jewellery for government-approved B2B domestic exhibitions will be exempted from mandatory Hallmarking.

Watches, fountain pens and special types of

jewellery such as Kundan, Polki and Jadau are exempted from hallmarking.

HUID number on gold jewellery

HUID number is a six-digit alphanumeric code. It is given to every piece of jewellery at the time of hallmarking, and is a unique identifier for each gold item.

The jewellery is stamped with the unique number manually at the Assaying & Hallmarking centre.

The HUID makes it easy to trace the individual piece of jewellery, and is a guarantee of quality.



In HUID-based Hallmarking, registration of jewellers is automatic with no human interference.

HUID is a secure system and poses no risk to data privacy or security.

Purity standards for gold and silver under the hallmarking scheme

No gold jewellery is made of 100 per cent gold, as it will be very soft and so it has to be mixed with other metals to shape it into jewellery items.

The “purer” the jewellery, i.e., the more gold a piece of jewellery has, the more expensive it will be.

As per BIS standards, there are three categories of hallmarking based on the purity of gold—22 carats, 18 carats and 14 carats.

Gold of Additional carats 20, 23 and 24 will also be allowed for Hallmarking.

Jewellers can continue to buy back old gold jewellery without a hallmark from consumers.

The three categories of hallmarked jewellery are:

- 22K916 => means 22-carat gold and the piece of jewellery has 91.6% gold.
- 18K750 => means 18-carat gold and the piece of jewellery has 75% gold.
- 14K585 => means 14-carat gold and the piece of jewellery has 58.5% gold.

FOOD IRRADIATION

Why in news?

The Centre is planning to irradiate onions with Gamma rays before sending them into cold storage on a pilot basis

About

Food irradiation

Food irradiation is used in food processing to help ensure food safety. In food irradiation, ionizing radiation uses electricity, x-rays and gamma rays to destroy microorganisms, such as bacteria, viruses or insects in food.

Radiation processing of food is essentially a cold process. Because of this, nutrient losses

are significantly less than those associated with canning, drying and heat pasteurization. Macro nutrients such as carbohydrates, proteins and fats undergo no change during radiation processing.

Under the radiation processing, food is treated by ionizing radiation. The process greatly reduces, but does not eliminate, bacteria.

Food irradiation in India

The **Atomic Energy (Control of Irradiation of Foods) Rules 1996** and the **Prevention of Food Adulteration (Fifth Amendment) Rules 1994** and other rules and notifications issued from time to time are the rules applicable for commercial radiation processing of food in India.

The Department of Atomic Energy (DAE) and the Atomic Energy Regulatory Board (AERB) enforce the former rules. DAE licenses the irradiator after AERB issues a certificate of approval. Before this, inspectors from AERB ensure that the installation satisfies all the prescribed safety requirements.

AERB is empowered to withdraw the certificate of approval if it is found necessary.

The DAE has licensed four radiation processing facilities so far. More facilities are being planned in the near future

The International Consultative Group on Food Irradiation had listed several studies to show that the consumer acceptance of the technology improved when they are informed about the facts about this unique technology.

Onion Climate

The onion is **cool season crop**, tolerant to frost in the young stage but less sensitive to heat. It is well adapted to a **temperature range of 13-25 C**. A temperature range of 15-21 C before bulbing is required for its good vegetative growth whereas a temperature of 20-25 C is considered ideal for bulb development.

Very low temperatures in the beginning favours **physiological disorder called bolting**.

Sudden rise in temperature favours early maturity of the crop in rabi and results in small size of bulbs.

At least 10 hours light with favorable temperature is essential for growth, development and bulbing.

Onion thrives well in places, which receive an average rainfall of 750-1000 mm during monsoon.

Soil

Onions can be grown on all types of soil such as **sandy loam, silt loam and heavy clay soils**.

However, deep friable, highly fertile sandy loam to clay soil rich in humus is considered as ideal.

Sandy soil needs frequent irrigation and favours early maturity. Whereas heavy soils restrict the development of bulbs and the crop matures late as compared to light soils.

A pH range between 5.8-6.5 is considered as optimum. Good drainage is essential as water-logging results in total failure of the crop.

Need for the irradiation of onion

Onion is an important commodity which is grown worldwide for culinary as well as medicinal purposes. **India is the second-largest producer** of onion after China.

Within India, **Maharashtra and Madhya Pradesh** produce more than 50% of the onions. However, the bulk handling of onions is poor in India with losses of fresh onion in storage exceeding 30-35%.

Post-harvest losses of onion in India are significant. Onion noticeably gets rotted and starts **sprouting even in cold storage**. To reduce post-harvest losses to 10-12% from prevailing 25%, it needs to send freshly procured onion to irradiation plants and then to cold storage.

The **perishable nature of onions**, combined with **lower processing penetration** and **sub-optimal storage infrastructure** causes post-harvest losses.

Currently, red onions are being procured by the National Agricultural Cooperative Marketing Federation of India and National Cooperative Consumers' Federation of India to support farmers amid falling prices. Kharif and late kharif onion or red onion is highly perishable and cannot be stored for over a month.

Uses of Food Irradiation

Preventing Foodborne Illnesses: They can get rid of the organisms which can cause foodborne illnesses like the Escherichia Coli and Salmonella.

Controls Insects: They destroy insects that are present on the various tropical fruits that are imported. Irradiation practices also decrease the need for other pest control activities which more often than not tend to harm the quality of the fruit.

Delay of Ripening or Sprouting: In vegetables like potatoes, irradiation can inhibit sprouting and can delay ripening in some fruits to increase their longevity.

Preservation: Inactive organisms can cause spoilage and decomposition of food items. Therefore, irradiation techniques are adopted to destroy these organisms and increase the shelf life of the foods.

Sterilization: Irradiation methods can sterilize food so that they can be stored without the necessity of refrigeration. These sterilized foods can be used in hospital settings for patients who have severe weakness in their immune system, like the patients undergoing chemotherapy or patients suffering from AIDS.

VDA UNDER PMLA AMBIT

Why in news?

On March 7, to further tighten the loosely regulated crypto market, the Finance Ministry said that all virtual digital assets (VDAs) will come within the ambit of the Prevention of Money Laundering Act, 2002 (PMLA).

About

Prevention of Money Laundering Act

The anti-money laundering legislation was passed by the National Democratic Alliance government in 2002, and came into force on July 1, 2005.

The PMLA was showcased as India's commitment to the **Vienna Convention on combating money laundering, drug trafficking, and countering the financing of terror (CFT)**.

The law was aimed at **curbing the process of converting illegally earned money into legal cash**.

The Act empowered the **Enforcement Directorate (ED)** to control money laundering, confiscate property, and punish offenders.

Enforcement Directorate

The Directorate of Enforcement (ED) is a multi-disciplinary organization mandated with **investigation of offences of money laundering and violations of foreign exchange laws**.

It functions under the **Department of Revenue** of the Ministry of Finance.

As a premier financial investigation agency of the Government of India, the Enforcement Directorate functions in strict compliance with the Constitution and Laws of India.

Directorate of Enforcement (ED) is a specialized body tasked with implementing two crucial financial laws – Prevention of Money Laundering Act, 2002 (PMLA) and Foreign Exchange Management Act, 1999 (FEMA).

Now, the Indian crypto exchanges will have to report any suspicious activity related to buying or selling of cryptocurrency to the Financial Intelligence Unit – India (FIU-IND).

Financial Intelligence Unit – India (FIU-IND)

It was setup as the central national agency responsible for receiving, processing, analyzing and disseminating information relating to suspect financial transactions.

FIU-IND is also responsible for **coordinating and strengthening efforts of national and international intelligence**, investigation and enforcement agencies in pursuing the global efforts against money laundering and financing of terrorism.

FIU-IND is an independent body reporting directly to the **Economic Intelligence Council (EIC)** headed by the Finance Minister.

PM MITRA SCHEME

Why in the News?

7 PM MITRA Parks to come up in Tamil Nadu, Telangana, Gujarat, Karnataka, Madhya Pradesh, Uttar Pradesh Maharashtra.

About

Government has approved setting up of 7 (Seven) PM Mega Integrated Textile Region and Apparel (PM MITRA) Parks in Greenfield/Brownfield sites with world class infrastructure including plug and play facility with an outlay of Rs. 4,445 cr for a period of seven years upto 2027-28.

The Government has finalised 7 sites viz. Tamil Nadu (Virudhnagar), Telangana (Warangal), Gujarat (Navsari), Karnataka (Kalburgi), Madhya Pradesh (Dhar), Uttar Pradesh (Lucknow/Hardoi) and Maharashtra (Amrawati) for setting up PM MITRA Parks

PM MITRA Parks inspired by the 5F vision of Hon'ble Prime Minister - Farm to Fibre to Factory to Fashion to Foreign

Nearly Rs. 70,000 crores investment and 20 lakhs employment generation envisaged

Parks will offer an opportunity to create an integrated textiles value chain right from spinning, weaving, processing/dyeing and printing to garment manufacturing at a single location

World-class industrial infrastructure would attract cutting edge technology and boost FDI and local investment in the sector

Integrated Textile Value chain at one location in each park will reduce logistics cost of Industry

PM MITRA Park

PM MITRA Park will be developed by a Special Purpose Vehicle which will be owned by the Central and State Government and in a Public Private Partnership (PPP) Mode.

Each MITRA Park will have an incubation

centre, common processing house and a common effluent treatment plant and other textile related facilities such as design centres and testing centres.

Implementation

Special Purpose Vehicle: An SPV owned by the Centre and State Government will be set up for each park which will oversee the implementation of the project.

Development Capital Support: The Ministry of Textiles will provide financial support in the form of Development Capital Support upto Rs 500 crore per park to the park SPV.

Competitive Incentive Support (CIS): A CIS upto Rs 300 crore per park to the units in PM MITRA Park shall also be provided to incentivise speedy implementation.

Convergence with other Schemes: Convergence with other Government of India schemes shall also be facilitated in order to ensure additional incentives to the Master Developer and investor units.

Significance of the Scheme

It will reduce logistics costs and strengthen the value chain of the Textile Sector to make it globally competitive. High logistics costs are considered a key hurdle to India's goal of boosting textile exports.

An investment of Rs 70,000 crore into these parks can generate employment for about 20 lakh people.

The parks are crucial to attract Foreign Direct Investment (FDI). From April 2000 to September 2020, India's textile sector received Rs 20,468.62 crore of FDI, which is just 0.69% of the total FDI inflows during the period.

Cluster-based approach will reduce the increased wastage and logistical costs of the sector, and thus will improve the competitiveness of the country's textile sector.

CONTINGENT CONVERTIBLES / AT1 DEBT BONDS

Why in the News?

Financial markets have been thrown a fresh curve ball by the decision to write down 16 billion Swiss francs (\$17.5 billion) of Credit Suisse bonds, known as Additional Tier 1 or AT1 debt, to zero as part of a forced rescue merger with UBS.

The Bombay High Court has quashed the write-off of Additional Tier-1 (AT1) bonds worth Rs 8,400 crore issued by Yes Bank Ltd, bringing relief to investors.

BACKGROUND:

AT1 bonds are unsecured bonds that have perpetual tenors.

In other words, these bonds, issued by banks, have no maturity date.

There is a call option, which can be used by the banks to buy these bonds back from investors.

Call options allow banks to redeem them after five or 10 years. But banks are not obliged to use this call option and can opt to pay only interest on these bonds for eternity.

Banks issuing AT-1 bonds can skip interest pay-outs for a particular year or even reduce the bonds' face value without getting into hot water with their investors, provided their capital ratios fall below certain threshold levels. These thresholds are specified in their offer terms.

If the RBI feels that a bank is tottering on the brink and needs a rescue, it can simply ask the bank to cancel its outstanding AT-1 bonds without consulting its investors. This is what has happened to YES Bank's AT-1 bond-holders who are said to have invested ₹10,800 crore.

AT1 BONDS OVERVIEW:

T1 bonds are typically used by banks to bolster their core or tier-1 capital under BASEL III norms.

Tier 1 capital is a **bank's core capital and includes disclosed reserves**.

Tier 2 capital is a bank's supplementary capital, Undisclosed reserves, subordinated term debts,

hybrid financial products, and other items make up these funds.

A bank's total capital is calculated by adding its tier 1 and tier 2 capital together.

Tier 1 Capital = Common Equity Tier 1 Capital + Additional Tier 1 Capital

Additional Tier 1 (AT1) Capital – AT1 capital includes certain contingently convertible and perpetual debt of the bank since they provide going concern capital to the bank.

Under Basel III, the **minimum tier 1 capital ratio is 10.5%**, which is calculated by dividing the bank's tier 1 capital by its total risk-weighted assets (RWA).

How are these bonds different from other debt instruments?

These bonds are perpetual in nature - they do not carry any maturity date. They offer higher returns to investors but compared with other vanilla debt products, these instruments carry a higher risk as well.

If the capital ratios of the issuer bank fall below a certain percentage or in the event of an institutional failure, the rules allow the issuer to stop paying interest or even write down these bonds, as happened in the Yes Bank case.

These bonds are subordinate to all other debt and senior only to equity.

What did Yes Bank do?

A SEBI probe found that the bank facilitated the selling of AT1 bonds from institutional investors to individual investors.

It found that during the process of selling the AT1 bonds, individual investors were not informed about all the risks involved in the subscription of these bonds.

The SEBI investigation also found that Yes Bank represented these bonds as a 'Super FD' and 'as safe as FD' to the investors.

Implications:

And now the decision to write off the AT1 bonds has been quashed. This is a relief to the investors.

Individual bondholders, most of whom were senior citizens, can finally find some justice through this judgment of the Bombay High Court.

SMALL SAVINGS SCHEMES

Why in news?

Investors in the popular small saving schemes Public Provident Fund (PPF) and Sukanya Samriddhi Account (SSA), whose rates have not been hiked since January 2019, are unlikely to get higher returns anytime soon, a top government official has indicated.

About

About Small Saving Schemes/ Instruments

Small Savings Schemes are a set of savings instruments managed by the **central government** with an aim to encourage citizens to save regularly irrespective of their age.

They are popular as they **not only provide returns** that are generally higher than bank fixed deposits but also come with a **sovereign guarantee and tax benefits**.

They are the major source of household savings in India and **comprises 12 instruments**.

The depositors get **an assured interest** on their money.

Collections from all small savings instruments are credited to the **National Small Savings Fund (NSSF)**.

The rates on these small savings schemes are **calculated on the yields on government securities (G-secs)**. Interest rates on small saving schemes are **reset quarterly**, in line with the movement in benchmark government bonds of similar maturity.

Small savings have emerged as a key source of financing the government deficit.

Small savings instruments can be classified as

Postal Deposits comprising savings account, recurring deposits, time deposits of varying maturities and monthly income scheme.

Savings Certificates: National Small Savings Certificate (NSC) and Kisan Vikas Patra (KVP).

Social Security Schemes: Sukanya Samriddhi Scheme, Public Provident Fund (PPF) and Senior Citizens' Savings Scheme (SCSS).

Sukanya Samriddhi Scheme

It is introduced for the benefit of the girl child. It was launched in 2015 under the Beti Bachao Beti Padhao campaign

The scheme guarantees a **return of 7.6% per annum** and is eligible for **tax benefit under Section 80C** of the Income Tax Act.

The **tenure of the deposit is 21 years** from the date of opening of the account and a **maximum of Rs 1.5 lakh** can be invested in a year.

The investment will mature after the completion of 21 years from the date of opening the account, or upon the marriage of the girl child after attaining the age of 18.

The account will also have to be closed if the girl child becomes an NRI or loses her Indian citizenship.

Public Provident Fund

PPF is a government of India savings and investment scheme. It is a **long term investment scheme** popular among individuals who want to earn high but stable returns.

A minimum of Rs. 500 and a maximum of

Rs. 1,50,000 per financial year may be deposited.

The **total duration is of 15 years** and central government determines the rate of interest on quarterly basis.

Interest earned in PPF account is **completely exempted from Income Tax**.

Indian citizens residing in the country are eligible to open a PPF account in his/her name.

Minors are also allowed to open a PPF account.

NRIs are not permitted to open a new PPF account.

National savings Certificates

The National Savings Certificates is a **fixed income investment scheme** that can be open with

any post office branch. It is a kind of savings bond that encourages **mainly small to mid-income investors** to invest while saving on income tax.

It has a fixed maturity period of 5 year.

There is no maximum limit on the purchase of NSCs and there is a fixed interest of 6.8% per annum.

Hindu Undivided Families, trusts, private and prudent limited companies, NRIs not allowed to invest in NSCs.

The principal invested in NSC qualifies for tax savings under section 80c of Income tax Act up to Rs. 1.5 lakhs annually.

NSC certificates are accepted as **collateral or security for secured loans** in banks and NBFIs.

RBI VRR AUCTION

‘VRR Auction’ stands for Variable rate repo auction. The Reserve Bank of India (RBI) infused liquidity amounting to ₹82,650 crore into the banking system on Friday via the 14-day Variable Rate Repo (VRR) auction amid tightening liquidity. Against the notified ₹1 lakh crore under the VRR auction, banks borrowed ₹82,650 crore at a weighted average rate of 6.53 per cent.

Operational Guidelines for VRR Auction

The auction will be conducted on CBS (e-Kuber) platform. The minimum bid amount for the auction would be Rupees one crore and multiples thereof. The allotment would be in multiples of Rupees one crore. Bids at or below the repo rate will be rejected. There will be the

Repo rate: Repo rate is the rate at which the central bank of a country (Reserve Bank of India in case of India) lends money to commercial banks in the event of any shortfall of funds. Repo rate is used by monetary authorities to control inflation.

Reverse Repo rate: A reverse repo is a rate at which RBI borrows money from banks. RBI borrows a part of this money at a fixed rate and some of it at variable rate.

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provision of pro-rata allotment should there be more than one successful bid at the cut-off rate.

RBI will, however, reserve the right to (i) inject a marginally higher amount than the notified amount due to rounding effects and (ii) inject less than the notified amount without assigning any reasons therefore.

PM MITRA SCHEME

Why In News?

The Government of India announced the sites for setting up of 7 PM Mega Integrated Textile Regions and Apparel (PM MITRA) Parks for the Textile industry. The Parks will come up in Tamil Nadu, Telangana, Gujarat, Karnataka, Madhya Pradesh, Uttar Pradesh and Maharashtra.

1. Inspired by the 5F vision (i.e. Farm to Fibre to Factory to Fashion to Foreign)

2. The PM MITRA Parks are a major step forward in realising the Government's vision of making India a global hub for textile manufacturing and exports.

3. It is expected that these parks will enhance the competitiveness of the textiles industry by helping it achieve economies of scale as well as attract global players to manufacture in India.

Objective:

PM MITRA Parks will help in creating world-class industrial infrastructure that would attract large scale investment including FDI and encourage innovation and job creation within the sector.

The parks will offer an excellent infrastructure, plug and play facilities as well as training and research facilities for the industry.

These parks represent a unique model where the Centre and State Governments will work together to increase investment, promote innovation, create job opportunities and ultimately make India a global hub for textile manufacturing and exports.

Nearly Rs. 70,000 crores investment and 20 lakhs employment generation are envisaged through these parks.

SIGNIFICANCE:

- **Reduce Logistics Cost:**
 - It will reduce logistics costs and strengthen the value chain of the Textile Sector to make it globally competitive. High logistics costs are considered a key hurdle

to India's goal of boosting textile exports.

- **Employment:**
 - An investment of Rs 70,000 crore into these parks can generate employment for about 20 lakh people.
- **Attract FDI:**
 - The parks are crucial to attract Foreign Direct Investment (FDI).
- **Competitiveness:**
 - This cluster-based approach will reduce the increased wastage and logistical costs of the sector, and thus will improve the competitiveness of the country's textile sector.

POTENTIAL OF INDIAN TEXTILE SECTOR:

- The sector is the 2nd largest provider of employment in India, after agriculture.
- India is the 6th largest exporter of textile and apparel in the world, with 4% share of the global trade in textiles and apparel.
- India's textile and apparel exports (including handicrafts) stood at USD 44.4 billion.
- India's textiles industry has around 4.5 crore employed workers including 35.22 lakh handloom workers across the country.

CHALLENGES:

1. Decline in Production
2. Surge in Imports
3. Exports Suffer
4. Inverted Duty Structure

FOREIGN TRADE POLICY 2023

GS-III Effects of liberalization on the economy, changes in industrial policy and their effects on industrial growth.

Context

Union Minister of Commerce and Industry, Consumer Affairs, Food and Public Distribution and Textiles recently launched the Foreign Trade Policy 2023. Foreign Trade Policy (2023) is a policy document which is based on continuity of time-tested schemes facilitating exports as well as a document which is nimble and responsive to the requirements of trade.

It is based on principles of 'trust' and 'partnership' with exporters. In the FTP 2015-20, changes were done subsequent to the initial release even without announcement of a new FTP responding dynamically to the emerging situations. Hereafter, the revisions of the FTP shall be done as and when required. Incorporating feedback from Trade and Industry would also be continuous to streamline processes and update FTP, from time to time.

Pillars of the Policy

The Key Approach to the policy is based on these 4 pillars:

- Incentive to Remission,
- Export promotion through collaboration - Exporters, States, Districts, Indian Missions,

- Ease of doing business, reduction in transaction cost and e-initiatives,
- Emerging Areas - E-Commerce Developing Districts as Export Hubs and streamlining SCOMET policy.

Process Re-Engineering and Automation

Greater faith is being reposed on exporters through automated IT systems with risk management system for various approvals in the new FTP. The policy emphasizes export promotion and development, moving away from an incentive regime to a regime which is facilitating, based on technology interface and principles of collaboration.

Considering the effectiveness of some of the ongoing schemes like Advance Authorisation, EPCG etc. under FTP 2015-20, they will be continued along with substantial process re-engineering and technology enablement for facilitating the exporters. FTP 2023 codifies implementation mechanisms in a paperless, online environment, building on earlier 'ease of doing business' initiatives. Reduction in fee structures and IT-based schemes will make it easier for MSMEs and others to access export benefits.

Duty exemption schemes for export production will now be implemented through Regional Offices in a rule-based IT system environment, eliminating the need for manual interface. During the FY23-24, all processes under the Advance and EPCG Schemes, including issue, re-validation, and EO extension, will be covered in a phased manner. Cases identified under risk management framework will be scrutinized manually, while majority of the applicants are expected to be covered under the 'automatic' route initially.

Towns of Export Excellence

Four new towns, namely Faridabad, Mirzapur, Moradabad, and Varanasi, have been designated as Towns of Export Excellence (TEE) in addition to the existing 39 towns. The TEEs will have priority access to export promotion funds under the MAI scheme and will be able to avail Common Service Provider (CSP) benefits for export fulfillment under the EPCG Scheme. This addition is expected to boost the exports of handlooms, handicrafts, and carpets.

Recognition of Exporters

Exporter firms recognized

with 'status' based on export performance will now be partners in capacity-building initiatives on a best-endeavor basis. Similar to the 'each one teach one' initiative, 2-star and above status holders would be encouraged to provide trade-related training based on a model curriculum to interested individuals.

This will help India build a skilled manpower pool capable of servicing a \$5 Trillion economy before 2030. Status recognition norms have been re-calibrated to enable more exporting firms to achieve 4 and 5-star ratings, leading to better branding opportunities in export markets.

Promoting export from the districts

The FTP aims at building partnerships with State governments and taking forward the Districts as Export Hubs (DEH) initiative to promote exports at the district level and accelerate the development of grassroots trade ecosystem.

Efforts to identify export worthy products & services and resolve concerns at the district level will be madethrough an institutional mechanism – State Export Promotion Committee and District Export Promotion Committee at the State and District level, respectively. District specific export action plans to be prepared for each district outlining the district specific strategy to promote export of identified products

and services.

Streamlining SCOMET Policy

India is placing more emphasis on the "export control" regime as its integration with export control regime countries strengthens. There is a wider outreach and understanding of SCOMET (Special Chemicals, Organisms, Materials, Equipment and Technologies) among stakeholders, and the policy regime is being made more robust to implement international treaties and agreements entered into by India.

A robust export control system in India would provide access of dual-use High end goods and technologies to Indian exporters while facilitating exports of controlled items/technologies under SCOMET from India.

Facilitating E-Commerce Exports

E-commerce exports are a promising category that requires distinct policy interventions from traditional offline trade. Various estimates suggest e-commerce export potential in the range of \$200 to \$300 billion by 2030.

FTP 2023 outlines the intent and roadmap for establishing e-commerce hubs and related elements such as payment reconciliation, book-keeping, returns policy, and export entitlements.

As a starting point, the consignment wise cap on

E-Commerce exports through courier has been raised from ₹5Lakh to ₹10 Lakh in the FTP 2023. Depending on the feedback of exporters, this cap will be further revised or eventually removed.

Integration of Courier and Postal exports with ICEGATE will enable exporters to claim benefits under FTP. The comprehensive e-commerce policy addressing the export/import ecosystem would be elaborated soon, based on the recommendations of the working committee on e-commerce exports and inter-ministerial deliberations.

Extensive outreach and training activities will be taken up to build capacity of artisans, weavers, garment manufacturers, gems and jewellery designers to onboard them on E-Commerce platforms and facilitate higher exports.

Facilitation under Export Promotion of Capital Goods (EPCG) Scheme

The EPCG Scheme, which allows import of capital goods at zero Customs duty for export production, is being further rationalized. Some key changes being added are:

Prime Minister Mega Integrated Textile Region and Apparel Parks (PM MITRA) scheme has been added as an additional scheme eligible to claim benefits under CSP (Common Service Provider) Scheme of Export Promotion

Capital Goods Scheme(EPCG).

Dairy sector to be exempted from maintaining Average Export Obligation – to support dairy sector to upgrade the technology.

Battery Electric Vehicles (BEV) of all types, Vertical Farming equipment, Wastewater Treatment and Recycling, Rainwater harvesting system and Rainwater Filters, and Green Hydrogen are added to Green Technology products – will now be eligible for reduced Export Obligation requirement under EPCG Scheme.

Facilitation under Advance authorization Scheme

Advance authorisation Scheme accessed by DTA units **provides duty-free import of raw materials for manufacturing export items** and is placed at a similar footing to EOU and SEZ Scheme. However, the DTA unit has the flexibility to work both for domestic as well as export production. Based on interactions with industry and Export Promotion councils, certain facilitation provisions have been added in the present FTP such as

Special Advance Authorisation Scheme extended to export of Apparel and Clothing sector under para 4.07

of HBP on self-declaration basis to facilitate prompt execution of export orders – Norms would be fixed within fixed timeframe.

Benefits of Self-Ratification Scheme for fixation of Input-Output Norms extended to 2 star and above status holders in addition to Authorised Economic Operators at present.

Merchanting trade

To develop India into a merchanting trade hub, the FTP 2023 has introduced provisions for merchanting trade. Merchanting trade of restricted and prohibited items under export policy would now be possible.

Merchanting trade involves shipment of goods from one foreign country to another foreign country without touching Indian ports, involving an Indian intermediary. This will be subject to compliance with RBI guidelines, and won't be applicable for goods/items classified in the CITES and SCOMET list.

In course of time, this will allow Indian entrepreneurs to convert certain places like GIFT city etc. into major merchanting hubs as seen in places like Dubai, Singapore and Hong Kong.

Amnesty Scheme

In line with “Vivaad se

Vishwaas” initiative, which sought to settle tax disputes amicably, the government introduced a special one-time **Amnesty Scheme** under the FTP 2023 **to address default on Export Obligations.**

This scheme is intended to provide relief to exporters who have been unable to meet their obligations under EPCG and Advance Authorizations, and who are burdened by high duty and interest costs associated with pending cases.

All pending cases of the default in meeting Export Obligation (EO) of authorizations mentioned can be regularized on payment of all customs duties that were exempted in proportion to unfulfilled Export Obligation. The interest payable is capped at 100% of these exempted duties under this scheme.

However, no interest is payable on the portion of Additional Customs Duty and Special Additional Customs Duty and this is likely to provide relief to exporters as interest burden will come down substantially. It is hoped that this amnesty will give these exporters a fresh start and an opportunity to come into compliance.

HOLISTIC DEVELOPMENT OF NORTHEAST REGION

GS-III Indian Economy and issues relating to planning, mobilization, of resources, growth, development, Inclusive growth and issues arising from it.

Context

Addressing the 3-days long North-East festival called 'Ishan Manthan' at Delhi, The Union Minister of Development of North Eastern Region (DoNER) – G Kishan Reddy emphasized on the region's current developmental efforts. He also mentioned that the Centre has Committed To Ensure Holistic Development Of Northeast India; It's Our "Heartbeat"

Northeast India

Northeast Region or The 'seven sisters' of Northeast India comprise Assam, Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland, and Tripura.

Sikkim is also a part of the Northeast but is not included in the Seven Sisters because while the other seven states

are contiguous, Sikkim is sort of a neighbour, divided by the Siliguri Corridor.

Sikkim is also referred to as the 'Brother' of the Seven Sisters.

Significance of North East for India

Cultural diversity: Northeast India is home to a large number of ethnic and linguistic communities, making it one of the most diverse regions in India. Each community has its own unique culture, traditions, and way of life, which makes the region a fascinating study in anthropology and cultural heritage.

Natural resources: Northeast India is rich in natural resources, including oil, natural gas, coal, timber, and minerals such as limestone,

granite, and copper. It is also home to several major river systems, including the Brahmaputra, which is one of the largest rivers in the world.

Biodiversity: The region is also known for its rich biodiversity, with several national parks and wildlife reserves, such as Kaziranga National Park and Manas National Park, which are home to rare and endangered species such as the one-horned rhinoceros, Asian elephant, and Bengal tiger. North East is a part of Indo-Burma biodiversity hotspot. It represents one of the highest avian and plant biodiversity of the Indian subcontinent. This area has the prestige of having all the bear species present in India.

Strategic location: Northeast India is strategically located at the crossroads of South Asia and Southeast Asia, making it an important gateway for trade and commerce. It shares international borders with Bhutan, China, Myanmar, and Bangladesh, which also makes it a key area for India's foreign policy and national security.

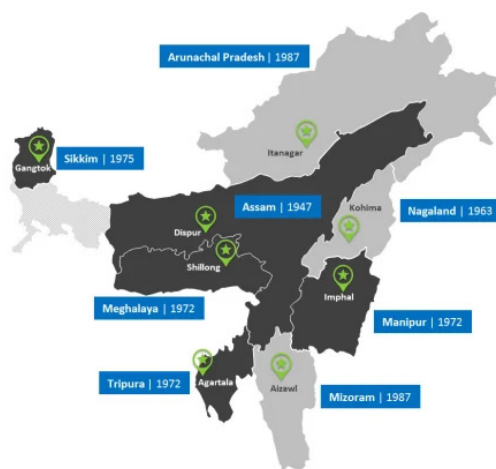
Economic Significance: Economically, the Region is rich in natural resources of "TOT" (Tea, Oil, and Timber). It is a veritable powerhouse with a potential of 50000 MW of hydroelectric power and an

North-East India

State Capitals and Year of Statehood

Dates of Statehood of the various states of North East India

- Assam - 15th August 1947
- Nagaland - 1st December 1963
- Manipur - 21st January 1972
- Meghalaya - 21st January 1972
- Tripura - 21st January 1972
- Sikkim - 16th May 1975
- Arunachal Pradesh - 20th February 1987
- Mizoram - 20th February 1987



abundant reserve of fossil fuels.

Northeast- Growing Sports Powerhouse: North East is emerging as a sports and sporting powerhouse of India that drives some of the best sports persons who go onto becoming icons. When Mary Kom (Manipur) won bronze medal at the 2012 Olympics in London and inspired countless girls to take to combat sports, and this year it was Mirabai Chanu (Manipur) bagged silver Tokyo Olympics 2020.

Challenges Pertaining to North-East India

Isolation From the Rest of India:

The region's accessibility has always remained weak due to geographical reasons and underdeveloped transport links with the rest of India.

The physical location of northeastern states makes it imperative that they develop in consonance with their neighbors.

Also, as the region witnesses floods and landslides in the Brahmaputra and Barak Valleys of Assam, considerable strain is exerted on the economy of not only Assam but other North-Eastern states too.

Lack of Efficient Infrastructure

Infrastructure i.e. physical (like roadways, waterways, energy and so on) as well as social infrastructure (for instance educational institutions, health facilities) plays an important role in

human development and economic growth of any region

One of the reasons for the economic backwardness of the North-Eastern states is the poor state of basic infrastructural facilities.

The prominent indicators of shortfalls in infrastructure in this region are: increasingly congested roads, power failures, shortage of drinking water etc.

Limited access to education and healthcare:

Northeast India has some of the lowest rates of literacy and access to healthcare in the country.

This is due to a lack of infrastructure, a shortage of trained personnel, and a lack of political will to address these issues.

This limits the region's human capital development and its ability to attract investment and industry.

Slow pace of industrial growth:

North-East India has remained historically underdeveloped in terms of industrial growth.

Post Independence, due to the partition of India, the industrial sector in the Northeast received a serious setback as its trade routes were cut-off with the rest of the country.

This in turn hindered economic integration with other parts of India and also reduced the attractiveness of

the region as a destination of investment.

Territorial Conflicts and Border issues

There are existing inter-state and international territorial conflicts within the Northeast that are often based on historical border disputes and differing ethnic, tribal or cultural affinities. Example: Assam-Mizoram Border Dispute.

With its proactive plans to increase its influence in the region, China remains a major source of concern. The vulnerability of the Siliguri Corridor is a case in point.

Insurgency and Political Issues

Insurgency or terrorism is a political weapon and is often the result of accumulated anger due to political, economic and social causes.

The North-Eastern states have witnessed a rise of insurgent activities and regional movements with a feeling of exploitation and alienation from other Indian states.

Some of the insurgent groups are United Liberation Front of Assam (ULFA), People's Liberation Army, National Socialist Council of Nagaland, All Tripura Tiger Force (ATTF).

Environmental degradation

The region's rich biodiversity and natural resources are under threat from

environmental degradation, including deforestation, soil erosion, and pollution.

This poses a threat to the region's ecological balance and the livelihoods of local communities who depend on these resources.

Government initiatives for the development of NER

Prime Minister's Development Initiative for the North East Region (PM-DevINE).

PM-DevINE is a new scheme for the Northeastern states which was announced in the Union Budget. The scheme will be operational for the remaining four years of the 15th Finance Commission, from 2022-23 to 2025-26, and will have an outlay of Rs 6,600 crore.

PM-DevINE will target:

1. The creation of infrastructure,
2. Support industries,
3. Social development projects and
4. Create livelihood activities for the youth and women, with a focus on job creation.
5. These projects will include basic infrastructure in all primary healthcare centres and government schools.

Funding and implementation:

It is a **central sector scheme with 100% central funding**. PM-DevINE will be implemented by

the Ministry of Development of North Eastern Region (DoNER), through the North Eastern Council or central ministries and agencies.

District Level NER Sustainable Development Goal (SDG) Index

MDoNER had launched the country's first district level SDG Index for the eight North East Region States as a collaborative effort with NITI Aayog, with technical support from UNDP. This is a first of its kind progress tracking tool for the North Eastern Region, of critical significance to the Region's development trajectory.

10% Gross Budgetary Support for North Eastern Region

Ministry of Development of North Eastern Region (MDoNER) monitors and keeps track of expenditure by all non-exempted Central Ministries / Departments mandated to spend at least 10% of their Gross Budgetary Support (GBS) of Central Sector and Centrally Sponsored Schemes for NE Region.

This is to ensure a quantum jump in budgetary resource flows to the region to fill the backlog and gaps in basic minimum services and infrastructure=

Development Tourism sector in NER

Sustainable Tourism is emerging as a key driver of faster economic growth, as it

does not suffer from the extra transportation costs and the resultant non-competitiveness of other economic activities in the NE Region.

Under the North East Special Infrastructure Development Scheme (NESIDS), 80 projects have been sanctioned for tourism related infrastructure relating to connectivity, power and water supply in the Region.

North East Special Infrastructure Development Scheme (NESIDS):

The aim of the scheme is to enhance the physical infrastructure related to power, connectivity and water supply, and social infrastructure in the form of health infrastructure. It is a Central Sector Scheme.

Mission mode program for Saturation of Model Blocks & Villages

The need for resilient communities is particularly critical in the North-East region, given the status of its infrastructure, limited resources, ecological profile and the vagaries of nature.

To address this, a Mission mode program for Saturation of Model Blocks & Villages (SAMBHAV) was conceptualized to enable the most backward and isolated communities to achieve their full potential and become "Atmanirbhar" through equal access to basic services and opportunities.

T h e S A M B H A V

programme will thus help these communities in the remote villages of the NE Region seek better governance from the line Ministries and State Governments, through prioritized implementation of their flagship schemes in NER. In doing so, the exposure to the best practices and case studies of the other parts of the country will also be tapped into.

‘Advancing North East Portal’

The “Advancing North East” developed by NEC with North Eastern Development Finance Corporation (NEDFi), a digital web-based platform provides needed knowledge and guidance - in education, employment and entrepreneurship - to the youth of NER.

Connectivity Projects:

To create alternate routes to the region and decrease its dependence on the Chicken's Neck, the Indian government has planned additional routes through South East Asia like Kaladan Multi-Modal Transit Project, Bangladesh-China-India-Myanmar (BCIM) Corridor, etc.

India's Look-East connectivity projects connect Northeast India to East Asia and ASEAN.

North Eastern Development Finance Corporation Limited (NEDFi)

NEDFi plays an important role in facilitating the setting up of new industrial and

service sector projects in the NE Region.

Promotion of education and skill development

North East Special Infrastructure Development Scheme (NESIDS):

The NESIDS scheme aims to develop infrastructure for education in the Northeast region, such as building new schools, colleges, hostels, and other educational institutions.

Ishan Uday Scholarship: The Ishan Uday Scholarship scheme provides financial assistance to students from the Northeast region who are pursuing undergraduate and postgraduate courses in universities and colleges across India.

North Eastern Region Community Resource Management Project for Upland Areas (NERCORMP): The NERCORMP scheme provides skill development training to rural and tribal communities in the Northeast region. It also provides support for education and livelihoods.

Udaan: The Udaan scheme aims to provide skill development training to graduates and postgraduates from the Northeast region, with the aim of improving their employability.

Pragati Scholarship: The Pragati Scholarship scheme provides financial assistance to girls from the Northeast region who are pursuing technical education, such as engineering,

technology, and architecture.

National Fellowship and Scholarship for Higher Education of ST Students: This scheme provides financial assistance to students from scheduled tribes who are pursuing higher education in technical and professional courses.

National Scheme of Incentive to Girls for Secondary Education: This scheme provides financial incentives to girls from the Northeast region who enroll in secondary education and complete their schooling.

Way forward

Act-East from Northeast: Comprehensive implementation of Act East policy is relevant to the entire country but particularly important for the long term growth of the North East. The agenda for its implementation must be prepared in active association with the State Governments of North Eastern States.

Potential Powerhouse of India: Its geo-strategic location and natural resources also makes it a potential powerhouse of India for development and progress. A comprehensive framework needs to be developed to make the region a preferred investment location. To improve the limited entrepreneurial base, a major capacity building exercise for local entrepreneurs should be taken up.

Development of Tourism: A key aspect of the development of the North East is tourism,

which has the potential to channel the region into mainstream development. Some of the famous tourism sites are: Kaziranga National Park famous for the one horned rhinoceros, Dibru Saikhowa in Assam, Namdapha in Arunachal Pradesh.

Enhancing Connectivity: Connectivity drives commerce, air links to the Northeastern states should be a priority. The development of road and railway projects should be in accordance with disaster-resilient measures. Japan has emerged as a major partner in our efforts for the development of the North-East

and connectivity to ASEAN(Association of Southeast Asian Nations).

Political and Social Awareness: It is necessary to foster inclusivity and drive awareness campaigns to change the perceptions from being a neglected, misgoverned, tribal region into a veritable soft power.

Development of Physical and Social Infrastructure: To support road and bridge construction activities, a separate unit should be established for physical infrastructure viability research. This re-emphasises the need for

setting up centres of excellence for professional and higher education in the North East. Furthermore, there is a need to extend digital connectivity and move towards digital inclusion in the North East.

Land Record Management: The system of maintenance of formal land records in the North East is weak and practically absent in tribal areas. This prevents landholders from securing loans and also leads to a number of land-related disputes. It is necessary to evolve a credible system of maintenance of land records.

DIGITAL PUBLIC INFRASTRUCTURE

GS-III Indian Economy, Infrastructure and Investments.

Introduction:

This article emphasises the importance of India's leadership in G 20 where India plays a major role in depicting e governance and digital platforms services to digitally transform the world.

Background:

During the first two decades of 21 st century, google, amazon, meta have been at the forefront of a massive explosion in innovation and value creation.

India has adopted a unique trajectory path, new approach in policy governance through the adoption of DPI.

About DPI:

It refers to an open source

identity platform that can be used to access wide variety of government and private services by building applications and products.

It includes digital forms of ID and registration, civil registration, payment and data exchange.

These platforms are customisable, localizable, interoperable.

Based on core principles of consent-based data sharing.

Significance lies on cost effective application and inclusive service delivery.

India has been a trend setter in DPI movement.

- Eg: CoWIN for corona vaccination, DIGI Locker for

digital storage and lockers.

Significance Of DPI In India:

1. The introduction of GST, with its end-to-end digitisation of all processes, digitalisation of tax administration, and the faceless e-assessment scheme for Income Tax, have improved governance and formalisation of the economy

2. The government has also taken initiatives towards empowering individuals with control over their data to access essential services related to finance, health, education, and skills digitally.

3. India is also geared to strengthen the up-and-coming drone industry. Under Mission

'Drone Shakti', the drone start-ups and Drone-as-a-Service (DrAAS) are being promoted.

4. The increasing digital adoption during covid-19 in areas like healthcare, agriculture, FinTech, education, and skilling indicates that the

National Automated Clearing House (NACH), Immediate Payment Service (IMPS), Aadhaar enabled Payment System (AePS), Bharat Bill Payment System (BBPS), RuPay etc.

AADHAAR:

experience based on a Facial Recognition System (FRS).

Air passenger traffic in India was estimated to be over 188 million in airports across India in the financial year 2022, out of whom over 22 million were international passengers.

DPI INFRA IN INDIA

PM- JAN DHAN YOJNA

- National mission for digital inclusion.
- It ensures access to financial services, namely, Banking/ Savings & Deposit Accounts, Remittance, Credit, Insurance, Pension in an affordable manner.
- 67% of new digital accounts were created for rural households.

ONDC

- Open Network for Digital Commerce (ONDC) is an initiative aiming at promoting open networks for all aspects of exchange of goods and services over digital or electronic networks. ONDC is to be based on open-sourced methodology, using open specifications and open network protocols independent of any specific platform.
- Thus, ONDC goes beyond the current platform-centric digital commerce model where the buyer and seller have to use the same platform or application to be digitally visible and do a business transaction.

digital delivery of services in India has a massive potential across economic sectors.

Other Infra:

UPI (Unified Payment Interface) has crossed eight billion transactions per month and transacts a value of USD 180 billion a month, or about a staggering 65% of India's GDP per annum.

UPI is currently the biggest among the National Payments Corporation of India (NPCI) operated systems including

Aadhaar is a strategic policy tool for social and financial inclusion, public sector delivery reforms, managing fiscal budgets, increasing convenience and promoting hassle-free people-centric governance.

Aadhaar holders can voluntarily use their Aadhaar for private sector purposes, and private sector entities need not seek special permission for such usage.

DigiYatra is a Biometric Enabled Seamless Travel (BEST)

DigiLocker has 150 million users, six billion stored documents, and done with a tiny budget of RS 50 crore over seven years.

The users can store their documents such as insurance, medical reports, PAN card, passport, marriage certificate, school certificate and other documents in the digital format.

Challenges:

1. Privacy violation
2. Data driven behavioural manipulation

3. Identity theft and fraud
4. May create new economic divide
5. Exclusion from essential public services

Strengthening DPI:

1. Global cooperation: in 2022 UNDP formed an alliance called digital public goods alliance for sharing best practices.
2. Engaging local stakeholders to help with long term capacity investment in dpi implementation and maintenance.
3. People centric

approach: focusing on equity, governance and regulatory frameworks to ensure that no one is left behind.

Conclusion:

With the advent of new technologies, we are witnessing new regulatory challenges. Technology and innovation are, per se, neither constructive nor destructive. The use cases present the positive aspects of technology and innovation. The government is committed to keeping pace with the digital landscape developments including those related to legislations and frameworks.

GEOGRAPHY,

ENVIRONMENT,

BIODIVERSITY AND

DISASTER MANAGEMENT

What's Inside?

How to become a green hydrogen
superpower

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G20 and Indian Ocean

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KERMADEC ISLANDS

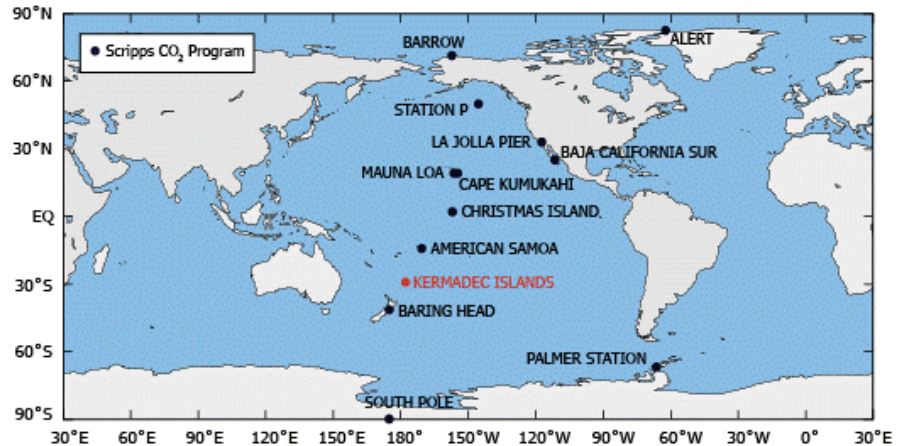
An earthquake of magnitude 6.9 struck the Kermadec Islands region in New Zealand.

About Kermadec Islands

The islands are a volcanic island arc, formed at the convergent boundary where the Pacific Plate subducts under the Indo-Australian Plate.

They are located in the South Pacific Ocean, 1000 km northeast of Auckland, New Zealand. They are a dependency of New Zealand.

They are uninhabited, except for Raoul Island.



The climate of the islands is subtropical. The islands are seismically active.

SWAYATT INITIATIVE

Recently, a function was held to commemorate the success of "SWAYATT".

About SWAYATT Initiative

It is an initiative to promote 'Start-ups, Women and Youth Advantage Through e-Transactions'(SWAYATT) on Government eMarketplace (GeM).

It aims to promote the inclusion of various categories of sellers and service providers on the portal by taking proactive steps to facilitate their training and registration, develop women's entrepreneurship, and encourage the participation of the MSME sector and startups in public procurement.

About Government e-Marketplace (GeM)

GeM is an Online Market platform that was set up in 2016 to facilitate the procurement of goods and services by government ministries,

departments, (PSU) etc.

It has been envisaged as the National Procurement Portal of India.

This portal was developed by the Directorate General of Supplies and Disposals (Ministry of Commerce and Industry) with technical support from the National e-governance Division (Ministry of Electronic and Information Technology).

GeM is a completely paperless, cashless and system-driven e-marketplace that enables procurement of common-use goods and services with minimal human interface.

EURASIAN OTTER RAISES HOPE FOR J&K STREAM

A team of scientists has spotted Eurasian otters in the Neeru stream of the Chenab catchment in Jammu and Kashmir.

About Eurasian Otter

It is an elusive, solitary otter that has one of the widest distributions. (Scientific Name: *Lutra lutra*)

The Eurasian otter covers the largest range of any Palearctic mammal, covering parts of three continents – Europe, Asia, and Africa. In India, it is present in northern, northeast and southern India.

‘**Palaearctic**’ is the largest of the Earth’s eight bio-geographic realms. It encompasses all of Eurasia, north of the Himalayan foothills, as well as North Africa.

‘**Bio-geographic realms**’ are large geographic areas where ecosystems share a broadly similar biota.

In the Indian subcontinent, Eurasian otters occur in cold hills and mountain streams. During summer (April – June) in the Himalayas, they may ascend up to 3,660 m.

Conservation Status:

IUCN Red List: *Near Threatened*

CITES: *Appendix I*

Indian Wildlife Protection Act, 1972: *Schedule II*

Neeru Stream

Neeru is a tributary of the Chenab River. It is a 30km perennial stream that originates in the Kailash Lake at 3,900 meters above mean sea level and drains into the Chenab at Pul-Doda.

Fed by 13 major tributaries, Neeru flows through several small villages, semiurban and urbanized areas with Bhaderwah being the largest settlement.



Significance of spotting Eurasian Otters near Neeru river

Eurasian otters are regarded as a flagship species and indicator of high-quality aquatic habitats. Its presence is encouraging for the health of the Neeru stream.

The findings have confirmed that some stretches of the Neeru remain unpolluted.

LIGHTNING AS A NATURAL DISASTER

Why in news?

Several Indian states have requested the Centre to declare lightning as a natural disaster.

About Lightning

Lightning is a **giant spark of electricity in the atmosphere** between clouds, the air, or the ground.

Currently, only certain types of disasters are covered under the State Disaster Response Fund (SDRF), which is a fund set up to provide financial assistance to states in the event of a disaster.

The types of disasters that are covered include cyclones, droughts, earthquakes, fires, floods, tsunamis, hailstorms, landslides, avalanches, cloudbursts, pest attacks, frost, and cold waves.

But, lightning is not considered as a natural

disaster under the legal framework of disaster management in India.

According to a study by the Delhi-based RMSI, the **frequency of lightning** was the highest in northeastern states and in **West Bengal, Sikkim, Jharkhand, Odisha and Bihar**, but the **number of deaths** were higher in **Madhya Pradesh, Maharashtra, Chhattisgarh, and Odisha**.

Hence, many states have requested the Centre to declare lightning as a natural disaster.

Need for declaring as a natural disaster

According to government statistics, **more than 100,000 individuals have died** in the nation as a result of lightning strikes between 1967 and 2019. This represents **more than a third of the deaths brought on by natural disasters throughout this time**.

By declaring lightning as a natural disaster, the Indian government would be able **to provide financial assistance to states** affected by lightning strikes.

This would help to ensure that states are able to **respond effectively to lightning-related**

disasters and that the burden of such disasters is not disproportionately borne by poorer states.

Legal Framework for disaster management

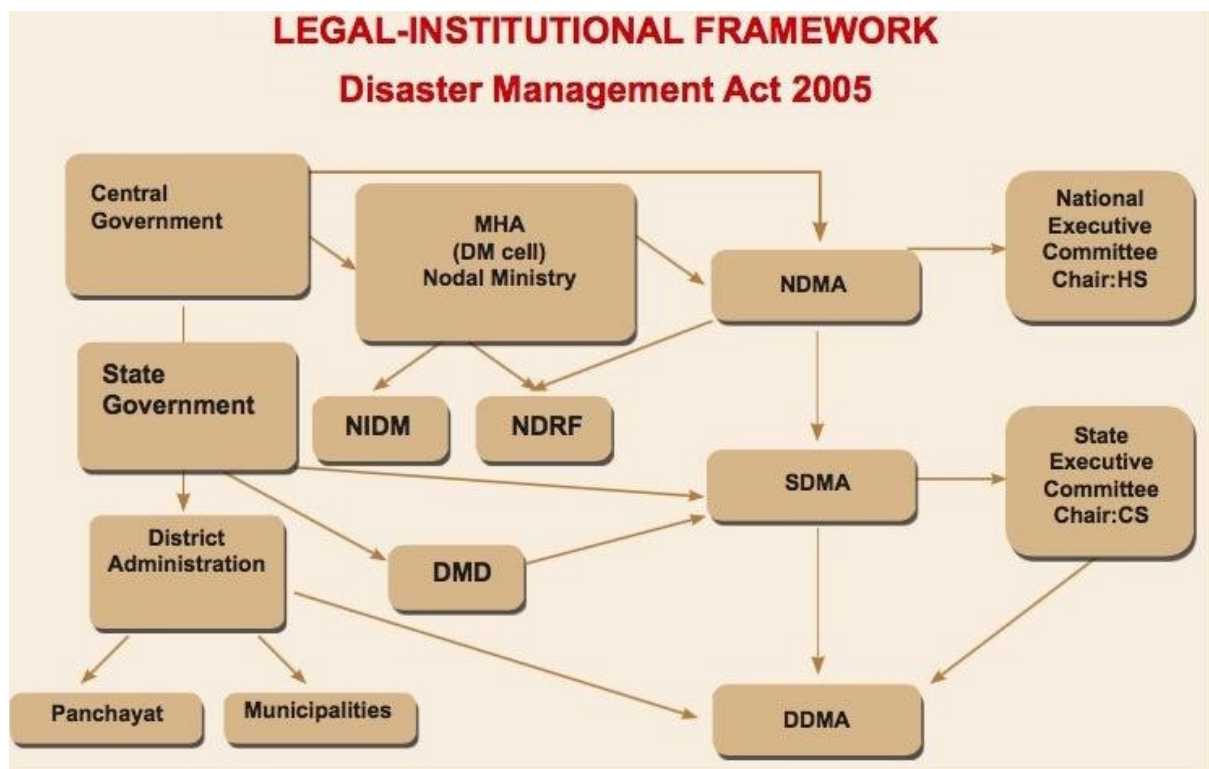
The subject of disaster management does not specifically find mention in any of the three lists in the 7th Schedule of the Indian Constitution

State Governments are primarily responsible for disaster management. The Union Government supplements the efforts of the state by providing logistical and financial support.

When disaster happens, the **State Governments undertake relief measures** using the SDRF available at their disposal. However, this amount may not be sufficient to carry out any relief work for disasters with high intensity. Whenever this happens, the Union Government releases additional financial assistance to the states from NDRF, provided the disaster is of a 'Severe nature'.

The **criteria for considering a disaster as a disaster of 'severe nature' is unclear**.

It is important to understand that the **contribution to SDRF from the Union and State**



Governments is a constitutional mandate which is not at the discretion of any government, whereas the **release of funds from NDRF is dependent** on the nature of the disaster and based on the recommendations of the High-Level Committee.

Disasters such as cyclones, drought, earthquakes, fire, flood, tsunamis, hailstorms, landslides, avalanches, cloud bursts, pest attacks and frost and cold waves are considered for the utilization of SDRF, while for NDRF releases to be made, these disasters must be of 'Severe nature' and require the expenditure in excess of the balances in SDRF as per the guidelines on the constitution and administration of State and National Disaster Response Funds.

Actions taken for resilience against Lightning

National Disaster Management Authority (NDMA) has issued '*Guidelines for Preparation of Action Plan – Prevention and Management of Thunderstorm & Lightning/ Squall/ Dust/ Hailstorm and Strong Winds*'

As per the guidelines issued based on recommendations of 15th Finance Commission for Constitution and Administration of State

Disaster Response Fund (SDRF)/ National Disaster Response Fund (NDRF), **lightning is not included in the centrally notified list of natural disasters eligible for relief under SDRF/NDRF.**

However, the State Governments can use up to 10% of the annual funds allocation of their SDRF, for providing immediate relief to the victims of natural disasters that they consider to be 'disasters' within local context in the State, including lightning. As per approved norms, an ex-gratia of Rs. 4.00 lakh is provided to the next-of-kin of a person died due to notified disaster.

In 2020, '**Damini**' lightning App was developed by IITM-Pune. The App is monitoring all lightning activity which are happening over India and alert the person if lightning is happening in the area near the person, by GPS notification under 20KM and 40KM radius.

National Disaster Management Authority (NDMA) has issued '**Guidelines for Preparation of Action Plan – Prevention and Management of Thunderstorm & Lightning/ Squall/ Dust/ Hailstorm and Strong Winds**' in 2019 to all State Governments/ UTs

WHY DO LANDFILLS CATCH FIRE DURING SUMMERS?

Why in news?

The Kochi landfill site around Brahmapuram that caught fire earlier this month is a stark reminder that Indian cities need to be prepared for more such incidents as summer approaches.

About Landfill

A landfill site, also known as a tip, dump, rubbish dump, garbage dump, or dumping ground, is a site for the **disposal of waste materials.**

Landfill is the **oldest and most common form** of waste disposal, although the systematic burial of the waste with daily, intermediate and final covers only began in the 1940s. In the past,

refuse was simply left in piles or thrown into pits; in archeology this is known as a midden.

Why do landfills catch fire?

India's municipalities have been collecting more than 95% of the waste generated in cities but the efficiency of waste-processing is 30-40% at best.

Municipal solid waste consists of about 60% biodegradable material, 25% non-biodegradable material and 15% inert materials, like silt and stone. Municipalities are expected to process the wet and dry waste separately and to have the recovered by-products recycled.

Unfortunately, **the rate of processing in India's cities is far lower than the rate of waste**

generation, so unprocessed waste remains in open landfills for long periods of time.

This openly disposed waste includes flammable material like low-quality plastics, which have a relatively higher calorific value of about 2,500-3,000 kcal/kg, and rags and clothes.

In summer, the **biodegradable fraction composts much faster, increasing the temperature of the heap to beyond 70-80°C**. A higher temperature coupled with flammable materials is the perfect situation for a landfill to catch fire. Some fires go on for months.

Environmental Impact of Landfills

The most pressing environmental concern regarding landfills is their **release of methane gas**.

Along with methane, landfills also **produce carbon dioxide and water vapor, and trace amounts of oxygen, nitrogen, hydrogen, and non methane organic compounds**. These gases can also contribute to climate change and create smog if left uncontrolled.

The creation of landfills typically means **destroying natural habitats for wildlife**.

While landfills are required to have plastic or clay lining these liners tend to have leaks. This can result in **leachate**, a liquid produced by landfill sites, **contaminating nearby water sources**, further damaging ecosystems.

Leachate can contain **high levels of ammonia**. When ammonia makes its way into ecosystems it is nitrified to produce nitrate. This nitrate can then cause **eutrophication**, or a lack of oxygen due to increased growth of plant life, in nearby water sources.

Landfills bring hazards such as odor, smoke, noise, bugs, and water supply contamination.

Suggestive measures

Permanent Solution - There are two possible permanent solutions to manage landfill fires.

The first solution is to **completely cap the material using soil**, and close landfills in a

scientific manner. This solution is unsuitable in the Indian context, as the land can't be used again for other purposes. **Closed landfills** have specific standard operating procedures, including managing the methane emissions.

The second solution is **to clear the piles of waste through bioremediation** — excavate old waste and use automated sieving machines to segregate the flammable refuse-derived fuel (RDF) (plastics, rags, clothes, etc.) from biodegradable material. The recovered RDF can be sent to cement kilns as fuel, while the bio-soil can be distributed to farmers to enrich soil. The inert fraction will have to be landfilled. However, implementing a bioremediation project usually takes up to two or three years, necessitating a short-term solution for summertime landfill fires.

Immediate Measures

To **divide a site into blocks** depending on the nature of the waste. At each site, blocks with fresh waste should be separated from blocks with flammable material. Blocks that have been capped using soil are less likely to catch fire, so portions like these should also be separated out. The different blocks should ideally be separated using a drain or soil bund and a layer of soil should cap each block. This reduces the chance of fires spreading across blocks within the same landfill.

The most vulnerable part of the landfill — the portion with lots of plastics and cloth — should be capped with soil. The **fresh-waste block shouldn't be capped but enough moisture should be provided by sprinkling water and the material should be turned regularly for aeration**, which helps cool the waste heap.

Once a site has been divided into blocks, the landfill operator should classify incoming waste on arrival to the site, and dispose them in designated blocks rather than dumping mixed fractions. Already segregated non-recyclable and non-biodegradable waste should be sent to cement kilns instead of being allowed to accumulate. Dry grass material and dry trees from the site should also be cleared immediately.

BIOMINING

Why in news?

The Greater Chennai Corporation will start biominining of legacy waste in Kodungaiyur in July and develop integrated processing and disposal facilities, besides raising a dense urban forest and eco park on 50 acres of reclaimed land

Biomining

Biomining is the scientific process of excavation, treatment, segregation and gainful utilisation of aged municipal solid waste lying in dumpsites typically referred to as legacy waste.

It is a process of treating garbage or waste with bio-organisms or natural elements like air and sunlight. Over time, the biodegradable component of the waste gets decomposed through the natural process, and the remaining part i.e. non-biodegradable material is then dealt separately. It extracts metals of economic interest from rock ores or mine waste.

It comprises 4 steps: excavation of legacy waste, stabilising the waste using bioremediation, segregation of excavated waste and then sustainable management and its safe disposal.

Most current biominining operations target valuable metals like copper, uranium, nickel, and gold that are commonly found in sulfidic (sulfur-bearing)

Microbes are especially good at oxidizing sulfidic minerals, converting metals like iron and copper into forms that can dissolve more easily.

Other metals, like gold, are not directly dissolved by this microbial process, but are made more accessible to traditional mining techniques because the minerals surrounding these metals are dissolved and removed by microbial processes.

Environmental risks of biominining

The release of the microbes themselves into the local environment are considered to be relatively small.

The greatest environmental risks are related to leakage and treatment of the acidic, metal-rich

solution created by the microbes.

This risk can be managed by ensuring that biominining is conducted under controlled conditions with proper sealing and waste management protocols.

Benefits

- It allows us to recycle resources by extracting useful components from the waste such as metal, as compost in fertilizer etc.
- If some of the Heavy metals are not degraded it can produce toxic compound and these compound can create health hazard like asthma, lungs cancer etc.
- Normal Processes of incineration requires a lot of energy whereas these processes do not need energy at all.
- These processes can be in situ and ex-situ.
- It is Eco-friendly and environmentally sustainable also after using this technique we can use the contaminated land for other purposes.

Disadvantage

- Limited to bio-degradable compound.
- Not instantaneous.
- Factors must be maintained as it is highly specific.
- Products may be more persistent or toxic than the parent compound.

Methods of Biomining

The methods of biominining include Bioleaching, Bio-oxidation, Dump leaching, and Agitated leaching.

Bioleaching: A classic method of biominining. In this method, low-grade ore is dumped into a heap called leach pile and then soaked with a weak sulfuric acid wash. Then acid reacts with the ores sulfide matrix and encourages the growth of bacterial strain which starts to degrade ore and releases minerals or metals in fluid form.

Bio-oxidation: it is widely used for the extraction of gold from ores. This process involves exposing the ore to bacterial oxidation which degrades the insoluble pyrite and arsenic components as it is a precious metal only removal of interfering metal sulfides from ore. Actually, bio-oxidation leaves metal in solid phase and solution is discarded.

Dump leaching : Dump leaching is an industrial process to extract precious metals and copper from ores. Dump leaching is similar to heap leaching, however in the case of dump leaching ore is taken directly from the mine and stacked on the leach pad without crushing where, in the

case of gold and silver, the dump is irrigated with a dilute cyanide solution that percolates through the ore to dissolve gold and silver. The solution containing gold and silver exits the base of the dump, is collected and precious metals extracted. The resultant barren solution is recharged with additional cyanide and returned to the dump. This method of leaching is usually suitable for low grade ores because it is very low cost

Agitated leaching: crushed rocks are placed into a large vat that is shaken to distribute the microbes and material evenly and speed up the bioleaching process.

PUMA CONCOLOR

Why in the News?

A new study has suggested that Pumas' hunting strategies might be superior to earlier believed and they might utilize a sly hunting strategy known as garden to hunt.

About Puma (*Puma concolor*)

Puma is a member of the family Felidae and is also called mountain lion, cougar, or catamount (archaic).

It is a large **brownish New World cat** comparable in size to the jaguar.

Habitats:

Pumas live in a variety of habitats, including desert scrub, chaparral, swamps, and forests but they avoid agricultural areas, flatlands, and other habitats lacking cover (vegetative or topographic).

Puma has the widest distribution of any New World mammal, with a range extending from southeastern Alaska to southern Argentina and Chile.

Conservation status

IUCN: Least Concern

About their hunting strategy

A recent study revealed that Puma is using a **garden-to-hunt strategy**; meaning they fertilize the soil in their hunting spots with their kills to

attract more prey.

The animal carcasses of their prey are helping the animals create nutrient-rich hotspots that may continue to improve their future hunting success over time.

These nutrients in the soil increase plant quality and attract ungulates — large mammals with hooves.

Decomposing ungulate carcasses deposits elevated **nitrogen, carbon and other valuable elements that improve soil and plants' chemistry and nutrient makeup.**

Over a **nine-year lifespan**, each puma was estimated to have created approximately 482 temporary hotspots of nutrient-rich soil.

The hunting capacity of pumas also fascinated the authors of the paper. A dozen pumas can



produce over 100,000 kilograms of carrion per year.

Pumas contribute over a million kg of meat to ecosystems every day, improving the quality of

soil and plant life, feeding hundreds of species, and supporting the health of their ecosystems and our planet's overall web of life.

ATMOSPHERIC RIVERS – CALIFORNIA FLOODING

California has experienced an exceptionally wet winter with 11 atmospheric rivers battering the state since late December 2022.

Atmospheric rivers are relatively long, narrow regions in the atmosphere – like rivers in the sky – that transport most of the water vapor outside of the tropics. One well-known atmospheric river called the “Pineapple Express” picks up warm, moist air near Hawaii. When the Pineapple Express hits land in the Western United States and Canada, it can cause heavy rain and snow. In California, it can cause up to 5 inches of rain in a day.

Atmospheric rivers typically occur in the extratropical North Pacific/Atlantic, southeastern Pacific, and South Atlantic oceans often making landfall on the west coasts of North and South America. Other regions that experience atmospheric river landfalls include Greenland, Antarctica, and the south-central United States.

Formation:

Atmospheric rivers usually begin over tropical regions. Warm temperatures cause ocean water to evaporate and rise into the atmosphere. Strong winds help to carry the water vapor through the atmosphere. As atmospheric rivers move over land, the water vapor rises up farther

into the atmosphere. It then cools into water droplets, which fall as precipitation.

Impacts:

Heavy rainfall associated with ARs can cause flooding, landslides, and mudslides. They can also lead to water supply disruption, and develop drought-like conditions. Not all atmospheric rivers cause damage; most are weak systems that often provide beneficial rain or snow that is crucial to the water supply.

Climate change is expected to increase the frequency and intensity of ARs in some regions of the world, particularly in the mid-latitudes. This could have significant implications for water resources management, flood control, and other areas of public policy.

The science behind atmospheric rivers

An atmospheric river (AR) is a flowing column of condensed water vapor in the atmosphere responsible for producing significant levels of rain and snow, especially in the Western United States. When ARs move inland and sweep over the mountains, the water vapor rises and cools to create heavy precipitation. Though many ARs are weak systems that simply provide beneficial rain or snow, some of the larger, more powerful ARs can create extreme rainfall and floods capable of disrupting travel, inducing mudslides and causing catastrophic damage to life and property. Visit www.research.noaa.gov to learn more.

A strong AR transports an amount of water vapor roughly equivalent to 7.5–15 times the average flow of water at the mouth of the Mississippi River.

ARs are a primary feature in the entire global water cycle and are tied closely to both water supply and flood risks, particularly in the Western U.S.

On average, about 30–50% of annual precipitation on the West Coast occurs in just a few AR events and contributes to the water supply — and flooding risk.

ARs move with the weather and are present somewhere on Earth at any given time.

ARs are approximately 250–375 miles wide on average.

Scientists' improved understanding of ARs has come from roughly a decade of scientific studies that use observations from satellites, radar and aircraft as well as the latest numerical weather models. More studies are underway, including a 2015 scientific mission that added data from instruments aboard a NOAA ship.

Image not to scale.

MOUNT MERAPI ERUPTION

Indonesia's second most active Merapi volcano suddenly erupted, spewing hot lava and a column of hot clouds rising 100 metres into the air.

Merapi is an active volcano located in Central Java, Indonesia. Its name means “Mountain of

Fire” in the Javanese language. It is one of the most active and dangerous volcanoes in the world, with a history of frequent and sometimes violent eruptions.

The last major eruption occurred in 2010,

which resulted in the deaths of over 350 people and caused widespread damage to nearby villages. Despite the risks, Merapi is a popular destination for hikers and tourists who come to marvel at its stunning beauty and geological significance.

Indonesia is located on the Pacific Ring of Fire, a horseshoe-shaped region around the Pacific Ocean where many earthquakes and volcanic eruptions occur. The country has more than 120 active volcanoes, the most of any country in the world, and has experienced some of the deadliest volcanic eruptions in history. The government has implemented measures to monitor and prepare for volcanic activity, but the frequent eruptions still pose a significant threat to the country's population and infrastructure.

Indonesia is home to many active volcanoes, with over 120 active volcanoes located across the country. Some of the other major volcanoes in Indonesia include:

Mount Krakatoa – Located in the Sunda Strait between the islands of Java and Sumatra. It is infamous for its 1883 eruption, which was one of the deadliest and most destructive volcanic events in recorded history.

Mount Rinjani – Located on the island of Lombok in West Nusa Tenggara province. It is

the second highest volcano in Indonesia and a popular destination for trekkers and hikers.

Mount Tambora – Located on the island of Sumbawa in West Nusa Tenggara province. It is known for its 1815 eruption, which was the largest volcanic eruption in recorded history, causing a “year without summer” in the northern hemisphere.

Mount Batur – Located on the island of Bali in Bali province. It is a popular tourist destination known for its scenic views and hot springs.

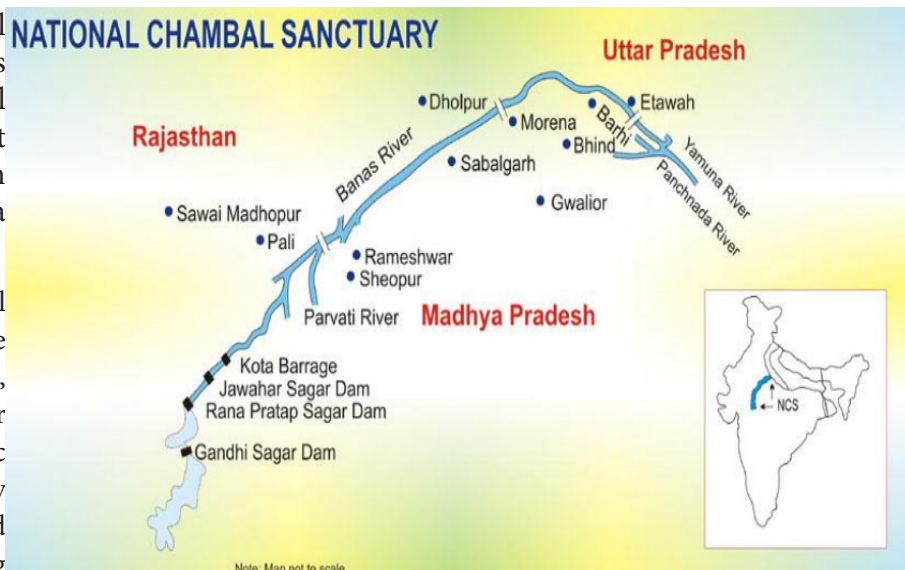


Mount Merbabu – Located on the island of Java in Central Java province. It is the highest mountain in Central Java and a popular destination for hikers and climbers.

NATIONAL CHAMBAL SANCTUARY

The area of National Chambal Sanctuary is under threat due to illegal sand mining activities that are damaging the ecosystem and endangering its flora and fauna.

The National Chambal Sanctuary, located at the trijunction of Rajasthan, Madhya Pradesh, and Uttar Pradesh. It is a fragile lotic ecosystem, which is a critically important breeding ground for gharials - fish-eating crocodiles. It is home to the



Note: Map not to scale

endangered Red-crowned Roof Turtle and the Ganges River dolphin. This is part of the Khathiar-Gir Dry Deciduous Forest Ecoregion.

The sanctuary is protected under the Wildlife

Protection Act, 1972, and is listed as an 'Important Bird and Biodiversity Area'. The sanctuary is also a proposed Ramsar site, and over 320 species of resident and migratory birds inhabit the area.

GREAT NICOBAR ISLAND PROJECT

The National Green Tribunal (NGT) has issued a stay on the Great Nicobar Island project worth ₹72,000 crore and created a committee to review the environmental clearance granted by the Ministry of Environment, Forest and Climate

Great Nicobar Gas and Solar Power Plant (Great Nicobar GSPP): with 450-MVA capacity, spread over 16,610 hectares.

Coastal cities: two new greenfield coastal cities.

As per the NITI Aayog report, the proposed port will allow Great Nicobar to participate in the regional and global maritime economy by becoming a major player in cargo transshipment. It is equidistant from Colombo to the southwest and Port Klang (Malaysia) and Singapore to the southeast, and positioned close to the East-West international shipping corridor, through which a very large part of the world's shipping trade passes.

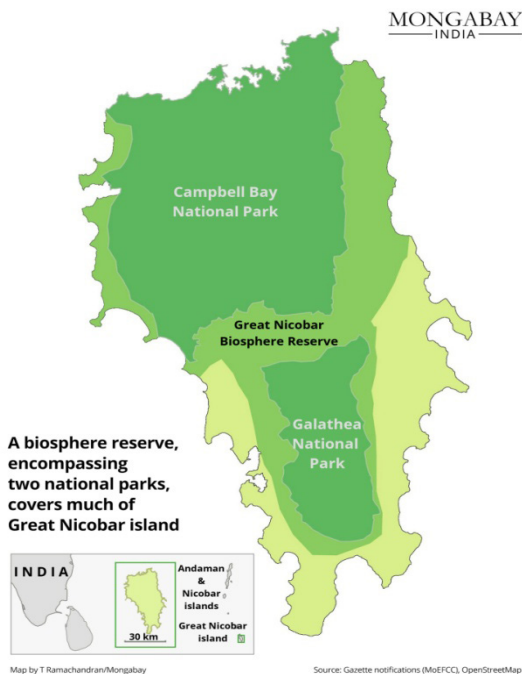
The proposal to develop Great Nicobar was first floated in the 1970s, and its importance for national security and consolidation of the Indian Ocean Region has been repeatedly underlined. Increasing Chinese assertion in the Indian Ocean has added great urgency to this imperative in recent years.

Criticism:

The project has faced several criticism citing concerns regarding its adverse impact on the rich biodiversity of the area and damage to the habitats of endangered species. The project area is part of Coastal Regulation Zones-IA and IB, and the Galathea bay which is a nesting ground for birds. Also, turtle nesting sites, dolphins and other species will be harmed by dredging.

Environmentalists have also flagged the loss of tree cover and mangroves on the island as a result of the development project. The loss of tree cover will not only affect the flora and fauna on the island, it will also lead to increased runoff and sediment deposits in the ocean, impacting the coral reefs in the area.

Critics argue that while Particularly Vulnerable



Change.

The Great Nicobar Island (GNI) Project is a mega project to be implemented at the southern end of the Andaman and Nicobar islands. The Project has geostrategic importance for defence, logistics, commerce and industries, eco-tourism, coastal tourism, Coastal Regulation Zone, etc. It has four components:

Galathea Bay International Container Transshipment Terminal (Galathea Bay ICTT), with 14.2 million TEUs (unit of cargo) capacity eventually.

Great Nicobar International Airport (GNIA): greenfield airport with peak hour capacity of 4,000 passengers.

Tribal Groups (PVTGs) are accorded the highest level of protection by local administration, they still face numerous challenges due to encroachment into their areas in the name of development.

This project will increase the population to over 3.5 lakh (350,000), which may cause a threat to the indigenous communities. Around 1761 inhabitants, including indigenous Shompen people and Nicobarese communities of this island, are likely to be affected by this project. 853 square kilometers of this island is designated as tribal reserve under the Andaman and Nicobar Protection of Aboriginal Tribes Regulation, 1956. This means that the land is meant for exclusive use of the community and others cannot access the area without their express permission. Around 10% of tribal reserve of the island will be affected by this project. According to Forest Rights Act, 2006, Shompen people are legal sole authority to preserve the forest reserve.

Major tribes in the Andaman Islands

Great Andamanese: The Great Andamanese tribe is one of the most prominent tribes in the Andaman Islands. Historically, they were divided into 10 different sub-tribes, but today, only around 50 members of the tribe remain. They are known

for their distinct language, which is unrelated to any other language in the world.

Onge: The Onge tribe is believed to be the first tribe to have settled in the Andaman Islands. Today, only around 100 members of the tribe remain. They are known for their unique hunting and fishing techniques.

Jarwa: The Jarwa tribe is one of the most isolated tribes in the world. They live deep in the forests of the Andaman Islands and have had very little contact with the outside world. They are known for their hunting and gathering skills and their unique culture.

Sentinelese: The Sentinelese tribe is perhaps the most isolated tribe in the world. They have had virtually no contact with the outside world and are known to be fiercely protective of their territory. As a result, very little is known about their culture and way of life.

Shompen: Apart from these four major tribes, there are also several smaller tribes in the Andaman Islands, including the Shompen and the Nicobarese. The Nicobarese are the largest indigenous community in the Nicobar Islands and are known for their unique culture and language.

APEX BODY FOR GLACIER MANAGEMENT

Recently, a Parliamentary Standing Committee in India has recommended the establishment of an overarching apex body for glacier management in the country.

There are different ministries/departments/institutions with different mandates for dealing with hydro-meteorological and hydro-geological hazards of Himalayan glaciers.

While the glaciers are surveyed and their detailed inventory is maintained by the Geological Survey of India, Ministry of Mines; the Ministry of Environment, Forest and Climate Change looks into all matters related to climate change. The Department of Science & Technology is involved in conducting research on glaciers and the National Centre for Polar and Ocean Research has done some studies on the Himalayan Cryosphere.

Glaciers are large, thick masses of ice that form on land when fallen snow gets compressed into ice over many centuries. Presently, 10 percent of land area on Earth is covered with glacial ice, including glaciers, ice caps, and the ice sheets of Greenland and Antarctica. In India, mostly glaciers are confined to the Himalayan region, specifically in Greater Himalayan ranges. Glacierized areas cover over 15 million square kilometres (5.8 million square miles). Glaciers store about 69 percent of the world's fresh water.

Recommendations by the parliamentary panel:

1. Set up a single nodal agency for bringing out synergies among various government departments/ministries involved in glaciological research and

2. Establish regional cooperation for the seamless sharing of hydrological information/data on glacier movement/behaviour
3. Create a multi-hazard alert and warning system
4. Increase involvement of Himalayan states, planners, scientists, and academicians in devising suitable measures for glacier management

HOW TO BECOME A GREEN HYDROGEN SUPERPOWER

GS-II Resources in the world, GS-III Science and Technology- developments and their applications and effects in everyday life

Context

The 2023 Union Budget has allocated ₹19,700 crore for the National Green Hydrogen Mission. This will set in motion a programme that can position India as a green hydrogen (super)power.

Green hydrogen

It is a type of hydrogen produced by splitting water through electrolysis, using electrolyser powered entirely by renewable power sources.

Advantages – It could replace fossil fuels and decarbonize a range of sectors such as petroleum refining, fertiliser production, steel production, chemicals, transport, etc.

Disadvantages – It is not commercially viable at present and is expensive to be manufactured.

Need for green hydrogen to propel growth

India has committed to 50% electricity capacity from non-fossil sources by 2030. But an energy transition in industry is needed at the same time.

Most industrial greenhouse gas emissions in India come from steel, cement, fertilizers and petrochemicals. Green hydrogen holds the promise of fuelling industrial growth while simultaneously reducing industrial emissions.

Green hydrogen can serve as an energy source (heavy industry, long-distance mobility, aviation, and power storage) and an energy carrier (as green ammonia or blended with natural gas).

India's primary energy requirement, which doubled in the last 20 years, will continue to grow along with the expected GDP growth (circa 9-10 per cent). However, other factors may contribute to increased energy requirements, thus putting additional pressure on climate concerns and energy security for the country.

India is targeting at least five million tonnes of production by 2030, which is larger than that of any single economy. This would create demand for 100-125 gigawatts (GW) of renewable energy, 60-100 GW of electrolysers, investment opportunity of ₹8

lakh crore, and cut 50 MMT of annual emissions.

With abundant sunshine and significant wind energy resources, India is geographically blessed to become one of the lowest-cost producers of green hydrogen

Actions taken by government

The Ministry of New and Renewable Energy (MNRE) developed a Hydrogen and Fuel Cell Road Map, published in 2006 (MNRE, 2006).

In 2016, MNRE published a further report, which laid out more up-to-date plans for the Government's ambitions for hydrogen (MNRE, 2016). This report lays out a comprehensive plan for increasing R&D activity in India across a number of programme areas, with the 2016 report showing ambitious timelines for research activities out to 2022.

Given the nascent stage of most hydrogen-based technologies, MNRE's activities have mainly focused on increased research activity, as opposed to wide-scale deployment.

Most recently, the Government of India have prepared a Hydrogen Mission, with support from the MNRE and NITI Aayog which expounds the strategy for wide scale deployment

How to capture benefits of Green Hydrogen

To ensure that Hydrogen plays a substantial role in the country's primary energy mix, we need to get into mission mode and address the following issues concerning this green fuel.

1. Policy clarity and Directives related to Hydrogen production, transportation & consumption
2. Supply of Hydrogen
3. Distribution and Transportation of Hydrogen
4. Demand creation and use of Hydrogen

The following describes the pathways that can capture the benefits of green hydrogen

Green Hydrogen mission

Repurposing Natural gas pipelines for Green hydrogen transportation

Niti Aayog can mandate a certain percentage of Hydrogen in, say, production of fertilizers and petroleum refining.

Near-term policy measures can bring down the current costs of green hydrogen to make it competitive with the existing grey hydrogen (hydrogen produced by natural gas) prices.

Medium-term price targets

should be set to guide the industry towards making green hydrogen the most competitive form of hydrogen.

Government can encourage near term market development by identifying industrial clusters and enacting associated viability gap funding, mandates and targets.

Opportunities around research and development and manufacturing of components like electrolyzers need to be identified and appropriately encouraged with adequate financial mechanisms such as production-linked incentive (PLI) schemes to enable 25 GW of manufacturing capacity of electrolyzers by 2028.

A globally competitive green hydrogen industry can lead to exports in green hydrogen and hydrogen-embedded low-carbon products like green ammonia and green steel that can unlock 95 GW of electrolysis capacity in the nation by 2030.

Five priorities

First, domestic demand is critical. If we are not a big player domestically, we cannot be a major player in the international market.

The mission introduces a Strategic Interventions for Green Hydrogen Transition fund for five years, with ₹13,000 crore as direct support to consume green hydrogen. This will encourage heavy industries to increase demand, offering economies of scale.

Blending mandates for refineries can be another demand trigger. Urea plants have been exempted.

Another approach is to leverage government procurement. India is the second largest steel producer in the world. Costs of green steel, made from green hydrogen, are currently much higher.

But, this could be reduced with economies of scale and changes in production technologies. A share of government procurement of steel may be green steel.

Second, India can be an attractive destination for domestic and foreign investment. Green Hydrogen production projects in India are far fewer compared to others. Green hydrogen is difficult and expensive to transport.

The mission envisions green hydrogen hubs to consolidate production, end use and exports. A mission secretariat can ensure project clearance is streamlined and reduce financial risks.

Third, the SIGHT fund offers ₹4,500 crore to support electrolyser manufacturing under the performance linked incentive scheme. Currently, manufacturers are importing stacks and assembling them.

India must become more competitive with targeted public funding in manufacturing the most critical and high value components of electrolyzers in India.

Electrolyser technology must be improved to achieve higher efficiency goals, specific application requirements, be able to use non freshwater, and substitute critical minerals.

Fourth, establish bilateral partnerships to develop resilient supply chains. Globally, about 63 bilateral partnerships have emerged; Germany, South Korea and Japan have the most.

Using yen or euro denominated loans for sales to Japan or to the EU, could reduce the cost of capital and help us become export competitive.

Many bilateral deals focus on import export but few deal with technology transfer or investments. India must cooperate with like minded

countries on trade, value chains, research and development, and standards.

The mission allocates ₹400 crore for R&D, which can be leveraged to crowd in private capital into technology codevelopment.

Indian companies should consider joint projects in countries with good renewable energy resources and cheap finance.

Finally, India must coordinate with major economies to develop rules for a global green hydrogen economy.

In the absence of common global frameworks, rules and standards are being

driven by collectives of private corporations rather than through structured intergovernmental processes.

There are already signs of conflicting regulations and protectionist measures in major markets. These put India's ambitions at risk.

India's G20 presidency is an opportunity to craft rules for a global green hydrogen economy. These rules must address operational threats, industrial competitiveness and strategic threats.

India should promote a global network on green hydrogen via which companies could collaborate.

INDIA'S G20 PRESIDENCY AND OCEANS

Context

The oceans hold unlimited opportunities for the prosperity of our planet. It is therefore not surprising that the most prosperous cities and countries are endowed with a coast.

The G20 countries

The G20 forum presents an excellent opportunity to build effective communication with all stakeholders to

share best practices

foster collaborations for advancements in science and technology

promote public-private partnerships

create novel blue finance

mechanisms.

The blue economy is articulated as a key priority area under the Environment and Climate Sustainability Working Group. They together account for around 45% of the world's coastlines and over 21% of the exclusive economic zones (EEZs).

The term 'blue economy' includes not only ocean-dependent economic development, but also inclusive social development and environmental and ecological security.

AIM of G20 Presidency

To promote adoption of high-level principles that

guide sustainable and equitable economic development through the ocean and its resources

Addressing climate change and other environmental challenges.

This approach is consistent with India's call for the global adoption of 'Lifestyle for the Environment' that promotes mindful utilization over mindless consumption patterns.

Role of oceans

The oceans are reservoirs of global biodiversity.

Critical regulators of the global weather and climate.

Support the economic well-being of billions of people in coastal areas.

Initiatives by the government

Sagarmala initiative promotes port-led development.

The Shipbuilding Financial Assistance Policy encourages domestic ship-building.

The Pradhan Mantri Matsya Sampada Yojana is actively engendering a 'blue revolution' through sustainable and responsible development of the fisheries sector.

The Sagar Manthan dashboard tracks vessels in real-time.

The Deep Ocean Mission explores deep-sea resources in the EEZ and continental shelf as well as development of technology for harnessing them.

India adopted the Coastal Regulation Zone notification to classify and better manage coastal regions and conserve ecologically sensitive coastal and marine areas including ecosystems.

Host of the World Environment Day in 2018: India gave a clarion call to eliminate

single-use plastic.

In 2022, the global community rallied together for a multilateral treaty on addressing plastic pollution.

India introduced an amendment to the Plastic Waste Management Rules banning select single-use plastic items.

Ocean related Issues discussed by G20 forum

G20 Action Plan on Marine Litter

Osaka Blue Ocean Vision

Coral Research and Development Accelerator Platform.

Ocean 20 launch: Discussions on the blue economy

Issues related to blue economy

Intensifying extreme weather events

Ocean acidification

Sea level rise.

Growing marine pollution

Over-extraction of

resources

Unplanned urbanization: It poses significant threats to the ocean, coastal and marine ecosystems, and biodiversity.

Way Forward

India's commitment to prioritizing oceans and the blue economy under its presidency would ensure continued discussions on this crucial subject and pave the way for future G20 presidencies.

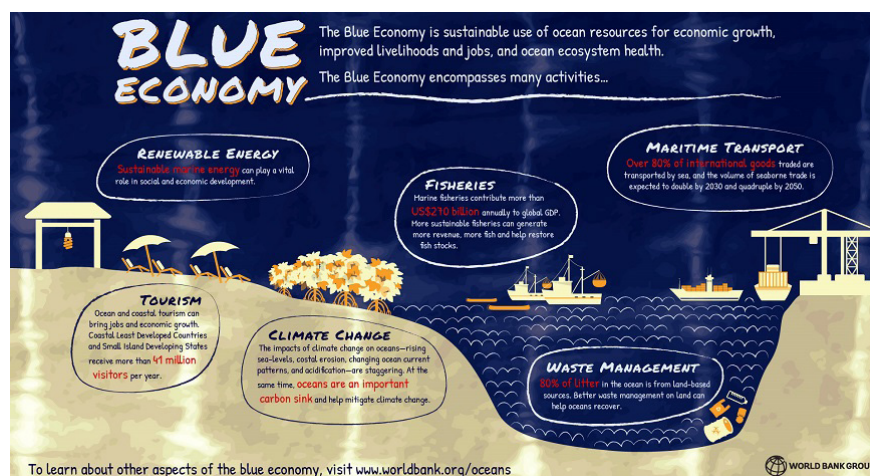
Interconnectedness of oceans implies that activities occurring in one part of the world could have ripple effects across the globe.


Therefore, the responsibility of their protection, conservation and sustainable utilization lies with all nations.

Since the blue economy involves a range of stakeholders and affects several other sectors of the national economy, effective and efficient ocean and blue economy governance also presents a significant challenge.

India's G20 presidency would play an important role in promoting individual and collective actions to facilitate the transition towards a sustainable blue economy.

The international negotiations under the United Nations Framework Convention on Climate Change, the Convention on Biological Diversity, the Intergovernmental Negotiating Committee on Plastic Pollution, the United Nations Convention on the Law of the Sea, etc are





SCIENCE & TECHNOLOGY

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ORGANOID INTELLIGENCE

Why in news?

Scientists at Johns Hopkins University (JHU) recently outlined a plan for a potentially revolutionary new area of research called “organoid intelligence”, which aims to create “biocomputers”

About

Organoid

An organoid is a **self-organized 3D tissue** that is typically **derived from stem cells** (pluripotent, fetal or adult), and which mimics the key functional, structural and biological complexity of an organ

In a quest to develop systems that are more relevant to humans, scientists are building **3D cultures of brain tissue in the lab**, also called **brain organoids**.

These “mini-brains” (with a size of up to 4 mm) are built using human stem cells and capture many structural and functional features of a developing human brain

Biocomputers

They are a type of computer that **use biological molecules, such as DNA or proteins, to perform computational tasks**.

The JHU researchers’ scheme combines brain organoids with modern computing methods to create “bio-computers”.

Brain organoids will be grown inside flexible structures affixed with multiple electrodes to

record the firing patterns of neurons and deliver electrical stimuli.

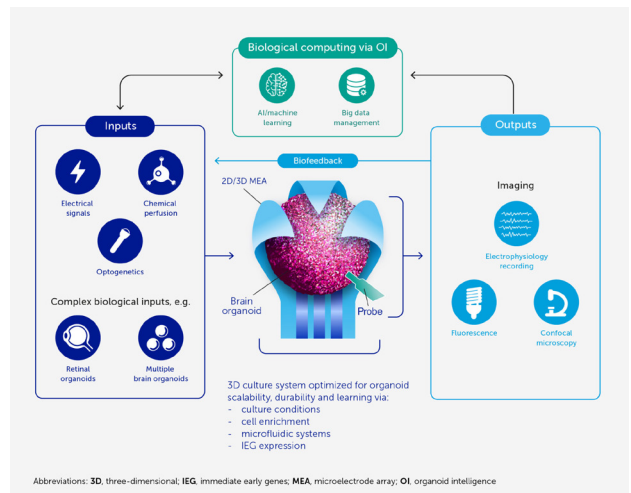
Machine-learning techniques will be used to analyze the response patterns of neurons and their effect on human behavior or biology.

Organoid intelligence

It refers to the **ability of organoids to exhibit certain behaviors** or responses that are **indicative of intelligence**, such as problem-solving, learning, or adapting to changing environments.

These organoids share aspects of brain structure and function that play a key role in cognitive functions like learning and memory.

They would essentially serve as biological hardware and could one day be even more efficient than current computers running AI programs.



CE CRYOGENIC ENGINE

Why in news?

The Indian Space Research Organisation (ISRO) has successfully conducted the flight acceptance hot test of the CE-20 cryogenic engine that will power the Cryogenic Upper Stage of the LVM3 launch vehicle for the Chandrayaan-3 mission.

About

The CE-20 is a **cryogenic rocket engine** developed by the Liquid Propulsion Systems Centre, a subsidiary of Indian Space Research Organisation.

It has been developed to power the upper

stage of the LVM 3 for the Chandrayaan-3 mission

It is the first Indian cryogenic engine to feature a **gas-generator cycle**.

The high thrust cryogenic engine is the most powerful upper stage cryogenic engine in operational service

Cryogenic Engine

A cryogenic engine/ cryogenic stage is **the last stage of space launch vehicles** which makes use of Cryogenics.

Cryogenics is the **study of the production and behaviour of materials at extremely low temperatures** (below -150 degree Centigrade) to lift and place the heavier objects in space.

Cryogenic engine makes use of Liquid Oxygen (LOX) and Liquid Hydrogen (LH2) as propellants which liquefy at -183 deg C and -253 deg C respectively. LOX and LH2 are stored in their respective tanks

LVM 3

LVM3 or Launch Vehicle Mark 3 is Indian

Space Research Organisation's **heaviest rocket**.

It is a **medium-lift launch vehicle** primarily designed to launch communication satellites into geostationary orbit.

LVM3 is a **three-stage vehicle** with two solid motor strap-ons, a liquid propellant core stage and a cryogenic stage.

LVM3 was earlier called **Geosynchronous Satellite Launch Vehicle Mark III** or GSLV Mk III.

The rocket carried into orbit OneWeb's 36 Low Earth Orbit broadband communication satellite.

Chandrayaan- 3 mission

This is India's third moon mission and is a follow-on mission to Chandrayaan-2 to demonstrate end-to-end capability in safe landing and roving on the lunar surface.

It has three major modules — **the Propulsion module, Lander module, and Rover**.

The mission is slated to be launched later this year by Launch Vehicle Mark 3 (LMV3) from the Satish Dhawan Space Centre at Sriharikota.

PROTON BEAM THERAPY

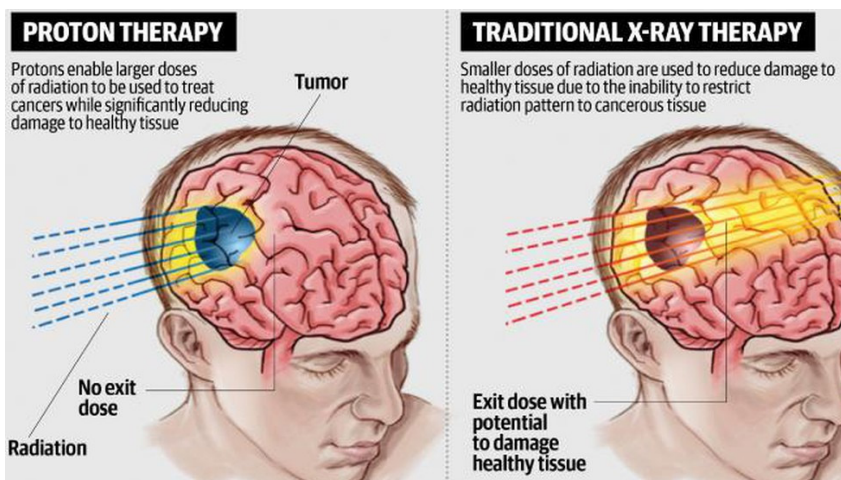
Why in the news?

Proton beam therapy out of reach for many with cancer.

About

PBT is a type of cancer treatment that uses a beam of high-energy protons to destroy cancer cells. A proton is a positively charged elementary particle that is a fundamental constituent of all atomic nuclei.

Unlike traditional radiation therapy, which uses X-rays, PBT can precisely target the tumor while minimizing radiation exposure to surrounding healthy tissue. PBT is typically delivered via a large, complex machine called a cyclotron, which accelerates protons to high speeds and delivers them to the tumor site.



Problems Associated with PBT

Setting up a PBT center is fraught with infrastructural and regulatory challenges stemming from safety concerns from the Department of Atomic Energy. There are concerns about safety

since hydrogen is a highly volatile element, and daily checks are required to prevent leaks. A PBT machine is a huge contraption, up to three storeys tall and costs nearly ₹500 crore.

PBT in India

Apollo Hospital in Chennai is the only center

in South and West Asia that offers PBT. The hospital has treated up to 900 patients, and 47% of cases were brain tumours. Prostate, ovaries, breast, lungs, bones, and soft tissues cancer patients have also seen promising results through PBT.

LEWIS SUPERACIDS

Why in the News?

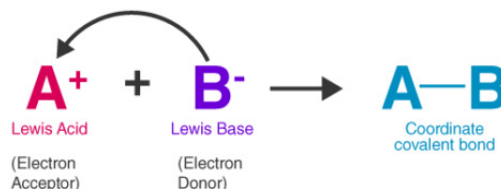
Recently, researchers at Paderborn University, Germany have been able to make a unique class of catalysts called “Lewis super-acids”.

About

Lewis Superacids

Lewis super-acids are derived from Lewis acids, named after the chemist, G N Lewis. Lewis superacids are used as **catalysts in chemistry to accelerate reactions**. These are compounds that add electron pairs and can be used to break strong chemical bonds and speed up reactions.

These are highly reactive reagents, thus difficult to produce and use. Lewis superacids are stronger than **antimony pentafluoride**, the strongest Lewis acid and can break even the toughest bonds. Breaking strong, chemical bonds requires highly reactive substances.



Significance

It enables non-biodegradable fluorinated hydrocarbons (similar to Teflon) to be converted back into sustainable chemicals. It can even convert climate-damaging greenhouse gases, such as sulphur hexafluoride into sustainable ones.

What are Lewis Acid and Base?

Lewis Acid: It is an electron-pair acceptor such as a Hydrogen ion (H^+)

Lewis Base: It is an electron-pair donor such as the hydroxide (OH^-) ion.

NASA MAGELLAN SPACECRAFT

Why in news?

Recently, NASA Magellan spacecraft captured images of Venus' surface from different orbits. A few locations, including those suspected to have volcanic activity, were observed two or three times over two years.

About

NASA's Magellan mission to Venus was one of the most successful **deep space missions**.

It was the **first spacecraft to image the entire surface of Venus** and made several discoveries

about the planet. Magellan burned up about 10 hours after being commanded to plunge into the Venusian atmosphere.

Venus the **second planet** from the sun, is the **hottest and brightest planet** in the solar system.

Venus is **highly visible from Earth** due to its reflective clouds.

Venus and Earth are often called twins because they are similar in size, mass, density, composition and gravity.

With respect to other planets, **Venus and**

Uranus spin backwards which means for these two planets, the sun rises in the west and sets in the east.

The surface of Venus is dominated by volcanic features and has more volcanoes than any other planet in the Solar System. Scientists suspect that there are four volcanoes that may be active: Maat Mons, Ozza Mons, Sapas Mons and Idunn Mons.

Recent Findings

A 2.2 square kilometre volcanic vent on Venus changed shape in eight months, indicating

volcanic activity.

It showed signs of drained lava, hinting at activity and eight months later, radar images indicated that the same vent had doubled in size and the lava lake seemed to have reached the rim

The vent is associated with Maat Mons, Venus's second-highest volcano.

It sits in the Atla Regio, a vast highland region near Venus' equator. These changes were likely due to lava flow escaping the vent, hinting at a possible volcanic activity.

JE VACCINE DELIVERING LOW ANTIBODIES

Why in news?

A small study involving 266 children, who had received two doses of a live, attenuated Japanese encephalitis vaccine SA-14-14-2 made in China, found very low levels of neutralising antibodies IgG at different time points after vaccination. However, the study did not measure cell-mediated immune responses (T-cell immune responses)

About

Japanese encephalitis

Japanese encephalitis virus (JEV) is a flavivirus related to dengue, yellow fever and West Nile viruses, and is spread by mosquitoes. J

EV is the main cause of viral encephalitis in many countries of Asia. Japanese encephalitis virus (JEV) is also a major cause of Acute Encephalitis Syndrome (AES) in India.

The disease is transmitted to humans through bites from infected mosquitoes of the **Culex species**.

These mosquitoes **breed mainly in rice fields** and large water bodies rich in aquatic vegetation.

There is **no antiviral treatment** for patients with JE.

Treatment, available, is supportive to relieve symptoms and stabilise the patient.

Vaccines in India against Japanese Encephalitis

Children between the age group of 1 to 15 years were vaccinated with a single dose of Chinese live attenuated SA-14-14-2 JE vaccine under Universal Immunization Program

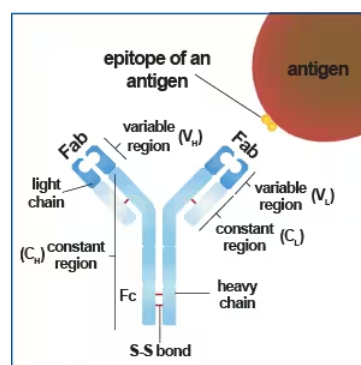
Antigens are substances that stimulate the immune system to produce antibodies. Each antigen has a distinct surface feature or **epitope**. Thus there is a resultant effect of a specific response. Antigens could be anything like a pathogen or bacteria or fungi or even virus. They cause diseases or allergic reactions.

Antibodies are immunoglobulins (Ig) produced by the **B cells of the immune system** in response to antigen exposure

Paratope of antibody binds with the **epitope of antigen** in a lock and key mechanism

With the help of this binding, the antigens are eliminated from the body through direct neutralization or with the help of activating other arms of the immune system

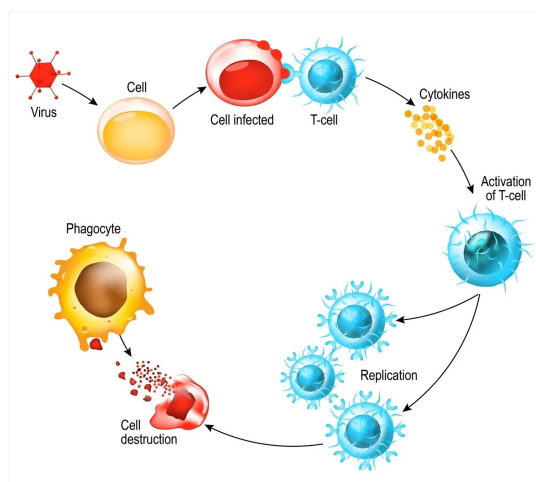
Types of antibodies: IgA, IgE, IgG, IgM, IgD



Cell mediated immunity

Cell-mediated immunity (CMI) is an immune response that does not involve antibodies but rather involves the **activation of macrophages**, the production of antigen-specific cytotoxic **T-lymphocytes**, and the release of various **cytokines** in response to an antigen

Cell-mediated immunity is **directed primarily at microbes that survive in phagocytes** and microbes that infect non-phagocytic cells. It is most effective in destroying virus-infected cells, intracellular bacteria, and cancers. It also plays a major role in delayed transplant rejection.



H3N2 VIRUS

India has recorded deaths of people, from Karnataka and Haryana, due to the Influenza 'A' subtype, H3N2 virus.

About H3N2 virus

Influenza viruses, which cause the infectious disease known as flu, are of four different types: A, B, C and D.

Influenza 'A' is further classified into different subtypes and one of them is the H3N2.

H3N2v is a non-human influenza virus that normally circulates in pigs. When these viruses infect humans, they are termed 'variant' viruses.

H3N2 caused the 1968 flu pandemic that led to the death of around one million people globally and about 100,000 in the US.

A 2020 study, found that the strains of the virus have dramatically evolved in the past five decades.

Its symptoms are similar to that of any

other flu. They include cough, fever, body aches and headache, sore throat and extreme fatigue. Nausea, vomiting and diarrhoea have been seen in very few cases.

WHAT IS H3N2 INFLUENZA

H3N2 influenza, also known as the **"Hong Kong flu,"** is a subtype of the Influenza A virus that can cause respiratory illness in humans.

This subtype has caused **several influenza outbreaks in the past.**

Behind the sudden outbreak

Recently, the IMA's Standing Committee for Anti-Microbial Resistance said **air pollution** may be one of the reasons behind the viral surge.

The change in weather may also be causing the surge. **The cases are expected to go down by April when the temperature increases.**

Transmission

H3N2 influenza is highly contagious and can spread from person to person through droplets generated when an infected person talks, coughs, or sneezes.

This virus usually preys on individuals below the age of 15 years or above 50 years of age.

Children, pregnant women and those with co-morbidities like asthma, diabetes,

heart disease, weakened immune systems and neurological or neurodevelopmental conditions are at a higher risk.

Prevention/Treatment

Self-hygiene like washing hands is the best way to thwart the spread of H3N2.

Moreover, a healthy diet that includes plenty of fruits and vegetables can also play a significant role in improving immunity. To prevent H3N2

influenza, it is essential to take some measures such as receiving a flu vaccine annually.

TRAPPIST-1 B

Why in the News?

New observations from the James Webb Space Telescope reveal that TRAPPIST-1b is unlikely to have an atmosphere wrapped around its rocky body.

About Trappist-1

Trappist-1 is a **red dwarf star** located about 39 light-years away from us in the constellation Aquarius. Trappist-1, the star, is classified as an **ultra-cool dwarf star**, and it has a much smaller mass and lower temperature than the Sun.

Despite its small size, it has been found to **have a high number of Earth-sized planets** in its habitable zone, making it an exciting target for astronomers searching for potentially habitable worlds beyond our solar system.

About TRAPPIST-1 b

Trappist-1b, a hot rocky exoplanet, is one of the seven known exoplanets that orbit Trappist-1 stars. Trappist-1b is the innermost planet of the seven and is about the size of Earth.

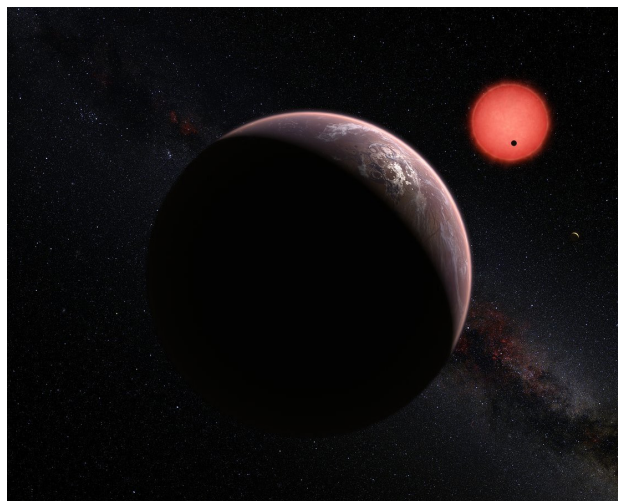
It has a **mass that is slightly larger than Earth's** i.e 1.4 times the mass and 1.1 times the radius of Earth. It orbits its star at a distance of 0.011 astronomical units (AU), completing one circuit in just 1.51 Earth days.

It is also **tidally locked**, which means that one

side of the planet always faces the star, while the other side is perpetually in darkness. It receives about four times the amount of energy that Earth gets from the Sun.

Astronomical unit (AU)

- An AU is the average distance between Earth and the Sun, which is about 93 million miles or 150 million kilometres.
- It is usually used to measure distances within our Solar System.



PIEZOELECTRIC EFFECT IN LIQUIDS

Why in the News?

Recently, scientists have reported evidence of the Piezoelectric effect in liquids. The effect has been known for 143 years and in this time has been observed only in solids.

About Piezoelectric Effect

The piezoelectric effect is a phenomenon where specific types of material (e.g., quartz, topaz, etc.) produce an electric charge proportional to the mechanical stress applied to them.

It occurs when there is a conversion of kinetic or mechanical energy due to crystal deformation, into electrical energy.

Piezoelectric materials are materials that can produce electricity due to mechanical stress.

When a piezoelectric material is placed under mechanical stress, there is a shift of the positive and negative charge centres in the material, which then results in an external electric field.

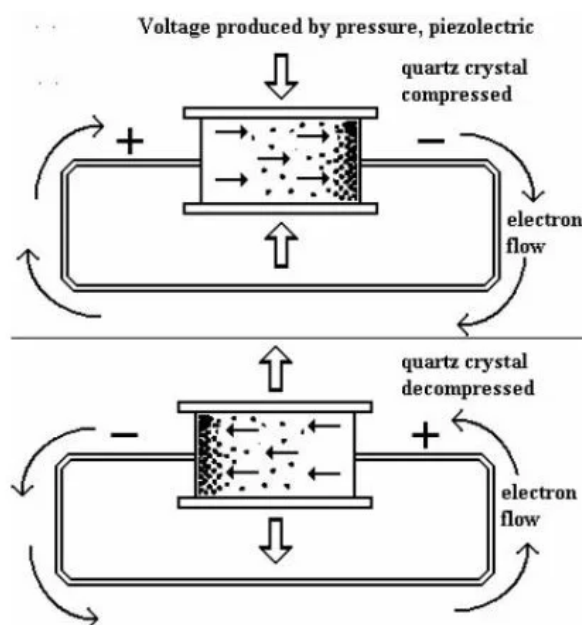
History behind the Piezoelectric Effect

In 1880, Jacques and Pierre Curie discovered that pressure generates electrical charges in certain types of crystals such as quartz and tourmaline.

They called this phenomenon the “piezoelectric effect”. The word “piezo” is derived from the Greek word piezein, which means to squeeze or press.

Later they noticed that electric fields can deform piezoelectric materials. This effect is called the “inverse piezoelectric effect”.

After these first demonstrations, more work was undertaken to explore the great potential of the piezoelectric effect.



About Piezoelectric Materials

A crystal is any solid with atoms or molecules that are arranged in a very orderly way based on repetitions of the same basic atomic building block (the unit cell).

In most crystals (such as in metals), the unit cell is symmetrical; in piezoelectric crystals, it is not.

Normally, piezoelectric crystals are electrically neutral.

The atom arrangement may not be symmetrical, but the electrical charges are perfectly balanced: a positive charge in one place cancels out a negative charge nearby.

However, stretching or squeezing a piezoelectric crystal deforms the structure, pushing some of the atoms closer together or further apart.

This upsets the balance of positive and negative, and causes net electrical charges to appear.

Examples of Piezoelectric Materials

There are a variety of piezoelectric materials, both man-made and natural, that can produce electricity.

Natural –

The most well-known, and the first commercially available piezoelectric material used in electronic devices is the quartz crystal.

Other naturally-occurring piezoelectric materials include topaz, tourmaline, and even bone.

Man-made –

A breakthrough came when scientists developed a new class of man-made materials, called ferroelectrics, which exhibited piezoelectric characteristics many times more powerful than piezoelectric crystals.

Scientists kept searching for higher performance materials and this resulted in the development of barium titanate and lead zirconate titanate.

Applications of Piezoelectric Effect

Developed in the 1900s to detect icebergs, the sonar device is the first practical application for piezoelectric devices.

Sensors, high voltage generators, electronic frequency generators, microbalances, inkjet printers, and ultra-fine focusing and alignment of optical assemblies among others all exploit piezoelectric technology.

It is also the basis of a number of scientific instrumental techniques with atomic resolution, such as scanning tunnelling microscopes.

Discovery of Piezoelectric Effect in Liquids

The researchers at Michigan State University were studying properties of ionic liquids.

Ionic liquids are made from salts with unsymmetrical, flexible organic cations and symmetrical weakly coordinating anions.

The liquid piezoelectric material was discovered as the researchers applied pressure with a piston to a sample of an ionic liquid in a

cylinder.

To their surprise, they found that this led to the release of electricity.

They also found that the amount of electricity released was proportional to the amount of pressure applied.

Significance of this Discovery

The reason the piezoelectric effect has only been expected in solids thus far is that the body being squeezed needs to have an organised structure, like the pyramids of quartz. Liquids do not have such structure; instead, they take the shape of their container.

The researchers suggest that liquid piezoelectric materials could prove to be useful, especially ones made using ionic liquids, because they would be more environmentally friendly than solid materials.

They also note that liquid piezoelectric materials could allow more variety in device shape, opening up wider design opportunities.

LAB GROWN MEAT AND PLANT BASED MEAT

Why in news?

Australian startup Vow, on Tuesday (March 28), lifted the glass cloche on a meatball made of lab-grown cultured meat using the genetic sequence from the long-extinct woolly mammoth

About

Cultured Meat

Cultured Meat is actual meat that is produced from animal cells. It is also known as cultivated meat, cell-based meat or Lab-grown meat. Without the need to raise and kill animals, this meat can be produced.

Instead of using meat from dead animals, cultured meat is created by growing animal cells in a lab. Instead of being raised inside the body of an animal, this meat is generated in cell culture. It tastes, smells, looks, and feels the same as traditional animal flesh and is nutritionally similar.

The more than the 100-year-old method of **in vitro muscle tissue growth** is used to produce lab-grown beef.

Advantages

Environmental impact -

There are enormous positive impacts of cultured meat on consumers and the environment. Cell-based meats are environmentally friendly when compared to livestock meat production.

Nutritional content

The nutrient quality of cultured meat can be regulated by altering the ingredients of the culture medium. There is indeed a possibility of controlling the level of saturated fatty acids and polyunsaturated fatty acids. Omega-3 is an excellent option to replace saturated fats, but the potential risk of higher rancidity needs to be regulated

Impact on health and safety

Cell-based meat production is carried out in a controlled environment, which prevents it from possible contamination during animal slaughtering. Furthermore, the safety of cell-based meat is maintained and protected as it is lab-grown, not produced from the animals raised in a small area which abolishes the risk of an outbreak like influenza. Cell-based meat is claimed to be safer because traditional animal products are a crucial cause of the outbreak, foodborne disease, and food recalls.

Disadvantages

Impact on carbon footprint

Downsides faced during the production and marketing of cell-based meat are expected to increase the carbon dioxide level in the atmosphere. Animal agriculture contributes to the 14% emission of global greenhouse gases. There may be more impact on carbon footprint during the production of cell-based meat.

Ethical concerns

There are ethical concerns raised with the production of cultured meat. The procedure is in vitro, but the fetal bovine serum is used, which shows the cruelty-free motto misleading contradicts the aim [28], so, may not be a choice for vegans or vegetarians. Bovine fetuses are taken from pregnant cows by slaughtering the animal. Fetuses are made sure to remain alive to maintain the blood quality, drawn out through a cardiac puncture. Whole blood is drained out, which takes an average of five minutes, leading the fetus to death. This process is inhumane as fetuses are in extreme pain and discomfort when the fetus's blood is extracted, raising moral and ethical concerns.

Effect on health

Livestock and farm animals produce hormones and growth factors to support growth and development. Hence, the culture medium will also need these hormones sufficiently to sustain cell growth. The hormones might not be able to be produced on an industrial scale. Even if possible, there might be short- and long-term effects that

have not been discovered yet. European Union prohibited hormone growth promoters, raising grave concerns for the acceptability of cultured meat.

Product cost and customer behaviour

Cell-based meat production requires massive amounts of energy where constant electricity is required. So, the higher production cost is a challenging factor to compete with the current price tag of animal meat. Thus, cultured meat is out of reach of the middle and low-income people, despite their interest.

What is the meat industry's role in climate change?

Multiple studies have pointed out the massive impact that the global meat industry has on the environment. According to the Food and Agriculture Organization of the United Nations (FAO), **global meat consumption has increased significantly in recent decades, with per capita consumption almost doubling since the early 1960s.**

This means that roughly **14.5 per cent of global emissions of greenhouse gases** are attributable to livestock farming. This includes not just **carbon dioxide** but also **methane and nitrous oxide**, which scientists say have a climate warming potential of anywhere between 25 times and 300 times higher than that of carbon dioxide.

Most greenhouse gas emissions from plant-based foods are lower than those linked to animal-based foods.

Is cultivated meat the solution?

Experts say that if cultivated/cultured meat is widely adopted, it could vastly reduce the environmental impact of global meat production in the future.

By cultivating beef, pork, chicken, and seafood, we can have the most impact in terms of **reducing emissions from conventional animal agriculture** and satisfying growing global demand for meat while meeting our climate targets.

This is because cultivated meat uses **much less land and water** than livestock, and produces

no methane emissions.

The industry can run on energy produced purely from **renewable sources**. While the woolly mammoth meatball is, as was planned, an unconventional idea, most of the industry has been focussing on commonly consumed meats like pork, chicken and beef.

Currently, **Singapore is the only country to have approved cell-based meat for consumption.**

Difference between plant-based meat and Cultured meat

The plant-based meat is created using plant sources like soy or pea protein, whereas cultured meat is created by growing cells in a lab.

The goal of both is to provide meat substitutes that could feed a lot more people, lessen the risk of zoonotic illnesses, and lessen the environmental impact of meat consumption.

ERITHRYTOL

New research by Cleveland Clinic, published in Nature Medicine, has shown that Erythritol, a popular artificial sweetener, is associated with an increased risk of heart attack and stroke.

Erithrytol is a type of sugar alcohol commonly used as a sugar substitute in foods and beverages. Unlike traditional sugars, it has no calories and does not raise blood sugar levels. Artificial sweeteners are common replacements for table sugar in low-calorie, low-carbohydrate and “keto” products (high in fat and low in carbohydrates).

It is also believed to have a lower GI than other sweeteners, meaning it may not impact insulin levels as strongly. (GI is a value used to measure how much specific foods increase blood sugar levels.)

Sugar-free products containing Erythritol are often recommended for people who have obesity,



diabetes or metabolic syndrome and are looking for options to help manage their sugar or calorie intake. People with these conditions also are at higher risk for adverse cardiovascular events like heart attack and stroke.

UPWARD LIGHTNING

Upward lightning is a phenomenon whereby a self-initiated lightning streak develops from a tall object that travels upward toward an overlying electrified storm cloud. For this to happen, storm electrification and the resulting presence of a cloud charge region are enabling factors. The vertical elevation of a tall object accentuates the electric field locally on the ground, resulting in conditions favourable for the initiation of an upward streak (called a leader) from a tall object, which can also develop in response to an electric field change created by a nearby preceding lightning flash.

Lightning is a rapid and massive electrical



discharge that takes place between storm clouds

and the ground, or within the clouds themselves. Scientists believe that for lightning to occur, positive and negative charges must separate within a cloud. This happens when the water droplets in the bottom part of the cloud are moved upwards, where the much colder atmosphere freezes them into small ice crystals. There are three common types of lightning: cloud to ground, cloud to cloud and cloud to air.

The upward lightning primarily occurs when there is a nearby positive cloud-to-ground flash. The electric field change caused by the preceding flash causes an upward positive leader to initiate from a tall object such as a building, tower or wind turbine. The shape of the tall object and the resulting enhancement in the electrical field makes it possible for an upward leader to form following

a nearby flash. Upward triggered lightning usually occurs in response to a natural lightning flash, but on rare occasions can be “self-triggered”—usually in winter storms with strong winds.

Upward lightning typically has a lower intensity and duration compared to downward lightning. It also has a higher frequency of occurrence during thunderstorms. Upward lightning can cause damage to structures such as buildings and towers by creating an electrical surge that can overload electrical systems and cause fires or explosions. Upward lightning can also pose a risk to aviation, particularly for planes that fly close to tall structures during thunderstorms. This can cause electromagnetic interference, affecting communication and navigation systems.

PATENT REJECTION OF BEDAQUILINE - THE TB DRUG

GS-III Awareness in the fields of IT, Space, Computers, robotics, Nano-technology, bio-technology and issues relating to intellectual property rights.

Context

Recently, the Indian Patent Office rejected an application by pharmaceutical giant Johnson & Johnson (J&J) to extend its patent on the drug **bedaquiline** beyond July 2023. This opens the door for drug manufacturers to produce generic versions of bedaquiline, which are expected to be more affordable and to contribute to India's goal of eliminating TB by 2025.

What is Bedaquiline?

Bedaquiline is a drug in tablet form used to treat drug-resistant tuberculosis (TB).

What is drug-resistant TB?

As of 2017, India accounted for around one-fourth of the world's burden of **multi-drug-**

resistant (MDR) TB and of **extensively-drug-resistant (XDR) TB**.

MDR TB resists treatment by at least two frontline drugs in TB treatment, *isoniazid* and *rifampicin*.

XDR TB resists these two drugs as well as fluoroquinolones and any second-line injectable drug. **XDR TB is rarer than MDR TB** — there were 1,24,000 cases of the latter in India (2021) versus 2,650 cases of the former (2017).

TB incidence in India has been on the decline, but MDR TB and XDR TB endanger initiatives to locally eradicate the disease. In the first two years of the pandemic, there were reports that TB treatment was hit by disrupted supply chains, availability of healthcare

workers for non-pandemic work, and access to drug-distribution centres.

A peer-reviewed 2020 study found that the incidence of MDR TB was “strongly correlated with treatment failure and spread through contact, and not to treatment compliance”.

How is drug-resistant TB treated?

TB is an infection of the bacterium **Mycobacterium tuberculosis in the lungs**, but often in **other organs as well**. It can be treated by strictly adhering to the doses and frequencies of drugs prescribed by a physician.

Deviations from this schedule can lead the bacteria to become drug-resistant. Yet they happen because the drugs often have side effects that diminish the quality of life and/or because patients haven't been afforded access to the requisite drugs on time.

Why was the patent application rejected?

J&J's patent application was for a fumarate salt of a compound to produce bedaquiline tablets. Two groups opposed the patent:

1) Network of Maharashtra people living with HIV and

Vital intervention

Bedaquiline, manufactured by J&J, is a crucial anti-TB drug



- India has rejected J&J's appeal to extend its patent beyond July 2023
- Currently priced at

around \$400 for a six-month treatment regimen, the prices are likely to fall

- After July, generic producers like Lupin and Macleods are likely to manufacture the drug
- Over 55,000 patients, in whom other drugs have stopped working, may benefit from Bedaquiline access
- Till March 2020, only a little over 10,000 patients received the drug

2) Nandita Venkatesan and Phumeza Tisile, both TB survivors, supported by Médecins Sans Frontières.

Both groups argued that J&J's method to produce a "solid pharmaceutical composition" of bedaquiline is "obvious, known in the art" and doesn't require an "inventive step".

According to the Indian Patent Act 1970 Section 2(1) (ja), an 'inventive step' is an invention that is "not obvious to a person skilled in the art".

The latter also contended that the current application drew significantly from a previous patent, WO 2004/011436, which discussed a similar compound on which bedaquiline is based and whose priority date (2002) well preceded the new application.

The Patent Office rejected the application on

these and other grounds, including Sections 3d and 3e of the Act. These pertain to "mere discovery of a new form of a known substance which does not result in the enhancement of the known efficacy of that substance" and "a substance obtained by a mere admixture resulting only in the aggregation of the properties of the components thereof", respectively, which are not patentable.

Why is the rejection notable?

India has the largest population of people living with drug-resistant TB. J&J's patent on bedaquiline meant the drug cost \$400 (revised to \$340 in 2020) per person, plus the cost of other drugs. The rejection is expected to lower the cost of bedaquiline by up to 80%.

So far, the Indian

government has directly procured the drug and distributed it through State-level TB programmes. After July 2023, manufacturers of generic drugs such as Lupin will be able to produce generic versions of bedaquiline.

What is Evergreening?

The evergreening of patents is a practice of tweaking drugs in order to extend their patent term and thus their profitability.

The Indian Patents Act 1970 introduced many provisions to prevent the mischievous practice of "evergreening" of patents.

This is to aid millions of people who can't afford the expensive modified drugs, as well as the development of the domestic generic drug market.

INDIA'S AI ROADMAP

GS-III Awareness in the fields of IT, Space, Computers, robotics, Nano-technology, bio-technology and issues relating to intellectual property rights.

Recently, the Ministry of Electronics and IT has established a task force to draft a roadmap for the artificial intelligence ecosystem.

It will focus on boosting research and facilitating tools for startups and IT companies.

Government has also asked startups and participants to volunteer for the task force and to put all the building blocks for AI in the country together for the government to take it up.

Major highlights:

'IndiaAI Platform' aims to promote Indian startups, research, and innovation. It is expected to deliver better governance, development and create an innovation ecosystem that will contribute to the digital economy.

Estimates predict that AI will add USD 967 billion to the Indian economy by 2035 and USD 450-500 billion to India's GDP by 2025. AI is projected to

account for 10% of India's USD 5 trillion GDP target.

Government will also focus on developing skilled professionals, with the goal of creating one million world-class skilled professionals by 2025.

About Artificial Intelligence (AI)

Artificial Intelligence (AI) is a branch of computer science that involves developing intelligent machines that

can perform tasks that typically require human-like intelligence, such as visual perception, speech recognition, decision-making, and language translation.

AI technologies are designed to learn, reason, and self-correct, making them highly useful for automating routine tasks, solving complex problems, and optimizing decision-making processes.

Importance of AI for India

AI is expected to contribute significantly to India's economic growth by creating new job opportunities, increasing productivity, and fostering innovation.

It has the potential to revolutionize the healthcare sector by improving patient outcomes, increasing efficiency, and reducing costs through better disease diagnosis, drug development, and personalized treatment.

It can enhance the quality of education by providing personalized learning experiences, automating administrative tasks, and improving student outcomes.

It can improve agricultural practices by optimizing crop yields, reducing waste, and increasing profitability through accurate weather predictions, soil analysis, and crop monitoring to help farmers make informed decisions.

It can help in improving governance by increasing

transparency, reducing corruption, and improving service delivery by better fraud detection, resource allocation, and decision-making.

Challenges of AI

There is a shortage of skilled professionals in the AI industry in India and the demand for skilled professionals still outstrips the supply.

The lack of standardization and availability of data, particularly in sectors like healthcare and education, limits the effectiveness of AI solutions.

The availability of computing infrastructure is essential for the development and deployment of AI solutions and India needs to invest in it.

Despite the potential benefits of AI, funding for AI startups and research in India is relatively low compared to other countries.

AI can have significant ethical and social implications, such as bias, privacy concerns, and job displacement.

Government steps to promote AI

National AI Strategy has been proposed by the government to develop a national AI Strategy with a focus on research, development, and deployment of AI-based solutions across various sectors.

The government has established AI research institutes in the country, such as the Centre for Artificial Intelligence and Robotics

(CAIR) and the National Institute of Advanced Studies (NIAS), to promote research and development in AI.

It has integrated programs to support AI startups, such as the Startup India program, which provides funding, mentorship, and other resources to startups.

The government has launched several initiatives to promote skill development in the AI industry, such as the National Programme on Artificial Intelligence, which aims to train professionals in AI-related technologies.

Way ahead

Overall, AI can play a crucial role in driving India's growth and development in various sectors, and the draft proposal by the Indian government is a step in the right direction.

The roadmap for the artificial intelligence ecosystem will help promote the development and adoption of AI in India and is expected to have a significant impact on the growth of the AI industry in the country.



SECURITY

What's Inside?

1. RAISINA SECURITY DIALOGUE
2. DEFENCE EXERCISES
3. INS SAHYADRI
4. OROP ARREARS



RAISINA SECURITY DIALOGUE

Why in the News?

India recently held the second edition of the Raisina Security Dialogue

About Raisina Security Dialogue

It is a conference of intelligence and security chiefs and top officials from around the world. It is modeled on the lines of the Munich Security Conference and Singapore's Shangri-La Dialogue.

It is organized by the **Research and Analysis Wing (R&AW)** and the **National Security Council Secretariat (NSCS)**. It was held for the first time in April 2022.

Raisina Security Dialogue 2023

This is the second edition of the dialogue. It saw participation from over 26 countries, including intelligence chiefs from the U.K, Japan, France, and Bahrain.

The focus of the discussions was largely on global security, which encompassed counterterrorism, radicalization, drug trafficking, and illegal arms smuggling, among others.

Munich Security Conference

It is an annual conference on international

security policy that has been held in Munich, Bavaria, Germany since 1963.

It has become the most important independent forum for the exchange of views by international security policy decision-makers.

The list of attendees includes heads of state, governments and international organizations, ministers, members of parliament, high-ranking representatives of armed forces, science, and civil society, as well as business and media.

The conference is held annually in February. The venue is the Hotel Bayerischer Hof in Munich, Bavaria, Germany.

Shangri-La Dialogue

It is Asia's premier defense and security summit.

It is attended by Defence Ministers, permanent heads of ministries and military chiefs of 28 Asia-Pacific countries.

It is organized by an independent think-tank, International Institute for Strategic Studies (IISS).

The summit is named after the Shangri-La hotel in Singapore, where it has been held since 2002.

DEFENCE EXERCISES

FRINJEX-23

It is the first joint military exercise between the **Indian Army and French Army**. This is the first time the two countries have engaged in a military exercise in a team format consisting of a company group.

Objective: Enhancing interoperability, coordination, and cooperation between both forces at the tactical level. The theme for the exercise is based on "Humanitarian Assistance and Disaster Relief Operations in a Contested Environment".

Indian-France Military Exercises:

Exercise Garuda: Air Force

Exercise Varuna: Navy

Exercise Shakti: Army

Exercise SHINYUU MAITRI

It is a bilateral military exercise between **Indian Air Force (IAF)** and **Japan Air Self Defence Force (JASDF)**.

The exercise is being organised on the sidelines of the Indo-Japan Joint Army Exercise, Dharma Guardian.

The IAF contingent is participating in the exercise with one C-17 Globemaster III

The first phase of the exercise consists of discussions on transport operations and tactical

manoeuvring, followed by the second phase of flying drills by IAF's C-17 and JASDF C-2 transport aircraft.

The exercise will enhance mutual understanding and interoperability between the two air forces.

INS SAHYADRI

Why in the News?

Indian Navy's INS Sahyadri joined two frontline warships of France in carrying out a two-day maritime partnership exercise in the Arabian Sea.

About

The INS Sahyadri is a Shivalik class multi-role **stealth frigate**.

It is equipped with cutting-edge weapons and sensors, enabling her to identify and eliminate threats from the air, the surface, and the subsurface.

The vessel is a member of the Eastern Fleet of the Indian Navy, which is located in

Visakhapatnam.

The maritime partnership exercise witnessed a wide spectrum of evolutions at sea which included cross-deck landings, boarding exercises and seamanship evolutions.

The seamless conduct of the exercise reaffirmed the interoperability and high level of cooperation between the two navies.

Stealth Frigates under the Shivalik class series namely INS Shivalik, INS Sahyadri, and INS Satpura are the first stealth warships built in India (by Mazagon Dock Limited).

OROP ARREARS

Why in News?

Supreme Court allows staggered payment of OROP arrears in context of national interest.

OROP BACKGROUND:


About:

OROP is a uniform pension to all personnel based on rank and length of service irrespective of the date of retirement.

Armed forces who are retired till 30th June 2014 are covered under it.

This scheme is implemented on the recommendation of **Koshiyari** committee.

This scheme is to be revised every five years.

NEWSICLE			
THE ABC OF OROP ONE RANK, ONE PENSION SCHEME			
WHAT IS OROP ➤ Payment of uniform pension to military personnel retiring in same rank with same length of service, irrespective of date of retirement ➤ Any hike in pension rates to be automatically passed on to past pensioners			
THE NUMBERS INVOLVED	24.25 lakh Registered ex-servicemen	Over 13 lakh serving military personnel	Rs 8,300cr Estimated cost of OROP
PROBLEMS			
Financial: Grant of full OROP will further bloat the govt's pension bill	Administrative: Huge task to pass all the benefits, with no cut-off date, to all living ex-servicemen	Legal: Will lead to similar demands by other govt employees, especially paramilitary forces	WHY IT IS BEING DEMANDED ➤ Civilian employees retire at 60. Military personnel retire much earlier (based on rank) when family liability is maximum and 2nd career is difficult ➤ Sepoys retire at 35-38; NCOs & JCOs at 40-45 (Only 10% of sepoys become JCOs) ➤ Most officers retire in early-50s (just a few become Lt-Generals/Air Marshals/Vice-Admirals to serve till 60) ➤ Terms and conditions of military service much tougher than civilian government employees ➤ Soldiers undergo hardship postings, with risk to life and restriction of fundamental rights ➤ Successive pay commissions have widened gap between veterans who have retired earlier and those who retire later



HISTORY



ART & CULTURE



What's Inside?

1. NANAKSHAHI SAMMAT 555
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NANAKSHAHI SAMMAT 555

Recently, the Prime Minister greeted the Sikh community on the commencement of Nanakshahi Sammat 555.

About

Nanakshahi Sammat 555 is a calendar system that was introduced by the Shiromani Gurdwara Parbandhak Committee (SGPC) in 2003.

It is named after the founder of the Sikh religion, Guru Nanak Dev Ji to mark his 500th birth anniversary.

It is a tropical solar calendar used in Sikhism.

The Nanakshahi calendar is used by Sikhs around the world to mark important dates and

festivals in the Sikh calendar, including the birth anniversaries of the ten Sikh Gurus, the martyrdom of Guru Arjan Dev, and the anniversary of the founding of the Khalsa Panth.

It is based on the “Barah Maha” (Twelve Months), a composition composed by the Sikh gurus reflecting the changes in nature conveyed in the twelve-month cycle of the year.

The year begins with the month of Chet, with 1 Chet corresponding to 14th of March.

The reference epoch of the Nanakshahi calendar is the birth of Guru Nanak Dev, corresponding to the year 1469 CE.

SISUPALGARH

Why in news?

Land mafias armed with heavy earth-moving equipment have damaged a portion of the wall of the fortified ancient city of Sisupalgarh

About

Location - Odisha (near Bhuvaneshwar)

It has served as the **capital of the Kalinga kingdom**

Sisupalgarh is believed to have been built around the 7th to 6th century BCE

The **fortification** was carried out in the 4th to 3rd century BCE

The King Kharavela took up the repair of the city 2,100 years ago.

It was an important centre of trade and commerce during ancient times.

The excavation of the Sisupalgarh site was first taken up in 1948, when it was declared a **Centrally Protected Monument** under the provisions of the Ancient Monuments Preservation Act, 1904

It was designed and constructed in a **complete square shape** that was surrounded by defensive walls.

There were **eight gateways into the city**, two on each of the four sides of the wall.

The gateways were connected by **streets in a grid-like arrangement** with the palace in the center.

The **gates** were elaborate structures made of **brick and stone**.

There is evidence of **stone-lined reservoirs** that were likely used for harvesting rainwater.

It is also identified with **Tosali of Ashoka**.

The construction of Sisupalgarh was based on **JalaDurga(Water Fort)** concept

Jala Durga Fort-

Jala Durga is a type of Durga or fort, which must be situated within a water body.

It is divided into two categories, viz., the Anterdvipa (Island fort) and the Sthala Durga (Land fort).

Antardvipa-Durga (island fortress) is surrounded by natural (sea or river) water bodies.

Sthala-Durga (plain fortress) is surrounded by artificial moats or irrigated by a river.

BI-CENTENARY CELEBRATION OF CHANNAR LAHALA

Why in the News?

The bicentenary celebration of one of the earliest recorded anti-caste assertions in Southern India ('Marumarakkal Samaram' and 'Channar Revolt' in Kerala and 'Thol Seelai Porattam' in Tamil Nadu) was held on March 6, in Nagercoil with Kerala Chief Minister Pinarayi Vijayan and Tamil Nadu Chief Minister M K Stalin.

Vijayan invited Stalin for the inaugural function of the Vaikom Satyagraha centenary celebrations.

The Channar Lahala or Channar revolt

The Channar Lahala or Channar revolt, also called Maru Marakkal Samaram, refers to the fight from 1813 to 1859 of Nadar climber women in Travancore kingdom of India for the right to wear upper-body clothes covering their breasts.

Personality and Place:

Ayyankali in Travancore in Kerala, Vaikuntha swamy in Kanyakumari, Muthukutty swamy tirunelveli in Tamilnadu (known as tholseelai porattam in Tamil nadu)

Cause:

In 19th century Travancore, baring one's chest to higher status people was considered a sign of respect by both males and females.

Thus, those of the lower status castes, such as the Nadar climbers and Ezhavas, had to bare their chest in the presence of members of the higher-ranked Nair caste, who in turn had to do so in the presence of still higher ranked Nambudiri Brahmins.

Course

In 1813, Colonel John Munro, British dewan in the Travancore court, issued an order granting permission to women converted to Christianity

to wear upper cloth.

The order was withdrawn when pindakars, members of the Raja's council, Nadar women were forbidden to wear the Nair sharf, and instead were allowed to wear the kuppayam, a type of jacket worn by Syrian Christians, Shonagas, and Mappilas

The women were not satisfied, continuing to fight for the right to wear upper cloth. This led to increasing violence in the 1820s against Nadar women, and also the burning of schools and churches.

In 1829, the Travancore queen issued yet another proclamation, which denied the right of Nadar women to wear upper clothes.

Result - 1859 proclamation

On 26 July 1859, under pressure from Charles Trevelyan, the Madras Governor, the king of Travancore issued a proclamation proclaiming the right for all Nadar women to cover their breasts, Yet they were still not allowed to cover their breasts in the style of the higher-class Nair women.

Nadar women continued to ignore the restrictions, developing an upper-wear style that resembled the style of the higher class Hindu women. The code was still discriminatory until 1915–1916, and the challenge was supported by Ayyankali.

Vaikom satyagraha

The Vaikom Satyagraha was held from 30 March 1924 to 23 November 1925, was a nonviolent agitation for access to the prohibited public environs of the Vaikom Temple in the Kingdom of Travancore

Unlike the Channar Revolt, the Vaikom Satyagraha saw the participation of Hindu upper castes in large numbers.

Personalities

Congress leaders T. K. Madhavan, K. Kelappan and K. P. Kesava Menon. E. V. Ramasamy “Periyar”, also participated in the satyagraha and was imprisoned twice

Cause

Most of the great temples in the princely state of Travancore had for years forbidden lower castes (untouchables) not just from entering, but also from walking on the surrounding roads. It demanded the right of the Ezhavas and ‘untouchables’ to use roads around the Vaikom Temple.

Course

The agitation was conceived by the Ezhava Congress leader and a follower of Sri Narayana Guru, T. K. Madhavan. This procession of savarnas was led by Mannath Padmanabhan Nair.

A resolution to allow Ezhavas to use roads

near the temple was defeated by one vote in the Travancore Legislative Council (opposed by all official members, introduced in October 1924. Mahatma Gandhi himself visited Vaikom in March, 1925.

The Vaikom Satyagraha settled with a compromise which allowed the entry of lower caste Hindus to (the newly constructed) roads on three sides of the Vaikom Temple. The other side and the temple remained closed to the lower castes (November, 1925). The new roads also kept the lower castes adequately away from the near environs of the Vaikom Temple.

Result

The Temple Entry Proclamation was issued by Maharaja Chithira Thirunal Balarama Varma on November 12, 1936. The Proclamation abolished the ban on the so-called ‘low caste people’ or avarnas from entering Hindu temples in the Princely State of Travancore.

PERSONALITIES OF ANTI-CASTE ASSERTIONS IN SOUTHERN INDIA

Vaikunta Swami

Vaikunta Swami, born in a Nadar family in Shastamkoyil, kanyakumari Tamil nadu., Started a radical spiritual movement that had equality in Datits core.

Influenced by the Tamil Siddha tradition, Vaikunta Swami, challenged the custodians of caste and the religious sphere it maintained — he questioned all these acts of authority, old and new including the Brahmins, the king, and the Missionaries.

He undertook Thol seelai porattam in the 1830s. Vaikunta Swamikal founded an organisation named Samatwa Samajam for carrying out social reforms

His call for freedom encompassed all spheres of human activity

also known as Siva Narayanar or Vaikunda Swami is the first and the foremost Purna avatar of Eka-Paran as per Ayyavazhi Mythology

he laid foundations in various places for small shrine-like centres, called Nizhal Thangals

Ayya Vaikundar inspired a group of his devotees to undertake a religious exercise called Thuvayal Thavas

Through one of his disciples, Hari Gopalan Citar, he wrote the holy book, called Akilam

The spiritual energy he unleashed impacted the Hindu society in Travancore in many unseen ways.

Sree Narayana Guru (1854-1928)

He was born in a family that belonged to the Ezhava caste at Chempazhanthy, a village near Thiruvananthapuram, Kerala and was considered ‘avarna’ according to the social mores of the time.

He learned Vedas, Upanishads, literature, logical rhetoric of Sanskrit, He gave the famous slogan “One Caste, One Religion, One God for All” (Oru Jathi, Oru Matham, Oru Daivam, Manushyanu).

In 1888, he built a temple dedicated to Lord Shiva at Aruvippuram which was against the caste-based restrictions of the time. Hatha Yoga and other philosophies.

He organized an All-Region Conference in 1923 at Alwaye Advaita Ashram, which was reported to be the first such event in India.

He became one of the greatest proponents and re-evaluators of Advaita Vedanta, the principle of non-duality put forward by Adi Shankara.

He provided the impetus for Vaikom agitation

He wrote various books in different languages.

Few of them are: Advaita Deepika, Asrama, Thevarappathinkangal, etc.

His Adyaropa darsanam (Darsanamala) explains the creation of the universe.

Guru also said: "What one does for one's self-happiness/ must also secure the happiness of the other.

In 1903, he established the Sree Narayana Dharma Paripalana Yogam (SNDP), a charitable society as the founder and president.

ACADEMY AWARDS

Why in the News?

On March 12, 2023, the 95th Academy Awards ceremony was held in Los Angeles to recognise movies released in 2022.

About

The Academy Awards, or "Oscars" recognize excellence in cinematic achievements in the United States film industry as assessed by the Academy's voting membership.

Colloquially known as Oscars, the Academy Awards, given out by the Academy of Motion Picture Arts and Sciences, are the top-tier awards when it comes to films. Although there is no monetary reward, winning the most sought-after Oscar statuette gives the winner what is called Oscar's Bump.

The Academy of Motion Picture Arts and Sciences is made up of more than 9,000 motion picture professionals. Established in 1927, it currently has a stated aim of advancing the arts and sciences of motion pictures.



In order to be eligible, a film has to be exhibited in a theatre for at least a week in Los Angeles. The exceptions to this are foreign-language movies, which are submitted by their country of origin and need not be featured in the US. The documentaries and short films are

officially submitted by their producers, whereas the music category needs the artist to submit a form to participate.

The 1st Academy Awards were held in 1929

Indian Hit List

The Oscar for Best Documentary Short Film went to India's "The Elephant Whisperers".

The "Naatu Naatu" song from the "RRR" movie won the Oscar award for the Best Music (Original Song) category.

Indians who have won the Oscars

Recipients	Category	Year
Bhanu Athaiya	Best Costume Design	1982
Satyajit Ray	Honorary Award	1992
Resul Pookutty	Best Sound Mixing	2009
Gulzar	Best Original Song	2009
A R Rahman	Best Original Score and Best Original Song	2009

SANDALWOOD BUDDHA STATUE

Why in news?

Recently, the Prime Minister of India gifts a sandalwood Buddha statue to Japanese Prime Minister Fumio Kishida during the latter's two-day state visit. The statue depicts Buddha sitting in 'dhyana mudra' under the Bodhi tree.

About

Sandalwood Buddha statue:

The Buddha figure, made of pure sandalwood, has hand carvings along with traditional designs and natural scenes.



In this posture, Buddha is sitting in 'dhyana mudra' under the Bodhi tree.

The obverse of the image has an intricate carving of the Bodhi tree.

The **Kadamwood Jali Box** in which the statue was encased is also considered auspicious in Indian culture.

The art of sandalwood carving is an exquisite and ancient craft that has been practised in Karnataka for centuries.

India's Buddhist Diplomacy

After gaining independence, India's first Prime Minister Jawaharlal Nehru had enunciated **Panchsheel principles** as the basis of his foreign policy.

Nehru refrained from using religion upfront in foreign policy. Panchsheel has now been replaced by the new **Panchamrit doctrine** based on: samman (dignity), samvad (dialogue), samriddhi (shared prosperity), suraksha (regional and global security) and sanskriti evam sabhayata (cultural and civilisational links).

The fifth of these five principles, namely 'sanskriti' and 'sabhayata,' is aimed at **leveraging India's rich historical cultural links** with other

countries as part of its non-coercive soft power strategy

India's present government with its Hindu nationalist leanings, is **using both Hinduism and Buddhism as its soft power tools** to promote national interests in the Indo-Pacific region and the immediate neighbourhood. Reviving and promoting Hindu-Buddhist linkages with Asian countries is also in consonance with India's 'Look East, Act East' policy

Along with Buddhism, efforts are also being made to project "Hindu-Buddhist" unity globally, through congregations, exhibitions, and melas, with India and Japan being the key participants in the strategy. In February 2015, India hosted the first International Ramayana Mela; and in May, India hosted the International Buddha Poornima Diwas. In 2015, the idea of promoting global HinduBuddhist unity through 'Samvad' dialogue was incorporated in India-Japan Joint Statement.

Mudras

Mudras are a **non-verbal mode of communication and self-expression**, consisting of hand gestures and fingerpostures. They are **symbolic sign based finger patterns** taking the place, but retaining the efficacy of the spoken word, and are used to evoke in the mind ideas symbolizing divine powers or the deities themselves.

It is an external **expression of 'inner resolve'**, suggesting that such non-verbal communications are more powerful than the spoken word.

Many such hand positions were used in the Buddhist sculpture and painting of India

Dharma Chakra Mudra:

In this the hands are held in front of the chest with the thumb and index finger of each hand forming a



circle. The remaining three fingers of each hand are extended upwards, representing the Three Jewels of Buddhism: **the Buddha, the Dharma (his teachings), and the Sangha (the community of practitioners)**.

The circle made by the thumb and index finger represents the wheel of the Dharma, which

This mudra represents the constant cycle of birth, death, and rebirth, and the Buddha's teachings as the means to break free from this cycle.

Bhumisparsha Mudra:

This mudra involves touching the ground with the fingertips of the right hand, while the left hand rests on the lap.

It represents the moment of the Buddha's enlightenment, and the gesture symbolizes the earth witnessing his attainment of enlightenment.



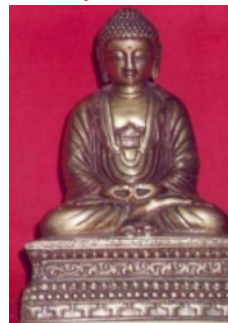
Varada Mudra:

In this mudra, the right hand is extended downwards, with the palm facing outwards.

It represents generosity, compassion, and the granting of wishes.

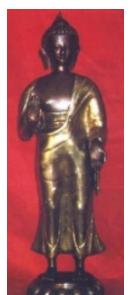


Dhyana Mudra:



In this mudra, the hands are placed on the lap, with the right hand on top of the left, and the thumbs touching.

This mudra symbolizes meditation,



concentration, and inner peace.

Abhaya Mudra:

This mudra involves raising the right hand up

to shoulder height, with the palm facing outwards

It represents fearlessness, protection, and the dispelling of negativity

SHARDA PEETH

In line with the Kartarpur Corridor, the government intends to establish a corridor to Sharda Peeth in Pakistan-occupied Kashmir (POK).

About

Sharada Peeth is a ruined Hindu temple and ancient centre of learning located in the Neelum Valley of Pakistan-Occupied Kashmir (POK).

It is situated in the valley of Mount Harmukh, believed by Kashmiri Pandits to be the abode of Shiva.

Sharada Peeth translates to “the seat of Sharada”, the Kashmiri name for the Hindu goddess Saraswati.

“Sharada” could be also related to the proto-Nostratic terms “sarv”, which means “flow or stream”, and daw (blow, tip or rock), because it was located at the confluence of three streams.

It was probably commissioned by Lalitaditya

Muktapida though no definitive evidence exists in favour.

Al-Biruni recorded the place for the first time, as a revered shrine housing a wooden image of Sharda.

Significance

Between the 6th and 12th centuries CE, Sharda was one of the foremost centres of higher learning, hosting scholars such as Kalhana, Adi Shankara, and Vairotsana.

It is also said to be where Paini and Hemachandra completed and stored their writings on Sanskrit grammar.

Sharda is the most revered religious place for Kashmiri Pandits. They believe that it is a tripartite embodiment of the goddess Shakti: Sharada (goddess of learning), Saraswati (goddess of knowledge), and Vagdevi (goddess of speech).



It is one of the 18 Maha Shakti Peethas throughout South Asia that commemorate the location of fallen body parts of the Hindu deity Sati.

Kartarpur corridor

It was opened in 2019 and allows pilgrims to travel visa-free.

The corridor links two important Sikh shrines i.e., Dera Baba Nanak of Punjab and Gurudwara Darbar Sahib in Kartarpur, Pakistan.

VEDIC HERITAGE PORTAL

The Union home minister has recently inaugurated the Vedic Heritage portal and a virtual museum, 'Kala Vaibhav' in New Delhi.

About

Vedic heritage portal and a virtual museum 'Kala Vaibhav', were built by the Indira Gandhi National Centre for the Arts (IGNCA).

The portal aims to communicate messages enshrined in the Vedas. It will help common people to have a general understanding of the Vedas.

The portal will be a one-stop solution for the user, who would like to search for any information regarding the Vedic heritage.

The audio-visual recording of four Vedas has been uploaded on the Vedic Heritage portal. The portal has over 18 thousand mantras of the four Vedas with a duration of over 550 hours.

Indira Gandhi National Centre for the Arts (IGNCA)

IGNCA was established in 1987 as an autonomous institution under the Ministry of Culture, as a centre for research, academic pursuit, and dissemination in the field of the arts.

It has a trust (i.e., Board of Trustees), which meets regularly to give general direction about the Centre's work.

Project 'Mausam'

It is a Ministry of Culture project to be implemented by the Indira Gandhi National Centre for the Arts (IGNCA), New Delhi as the nodal coordinating agency with the support of the Archaeological Survey of India and the National Museum as associate bodies.

The Executive Committee, drawn from among the Trustees, functions under a chairman.

SIKHISM RELATED TERMS

Why in news?

In a video statement issued from hiding, Amritpal Singh, the head of Waris Punjab De, has asked Akal Takht Jathedar Giani Harpreet Singh to call the Sarbat Khalsa on Baisakhi Day (April 14) at the Takht Sri Damdama Sahib in Talwandi Sabo. Amritpal Singh has been on the run since March 18, when the Punjab Police moved to take him into custody.

About

Adi Granth

Adi Granth means literally the "First Book." For Sikhs, the three thousand hymns (shabads)

contained within its pages are the Word of God.

Before the death of Guru Gobind Singh in 1708, he invested the Guruship not in a human successor, but in the scripture itself. Hence, as the most reverend (Sahib) fully authoritative spiritual guide (Guru), the book is also known as the Guru Granth Sahib.

Akal Takht

In 1606 the Sikhs established their own royal court, similar to the Mughal court of the time, with the Guru as the royal and spiritual head. The temporal role of the Sikh Guru was symbolized by the seat called Akal Takht, "The Throne of

the Almighty.”

amrit

Amrit means “immortal nectar,” and “taking amrit” is a term used for **initiation into the Khalsa**, the order of fully committed Sikhs. A bowl of water with sugar crystals is stirred with a double-edged sword, while sacred hymns are recited, infusing the solution with the power of the Divine Word. This water, which has now become immortal nectar (amrit), is sipped by each of the initiates, giving the rite its common name.

Khalsa

Guru Gobind Singh, the tenth Sikh Guru, created the Khalsa, the “alliance of the pure” in 1699. When a Sikh comes of age or is ready for a greater level of commitment, he or she joins the Khalsa through the special initiation known as “taking amrit.” Initiated Sikhs wear five signs of their new identity and acquire a new name. Singh for men and Kaur for women.

Nirankar

According to the Sikh tradition, God cannot be known in any image for God, the Nirankar, is invisible, infinite, beyond the confines of form. This transcendent God can nonetheless be known through the voice, or “unstuck sound,” that has been mediated through the Guru—initially the ten human Gurus and subsequently the Guru Granth Sahib (Sikh scripture).

Janamsakhis

- The Janam Sakhis, which literally translate as “birth stories,” are writings that are biographies of Guru Nanak.
- These compositions were written at various stages after Guru Nanak’s death.
- Bhai Bala Janamsakhi is the most popular book.
- Miharban Janam Sakhi and Adi Janam Sakhi are two others.

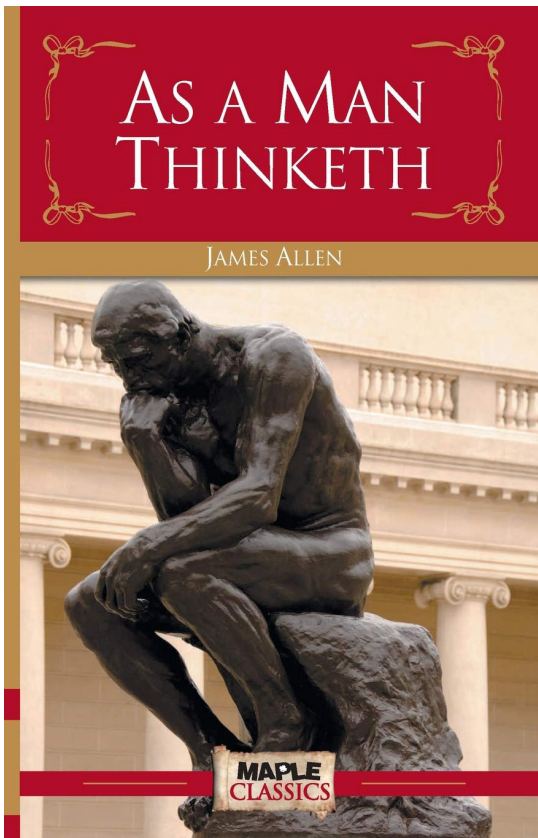
Sarbat Kalsa

The word sarbat means ‘all’, and literally, the Sarbat Khalsa is an assembly of all factions of Sikhs (Khalsa). The idea of a deliberative assembly of Sikhs dates back to the 18th century.

Following the death of the tenth Guru, Guru Gobind Singh, the Sikh misls (military units) began to convene the Sarbat Khalsa to discuss political, social, and religious issues of great importance to the community, which was then in the midst of its struggle against the Mughals.

These gatherings, called twice a year on the occasion of Baisakhi and Diwali, had the power to issue directions to all Sikhs. The Sarbat Khalsa was first institution of Sikhs that took shape after the tradition of Guru in human form came to end, and turned out to be very effective amid the internal conflicts among the misled

AS A MAN THINKETH BY JAMES ALLEN



As a Man Thinketh is not intended as an exhaustive treatise on the much-written-upon subject of the power of thought. It is suggestive rather than explanatory, its object being to stimulate men and women to the discovery and perception of the truth that—***‘They themselves are makers of themselves.’*** by virtue of the thoughts, which they choose and encourage. The Author has given this under seven sub-headings, which are as follows.

Thought & Character

“As a man thinketh in his heart, so is he”. The sum of a man’s thoughts are his character. His character influences the conditions and circumstances of his life .Every action springs forth first from thought – even actions considered to be spontaneous and unpremeditated.

Act is the blossom of thought ,and joy and suffering are its fruit .The law of cause

and effect exists in the world of thought ,not just the natural world .A God-like character is the result of God-like thoughts .A bestial character is the result of groveling thoughts. Man is made or unmade by his own thoughts, which can destroy him or build him up .Man becomes master of his” household “of thoughts by application ,self-analysis and experience.

Gold and diamonds are found only by much searching and mining .Similarly ,a man must dig deep in the mine of his soul to find every truth connected with his being.A man must watch ,control and alter his thoughts–tracing their effect on himself ,others ,and his life and circumstances .In doing so he will prove to himself that he is maker of his own character ,life and destiny.

Effect of Thought on Circumstances

A man’s mind may be likened to a garden – cultivated or uncultivated .The cultivated produces flowers & fruit ,while the uncultivated produces weeds.A man must continually weed-out all wrong ,useless ,and impure thoughts and deliberately cultivate right ,useful ,and pure thoughts.

Thought and character are one ,and character has a profound influence on the circumstances of one’s life .If a man learns the spiritual lesson of his current circumstances they will give way to other circumstances.

As long as a man believes he is a creature of external conditions he will be buffeted by those conditions .When he practices self-control and self-purification of thought ,and remedies his defects of character ,he finds that his circumstances will change.

The soul attracts that which it secretly harbors - its loves and fears .The soul reaches the height of its cherished aspirations and the depth of its unchaste desires .Every thought-seed allowed to take root in a man’s mind will

eventually produce the fruit of character and opportunity and circumstance .Good thoughts bear good fruit ,bad thoughts bear bad fruit.

Effects of Thoughts on Health & Body

The body is the servant of the mind .With unlawful thoughts the body sinks into disease and decay .with glad and beautiful thoughts it becomes clothed with youthfulness & beauty. Thoughts of fear can kill the body .Anxiety quickly demoralizes the whole body ,opening it to disease ,while impure thoughts will shatter the nervous system .Strong pure and happy thoughts build up the body in vigor and grace.

The habits of thoughts will produce their effects - good or bad - upon the body .Thought is the fount of action ,life ,and manifestation. Make the fountain 'pure and all will be pure.

If you would perfect your body ,guard your mind .If you would renew your body, beautify your mind .Thoughts of malice, envy ,and disappointment ,rob the body of its health and grace .A bright ,happy ,and serene countenance follows from thoughts of joy, goodwill and serenity .To continually live in thoughts of ill-will ,cynicism ,suspicion and envy ,is to be confined in a self-made prison.

To think well of all ,to be cheerful with all, to find the good in all -- such unselfish thoughts are the very portals of heaven.

Thought & Purpose

Until thought is linked with purpose there is no intelligent accomplishment .Aimlessness is a vice .They who have no central purpose in their life fall prey to worries ,fears ,troubles and self-pity ,which lead to failure and loss.

A man should conceived of a legitimate purpose in his heart and set out to accomplish it .He should make this purpose the centralizing point of his thoughts .He should make this purpose his supreme duty and should devote himself to its attainment ,not allowing his thoughts to wander into fanciful imaginings. This is the royal road to self-control and true concentration of thought .He may repeatedly fail to accomplish this purpose ,but will

overcome weaknesses and grow in character -a measure of true success and the starting point for future power and triumph.

Those who are not prepared for the apprehension brought on by having a great purpose ,should instead fix their thoughts on the faultless performance of their duty, no matter how insignificant it may appear. This discipline will focus their thoughts and develop their resolution .Strength can be developed by effort and practice ,even in the weakest soul .The physically weak can be made strong by patient training and the man of weak thoughts can make them strong by exercising himself in right thinking.

To think with purpose puts one in the ranks of those who know that failure is one of the pathways to success .A man should mentally mark out a straight path to achieving his purpose and rigorously exclude doubts and fears .The will to do springs from the knowledge that we can do .Doubt and fear are the great enemies of knowledge and must be slain.He who has conquered doubt and fear has conquered failure .Thought allied fearlessly to purpose becomes a creative force.

"The Thought-Factor Achievement"

All that a man achieves and all that he fails to achieve is the direct result of his own thoughts .A man's weakness and strength, purity and impurity ,are his own and not another man's .They can only be altered by himself .His sufferings and his happiness are evolved from within.

As he thinks ,so is he ;as he continues to think ,so he remains.

A strong man cannot help a weaker unless the weaker is willing to be helped .Even then the weak man must become strong of himself --only he can alter himself .Oppressor and slaves are cooperators in ignorance and afflict themselves rather than each other .A perfect love condemns neither and a perfect compassion embraces both .He who has conquered weakness and has pushed away all selfish thoughts belongs neither to oppressor

nor oppressed .He is free.

A man can only rise ,conquer and achieve by lifting up his thoughts .Before a man can achieve anything - even worldly - he must lift his thoughts above slavish animal indulgence .A man whose first thought is bestial indulgence could neither think clearly nor plan methodically .He could not find and develop resources and would fail in any undertaking .Not having begun to manfully control his thoughts ,he is not in a position to control affairs and to adopt serious responsibilities .He is limited by the thoughts he chooses.

By the aid of self-control ,resolution, purity ,righteousness ,and well-directed thought a man ascends .By the aid of animality, indolence ,impurity ,corruption and confusion of thought man descends .A man who has risen to high success may descend into great wretchedness by allowing arrogant ,selfish and corrupt thoughts to take possession of him .Victories attained by right thought are maintained by watchfulness .Many give way when success is assured ,and rapidly fall back into failure.

Visions & Ideals

The dreamers are the saviors of the world. All the visible world is sustained by the invisible. He who cherishes a beautiful vision, a lofty ideal in his heart, will one day realize it. To desire is to obtain, to aspire is to achieve. Shall a man's basest desires receive the fullest measure of gratification, and his purest aspirations starve for lack of sustenance? Dream lofty dreams and as you dream, so shall you become.

Your vision is the promise of what you shall one day be. The greatest achievements were at first and for a time a dream. The Oak sleeps in an acorn. Dreams are the seedlings of realities.

Uncongenial circumstances can be overcome by perceiving and striving toward and ideal. You cannot travel on the inside and remain still on the outside.

You will always gravitate toward that which you secretly love most. You will become as small as your controlling desire, or as great as your dominant aspiration. The thoughtless, ignorant and indolent speak of luck, fortune and chance. They do not see the trials, failures and struggles of men who achieve wealth, intellect or holiness. They have no knowledge of the sacrifices, efforts and exercised faith of the latter in overcoming the obstacles to their dreams. They do not know the darkness or the heartaches.

Gifts, powers, material, intellectual and spiritual possessions are the fruits of effort. They are thoughts completed, objectives accomplished, and visions realized. The vision that you glorify in your mind, the ideal that you enthrone in your heart, this you will build your life by; this you will become.

Serenity

Calmness of mind is one of the beautiful jewels of wisdom. It is the result of long and patient effort in self-control. A calm man, having learned how to govern himself, knows how to adapt himself to others. The more tranquil a man becomes, the greater is his success, his influence, his power for good.

The strong, calm, man is always loved and revered. Only the wise man, only he whose thoughts are controlled and purified, makes the winds and storms of the soul obey him. To tempest-tossed souls: Self control is strength. Right thought is mastery. Calmness is power. Say unto your heart, "Peace. Be still."

FACT SHEET

GENERAL STUDIES – I

SOCIETY

- ✦ In a new report by UN body acknowledged that the COVID-19 crisis had led to greater social protections worldwide, albeit mainly in wealthy countries. Only 47% of the global population is covered by at least one social protection benefit, while only 1 in 4 children have access to national welfare safety nets.
- ✦ Recently, the UN Sustainable Development Solutions Network released the World Happiness Report 2023. The ranking uses 6 key factors to measure happiness — social support, income, health, freedom, generosity, and absence of corruption. For the sixth year in a row, Finland has been crowned as the happiest nation, Denmark is at number two and followed by Iceland. India ranks at 126th position out of 136 countries, making it one of the least happy countries in the world. It even lags behind its neighbouring nations like Nepal, China, Bangladesh and Sri Lanka. Afghanistan was ranked last.

WOMEN

- ✦ World Bank recently published the 'Women, Business, and the Law 2023 report.' India scored higher than the South Asian region's average but lower than Nepal's. India receives a perfect score in indicators such as restrictions on freedom of movement, laws affecting women's employment decisions, and restrictions on marriage.

GENERAL STUDIES – II

POLITY

- ✦ India is ranked 48th out of 146 countries in the Global Gender Gap Report 2022's Political Empowerment (Percentage of Women in Parliament and Ministerial Seats) component. Bangladesh is ranked 9th and Iceland is ranked 1st.
- ✦ Only 14.4% of Indian Parliament members are women right now, which is the highest percentage ever. India has a lower ratio of women in the lower House than its neighbours Bangladesh, Nepal, Pakistan, and Sri Lanka.
- ✦ India Justice Report 2022 (It assesses the performance of states in terms of justice delivery, by considering parameters such as police, judiciary, prisons, and legal aid). Karnataka has achieved the top rank among the 18 large and mid-sized states in the delivery of justice with a population over one crore. (Tamil Nadu -> 2nd & Uttar Pradesh is last). Among the 7 Small States with a population of less than one crore -> Sikkim topped. As of December 2022, the High Courts were functioning with only 778 judges against a sanctioned strength of 1,108 judges -> leading to rising pendency, increasing caseloads, and declining case clearance rates (CCR) in lower courts. High Courts are increasingly clearing more cases annually than subordinate courts.

HEALTH

- ◆ In the Economic Survey of 2022, India's public expenditure on healthcare stood at 1% of GDP in 2021-22 (1.8% in 2020-21). US spends over 16% of its total GDP on healthcare; Japan, Canada, Germany etc. spend over 10% of their GDP.
 - i. India had 7 physicians per 1 lakh people in 2017 (98 in Pakistan, 100 in Sri Lanka and 241 in Japan).
 - ii. 53 beds per 1 lakh people (63 in Pakistan, 79.5 in Bangladesh, 415 in Sri Lanka and 1,298 in Japan).
 - iii. 7 nurses and midwives per 1 lakh people (220 in Sri Lanka, 40 in Bangladesh, 70 in Pakistan, and 1,220 in Japan).
 - iv. India has among the highest out-of-pocket (OOP) expenditures of all countries in the world i.e., 62% of the total health expenditure in India is OOP.
 - v. According to the WHO, India ranks 184 out of 191 countries in health spending.
- ◆ WHO recommends a daily intake of less than 5 grams of salt for adults, but an average Indian's sodium consumption is more than double that amount.
- ◆ The WHO recently published the 'Global Report on Sodium Intake Reduction,' which sheds light on the progress of its 194 member states towards reducing population sodium intake by 30% by 2025.
- ◆ The 2020 Report on Medical Certification of the Cause of Death shows that circulatory system diseases account for 32% of all documented deaths in India, with hypertension being a major risk factor.
- ◆ The World Economic Forum projects that the Indian economy alone faces losses surpassing USD 2 trillion between 2012 and 2030 because of cardiovascular disease.
- ◆ According to the World Bank estimates, India's life expectancy has increased from 58 in 1990 to 70 in 2020.
- ◆ As per WHO, every day, over 4100 people lose their lives to TB and about 28,000 people fall ill with this disease. Deaths from tuberculosis have risen in 2020 for the first time in more than a decade. India accounts for roughly 28% of TB cases in the world, as per the Global TB Report 2022.

EDUCATION

- ◆ Indian Research Ecosystem => In the U.S., 9% of undergraduates go on to do a PhD but in India, it is only 0.5%. India ranked 3rd globally in terms of the number of publications in SCI journals and in terms of the number of PhDs awarded in Science and Engineering.
- ◆ Despite rising literacy rates over the past 50 years, there are still an estimated 773 million adults globally who can't read or write.
- ◆ Literacy rates are lower in developing countries and those with a history of conflict, and women, who account for two-thirds of the world's illiterate, are disproportionately affected.
- ◆ According to a recent study in India, people with poor literacy face more mental health problems

such as loneliness, depression and anxiety.

CHILDREN

- ◆ The Global Threat Assessment report 2021, by 'WeProtect' Global Alliance, said COVID-19 had created a 'perfect storm' of conditions that fuelled a rise in child sexual exploitation and online abuse across the globe.
- ◆ The findings show that in the past two years, the reporting of child sexual exploitation and online abuse has reached its highest level.
- ◆ Child labour has decreased by 38% globally in the last decade, according to International Labour Organization (ILO). But over 152 million children are still in the grip of this social evil, the eradication of which is one of the UN Sustainable Goals.
- ◆ According to UNICEF, India has over 30 million orphaned and abandoned children.
- ◆ 80% of working children live in India's villages, where most of them work in agriculture.

INTERNATIONAL RELATIONS

- ◆ • According to the Parliamentary Committee on external affairs, there were 7 crore Indians (NRIs - 1.35 crore, PIOs - 1.87 crore, OCIs, and students) living overseas (as of 2021). In which, the number of students stands at 3.8 crores.
- ◆ • According to the World Migration Report, prepared by the International Organisation for Migration under the UN, India has the largest emigrant population in the world, making it the top origin country globally, followed by Mexico, Russia and China.

GENERAL STUDIES – III

ECONOMY

- ◆ The revenue receipts in India experienced strong growth in FY22, rebounding from the decline in FY21 during the pandemic. The growth was driven by an increase in the collection of major direct and indirect taxes (excluding excise duties) in FY22.
- ◆ The World Bank has released a report titled "South Asia Economic Focus: Expanding Opportunities: Toward Inclusive Growth," which provides an economic forecast for India, Sri Lanka, and Pakistan. India's growth rate has been downgraded to 6.3% for FY 2023-24, and the report cites high borrowing costs and slower income growth as the primary reasons for this downgrade. The female labour participation rate and the size and productivity of the informal sector are also concerns in India. However, the services sector and the construction sector are the fastest-growing industries in India, with strong investment growth and high business confidence.

ENVIRONMENT

- ◆ According to the Desertification and Land Degradation Atlas published by Union Environment Ministry, at least 30% of India's total geographical area is under the category of "degraded land".
- ◆ Plastic pollution in the world's oceans has reached unprecedented levels over the past 15 years. An estimated 171 trillion plastic particles, weighing 2.3 million tonnes, were afloat in the world's

oceans in 2019, said the study published in 'Plos One'.

- ✦ The report, "Peak Plastics: Bending the Consumption Curve," explores the potential impact of policies being considered by the UN's plastic treaty negotiators. According to recent research, the G20 countries would almost double their plastic usage by the year 2050, going from 261 million to 451 million tonnes.
- ✦ India, China, Bangladesh, and the Netherlands are the countries that are most at risk from sea level rise globally, according to the WMO report, "Global Sea-level Rise and Implications." The hazard posed by the sea level rise affects a number of major cities on all continents. From 2013 and 2022, the average global sea level increased by 4.5 mm per year, with human activity presumably playing a major role in these rises at least since 1971.
- ✦ A study published in July 2021 in The Lancet, which took into account the data from two decades (2000-2019), notes that about 50 lakh people die every year (on average) across the world due to extreme temperatures. Further, the IPCC Sixth Assessment Report (AR6) highlights the fact that extreme heat events would continue to grow with the rise in global warming and that every increment of warming matters.

DISASTER MANAGEMENT

- ✦ 'The Landslide Atlas of India,' a comprehensive guide identifying Landslide Hotspots throughout the nation, was recently released by the National Remote Sensing Centre (NRSC) under ISRO. The states with the most landslides between 1998 and 2022 were Mizoram, Kerala, Uttarakhand, Jammu and Kashmir, Tripura, Nagaland, and Arunachal Pradesh.
- ✦ India is one of the top five landslide-prone nations in the world, with at least one landslide-related mortality per 100 square kilometres reported a year.
- ✦ Up to 66.5% of the reported landslides come from the North-Western Himalayas, followed by the North-Eastern Himalayas with 18.8% and the Western Ghats with 14.7%.

SECURITY

- ✦ As per the report by the Swedish think tank Stockholm International Peace Research Institute (SIPRI), India has remained the world's largest arms importer between 2018 and 2022 despite there being a drop in imports by around 11% in comparison to 2013-2017. Russia was the largest arms supplier to India from 2013 to 2022. France has displaced the US to become the second-largest supplier of arms to India. Saudi Arabia is the second largest arms importer after India

Global Terrorism Index, 2023

- ✦ Globally, deaths from terrorism fell by 9% to 6,701 deaths. South Asia remains the region with the worst average GTI score with 1,354 deaths from terrorism in 2022.
- ✦ Islamic State (IS) and its affiliates were the deadliest terror group globally for the eighth consecutive year, recording the most attacks and deaths of any group.
- ✦ India ranks 13th. Pakistan recorded the second-largest surge in terror-related deaths worldwide in
- ✦ Afghanistan continues to be the country most affected by terrorism for the 4th year in a row, even though attacks and deaths decreased.

1. *The serious complaint of human rights violation against an IPS officer in south Tamil Nadu has embarrassed the State government and the police hierarchy. The officer has been suspended from service and his alleged misconduct is being probed. This incident once again brings to the fore the issue of long overdue police reforms in India.*
2. *The opposition parties had suggested a “triple test” before ordering the arrest of political leaders. In this context, the Supreme Court of India has observed that a political leader is basically a citizen and as citizens, all are amenable to the same law. It said that the political leaders stand on the same footing as any ordinary citizen of India and are not entitled to “higher immunity” from investigation, arrest or prosecution.*
3. *Recently, the UN held its first water conference on March 22-24 in New York. The theme for 2023 is “Our watershed moment: uniting the world for water,” aimed to support the achievement of water-related global goals and objectives. It brings together people from different countries and organizations to work together on solving global water challenges. The urgent need for action was demonstrated by a report “Water for Sustainable Development 2018-2028.”*
4. *Bhutan’s King visited India and met the Indian Prime Minister, where both leaders discussed bilateral cooperation and issues of national and regional interests.*
5. *Recently, a massive Avalanche hit Sikkim’s Nathu La. Many people lost their lives by trapping under the snow.*
6. *GI tag was given for Ladakh’s wood carving which is renowned for its intricate designs and unique patterns that are mostly inspired by Buddhist themes and motifs. Local wood such as willow and apricot are used to make these wood carvings, which are often used to decorate doors, windows, and other household items.*
7. *The Tamil Nadu Forest Archive and Data Centre (TNFADC) is proposed to be set up at the Guindy National Park, Chennai. The centre will be a repository for archival reports, forest maps, gazette notifications, photographs and so on.*
8. *Australia, UK and US unveiled plans to provide Australia with conventionally armed, nuclear-powered ‘Virginia class’ attack submarines in the early 2030’s to counter China’s ambitions in the Indo-Pacific. The arrangement was made through the Australia-United Kingdom-United States (AUKUS) enhanced security partnership.*
9. *Every year on March 21st, World Down Syndrome Day is observed to raise awareness about Down syndrome, advocate for the rights of people with Down syndrome, and promote their inclusion and well-being. Down syndrome is a genetic condition that occurs when there is an extra copy of the 21st chromosome, resulting in physical and intellectual disabilities. They are prone to several health complications. The theme for 2023 is “With Us Not For Us,” which highlights the importance of involving people with Down syndrome in decision-making and planning processes that affect their lives.*
10. *For the first time, the Indian Air Force (IAF) will deploy the indigenous Light Combat Aircraft (LCA) Tejas for the multilateral air exercise ‘Cobra Warrior’ at Waddington, U.K. This exercise will also see the participation of Air Forces of Belgium, Saudi Arabia, Sweden and the U.S. It is aimed at providing operational exposure and sharing best practices amongst the participating*

Air Forces, thereby enhancing combat capability and forging bonds of friendship.

- 11. World Tuberculosis (TB) Day is observed on 24th March every year to spread awareness about the disease and how best to combat it. India aims to make the nation TB-free by 2025, whereas the Global Target for TB elimination is 2030. The theme for 2023: Yes! We can end TB!*
- 12. The Indian Army is set to reintroduce millets flour in the rations of soldiers and has sought the Union Government sanction to procure millets flour not exceeding 25% of the authorised entitlement of cereals (rice and wheat flour), in rations for troops commencing from the financial year 2023-24 onwards.*
- 13. UK and the European Commission have announced a new deal known as the “Windsor Framework” to repair post-Brexit difficulties in Northern Ireland. It is an essential step to ensure peace and progress between the UK and the EU as it not only protects Northern Ireland’s place within the UK’s internal market but also the EU’s single market.*
- 14. Recently, India and Bangladesh have inaugurated the India-Bangladesh Friendship Pipeline (IBFP), a cross-border pipeline that will have the capacity to supply one million metric tonnes of diesel a year from Assam’s Numaligarh refinery to the northern parts of the neighbouring country.*
- 15. India’s development model won praise at the 52nd UN Human Rights Council meeting in Geneva with NGOs highlighting the Indian education model and urging other UN member states to follow it. In recent years, India has implemented measures to promote gender equality, including the criminalisation of marital rape and a new law to protect women from sexual harassment in the workplace.*
- 16. In a first-of-its-kind event, India hosted a conference last week on ‘Shared Buddhist Heritage’ under the ambit of the Shanghai Cooperation Organisation (SCO). The objective of the Conference is to renew trans-cultural links and shared histories between different countries.*
- 17. The Indian Space Research Organization (ISRO) has completed the flight acceptance hot test for the CE-20 cryogenic engine, which will power the Cryogenic Upper Stage of the LVM3 launch vehicle for the upcoming Chandrayaan-3 mission. The test was conducted at the ISRO Propulsion Complex in Mahendragiri, Tamil Nadu, and all propulsion parameters were found to be satisfactory during the test.*
- 18. ‘The Golden Handshake’ agreement between the forest dwellers of Mudumalai Tiger Reserve and the forest department aims to benefit the local communities and aid the conservation efforts. However, there are several concerns associated with fraud and cheating that needs to be addressed by the government and forest officials.*
- 19. Indonesia’s Mount Merapi erupted recently. It is one of Indonesia’s most active volcanoes and was already on the country’s second-highest alert level. Merapi is the youngest in a group of volcanoes in southern Java. It is situated at a subduction zone, where the Indo-Australian Plate is subducting under the Sunda Plate. A series of eruptions of the volcano in late 2010, which included pyroclastic flows, killed scores of people, injured dozens more, and forced tens*

of thousands to evacuate the area.

20. Argentine-American Luis A. Caffarelli, an expert in “partial differential equations” which can explain phenomena such as water flow and population growth has been awarded the Abel Prize 2023. The Abel Prize recognises pioneering achievements in the field of mathematics. The prize is named after Niels Henrik Abel who is considered Norway’s greatest mathematician.

TERMS IN NEWS

21. **Nature-based Solution:** In order to effectively and adaptively address societal challenges like climate change, human health, food and water security, and disaster risk reduction, nature-based solutions are actions to protect, sustainably manage, or restore natural ecosystems. Simultaneously, these also benefit human well-being and biodiversity. Example: tackling coastal floods.
22. **Cyborg:** It is a part human and part machine or a machine that looks like a human being. Although no cyborg has been developed yet we are in the phase of development. Examples: The artificial pancreas is in the development phase.
23. **Greenium:** The term greenium or green premium describes the idea that investors are willing to pay a premium to hold a green bond rather than a conventional bond, as they are willing to accept lower monetary returns in exchange for supporting environment-benefitting activities.
24. **Pink tax:** It is being paid by women simply for existing in the world as non-men. From girls’ toys to women’s personal care products, goods for females cost more than their male counterparts.
25. **Ice Memory:** A team of Arctic scientists is on a mission to extract samples of ancient ice containing frozen geochemical traces dating back three centuries before they melt away due to climate change. These ice cores will be used for immediate analysis and sent to an “ice memory sanctuary” in Antarctica for future generations of scientists. It aims to preserve crucial ice records that provide valuable data about past environmental conditions.

RELEVANT QUOTES

- ✦ “Indian democracy’s greatest strength is that we have always put the nation ahead of politics”- Atal Bihari Vajpayee.
- ✦ “Poverty is the worst form of violence”- Mahatma Gandhi.
- ✦ “In trans-border relations, there are no permanent friends or permanent enemies or even permanent borders”- Chanakya.
- ✦ “If you think the economy is more important than the environment, try holding your breath while counting your money”- Guy Mcpherson.
- ✦ “Dharma is the foundation of good governance”- Buddha