

9pm
Compilation

4th to 9th April, 2022

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General

Studies

Paper – 1

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INDIA'S CONTRIBUTION TO THE WORLD KNOWLEDGE

1. Celebrating India's contribution to the world of knowledge

Source: The post is based on an article “**Celebrating India's contribution to the world of knowledge**” published in **The Indian Express** on **09th April 2022**.

Context: Recently there have been debates and discussion over India's contribution and achievements in various domains of knowledge.

The debates arose because despite immense contributions, India's achievements remain unattributed and uncelebrated despite 5,000 years old civilization. The topic became more important as India is going to celebrate its 75 years of Independence.

What have been the Indian contributions to world knowledge?

India has contributed a lot since ancient times, which has been crucial in the development of modern concepts.

Albert Einstein once said, “We owe a lot to the Indians. They gave zero, and taught how to count”.

The scientific discovery could not have been possible without such contribution in the field of knowledge.

The **modern mathematical concepts** were born in India several centuries ago – **(1)** In the 7th century CE, **Brahmagupta** proved that the product of a negative and a positive number is a negative number. **(2)** The **Virahanka work** is similar to the Fibonacci Series, **(3)** Pingala's **Meru Prastara** can be related to **Pascal's Triangle**, and **(4)** **Madhava** (c 1,400 CE) found the approximate value of pi (p), and **(5)** In fact, the Indian numeral system (e.g., **Bakhshali Manuscript**) is the source of the **Arabic numeral system**. Later, it was transmitted to Europe.

In the field of **space sciences**, **Hinduism** related **ancient cosmological ideas** that were central to Hinduism form the basis of modern cosmology. The Hindu religion faith related to an **infinite number of deaths and rebirths** has some similarities with the **theory of the multiverse**.

India was a centre of **manufacturing** and **trade**. The **Damascus swords** were made from **Wootz steel in India**. Till the 19th century, Lahore, Amritsar, Agra, Jaipur, Gwalior, Tanjore, Mysore and Golconda were some of the few manufacturing centres for the Wootz steel. The art was lost after the advent of the British

In fact, **Kautilya** advocated **interest rates** that varied with **risk** (His **treatise** known as **Sukraniti**). This concept is related to **constant optimisation** of **risk** and **return**. These thoughts are the basis of theory of **differential interest rate** which is one of the founding pillars of modern economics.

India's rich heritage comprises both **tangibles** like **architecture** and **intangibles** like the wealth of knowledge.

Way Forward

“**Dhara: An Ode to Indian Knowledge Systems**” has been launched by the Ministry of Culture in this direction. It will enable academic scholars to add rigorous reasoning and scientific credibility to India's contribution and achievements across domains.

Further, **Azadi Ka Amrit Mahotsav** commemorating the **75th year** of **Indian Independence** provides an occasion for doing something in this regard.

MERGING OF FILM AND MEDIA UNITS WITH NFDC

2. Protect the film archive. This can't be done by handing it to a corporation

Source: The post is based on the article, “Protect the film archive. This can't be done by handing it to a corporation” published in the **Indian Express** on **5th Apr 22**.

News: Recently, the government has **merged** the Films Division, Children's Film Society, International Film Festival of India (IFFI), Directorate of Film Festivals, and National Film Archive of India (NFAI) with the NFDC (National Film Development Corporation of India).

What are the achievements of the NFAI?

Contributed to the growth of our film culture. It has gathered a certain amount of expertise and special experience. These worked with experts in the respective fields.

The NFAI's functioned to **preserve our film heritage**. It was one of the largest reserves of cinema films in the world. It used to archive the original prints of films in various languages from all over India.

The NFAI was a member of the international federation of film archives. It shared, exchanged, and standardised modern methods of archiving and restoration.

What are the issues with the merger?

The government has the duty and commitment to preserve and nurture our cultural heritage. This merger with a corporate body will **violate the government's commitment**.

These institutions have different characters and functions. They are being brought under a single institution known as NFDC. The **NFDC does not have special knowledge or experience** in any of these areas.

Any corporation works on the basis of business. Thus, how NFDC, a company would maintain a film archive when it is a known fact that it is an expensive affair.

The government has **proposed digitisation of films** in the archive. It will act as an alternative model to optical film preservation. There are questions like for how long digital format will last and how secure it is for preservation.

The culture of preservation of cinema in optical film format is a strong movement. It ensures long-time preservation. It ensures longevity in preservation.

GS1 – SOCIETY – WOMEN ISSUES

HIJAB ROW IN KARNATAKA

3. Strengthen secularism, save the republic

Source: This **post** is created based on the article “Strengthen secularism, save the republic” published on **6th April 2022** in The Hindu.

Syllabus: **GS2** – Indian Constitution: Evolution and Features

Context: The judgment of Karnataka High Court regarding the hijab issue has further provoked the hijab-wearing college students in Udupi. They have approached the Supreme Court to contest the order.

What is the political dimension of the hijab issue?

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The issue of hijab is political as well as constitutional. The Supreme court can settle the constitutional aspect but the political dimension will continue.

As a matter of fact, Hindu and Sikh women in northern India cover their heads on occasions such as a marriage, funeral, etc. However, removal of hijab from educational institutions creates an environment of intolerance.

What is the moral framework that India has followed?

India has a past where people from other parts of the world were welcomed with open arms. A tolerance of other faiths and compassion towards fellow beings became an integral part of Indian traditions because of Buddha.

The Constitution adopted that moral framework for the governance of India. The Constitution provides for freedom of religion and conscience on the one hand and secularism for the governance of the country on the other.

What is the essence of Indian secularism?

The essence of Indian secularism is that the state has no religion. This is clear from **Article 27 and 28** of the Constitution.

Article 27 states that no tax can be levied for promoting any particular religion. **Article 28** says that no religious instruction shall be given in any educational institutions wholly maintained out of state funds. **Article 25(2)(a)** empowers the state to regulate secular activities associated with religious practices. **Article 15** prohibits any kind of discrimination on the ground of religion. Above all freedom of religion is made subject to other fundamental rights, apart from the reasonable restrictions on the grounds of public order, morality and health.

In **Indira Nehru Gandhi v. Raj Narain & Anr.**, the Supreme Court of India said “the state shall have no religion of its own’.

Can India become a theocratic state?

A theocratic state with majority religion as the state religion is an unworkable proposition. A **theocratic state functions on the basis of religious laws**, which in India means the Dharma Shastras according to which only a particular caste has the right to rule and a large majority of the population will have no right to be a part of the power structure. This may lead to perennial conflicts and the eventual disintegration of society.

What should be done?

India can only survive as a secular state where the state has no religion and does not promote any religion. Secularism was chosen as the foundational principle of the republic to keep the nation united.

MARITAL RAPE AND RELATED ISSUES

4. A far reaching verdict that ends a regressive exception

Source: The post is created based on the article “**A far reaching verdict that ends a regressive exception**” published in **The Hindu** on **04th April 2022**.

News: In the case of **Hrishikesh Sahoo v. State of Karnataka**, the Karnataka High Court pronounced the end of marital rape exception in **Section 375 (Rape) of Indian Penal Code**.

In the case, a husband approached the High Court seeking to quash the criminal proceedings against him. The charges framed were under Section 376 (rape), notwithstanding the marital rape exception. The High Court refused to quash the charge of rape against the husband.

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What does the judgment say?

The Judge held that if a husband is exempted from his acts of sexual assault it **would destroy the women's right to equality**, which is the soul of the Constitution.

The exception to marital rape in the IPC amounts to **discrimination because a wife is treated as subordinate to the husband**.

The Constitution guarantees women fundamental rights under **Articles 14,15,19 and 21**. These include **the right to live with dignity, personal liberty, bodily integrity, sexual autonomy, right to reproductive choices, right to privacy, right to freedom of speech and expression**.

What are the previous judgements?

In **Independent Thought v. Union of India (2017)**, the Supreme Court of India diluted the exemption. Earlier the exception stated that sexual intercourse with wife over the age of 15 years is not rape. The Court changed the **minimum age to 18 years**. The Court stated that a girl **cannot be treated as a commodity**. The human rights of a girl child are alive whether she is married or not.

What are the basis of the judgement?

The exception to marital rape is based on the principle of common law that by marriage a woman gives up her body to the husband. Due to which, husband could not be guilty of raping his wife. This was also adopted in the Indian Penal Code.

In United Kingdom, the case of **R v. R (1991)**, abolished the principle. The House of Lords held that the **duty of the court is to take steps to alter the rule** according to the position of society. Hence, a rapist remains a rapist subject to the criminal law, irrespective of his relationship with his victim.

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General

Studies

Paper – 2

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GS2 – POLITY – STATUTORY, REGULATORY AND VARIOUS QUASI-JUDICIAL BODIES

UIDAI AND RELATED ISSUES

1. Safeguard Aadhar: CAG's audit of UIDAI reveals worrisome laxity. It needs to improve fast

Source: This post is created based on the article “**Safeguard Aadhar: CAG's audit of UIDAI reveals worrisome laxity. It needs to improve fast**” published on **7th April 2022** in Times of India.

Syllabus: Statutory bodies

News: CAG presented its performance audit of Aadhaar's regulator, Unique Identification Authority of India (UIDAI). The audit covered its mature phase, from 2014-15 to 2018-19. CAG's audit portrays an unsatisfactory picture of the systems and processes in UIDAI.

How does the UIDAI function?

UIDAI operates Aadhaar through a layer of subcontractors. So, when an applicant's biometrics are uploaded to the Central Identities Data Repository, it may be executed by the third layer of subcontractors. A similar system is in place when a financial intermediary seeks to authenticate the identity of a potential customer by using the Aadhaar database.

What does the CAG report state?

CAG's report shows **looseness in the process:**

1. UIDAI **neither has granular data nor is it able to pinpoint the cause of failure.** For example, UIDAI is unable to identify the cause of authentication failures, which causes people to pay to update their biometrics.
2. Issue of **duplicate Aadhaar**
3. Lack of **oversight of subcontractors:** Many failed to get their operations audited annually.

All these have bearing on data security.

Way forward

UIDAI must have more robust systems in place. Need for better grip on data and subcontractors is required.

GS2 – POLITY – JUDICIARY

CRIMINAL JUSTICE REFORM

2. Closing the gaps in criminal justice

Source: The post is based on an article “**Closing the gaps in criminal justice**” published in **The Hindu** on **09th April 2022**.

News: Recently, the Supreme Court observed certain **deficiencies** and **inadequacies** which occur during the course of criminal trials. Therefore, the court has issued certain guidelines in this regard. Further, the essential notification and the necessary changes has been issued by the Guwahati High Court in January 2022.

What directions have been given by the Supreme Court?

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Preparing a site sketch: Traditionally, as per The Criminal Procedure Code (CrPC), the investigating officer prepares a **site sketch** that shows **details of the crime scene** and **collects evidence**. As per new guidelines, I.O. is required to prepare a **scaled site plan** of **site sketch**. **It is mandated to be prepared by a police draftsman.**

As per the guidelines, the police are required to develop its **own cadre of draftsmen**. **They will prepare a scaled site plan.**

A printed format of the human body must be accompanied with **every medico-legal certificate** and **post-mortem report**. It shall contain all the reverses and injuries from both sides of the body.

An inquest report must be produced. Its purpose is to ascertain whether a person has died an **unnatural death**. If so, then what is the nature of injuries and the apparent cause of death'. In this case, a criminal case has to be registered and regular investigation has to be taken up immediately without waiting for any formal complaint.

The post-mortem report is a 'document'. It is not a piece of **substantive evidence** by itself.

In case of **custodial death**, the magistrate or the IO must inform the hospital to arrange for photography and videography for post-mortem examination. The I.O. has been mandated to seize such photographs and video graphs and obtain a certificate for evidence for them under the Indian Evidence Act, 1872.

The government has been directed to develop trained photographers at police stations. It was also mandated in the ***Shafhi Mohammad vs the State of Himachal Pradesh*** Case (2018).

The state governments should appoint **advocates**, other than **public prosecutors**. They will advise the investigating officer during investigation (Currently, a public prosecutor advises the I.O).

In reality, the **investigation** and **prosecution** are different facets in the **administration of criminal justice**. Therefore, the SC has directed to separate the two wings in the criminal procedure.

Way Forward

For the time being, **investigating officers** and **medical doctors** must be trained in order to implement the **Supreme Court's directives**.

The creation of a cadre of **draftsmen** and **photographers** should be undertaken at the war scale.

Chhattisgarh has sanctioned a **cadre of law officers** to assist the investigating officers. They will work independently of the public prosecutors. They will have no role in the court. Other States should also follow suit.

The guidelines must be implemented sincerely. They have also been issued earlier. For example, the **NHRC** and the Supreme Court in ***People's Union for Civil Liberties vs State of Maharashtra (2014)*** have issued similar guidelines for deaths in exchange of fire with the police. In addition, the **NHRC** issued similar guidelines related to body sketches in an inquest report and a post-mortem report.

ISSUES WITH THE JUDICIAL SYSTEM – PENDENCY OF CASES

3. **Big headache: Minor offences majorly clog courts and harass individuals and businesses. Decriminalise them**

Source: This post is created based on the article “**Big headache: Minor offences majorly clog courts and harass individuals and businesses. Decriminalise them.**” published on 7th April 2022 in Times of India.

News: The GoI has given a renewed push to decriminalize minor offenses. It has the potential to **clog courts, promote ease of doing business** and **relieve citizens** fighting criminal cases for non-serious violations. Example – In 2020 provisions of the Companies Act were decriminalized.

Examples of laws causing high pendency:

Section 138 of Negotiable Instruments Act (cheque bounce cases), criminalised in 1988. Arguments that this deters issuing of bad cheques must contend with high judicial pendency i.e., 15% pendency in subordinate courts.

Bihar prohibition law that jammed courts and prisons was amended to put emphasis on monetary penalties, still errs towards criminalisation.

What should be done?

Introduction of liberal approaches such as **compounding of offences, Alternate Dispute Resolution (ADR) or community service.**

This also has the potential to free up judges to focus on heinous crimes and enforcement of contracts.

GS2 – GOVERNANCE – CIVIL SERVICES

CRITICAL ANALYSIS OF PERFORMANCE OF IAS

4. **Has IAS Failed The Nation? Not Really**

Source: The post is based on the article, “**Has IAS Failed the Nation? Not really**” published in **The Times of India** on 7th Apr 22.

Context: Recently, the Indian Administrative Services (IAS) has come under severe criticism from different quarters, including from several senior retired IAS officers.

Therefore, it demands both constructive criticism and introspection for the improvement in the premier institution of the Indian bureaucracy.

What are the problems the IAS is facing?

There is a perception that the IAS has “lost its ethos and its way” over a period of time. They have become “**cogs in the wheels of complacency and acquiescence**”.

The Indian bureaucracy has been facing the **biggest issue** of **politicisation**. It has resulted into the deeply flawed system of incentives and penalties for the IAS officers. It is the biggest problem of the IAS officers.

Why the IAS has not failed?

The IAS service has played its role in Indian democracy while adhering to the **principle of the primacy** of the political executive. In fact, is the most important principles of a democratic country

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The IAS officers are **wrongly blamed for every policy failure or its implementation failure**. They are disproportionately blamed because of the premier status of the IAS. There are other services or institutions involved in the policymaking and implementation process as well.

As per findings of a detailed study on the effectiveness of the IAS in 2017, it was found that the IAS has been very effective in preserving **national unity** and upholding the **constitutional rule in India**.

In fact, every **single state reform** and improvement in **public service delivery** in India happened due to the effort of a **competent IAS officer** (As per the World Bank study in 2006-07). These are '**unsung heroes**' of India. Such efforts are often replicated and also publicized as good work by the LBSNAA.

What are the reforms that need to be implemented?

Reforms must start with changes in the entry examination, say, the **maximum age and number of attempts should be reduced**.

In order to improve performance, there is a need to do away with the **distinction** between **promotion** and **empanelment**.

The government needs to establish a very **robust appraisal system**. It should be executed through the UPSC. Those who do not qualify in the appraisal system should be pensioned off.

The **state civil service officers should be promoted to the IAS by a competitive examination**. It would ensure younger persons come into the IAS service. It will also strengthen the federal character.

It should be ensured that the **transfer is not used as an instrument of coercion** and the IAS are not targeted post retirement.

Discourage post-retirement positions of the IAS officers.

What is the way forward?

IAS comprises an "extraordinary pool of skills and talents". They have rich experiences in various fields, understanding of the functioning of the government, and understanding of delivery systems for development". Therefore, they are best positioned to lead our developmental efforts.

Moreover, if the IAS officers are properly empowered by politicians, they can be transformed into an effective instrument for innovation in service delivery.

GS2 – POLITY – CONSTITUTIONAL AND OTHER BODIES

CBI AND RELATED ISSUES

5. A candid conversation about the caged parrot

Source: This post is created based on the article "**A candid conversation about the caged parrot**" published on **7th April 2022** in The Hindu.

News: The Chief Justice of India (CJI) recently gave a candid appraisal of the state of India's investigating agencies.

The CJI called upon investigators to stand up to the unethical pressures in order to uphold the confidence entrusted in them by the public. He stated if middle-and senior-level investigators deviated from the path of objectivity and neutrality, they will be held accountable for it.

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Has the judiciary made similar observations earlier?

In 1997, **Justice J.S. Verma** has rebuked the then CBI Director in **Hawala case** for stalling the investigation at will. He went on to prescribe a new clinical procedure for the selection of the CBI chief. Also giving the chief fixed tenure of two years to insulate the CBI director from the caprice of the executive.

What is the bright spot in CBI?

It has some of the brightest Indian Police Service officers in its higher echelons. There is a fear among CBI officers that the judiciary could intervene if an investigator is arbitrary and dishonest.

It has acquired greater uprightness than before. Allegations of political interference have been blown out of proportion, because only about 10% of the cases handled by the CBI have political overtones.

There have also been some big cases in the net of investigators – a former CM of Bihar and a former Home Minister of Maharashtra.

What should be done?

The CBI needs to have **the strongest leader with a distinct belief in the law and ethics**. A Director who is able to explain issues to higher authorities in a rational and reasonable manner and efficiently protect his deputies.

An umbrella organization, as suggested by CJI, to oversee all investigating agencies can prove to be impractical. Such a body can generate its own problems – of turf wars and ego clashes.

The **focus should be on weeding out the dishonest officers** and **rewarding those who have proven themselves to be honest** and professionally innovative.

GS2 – GOVERNANCE – GOVT POLICIES AND INTERVENTIONS

UAPA AND RELATED ISSUES

6. How the UAPA is wrecking lives

Source: The post is based on an article “**How the UAPA is wrecking lives**” published in **The Hindu** on **7th Apr 22**.

News: Recently, an accused in “the Delhi riots cases” who was charged under the Unlawful Activities (Prevention) Act (UAPA), 1967 was denied bail by a Sessions Court in Delhi. He was involved in a protest against the Citizenship (Amendment) Act of 2019.

What is the concept of bail in criminal law?

The bail is based on the principle of ‘innocent until proven guilty’. It ensures that an individual is not unjustly treated, and liberty is not denied when a person is under trial or he/she has not been proven guilty.

In normal circumstances, the bail is granted if an accused is not at risk of escaping or is unlikely to tamper with evidence or intimidate witnesses.

What are the problems wrt bail provisions in UAPA?

The UAPA prohibits a judge from granting bail to an individual if he/she is satisfied that there are **reasonable grounds** for believing that the **accusation is prima facie true**.”

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The **bail hearings** under the UAPA are like a **mini-trial**. It is subjected to a lot of hearings on lines of a **criminal trial**. Therefore, this process of grant of bail takes a lot of time.

In these bail hearings, the judge makes **decision** based on the **arguments of the prosecutor/police version only**. Unlike trial, in which the **defence** is entitled to **cross-examine** the prosecution's witnesses, the defence is **not entitled to cross-examine**. It is done based on the presumption that everything in the police report is **true**.

A trial under UAPA often takes more than 10 years. If the bail is denied to a person, then it is likely that he/she will have to spend a **decade or more** behind bars. In addition, the **conviction rates** under the UAPA are **very low**. It means that most of the under trials are **innocent**.

In the UAPA case, the outcome of the bail hearing also determines the outcome of the case itself. For example, the **denial of bail** is like an accused has been found **guilty**.

In fact, in a notorious judgment in **National Investigation Agency v. Zahoor Ahmad Shah Watali (2019)**, the Supreme Court forbade the lower courts from in-depth scrutiny of the police case.

Way Forward

In the immediate future, the UAPA provision related to **bail prohibitions** can be diluted. The police case may also be subjected to **stricter scrutiny** during bail hearings.

GS2 – GOVERNANCE – WELFARE SCHEMES

GS2 – SOCIAL ISSUES – ISSUES RELATED TO CHILDREN
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SCHEMES FOR CHILD WELFARE

CHILD HEALTH

7. On Mission Vatsalya: The child at the centre

Source: This post is based on the article “**The child at the centre**” published in **The Hindu** on **7th Apr 22**.

Context: Mission Shakti, [Mission Vatsalya](#), [Saksham Anganwadi](#) and [Poshan 2.0](#) were **launched recently to provide integrated benefits to women and children**.

The intent behind these schemes is to provide integrated benefits to children and women.

What are the components under Mission Vatsalya?

Components under Mission Vatsalya include

- Statutory bodies
- Service delivery structures
- Institutional care/services
- non-institutional community-based care
- Emergency outreach services
- Training and capacity building.

What are some associated concerns?

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ChildLine (1098), the 24-hour toll-free helpline for children in distress, will be manned by the Home Affairs Ministry under Mission Vatsalya, because of the need to 'preserve data sensitivity'.

A road map to implement the scheme is not yet available, but it is understood that police personnel will first answer the call, handing over implementation to NGOs later.

– This is problematic as children do not feel comfortable confiding in police personnel.

What is ChildLine?

ChildLine, set up in 1996, has been in operation for over 25 years, growing gradually to become one of the largest global networks to assist and rescue children in distress.

It has functioned as a public-private partnership (PPP) between the government and civil society organisations to provide a first-responder safety net, and kick-start the process of rescue and rehabilitation of children.

ChildLine seeks to reduce the burden on the police force, and invokes their assistance only if the circumstances necessitate.

During a short-lived experiment in Chennai around 2003, when ChildLine calls were diverted to All Women Police Stations (AWPS) — they were flooded with calls, hampering regular work. Sometimes, all the children wanted was to spend some time talking to someone, or they were making multiple blank calls before they picked up the courage to tell all. In many cases, police intervention was not needed at all.

What is the way forward?

The govt must consider the issue from the perspective of the key beneficiary of this scheme — the child — and make sure that his/her safety, security and happiness are ensured.

GS2 – SOCIAL ISSUES – MANUAL SCAVENGING

MANUAL SCAVENGING AND RELATED ISSUES

8. **The manacles of caste in sanitation work**

Source: This post is created based on the article “**The manacles of caste in sanitation work.**” published on **8th April 2022** in The Hindu.

Syllabus: GS 2 – **Welfare** Schemes for vulnerable section of the population

Context: Even today, the Indian government and civil society continue to grapple with the inhuman nature of manual scavenging. While in 1993, the government promulgated an Act to stop construction of unsanitary dry latrines and employing manual scavengers, the problem still continues.

Issues with the Act:

Problematic descriptions: The act defined dry latrine as “latrine other than a water-seal latrine”. Manual scavenging was not just a practice related to dry latrines, but also insanitary latrines and open defecation.

In 2013 the Supreme Court forced the Central government to conduct a survey of manual scavengers, on the basis of a PIL filed by Safai Karamchari Andolan. The survey found continuation of practice and hence, **Prohibition of Employment as Manual Scavengers and their Rehabilitation Act** was passed.

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The construction of dry latrines reduced but **the deaths remained high**. The government had plans to amend the 2013 Act to completely mechanise the cleaning of sewer and manholes and build new sewers. But the **issue of labour safety remains unaddressed**.

Issues of dignity of the sanitation workers:

Most sanitation contracts are given to private contractors – such staff hardly have ID cards, leave alone medical insurance policies.

Unlike other labour forces, the sanitation workers do not have a separate rule book that lays down guidelines for their work timings, holidays, a proper place for roll call, removal from duty etc.

There are no vehicles for sanitation workers to travel to their designated workspaces. There are hardly any exclusive trade unions for sweepers. Dalit movements have also been found wanting in his regard.

In India, sanitation work is caste-ridden and hence, is an urgent need to dissociate caste from labour.

GS2 –SOCIAL ISSUES – RESERVATION IN INDIA

RESERVATION AND RELATED ISSUES

9. No quota without quantifiable data

Source: This post is created based on the article “No quota without quantifiable data” published on **6th April 2022** in The Hindu.

Syllabus: GS 2 – **Constitution** features/ Government policies and interventions aimed at development.

Context: The Madras High Court recently quashed the 10.5% special reservation for Vanniyakula Kshatriyas with the overall 20% quota for Most Backward Classes (MBC) and Denotified Communities (DNC). It has again highlighted the importance of quantifiable data as a prerequisite for reservation in education and employment.

Is there a need for an exhaustive study?

It is a fact that no exhaustive study has been done to collect quantifiable data on the representation of different communities in education and employment since the second BC Commission (1982-85).

The quantifiable data are required for providing any form of quota in favour of any community. The Constitutional stipulation of **adequate representation in the services** has to be met along with that of **social and educational backwardness** for any community to become eligible for reservation in employment.

The Tamil Nadu government should commission a study to compile the data on the way the benefits of reservation got distributed among BCs, MBCs and the DNCs.

What is the need for internal reservation?

The need for internal reservation has been felt for more than one reason. Even in the 1970s and 1980s, two BC Commissions found that **certain sections of communities are more backward than others**. The situation has got compounded in the **absence of application of creamy layer rule**.

What should the Tamil nadu Government do now?

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As the 69% quota law came into force in 1994, the government can have the data compiled since then with regard to education and employment in government institutions, and make them available in public domain.

Depending on the finding of the proposed study, the government can frame its policies accordingly to ensure equitable distribution of benefits of reservation and social justice.

GS2 – GOVERNANCE – ISSUES RELATED TO DEV OF EDUCATION

HIGHER EDUCATION AND RELATED ISSUES

10. To begin with, the UGC needs to get the credits right

Source: The post is based on an article “**To begin with, the UGC needs to get the credits right**” published in **The Hindu** on **9th Apr 22**.

Syllabus: GS2 – Social Sector, Education

Relevance: Higher Education, National Education Policy, Choice Based Credit System

News: Recently, in pursuance of the **National Education Policy (NEP) 2020**, various documents related to a four-year undergraduate degree programme have been released for discussion.

These are the **Choice Based Credit System (CBCS)**, the **Learning Outcomes-Based Curriculum Framework (LOCF)**, and the **draft National Higher Education Qualification Framework (NHEQF)** document issued by University Grant Commission (UGC).

How is the NEP 2020 going to reform education in India?

It has proposed a number of changes in higher education. These changes will address the rigid and terribly **outdated course structure** in higher education programmes in India.

At present, students received education only on papers. However, the new changes will enable **choice, flexible, and liberal ethos-based education system**.

What is the concept of a credit system?

It refers to the **total expected engagement** from the student. It includes **time spent** in lectures and tutorials. For example, a **seven-credit course** mean two hours of teaching per week and remaining hours credited for preparation and assessment. (For example, a seven-credit system is used under the **Bologna Process in the UK**).

A credit also signifies the **minimum skill attainment** for graduating from one level to another in education.

What will be the implications of the proposed credit system in India?

It will impact the teaching quality and research productivity of the faculty members in the higher education institution in India.

In India, the course credits are going to be directly proportional to the teaching hours. For example, **one credit for one teaching hour**. However, this is not found in the Anglo-American Universities like U.K. university. The faculty teaching hours per course are much lower than what is currently practised in Indian universities and outlined in several UGC documents.

The proposed **credit system in India** is going to increase the **faculty workload**. For example, NEP mandates that it is the responsibility of a faculty to prepare the course content, assessments, and grading. In addition, they cannot teach more than 20 students at one time. So, in a way, a faculty would end up teaching for more hour in a week.

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The overburden the faculty will not be able to produce **research productivity** and **better content and teaching delivery**.

Way Forward

The standard workload for a faculty is typically decided via **negotiations** between faculty unions and the university administration.

The **faculty workload** should vary between **two courses per year** in a **research-intensive university** to four or five courses per semester in a **community college**. It will increase the productivity of the faculty member of an institution. They will be able to create quality teaching content and engage in research. Indian regulators need to reduce credits per course in line with the practice in **North American universities**.

We need to train students to take more responsibility for their learning. The government can promote **technology-aided larger classrooms** for introductory courses in universities. Further, the graduate students can act as teaching assistants to economise on faculty time and effort.

We need to incentivise stakeholders in the higher education sector to collectively meet the desired outcome.

11. Time to revisit the IIM Act

Source: The post is based on an article “**Time to revisit the IIM Act**” published in the **Business Standard** on **8th Apr 22**.

News: Recently, IIM Ahmedabad (IIMA) witnessed a lot of turbulence over changes in the logo. Other IIMs in the country also witnessed disturbances over a variety of issues.

This has raised questions over governance in the premier management institution of India.

What changes have been introduced by the IIM Act 2017?

The Act has given formal shape to the **considerable autonomy** which the IIMs have been enjoying so far. In fact, the Act has enhanced the autonomy of the IIMs in the following ways:

- (1) The government left the **appointment** of the chairman and the director to the **board**, and secondly, it has decided not to influence the working of the IIMs.
- (2) The central government and the state government have one **representative** on the board of IIMs. These **nominees** play a passive role. Earlier, they used to be active.
- (3) The IIM Act says that the **IIM’s board** is **accountable** to the government. IIM boards evaluate the **performance** of the institute **once every three years** through an **independent agency**. Then, it would submit an action taken report to the government. Further, the report would be placed in the public domain.

What have been the controversies since the enactment of the IIM Act?

Erosion of faculty governance in IIMs. Earlier, IIMs used to be called as **faculty-governed institutions**. The faculties used to be consulted in key decisions like admissions, placement, course syllabi, recruitment of faculty, etc. Now, faculties are **not consulted** on proposed changes. The decisions are taken at the level of the **Director** and approved by the **Board** of the institution.

- For example, in **2008**, the Board of IIMA announced a **100% fee hike** for its **post-graduate programme**. Thereafter, the faculty were informed.
- Now, the **logo of IIMA** has been changed by the director and Board without consulting the faculty members.

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The **director appoints the faculty members** to the board. The appointed faculty is supposed to act as a bridge between the faculty and the board. However, **traditionally, the faculty used to elect its representatives** to the board.

In addition, the norms for the appointment of dean, which is a very important post in an educational institution, has not been fixed.

In India, the Board members come and go. They have virtually no stake in the IIMs. There is **no meaningful accountability** of the director or the board in IIMs.

How can the governance deficit be addressed?

The government should have a **meaningful and active role in the governance** of the IIMs. It should **expedite the creation of a new higher education regulator** in India.

The govt must constitute an **IIM Advisory Board (IAB)**. It will commission an independent performance audit of each IIM every three years. It should also be empowered to propose **chairman and directors** for the IIMs like done by the Banks Board Bureau (BBB) for public sector banks.

The **IIM Act must be amended**. It should include a provision that faculty members on the board are chosen by the faculty and not by the director.

The govt nominees on the board should play a role on important issues. They should demand clearly defined criteria for important posts such as those of dean, membership of the board and membership of the committee that evaluates faculty.

CUET AND RELATED ISSUES

12. The CUET mandate warrants cautious implementation

Source: The post is based on an article “**The CUET mandate warrants cautious implementation**” published in **The Hindu** on **6th Apr 22**.

News: Recently, the **University Grants Commission (UGC)** has made it mandatory for the Central Universities to take admission in their undergraduate programmes on the basis and merit of scores in the **Central University Entrance Test (CUET)** from this year.

What is the situation wrt admission tests in India?

The institutions of national importance (INIs), i.e., the IITs, the IIIT, the NITs, and the IIM, already admit students on the basis of a **single common entrance examination**.

All the **medical institutions** take admission on the basis of **the National Eligibility cum Entrance Test** (undergraduate), or NEET.

12 central universities have been admitting students on the basis of a **single common entrance test**.

However, **most central universities** admit students on the basis of their **own entrance tests** which conducted programme by programme. The Indian Institutes of Science Education and Research is also allowed to follow a different approach for taking admission.

What are the concerns associated with CUET?

It goes against the **principle of academic autonomy**. In addition, the formalisation, uniformity, and standardisation of the education will pull down quality of education to the lowest common denominator.

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There are concerns over the autonomy, competence, credibility and expertise of the **NTA** which will conduct the test. For example, leakage of national level tests.

The entrance tests may undermine the **importance of board examinations**. It can distract students from their studies in schools.

It may pose a huge disadvantage to an overwhelmingly large number of students from the **State Boards** (not the Central Board of Secondary Examination).

In fact, the countries in which the **World-class** universities are situated do not insist on admitting students based on a **quantitative score** of a common test. They grant freedom to evolve **holistic criteria for admission** or in other words they respect the **idea of academic autonomy**.

The higher education is in the **concurrent list**. Therefore, the States must be taken into **confidence** on such matters. In fact, the centrally-funded technical educational institutions, central universities, and deemed universities enrol a mere **5.08%** of students. The remainder, **94.92%**, are enrolled by the state universities, and their colleges (publicly funded or self-financed).

Way Forward

There has to be **discussion, deliberation** and **consultation** with all the stakeholders. It will develop the best method for admission in the **higher educational institutions**.

Finally, The **Higher Education Commission of India (HECI)**, as prescribed by the **NEP 2020**, needs to be established soon. It includes the **General Education Council (GEC)** which is a consultative mechanism.

GS2 – INTERNATIONAL RELATIONS – INTERNATIONAL GROUPINGS AND ORG

BRICS AND RELATED ISSUES

13. Fulfilling the potential of the Bay of Bengal community

Source: The post is based on an article “**Fulfilling the potential of the Bay of Bengal Community**” published in **The Hindu** on **09th April 2022**.

News: Recently, the **fifth summit** of the Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC) was concluded in Colombo. The organization is also celebrating its **25th year of the formation**, which was launched in 1997.

What were the outcomes of the summit?

The summit had **three important outcomes**:

- Expanding the **grouping’s agenda**, deepening cooperation between the member countries and planning systematically for consistency and coherence.
- the **BIMSTEC charter** was finalised after more than two decades. It articulates the purpose, principles, legal standing and regular meeting of the organisation. It stipulates that **consensus** is required for **admission of new members** and increasing the **number of observer countries** of the organisation.
- The **Master Plan for Transport Connectivity** has been adopted. It has been proposed to extend the **trilateral highway project** between Thailand, Myanmar and India to Laos and Cambodia. Further, Bangladesh, Bhutan and Nepal have also shown interest in the project. These measures will ensure seamless connectivity through **multi-modal channels**. It will deepen cooperation in the region.

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The organization has proposed to conclude the **regional free trade agreement**. It will give a fillip to the organisation's efforts.

The MoU has been signed for **legal assistance in criminal matters**. Further, additional MOUs have been signed for mutual cooperation between **diplomatic academics** and **training institutes**.

An **Eminent Persons' Group (EPG)** is to be established on the lines of the **EU, G20, and ASEAN**. It will formulate a vision document for the region. It will suggest a roadmap to address the challenges in the future.

What commitments have been made by India?

India has promised \$1 million to set up a **Secretariat in Dhaka** (As proposed in the 4th Summit in Kathmandu).

India has committed to provide a \$3 million grant to the **BIMSTEC Centre for Weather and Climate**.

India will promote collaboration between **industries and start-ups**, and would help in adoption of international standards and norms.

India proposed an **agricultural trade analysis** based on the **regional value chain**. It will be conducted by the **RIS**.

Way Forward

The term of the **Secretary-General** of the BIMSTEC may be extended. It would provide **stability** to several of the collective's initiatives.

Besides economic links, the Bay of Bengal countries share a **cultural** and **civilisational legacy**. Therefore, institutions like **Nalanda University** can play a role in promoting research on cultural and civilisational linkage. They can help in the adoption of **sustainable practices** in the region.

BRICS AND RELATED ISSUES

14. BRICS and the creation of a multipolar world

Source: The post is based on an article "**BRICS and the creation of a multipolar world**" published in the **Indian Express** on **8th Apr 22**.

News: The Russia-Ukraine conflict has brought BRICS grouping at the centre of discussion due to multiple reasons.

The RIC controls 22% of the global GDP, and it accounts for 16% of global exports of goods and services.

Therefore, the current crisis may **consolidate BRICS**, especially RIC. It has the potential to become a **real alternative** to the West. It can create a **real multipolar world**.

What is the significance of the Ukraine conflict for BRICS?

Russia is now alienated and has been expelled from the G-8 group. It may now wish to increase its bilateral trade with India and China. It will lead to a strong **Russia-India-China (RIC) relationship** or a **north Eurasian integrationist core** within BRICS.

New alternative arrangements are being developed. **For example**, India-Russia have agreed **Rupee-Ruble cross currency pairing** to settle payments in non-dollar currencies.

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India is aiming to build a dedicated payment mechanism known as **India's sovereign Financial Messaging Systems (SFMS)** like SWIFT. It will enable energy-related payments, and will challenge the **dollar's hegemony**.

Such measures may push for **internationalisation of the Indian rupee**. In fact, Russia has also decided to export **discounted crude oil** to India to recoil from sanctions.

How BRICS members have tried to change world economic system in recent years?

In recent years, BRICS members have attempted to change the **world economic system**, through the following efforts:

- Creation of the **BRICS Development Bank**.
- Creation of a **reserve currency pool** (\$100 billion) to offer an alternative to countries in the non-Western world to avert **serious economic crises**.
- BRICS has also demanded an increase in the number of **non-Western states** in international financial institutes.

How are the BRICS states different, and how do they disagree with the West?

Brazil and Latin America: Brazil has strong **left socialist tendencies**. It disagrees with the West on social issues. In fact, Latin America is sensitive to diktats from the North and recurrences of the Monroe Doctrine.

South Africa: Some of the local communists belong to the ruling coalition. The West has been accused of abetting the old order.

In **Russia** and **India**, people do not like the moral values of the West. Both are determined to oppose diktats of the West.

Way Forward

The **present crisis** has increased the weight of India. India is at the centre of a **diplomatic triangle** in the **Indo-Pacific**. It is witnessing high-profile visits from the US, Australia, Japan, China and Russia.

Therefore, New Delhi could be looking at a new dawn.

GS2 – INTERNATIONAL RELATIONS – BILATERAL AND MULTILATERAL AGREEMENTS

INDIA – NEPAL RELATIONS

15. Repairing the complex India-Nepal relationship

Source: The post is based on an article “**Repairing the complex India-Nepal Relationship**” published in **The Hindu** on 7th Apr 22.

News: Recently, the Nepal Prime Minister, Sher Bahadur Deuba completed his visit to India which was also his first bilateral visit abroad.

What is the convergence of interests between India and Nepal?

Recently, Nepal ratified the agreement with the **U.S. Millennium Challenge Corporation (MCC)**. China claimed that it was part of the **U.S.'s Indo-Pacific strategy** to contain China. Therefore, it will provide welcome synergy between India and Nepal.

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35 km cross-border rail link from Jayanagar (Bihar) to Kurtha (Nepal) was operationalized, the **90 km long transmission line** connecting Tila (Solukhumbu) to Mirchaiya (Siraha) was inaugurated.

Nepal has been inducted into the **International Solar Alliance (ISA)**. In addition, agreements have been signed for **technical cooperation** in the railway sector, and ensuring regular supplies of **petroleum products** (*it was signed between Indian Oil Corporation and Nepal Oil Corporation*).

Both sides have signed **the Mahakali Treaty** (1996). The treaty covers the Sarada and Tanakpur barrages and Pancheshwar Multipurpose project. It will enable power sector cooperation between both the countries.

What are the differences that have emerged in the India and Nepal relationship?

The political narrative has changed in both countries.

In 2019, Nepal government raised and expanded **the Kalapani boundary issue**. It soured Nepal's relations with India.

Now, the **1950 Treaty of Peace and Friendship** is being viewed as a sign of an unequal relationship. It is seen as a sign of Indian imposition. (Note: *It provides for an open border between India and Nepal. It allows Nepali nationals to have the right to work in India.*)

India has been blamed for interfering in the **Constitution drafting process** of Nepal. It was also condemned for **"unofficial blockade"** in Nepal. This reinforced the notion of **Nepali nationalism** and **anti-Indianism** in Nepal.

China's growing role: **a)** China considers Nepal as an important element in its growing **South Asian footprint**. **b)** In 2016, Nepal and China concluded a protocol. It allowed Nepal to have access to four seaports and three land ports of China. **c)** Both China and Nepal had joint military exercises, **d)** China has overtaken India as the largest source of foreign direct investment (FDI) in Nepal, **e)** China has hiked its annual development assistance to Nepal and **f)** China is also engaged with airport expansion projects at Pokhara and Lumbini in Nepal.

Way Forward

India and Nepal share a **'special relationship'** based on ties of a shared culture, language and religion.

It is necessary that bilateral issues be discussed, behind closed doors and at Track 2 and Track 1.5 channels.

At present, there is a need of revising and updating the **1950 Treaty of Peace and Friendship**.

Although **98%** of the **India-Nepal boundary** has been demarcated. These boundaries had been fixed in 1816 by the British. But two areas, **Susta** and **Kalapani** remain in limbo. Both sides should avoid rhetoric on **territorial nationalism**, and should solve these issues through **quiet dialogue**.

The Indian Prime Minister launched the **"neighbourhood first" policy** in 2014. India should uphold this policy and be a sensitive and generous partner.

INDIA – AUS RELATIONS

16. Sending a strategic message

Source: The post is based on an article “Sending a strategic message” published in **The Hindu** on **7th Apr 22**.

News: Recently, India and Australia, struck a trade deal known as the **India-Australia Economic Cooperation and Trade Agreement (ECTA)**.

The deal was brokered after two decades of efforts. It is said to be a “**watershed moment**” for bilateral relations for both India and Australia.

What has been proposed under the trade deal?

It will enable **elimination** or **phased reduction of tariffs** on a range of **Australian exports to India**. The range of products includes coal, lentils, sheep meat, wool, lobsters, rare earths, wine and agricultural products.

The deal will promote **services exports**. It will strengthen our **people-to-people links**. For example, the trade deal will provide a quota for **chefs** and **yoga teachers**, Indian students will be provided a post-study work visa of 2-4 year, and professional services will be mutually recognized. Others things that will be included are licensed/regulated occupations, and work and holiday visa arrangements for young professionals.

It will help in taking advantage of the **Indian diaspora** which is called as the **national economic asset** of India. For example, one in five overseas students that live in Australia are from India.

Why is the deal important?

Seeks to **double bilateral trade and investments** between India and Australia in the next five years.

Will **eliminate tariffs** on more than 85% of Australian goods exports to India (valued at more than \$12.6 billion a year).

Strategic importance –

- Both nations share norms and democratic principles and support a rules-based order in the Indo-Pacific region. Therefore, both nations are members of the Quad.
- Further, both share **economic** and **geopolitical risks** in the **Indo-Pacific region**. In this context, a trade agreement shows the diversification of its strategic and economic approach for both the countries.

What are some issues in Indo-Aus bilateral relations?

Past

- In the past, Indo-Australia ties were derailed due to multiple reasons. For example, Australia responded against **India’s nuclear tests** conducted in **1988**.
- The relations were also derailed due to over-the-top reaction by Indian media’s attacks on **Indian students in Melbourne** in 2009-2010.

Present

- Recently, both India and Australia **responded differently to the Russian invasion of Ukraine**. India has been criticized for doing a ‘balancing act’ in wake of the Russian invasion of Ukraine.
- Both hail from **opposite sides of power blocs during the Cold War**.

17. India's trade pact with Australia will click: it ticks the right boxes

Source: The post is based on an article “India's trade pact with Australia will click: it ticks the right boxes” published in the **Live Mint** on **04th April 2022**.

News: Recently, India has signed the **first trade agreement** with a large developed economy in the world after more than a decade. It was a path-breaking trade agreement known as the **Economic Cooperation and Trade Agreement (ECTA)** signed with Australia.

About India's trade agreements

India already has trade agreements with the Association of South-East Asian Nations (ASEAN), Japan, Korea, Singapore and Malaysia. In the case of **developed countries**, this is the third trade agreement that India has signed with any **OECD** country, after the trade agreement India had with **Japan** and **Korea**.

Why is the Indian Industry showing a lot of enthusiasm for new trade deals with the UAE and Australia?

The India Industry was consulted at every stage of trade negotiations. Therefore, it has helped Indian industry members to articulate their **interests** in **overseas market access**.

The Indian government has identified the **right set of countries** for trade deals, i.e. Australia and the **UAE**. In addition, it has ensured **meaningful market access** for Indian exports.

Unlike, in previous FTAs in which India bargained mainly for market access for business professionals under **Mode 4 (Movement of Natural Persons)**, this time Indian government's focus has been on **access** to **foreign-market** for **all our merchandise exports**.

Why is the Indo-Australian trade deal significant for India?

The trade deal may lead bilateral trade between India and Australia to touch \$45 billion in five years.

Address the tariff disadvantage: Indian exporters face a tariff disadvantage of 4-5%. It was present in many **labour-intensive sectors**. It was posed by China, Thailand, Vietnam, South Korea, Japan, Indonesia and Malaysia in the Australian market. Now, Indian exports will not have to face this disadvantage in the Australian Market.

Increase in exports of goods and services: The **merchandise export** will increase in textiles and apparel, select agriculture and marine products, leather, footwear, furniture, gems and jewellery, pharma and engineering products, etc.

In addition to merchandise export, India will get meaningful access to the Australian market for service sectors too. For example, Annually, 1800 Indian traditional chefs and yoga teachers can enter Australia as contractual service suppliers, Indian students will get a post-study work visa, and mutual recognition of professional qualifications etc.

The Australian government will also stop taxation of the **offshore income** of Indian firms providing technical services to Australia. It will enhance their competitiveness in the international market.

Many Indian industries in sectors like steel, aluminium, power, engineering and so on will become competitive. They will get cheaper raw materials from the Australian exporter.

India's particular sectors like milk and dairy, among others where Australia has a comparative advantage, will remain protected under the ECTA. It is because the Indian government has **not offered concessions on these sensitive products**.

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What will be the challenges?

Currently, Australia has 16 operational FTAs. Therefore, India would be competing with China, ASEAN, Chile, Japan, Korea and New Zealand, which have already-functional FTAs with Australia.

INDIA – SOUTH KOREA CEPA

18. India's zinc-trade deficit with Korea tells why we need industry input on deals

Source: The post is based on an article “**India-zinc trade deficit with Korea tells why we need industry input on deals**” published in the **Live Mint** on **5th Apr 22**.

News: India aspires to be the **3rd largest economy** in the world by the **year 2047**. The government is working hard to make India self-reliant and play a bigger role in the global economy.

In this context, Indian industry has been requesting the government to look into the existing trade pacts, especially India-South Korea CEPA that includes provisions which are threatening domestic industry.

What was the trade position before signing of the CEPA between India and South Korea?

When the India-Korea CEPA was signed, India used to export a sizeable quantity of zinc to the Republic of Korea (RoK). Korea had low production and India had weaker domestic demand.

The RoK increased its manufacturing capabilities, over time it enhanced its smelting capabilities. It also has lower logistical costs. In addition, it was also helped by the “**smart free trade agreement negotiations**”. Therefore, RoK has been able to supply zinc at highly competitive prices to India.

India's import of zinc and zinc alloys products from South Korea increased manifold since 2013-14. It happened because the duty was phased down to zero for the Republic of Korea (South Korea).

In 2020, the RoK became the leading exporter of zinc. It accounted for around 10.5% of global exports, despite having no mines.

What are the issues in the Indian Zinc Industry and CEPA b/w India and Korea?

It is facing tough competition from low-cost imports from the RoK.

– India has a lot of domestic manufacturing capabilities. For example, India was the 5th largest country for zinc mining (with 5.67% share) in 2019, after China, Peru, Australia and the US. In India, 100% of the value addition can be done within the country.

Increased negative trade balance with the RoK. It has adversely impacted several downstream industries.

The India-Korea trade pact has resulted in a large and growing trade deficit in zinc products. It happened because India overlooked imports from South Korea as a threat to domestic market while signing the pact.

A large deficit between India and South Korea occurred due to the Rules-of-Origin (RoO) in the India-Korea Comprehensive Economic Partnership Agreement (CEPA).

Way Forward

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There is a need to **re-examine the India-Korea CEPA**. It needs to talk about the existing product-specific RoO for zinc. India also needs to discuss a change in tariff subheading (CTSH) and other aspects in the trade pact.

India needs to **take lessons from the India-Korea zinc-metal trade case history**, and be cautious in its new trade deals with Australia, the UK, Canada and the European Union(EU).

India needs to have a **regular engagement with domestic industry** before signing trade agreements with other countries.

GS2 – POLITY – BILLS AND RELATED ISSUES

CRIMINAL PROCEDURE BILL

19. Parliament has just passed a dangerous bill

Source: The post is based on an article “**Parliament has just passed a dangerous bill**” published in the **Indian Express** on **8th Apr 22**.

News: Recently, the Rajya Sabha has passed the **Criminal Procedure (Identification) Bill, 2022, just two days after it was passed by the Lok Sabha.**

In fact, Maharashtra has become the first state to launch its biometric database of undertrials and convicts.

Such moves are being objected to on account of the violation of the **right against self-incrimination guaranteed** under **Article 20(3)** of the Constitution of India.

What constitutes right against self-incrimination in India?

In the **Kathi Kalu Oghad case (1962)**, the court held that giving **palm impressions** or **footprints** could not be called **self-incriminatory**. The reason is that such impressions cannot be changed. However, the **compulsory extraction** of an **oral** or **written statement** from the accused are prohibited in the Constitution.

In 2005, the **Code of Criminal Procedure (CrPC)** was amended. It allowed a magistrate to order any person to give their **handwriting samples** for the purpose of an investigation or proceeding.

In 2019, the Supreme Court, in **Ritesh Sinha v. State of UP Case**, ruled that handwriting samples could include **voice samples**. This would **not violate** the right against self-incrimination

What are the issues in the proposed bill?

The **1962 judgment's logic** used to interpret what would violate the right against self-incrimination is unlikely to apply to technologies in use today. The proposed bill authorizes the agencies to use **new** and **emerging technologies** for processing, sharing, and dissemination of data.

The Bill is **vaguely worded**. It may lead to new forms of coercion of accused persons. It may lead to new forms of surveillance and the stifling of dissent.

The new technologies would be used in **policing** and **the criminal justice system**. They have new implications for the right against self-incrimination. They will be used to find patterns like **one's personal beliefs** or **behaviour**. In other words, such a pattern of an accused person might be enough to incriminate him.

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The law can lead to **unchecked abuse of power** by the police. It can lead to harassment of the de-notified tribes' children, men and women etc. The local police stations have to maintain history sheets of these people as they are labelled as "Habitual Offenders".

The new piece of legislation could lead to **harassment of a person** who is merely alleged of a crime, and not convicted.

Also, the "measurements" are to be stored at the national level for 75 years. There is **no clear procedure outlined for destroying the information**.

The process of digitisation could push the **process of criminalisation** of oppressed caste communities from the **local and state-level** to the national level.

Way Forward

Parliament must make laws that protect against such blatant attacks on fundamental rights and freedoms, rather than enable them.

20. Criminal Procedure bill will not make Indians safer

Source: The **post** is based on an article "**Criminal procedure bill will not make Indians safer**" published in **the Indian Express** on **5th Apr 22**.

News: Recently, the government has introduced the Criminal Procedure (Identification) Bill in the Lok Sabha. It seeks to replace the Identification of Prisoners Act, 1920 which regulates how the police can gather data from convicted or suspected criminals.

The bill has generated a lot of controversy.

What are the issues with the bill?

– Read [here](#)

What has been proposed in the bill?

It expands the type of data collected by the police from basic fingerprint and footprint impressions to a range of other samples, including iris and retina scans, behavioural attributes, and "biological samples".

It mandates the National Crime Records Bureau to collect that data and keep it for 75 years.

Read [here](#)

What is the rationale behind the bill?

The government has asserted that the **present prisoner identification law** is a century old law. It is inadequate for the present day. The technological and scientific advancements have transformed crime and law enforcement since 1920.

What are the issues in particular which make this bill disturbing?

It will give the police free hand to collect personal data of anyone, say, detained protestors. It can be used against them at a later date.

The national data protection legislation has not been enacted for years. For example, **the Justice Srikrishna Commission (2018)** released its report in 2018. The **first Personal Data Protection Bill (PDPB)** that was drafted based on it has a number of weaknesses. It allowed the Centre to exempt any of its agencies from the provisions supposed to protect privacy in the name of security. The proposed "**Data Protection Authority**" could not act as an independent regulator".

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Read [here](#)

Way Forward

The Parliament may refer the Bill to a standing committee. Efforts should be made to increase the accountability framework in the Bill.

India already has the Crime and Criminal Tracking Networks and System (CCTNS) which has played a significant role in modernising Indian policing.

GS2 – SOCIAL ISSUES – HEALTH RELATED ISSUES

ISSUES RELATED TO PUBLIC HEALTH

21. Better early than late

Source: This post is based on the article “**Better early than late**” published in **The Hindu** on **4th April 22**.

Syllabus: GS2 – Issues related to health

Relevance: Regarding the autism spectrum disorder

News: Early intervention programme that prevents disabling conditions in newborn children, is better than one that tries to mitigate the effects once disability has set in.

What is Autism Spectrum Disorder?

Autism is a condition related to brain development that impacts how a person perceives others and socialises with them, causing problems in social interaction and communication. It also includes limited and repetitive patterns of behaviour.

The term ‘spectrum’ in Autism Spectrum Disorder refers to the range of symptoms and severity.

What is early intervention?

The set of services towards identification, assessment and a multipronged therapeutic approach to disabling conditions in the 0-3 age group is referred to as early intervention.

While physical disabilities are evident from birth, intellectual disabilities take time to manifest. Autism Spectrum Disorder leads the list.

Why early intervention is more effective?

Early intervention programmes take advantage of **neural plasticity** or the ability of the brain to mould itself to stimuli.

The greatest changes as a result of intervention are observed in the ages 0-3. This is not to say that programmes beyond this age are not effective, but they take more effort and time.

What are the challenges to early intervention?

The three big challenges to early intervention are:

- parental ignorance
- An unwillingness to accept facts
- Social stigma attached to seeking specialised services.

What is the way forward?

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The child should be assessed by a team comprising an occupational therapist, special educator, speech therapist and physiotherapist. A plan of action should be put in place. Communication within the team is of critical importance in helping the child. The child should receive a **combination of therapy and special education** for one to two hours every day.

Parents need to be educated on home plans and in dealing with the condition and behaviour of the child. Sometimes, the **extended family also needs to be counselled** on how to provide the right environment to nurture the child.

Children who have been part of early intervention programmes show remarkable progress, and the process of their integration with the mainstream is faster.

GS2 – POLITY – JUDICIARY

DEATH PENALTY AND RELATED ISSUES

22. Explained: Reforming death penalty

Source: The post is created based on the article “**Explained: Reforming death penalty**” published in **Indian Express** on **04th April 2022**.

Context: This week, the Bench headed by Justice Lalit agreed to comprehensively examine procedures in death penalty cases. It is to ensure that judges who have to choose between life imprisonment and the death sentence have **comprehensive sentencing information**.

What has caused the SC to examine practices in death penalty sentencing?

The Supreme Court has acknowledge concerns with the manner in which death penalty sentencing is being carried out. While the death penalty has been held to be constitutional, the manner in which it has been administered has triggered accusations of unfairness and arbitrariness.

How are judges supposed to choose between life and death sentences?

In Bachan Singh’s case, a “**rarest of rare cases**” framework was developed for judges to follow when they had to choose between life imprisonment and the death penalty. It made clear that **life imprisonment would be the default punishment** and judges would need to give “special reasons”. The judges must consider both **aggravating and mitigating factors** concerning the crime and the accused when deciding if the death penalty is to be imposed.

What has happened to this framework in the four decades since Bachan Singh?

The Supreme Court has repeatedly lamented the inconsistency in application of the Bachan Singh framework. A study by **Project 39A** looking at 15 years of death penalty sentencing in trial courts has shown that the Bachan Singh framework has broken down, with judges attributing to it multiple and inconsistent meanings.

What is the reason for this?

One of the main reasons is that **very sparse sentencing information** about the accused is brought before the judges. It is an empirical reality that the vast majority of death row prisoners are economically vulnerable and very often receive poor legal representation.

Also, there has been **no real guidance** on how judges must go about assigning weight to aggravating and mitigating factors, and how they should approach weighing one factor against another.

What is mitigation, and what are mitigating factors?

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It is a fundamental tenet of criminal law that sentencing must be individualized, i.e, in the process of determining punishment, the judge must take into account individual circumstances of the accused.

The idea of mitigation is to present an individual in all their complexity and the various factors that contributed to a set of decisions and actions in their lives.

Who can collect all this information?

The judgments in **Santa Singh (1976)** and **Mohd Mannan (2019)** have recognised the interdisciplinary nature of such an exercise, and that it requires professionals other than lawyers to collect such information. For instance, American Bar Association's 2003 Guidelines for the **Appointment and Performance of Defence Counsel in Death Penalty** recognises the **role of a mitigation specialist** with a clearly defined role that goes beyond what lawyers can do.

GS2 – INTERNATIONAL RELATIONS – EFFECTS OF POLICIES AND POLITICS OF DEVELOPED AND DEVELOPING COUNTRIES ON INDIA'S INTERESTS

INDONESIA'S PALM OIL CRISIS

23. Explained: Indonesia's palm oil crisis, and its implications for India

Source: This post is based on the article “**Explained: Indonesia's palm oil crisis, and its implications for India**” published in **The Indian Express** on **8th Apr 22**.

News: The world's largest producer and exporter of palm oil, Indonesia, is facing domestic shortages, leading to price controls and export curbs. What explains this situation, and what are the implications for India?

What is the present situation wrt palm oil in Indonesia?

Indonesia has witnessed the **domestic prices of branded cooking oil** spiral, between March 2021 and March 2022.

On February 1, the Indonesian government **imposed a ceiling on retail prices**. The price caps, however, led to the product disappearing from supermarket shelves, amid reports of hoarding and consumers standing in long queues for hours.

Besides domestic price controls, the government also made it **compulsory for exporters to sell 20% of their planned shipments in the domestic market**, at predetermined prices.

What are the possible reasons behind the price rise?

There are two plausible reasons:

1]. Supply disruptions, both man-made and natural, in other cooking oils, especially sunflower and soyabean.

– **Russia's invasion of Ukraine** has resulted in port closures and exporters avoiding Black Sea shipping routes. Ukraine and Russia together account for nearly 80% of the global trade in sunflower oil.

– **Sanctions against Russia** have further curtailed trade in sunflower oil, the world's third most exported vegetable oil

Soyabean oil, too, is facing supply issues due to **dry weather in South America**.

Supply tightness in sunflower and soyabean — from war and drought, respectively — has, in turn, transmitted to palm oil.

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2]. The second factor is linked to petroleum, more specifically the use of palm oil as a bio-fuel. The Indonesian government has, since 2020, made 30% blending of diesel with palm oil mandatory as part of a plan to slash fossil fuel imports. Palm oil getting increasingly diverted for bio-diesel is leaving less quantity available, both for the domestic cooking oil and export market.

What are the implications for India?

India is the **world's biggest vegetable oils importer**. Out of its annual imports of 14-15 mt, the lion's share is of palm oil (8-9 mt), followed by soyabean (3-3.5 mt) and sunflower (2.5).

Indonesia's restrictions on exports take into account its domestic demand obligations and its ambitious bio-fuel programme. So in that sense, India must get used to a lower supply from Indonesia.

RUSSIA-UKRAINE CONFLICT

24. The road to Ukraine peace runs through Delhi

Source: This post is created based on the article "The road to Ukraine peace runs through Delhi" published in 5th April 2022 in The Hindu.

Syllabus: GS 2 – International relations: Effect of policies and policies of developed nations on India's interests.

Context: Nearly 40 days ago, Russia launched a military invasion of Ukraine. Despite peace talks, direct negotiations between the conflicting parties have failed to make much progress. India can play an important role in its resolution.

Mediation as a conflict resolution tool that can assist the parties in identifying their hidden 'interests'. It is a **flexible conflict resolution tool facilitated by a neutral third party**. Due to its potential, the **Article 33 of the UN Charter** recognises the promise of mediation for a peaceful resolution of international disputes.

The best known example of mediation is the U.S. President Jimmy Carter who mediated peace between Israel and Egypt (known as **Camp David Accords of 1978**). It resulted in 44 years of peace.

A neutral third party can act as a 'go-between' (**shuttle diplomacy**) to gather more information and help parties identify their hidden interests.

Why mediation can be an effective tool?

Mediation as a tool would help focus on number one priority. i.e., the safety of the Ukrainian people through a complete ceasefire. Russia will also be obliged to participate as opting for mediation is the only way left for Russia to save face and escape the sanctions that have crippled its economy.

For the West, going ahead with mediation presents itself as an opportunity to include Russia in the security infrastructure of Europe (like it did with East Germany after the fall of Berlin Wall in 1989).

India's role as a mediator between Ukraine and Russia

Recent visits from various foreign dignitaries show that the world expects India to play a more active role in the Ukrainian crisis.

It can be **India's golden chance** to establish itself as a global power. It is in India's **long-term interest in countering the China threat**. The U.S. and its allies need India as a strategic partner to **balance the rise of China in the Indo-Pacific**.

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For now, India is right in not taking sides. India must step up and live up to its claim of being a **'Vishwa-Guru' (or world leader)**.

GS2 – INTERNATIONAL RELATIONS – INDIA AND ITS NEIGHBOURHOOD

INDIA – US RELATIONS

25. Is India's position on Russia affecting its relationship with the U.S.?

Source: The post is based on an article **"Is India's position on Russia affecting its relationship with the U.S.?"** published in **The Hindu** on **8th Apr 22**.

News: Recently, India's neutral position on Russia's invasion of Ukraine has antagonised the U.S.

In fact, the U.S. has issued a warning against conducting local currency transactions through Russia's central bank or constructing an alternative payment mechanism that subverts or circumvents the U.S.'s sanctions against Russia.

What are the issues with India's neutral stand on Russia's invasion of Ukraine?

Around 140 nations (apart from the western countries) have condemned Russia's actions in the United Nations General Assembly. **India seems to be isolated in its position** of being supportive of Russia.

The west is wary of **India's purchase of discounted Russian oil**. On the one side, the rest of the world is trying to isolate Russia. On the other side, India's move may lead to boosting up the Russian economy.

If nobody stands up for the territorial sovereignty of other countries (Here, Russia invading Ukraine), **it will prompt China to do something aggressive with Taiwan**. China may also create another border crisis with India.

Russia is **not a dependable partner** for India. The crushing sanctions which are going to be faced by it will destroy its economy.

India's move could impact the strategic cooperation of India with three nations in the QUAD.

How is India's stand not wrong?

Although, India has not directly named while condemning Russia, it has sufficiently criticized Russia.

– **Statements have been issued** against the transgression of international law; violation of territorial integrity and sovereignty; and the civilian killings.

– In addition, India has supported an **independent inquiry**.

India has been adopting the policy to be neutral since 1956. For example, India has done so in **Hungary in 1956**, in the **Czech Republic** (which was then Czechoslovakia) and in Afghanistan in 1979.

The **U.S. sanctions have double standards**. The US has carved out waivers for Europe on energy purchases, as the continent is dependent on Russia. But the US has ignored India's defence dependency on Russia

As per international law, the U.S. sanctions do not have any legal backing. These are **"unilateral coercive economic measures"** having validity in U.S. laws and European Union (EU) laws.

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India is a developing country. It has not come out of the COVID-19-related economic shock. It has **huge economic needs**. For example, Petrol, and Food prices are increasing.

In fact, the amount of oil that India imports from the Russian Federation is very small. Also, India's moves for diversifying defence purchases **will take time**.

Way forward

The U.S. should **take other countries on board while taking international actions**. It is because when the US takes unilateral action, it also impacts other countries, and as strategic partners, India has a right to request them to be more understanding of its needs than they have been.

Both countries should **discuss their differences over Russia**. They should elaborate on the bilateral agenda

The **2+2 meeting is a good opportunity to work on other aspects of Indo-US relationship** while exchanging views quietly.

The US needs to look beyond the battlefield. Now, the security covers a vast array of non-traditional areas. For example, like mobility, climate change, health, technology and maritime security.

INDIA – SRILANKA RELATIONS

26. Lessons from the implosion of Sri Lanka's tiny economy?

Source: The **post** is based on an article "**Lessons from the implosion of Sri Lanka's tiny economy?**" published in the **Live Mint** on **5th Apr 22**.

News: Recently, Sri Lanka's entire cabinet resigned over inability to handle the ongoing country's worsening economic crisis. It is undergoing a state of emergency due to a deteriorating food and fuel crisis.

What were the reasons behind Sri Lanka's economic crisis?

In 2019, the newly-elected government of Sri Lanka has been accused of announcing a series of populist measures like tax cuts, 50% reduction in value added tax, eliminating capital gains tax etc.

Tourism, remittances and the apparel export are the top **three foreign-exchange earners** for Sri Lanka's economy.

- **Inward remittances** dropped before the Pandemic.
- Tourism revenues fell down due to the pandemic.
- In addition, the **apparel exports** too have been hit during the pandemic.
- Its **tea export** which is a crucial forex earner was also hit due to decline in the production. It happened due to a ban on the use of chemical fertilizers.

Sri Lanka depends upon the import of crude oil for transportation and energy. But, the **prices of crude oil have been spiked** by the Ukraine war.

In addition, there is an **inflation** of more than 19%.

Sri Lanka is facing both domestic and foreign debts. As a result, it has **twin deficits** – fiscal and the current account deficit. It is burdened by the Chinese debt. China has invested in Sri Lanka as part of its Belt and Road Initiative.

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What steps are being taken by Sri Lanka to overcome the crisis?

Sri Lanka is trying to raise forex by floating **sovereign dollar bonds**. But it may turn ugly. If Sri Lanka borrows someone else's currency, it will not have the freedom to either repudiate or print its own currency out of a debt hole.

India has provided emergency aid via food and fuel shipments.

What lessons can be learnt by India?

Sri Lanka's crisis was in the making from much earlier than the pandemic or Ukraine war. Populist measures proved to be a major cause of it.

India is also witnessing a lot of **populists welfarism** at the state level and the Centre level.

– The state of finances of certain states of India, such as Punjab, Bengal, Delhi, Telangana and Andhra Pradesh is going to face a lot of challenges. For example, they are providing a lot of freebies from their respective budgets like free electricity, free water, etc.

– In fact, the states of Chhattisgarh and Rajasthan may shift their pension regime. They may shift away from the National Pension Scheme of 2005.

The fiscal burden of the central government is also likely to increase. The major causes behind this could be One Rank One Pension scheme, new extension to free rations scheme among others.

INDIA – AUS RELATIONS

27. India's trade pact with Australia will click: it ticks the right boxes

Source: The post is based on an article “**India's trade pact with Australia will click: it ticks the right boxes**” published in the **Live Mint** on **04th April 2022**.

News: Recently, India has signed the **first trade agreement** with a large developed economy in the world after more than a decade. It was a path-breaking trade agreement known as the **Economic Cooperation and Trade Agreement (ECTA)** signed with Australia.

About India's trade agreements

India already has trade agreements with the Association of South-East Asian Nations (ASEAN), Japan, Korea, Singapore and Malaysia. In the case of **developed countries**, this is the third trade agreement that India has signed with any **OECD** country, after the trade agreement India had with **Japan** and **Korea**.

Why is the Indian Industry showing a lot of enthusiasm for new trade deals with the UAE and Australia?

The India Industry was consulted at every stage of trade negotiations. Therefore, it has helped Indian industry members to articulate their **interests** in **overseas market access**.

The Indian government has identified the **right set of countries** for trade deals, i.e. Australia and the **UAE**. In addition, it has ensured **meaningful market access** for Indian exports.

Unlike, in previous FTAs in which India bargained mainly for market access for business professionals under **Mode 4 (Movement of Natural Persons)**, this time Indian government's focus has been on **access to foreign-market for all our merchandise exports**.

Why is the Indo-Australian trade deal significant for India?

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The trade deal may lead bilateral trade between India and Australia to touch \$45 billion in five years.

Address the tariff disadvantage: Indian exporters face a tariff disadvantage of 4-5%. It was present in many **labour-intensive sectors**. It was posed by China, Thailand, Vietnam, South Korea, Japan, Indonesia and Malaysia in the Australian market. Now, Indian exports will not have to face this disadvantage in the Australian Market.

Increase in exports of goods and services: The **merchandise export** will increase in textiles and apparel, select agriculture and marine products, leather, footwear, furniture, gems and jewellery, pharma and engineering products, etc.

In addition to merchandise export, India will get meaningful access to the Australian market for service sectors too. For example, Annually, 1800 Indian traditional chefs and yoga teachers can enter Australia as contractual service suppliers, Indian students will get a post-study work visa, and mutual recognition of professional qualifications etc.

The Australian government will also stop taxation of the **offshore income** of Indian firms providing technical services to Australia. It will enhance their competitiveness in the international market.

Many Indian industries in sectors like steel, aluminium, power, engineering and so on will become competitive. They will get cheaper raw materials from the Australian exporter.

India's particular sectors like milk and dairy, among others where Australia has a comparative advantage, will remain protected under the ECTA. It is because the Indian government has **not offered concessions on these sensitive products**.

What will be the challenges?

Currently, Australia has 16 operational FTAs. Therefore, India would be competing with China, ASEAN, Chile, Japan, Korea and New Zealand, which have already-functional FTAs with Australia.

INDIA'S FOREIGN POLICY

28. Ukraine and the anatomy of India's neutrality

Source: The post is based on an article "**Ukraine and the anatomy of India's neutrality**" published in **The Hindu** on **8th Apr 22**.

News: Recently, India has chosen a non-condemnatory approach and abstention approach in the United Nations (UNs) forum on the Ukraine-Russia conflict.

India's stand has pushed India at the centre of the debate in the international community.

What has been the nature of India's foreign policy?

In 1957, Prime Minister of India Jawaharlal Nehru advocated a foreign policy guided by a **non-condemnatory approach**. India more or less followed the same line in the Soviet interventions in Hungary (1956), Czechoslovakia (1968) or Afghanistan (1979), or the American invasion of Iraq (2003)

In fact, India also condemned the civilian killings in Ukraine without calling any names.

Why do the western countries want India to embrace the anti-Russian stand?

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(1) From a political point of view: The U.S. considers the assault on Ukraine as an assault on “the free world”. Therefore, its narrative would look weak if the world’s largest democracy (India) does not take the side of the West.

(2) From an economic point of view: The sanctions imposed by the US on Russia would not work if India continues to trade with Russia. Importantly, China, the world’s second largest economy, refuses to abide by the American sanctions. Further, the adherence of Japan, South Korea and Singapore, the only three Asian nations which have backed the sanctions, would not be strong enough to deter Russia.

(3) From a strategic point of view: US sees India as a counterweight to China in the Indo-Pacific region. Therefore, it wants India to choose sides.

How the global order has changed?

Since the last two decades, the global order is witnessing rapid changes. There seems to be **three great powers** (*the US, Russia and China*) and several **middle powers**.

The US is an existing power, Russia is a wounded bear with an imperial nostalgia. It is economically weak but in terms of land mass and military might, it remains a superpower, and China is rising fast and seek to displace the American order at the global level.

India is itself a middle power. In the present conflict, two out of three global powers are India’s partners and one is a competitor. Therefore, it is not wise for India to take side. Taking sides with one partner, would make China (India’s competitor) stronger.

Why India’s present foreign policy is right?

It seems **India is being selectively targeted**. India’s position is not isolated.

– For example, **South Africa** and the **United Arab Emirates**, a close American ally, abstained from a vote in the UN Security Council. In fact, Israel, and Turkey, both refused to join the sanctions regime.

The **foreign policy of a country does not depend upon the moral commitments**. It is based on its national interests. For example, The U.S.-led NATO bombed Yugoslavia in 1999, invaded Iraq in 2003, and destroyed the state of Libya while pursuing its national interest, rather than moral commitments.

India’s national interests lies in non-alignment. In addition to defence and energy security, India wants Russia for continental security (geopolitical reasons), especially after the U.S. withdrew from Afghanistan. On the contrary, India wants the U.S., Japan and Australia for India’s maritime security.

India is **not a client state** of any great power. In fact, the client states of the West have not joined the sanctions regime.

India is **not an ally of the US**. For example, the Quad (India, Australia, Japan and the U.S.) is not an alliance.

India’s core national interests need pragmatic realism. The strategic autonomy keeps channels open with both sides. It serves our national interests.

29. Realism versus liberalism in international relations

Source: This post is created based on the article “**Realism versus liberalism in international relations**” published on 7th April 2022 in **The Hindu**.

Context: Russia’s invasion of Ukraine has rekindled the realism versus liberalism debate in international relations. The liberals call the war an attack by “authoritarian Russia” on “democratic Ukraine”. The realists argue that the war was the culmination of the post-Cold War power games in Europe.

What are the theories of liberalism?

Liberalism has 3 core beliefs:

1. State are the main actors in the international system;
2. The internal characteristics of each state vary from the other and these shape the state’s behavior;
3. Some governance models are good (democracies) and some are bad (dictatorships)

According to them, good states are supposed to make peace while bad states seek to expand their power at the expense of others.

There are three different but interconnected theoretical approaches: **economic interdependence, democratic peace, and international institutions**. Therefore, the ideal world order that liberals want is the one where democratic states are connected through economic globalization and function in a system regulated by the international organizations (Ex – UN).

While liberalism offers an optimistic view of global order, it is more about what the world ought to be. Realism is more about what the world is.

What is the premise of realism?

For realists, a peaceful global order is desirable, but that’s far from reality. They also consider nation states as the primary actors in the international system.

The three main streams of realist theory in international relations – **human nature realism, defensive realism and offensive realism**. All seek to explain why states seek more power.

Human nature realism is based on the argument that humans’ lust for power can have a profound impact on the nature of states as states are led by human beings. They continue to seek expansion of power, leading to conflicts. (**Hans Morgenthau in Politics Among Nations**)

Defensive realists argue that the fundamental aim of the states is survival. The global order is anarchic and this factor forces the states to compete with each other. (**Kenneth Waltz in The Theory of International Politics**)

Offensive realism bases its arguments on structural factors rather than human behaviour. Power always seeks to maximise power at the expense of rivals. A state’s ultimate goal is to be the hegemon in the system. (**Jon Mearsheimer in The Tragedy of Great Power Politics**)

30. Playing the strategic autonomy game

Source: The post is based on an article “**Playing the strategic autonomy game**” published in **The Hindu** on 04th April 2022.

News: The Russian invasion of Ukraine has led to a rush of foreign diplomats to India. India has welcomed Chinese and Russian leaders. They have come for a personal meeting with the Indian Prime Minister.

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Why has India's decision to continue trade with Russia not faced any public criticism so far?

India very well **understands the sensitivities** and the nature of the engagement of the Western interlocutors with a given country.

India is a developing country. It is **fighting serious economic hardships**. It is recovering from the impact of COVID-19.

It will not be wise to expect India not to buy discounted Russian oil. In fact, some of India's critics are still buying energy from Russia.

India has a unique and very important **geopolitical location**. Therefore, India needs an unrestricted supply of defence equipment.

India's decision to abstain from condemning Russia is **based on a geopolitical rationale** (just like India did not condemn the American invasion of Iraq in 2003).

Further, India does not want to alienate Russia. It is because India cannot afford to have yet another **unfriendly country** in a deeply unfriendly region.

In fact, even if India takes a side in the favour of the West, the West may also not stand by India in the future if India enters into a conflict with China

Why does the West want India to pick up a side?

The west is of the notion that **1)** The Russia-Ukraine war is a broader conflict between democracies and non-democracies. Therefore, India must decide to pick upsides. **2)** In case India enters into full-fledged conflict with China in the future, Russia is unlikely to help India.

What are the challenges between the present and future?

First, India will be **relegated** to a **weaker position** in the region after the Ukraine war is over. **Indian primacy** might end in the region.

Second, the U.S. has withdrawn from Afghanistan, and it is currently focusing on Russia and Ukraine.

Third, Russia is weakening, and fourth, Beijing is actively playing a geopolitical game with money and muscle power in the region.

Therefore, the **continental geopolitics** of **Southern Asia** is now becoming China-centric. There are chances that there will be a rise of a China-centric geopolitical order in Asia in the coming future.

What should India do?

New Delhi may indeed be on the side of the Western Countries, but not in the manner they would like India to be. India cannot fully ally with either side. It needs to maintain good relations with both, and India needs to adhere to its **strategic autonomy**.

31. Playing the strategic autonomy game

Source: The post is based on an article "**Playing the strategic autonomy game**" published in **The Hindu** on **04th April 2022**.

News: The Russian invasion of Ukraine has led to a rush of foreign diplomats to India. India has welcomed Chinese and Russian leaders. They have come for a personal meeting with the Indian Prime Minister.

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General

Studies

Paper – 3

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AVIATION SECTOR IN INDIA

1. Up & Up: Airports, Pilots, Passengers, Cargo, Drones

Source: The post is based on an article “Up & Up: Airports, Pilots, Passengers, Cargo, Drones” published in **The Times of India** on **7th Apr 22**.

News: Recently, India has opened its airspace for international travel for the first time since the outbreak of Covid-19 in 2020 after a period of two-year.

The sector is going to witness rebound due to easing in the covid-led disruptions, and simultaneously, due to important reform measures undertaken by the government.

What are the expected trends in the Indian Aviation Sector in the coming years?

Civil aviation has become a vehicle of economic change in India, and it is going to face strong growth in coming years,

The government has launched its flagship scheme known as **Ude Desh Ka Aam Nagrik**. It connects some of the most remote cities of India such as Jharsuguda, Odisha. These areas will emerge as new growth avenues for the country.

At present, the **number of airports** stands at 140 in 2021. India will witness growth in the number of both **greenfield** and **brownfield airports** in the next 2-3 years. Therefore, the number of airports is bound to reach the tally of 220 by 2025.

India's **aircraft fleet is also likely to grow**, by 110-120 every year.

In addition, the **number of pilots trained by the Flying Training Organisations (FTO) is also going to increase** in the near future.

Allied sectors rise during the pandemic period: Allied sectors of Aviation like air cargo have seen exponential growth in a short span of two years. As a result, India's share in international cargo traffic movement went up from 1.8% to 19%.

Similarly, **reform measures undertaken in the drone sector** will make drones part of almost every sector in the coming years. It will lead to an explosion of start-ups and skilled manpower. It will also bring huge economic benefits to Indian economy.

What are the challenges?

The civil aviation sector is **highly prone to disruptions** in the future. It may be due to geopolitical disturbances and a new pandemic in the future.

India's **taxation regime on Air Turbine Fuel (ATF)** is very high as compared to the rest of the world. For example, at present, it now costs twice as much as the pre-Covid-19 rates.

The Aviation industry is also **highly elastic to price change**. For example, a minor rise in air fares could adversely impact the demand of air travel in the short term.

What is the way forward?

Rationalising ATF: Recently, 24 states/UTs have executed taxation reform (VAT) on the Aviation Turbine Fuel (ATF) rates. In addition, there are chances that remaining states/UTs will also join this reform regime soon.

India needs to focus on international travel, as well as the air cargo segment.

PUBLIC PRIVATE PARTNERSHIP (PPP) IN INDIA

2. **Measures to rejuvenate public-private partnerships**

Source: The post is based on an article “Measures to rejuvenate public-private partnerships” published in the **Business Standard** on 6th Apr 22.

News: Recently, the **New Monetisation Pipeline (NMP)** and the **National Infrastructure Pipeline** were launched by the central government.

As a result, **Public-private partnership (PPP) models** have come under the focus as various projects will be funded under PPP.

What have been the Indian experience with various PPP models?

(A) Indian experience:

Almost all **Indian companies** and **commercial lending institutions** are concerned of investing in greenfield PPP projects. In fact, foreign investors also prefer to invest in the brownfield assets.

In recent years, the government has received **poor responses** from private players in PPP bids.

– For example: (1) the **Indian Railway** could not attract many private players for passenger-train operations, and (2) The **Bharat Broadband Nigam Ltd (BBNL)** cancelled a tender for connecting villages due to the lack of participation of eligible bidders.

Various PPP models including the **Build-operate-transfer (BOT)** and the **Engineering, Procurement and Construction (EPC)** have been examples of classic failure of PPP model in India.

– For example, the share of the BOT model in road investments in India declined from 85% in 2013 to almost zero in 2020.

PPP Models have performed well in sectors like telecom, ports, airports, electricity transmission and renewable energy.

(B) International experience:

Recently, Britain renationalised the British Rail, after being operated on a PPP model after a period of 25 years.

What are the suggestions for PPP reforms?

Kelkar Committee submitted a report titled as “**Revisiting and Revitalizing PPP Model of Infrastructure Development**” (2015). It recommended some of the following measures in this regard

(1) The report recommended setting up “**3P India**”. It would function as a centre of excellence in PPPs.

(2) The report proposed to address complex issues like renegotiation, independent regulation, equitable risk-allocation, amendments to Prevention of Corruption Act, 1988, and expeditious redressal of disputes.

Regulatory bodies can be established for administration of PPPs. Such bodies have also been established in other countries.

– For example, there is the **Infrastructure Concessions Regulatory Commission** in Nigeria, the **PPP Advisory Unit** in Ghana, the **PPP Centre** in the Philippines and the PPP Unit in South Africa, and the **National Infrastructure Commission** of the United Kingdom

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A **Special Purpose Vehicle (SPV)** which is **100% owned by the government** can be established for the PPP project. It can perform the **sovereign function** like land acquisition and securing all permissions. Subsequently, the SPV's share will be sold to the **highest private bidder**. It will reduce the development risk.

The **Least Present Value Method (LPVM)** can be adopted. In this, the **time-period of a concession** is kept open-ended and flexible. It helps the concessionaire who bid with the lowest amount of revenue share. It will remove the **revenue risk** in the long term PPP projects to a substantial level.

In addition, a **bespoke credit-rating system** can be adopted. It requires embracing the **“expected loss” (EL) approach** instead of the **“probability of default” approach**.

Way Forward

In response to the latest Budget speech, the Department of Economic Affairs is required to take a fresh approach for “capacity building” for PPPs.

DIGITALIZATION AND RELATED ISSUES

3. What's Powering A Trillion Dollar Revolution

Source: The post is based on an article **“What's powering a trillion-dollar revolution”** published in **The Times of India** on **04th April 2022**.

News: In recent years, the Indian government has been adopting path-breaking digital initiatives across various sectors. These initiatives hold tremendous potential to spur entrepreneurship, increase India's global competitiveness and meet the nation's goal of “growth for all”.

What are the thrust areas of the government's digital strategy?

First, boosting the optic fibre network: It is the digital backbone of a digital economy. It is being executed under the **BharatNet project**. In addition, 5G services are likely to be rolled out by the end of 2022. It will enable access to high-speed internet in a few years.

Second, the government has been building up Open, scalable digital public platforms like **Aadhaar, DigiLocker** and **UPI**.

In addition, the government has also planned (1) a **healthcare registry and platform** known as **Ayushman Bharat Mission** to allow accessing and sharing of health records digitally, and (2) **open network protocols** such as ONDC to make digital commerce more accessible for MSMEs,

Third, the government is **digitising public service delivery**. For example, filing of income tax returns, single-window clearance for projects, the GeM portal for digital public procurement, the e-bill system etc. Also, the proposed **Gatishakti initiative** is a step in this direction.

What is truly transformative about the government's digital strategy?

The digital platforms have the potential for **scalability** and **inclusivity**. For example, **75% of the Public Distribution System (PDS) distribution** at a national level has been done through **Aadhaar-authentication**; The disbursement of MGNREGA wage payment is done through a central platform that is authenticated by using Aadhaar.

The Direct Benefits Transfer has helped to address the leakages and ensure the government's savings to the exchequer. It has been done by leveraging Aadhaar.

What should be done?

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There is a need for **strong policy** and **regulatory reforms** for boosting digital infrastructure in India. For this, the government can initiate **Public-private dialogue** to promote trust.

The government can start using **Web 3.0 technologies** to plug loopholes and improve service delivery.

A robust privacy and data protection law also need to be expedited.

GS3 – ENERGY AND INFRASTRUCTURE – ELECTRIC VEHICLES

ELECTRIC VEHICLES AND RELATED ISSUES

4. **How the Delhi model for EV chargers is worthy of emulation**

Source: The post is based on an article “**How the Delhi model for EV Chargers is worthy of emulation?**” published in the **Live Mint** on **04th April 2022**

News: The Delhi government has adopted a new model for the development of public charging infrastructure. This model might amplify India’s EV Charging Infrastructure.

What have been the issues in the EV segment?

First, slow pace in setting up large-scale public charging infrastructure or stations.

Second, Central and state governments have **failed to leverage the private sector** to invest in charging networks. They focus on public sector units (PSUs) to set up the EV infrastructure

What are the different EV Charging Infrastructure Models across the world?

Typically, there are four models: (1) utility-led, (2) automakers-led (with ‘walled gardens’ of chargers), (3) PSU-led and (4) business-led (independent entities offering customers a charging service).

In contrast, the Delhi government has developed a **private-public partnership (PPP) model** for setting up 500 charging points at 100 locations in Delhi.

About the ‘Delhi Model’ of EV-charging infrastructure model

(1) The Delhi government will aggregate land parcels (a scarce resource in Delhi) from different agencies. Thereafter, the land will be given for rent to private players on a concessional basis.

(2) The Delhi government will provide assistance with the cost of upstream electrical infrastructure on the charging site. In addition, the **lease rentals** will be linked to revenue because the station’s profit is meagre in the initial years.

In order to increase the business at charging stations, the stakeholders whose business is aided by operating charging stations, such as fleet operators, vehicle and battery manufacturers, battery-swapping operators, etc. will be encouraged to participate at stations.

(3) The private sector will be provided with the flexibility in determining the charger combinations on **70%** of the space in the station. The charging technology evolves with time.

(4) The Delhi government has fixed Service charges for the end consumer as a bidding criterion. Thus, the private bidders will be encouraged to quote a low service charge. Thus, the cost of charging for the users will be just ₹2 per unit, perhaps cheaper than anywhere else in the world.

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(5) **Delhi's EV charging strategy has been based on a participatory approach.** All the heads of Delhi government departments, municipal corporations, etc were members of a high-level working group. The group was set up for the accelerated rollout of charging infrastructure. It will lead to coordinated decision-making and implementation of the decision.

How can the Delhi Model transform the national thinking on EV charging?

On the lines of the Delhi Model, all states have been advised by the NITI Aayog that they should form a working group or committee for the development of state charging infrastructures.

On the lines of the Delhi Model, the Government of India has also recommended: (1) the **lease rentals** for charging stations should be linked to **revenue**, and (2) the public funds should be used for the augmentation of EV charging stations in the states.

GS3 – ENVIRONMENT – RENEWABLE ENERGY

RENEWABLE ENERGY SECTOR IN INDIA

5. Renewable energy has a tariff problem. Here's how to fix it

Source: The post is based on the article “**Renewable energy has a tariff problem. Here's how to fix it**” published in the **Indian Express** on **04th April 2022**.

News: India has stated its target of having a renewable generating capacity of 450-500 GW by 2030. Therefore, there is a need to create a proper environment and ensure adequate returns to invite fresh investments into renewable generation. In this regard, it is important to look at the tariff structure for renewables.

What are the two parts of Power generation tariffs?

In power generation, the **two-part tariff system** comprises the first part and the second part.

(1) The **first part:** It is the **fixed cost** that is incurred by a generator. It is not linked to the amount of power generated. It is determined by regulatory commissions. It has a graded payment system depending on the position of the plant to generate.

(2) The **second part:** It is a **variable cost**. It varies with the quantum of power generation. It is calculated on the cost of fuel, i.e., coal or gas or lignite. It is determined by the regulatory commissions.

What are the tariff structures in the power sector in India?

The **Two-part tariff system** is found in hydropower generation. The hydro generators do not have any **variable cost of generation**. Therefore, the entire cost of a hydro station is fixed cost. Notionally, half of this cost is treated as a variable cost.

The one-part tariff system is applicable to **solar, wind** and **nuclear** energy generation.

What are the issues with a single-part tariff in the case of renewable energy?

The contribution of solar and wind generation accounts for about 10% of the overall power generation in India. It is expected to be ramped up to 50% by 2030 (Commitment in COP26 in Glasgow).

The sector has been given a “**must-run**” status. This means that the **state load dispatch centres (SLDCs)** have to dispatch the **renewable power** first, even if another cheap source is available or not. But, there is a high **variable cost** in the renewable energy sector. In contrast, the variable cost of the NTPC coal-fired is far lower due to the two-part tariff structure.

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Therefore, the SLDCs flout the principle of “must-run”. The discoms would ask the renewable generator to back down. They would buy from a coal-based generation. It would save money for the discoms.

What should be done?

Adoption of a two-part tariff would ensure **certain minimum return** to the developers. This will make the renewable sector at par with the coal and hydro plants.

A principle should be developed for the **share of variable costs** in renewable generators. For example, 50% of the total cost is attributed as a variable cost in hydro energy.

A **fine balance** should be maintained between the proportion of the fixed and variable costs. For example, the variable cost should be ensured at the lowest so that the “must-run” principle is not violated. In addition, the fixed cost component should not be kept so high as it may hurt the consumers.

GS3 – INTERNAL SECURITY – SECURITY CHALLENGES AND THEIR MANAGEMENT IN BORDER AREAS

WITHDRAWAL OF AFSPA AND RELATED ISSUES

6. Time to bid goodbye to AFSPA

Source: This post is based on the following articles

“**Time to bid goodbye to AFSPA**” published in **The Indian Express** on **4th April 22**.

“**For a full repeal: On AFSPA**” published in **The Hindu** on **4th April 22**.

News: Recently, the Home Ministry has decided to considerably reduce the number of “disturbed areas” under the AFSPA in three States. To fulfil that, the April 1st order significantly reduced disturbed areas in Nagaland, Assam and Manipur. Though it is a welcome step, the government does not consider repealing the AFSPA.

What is the reason for the reduction in disturbed areas?

The Government’s decision to relax the application of the Act in specific areas is due to a **reduction in violence and administrative reasons**. However, the relaxation is not due to a response to the question of whether the Act is essential to security operations in these States or not?

Why does the government have to repeal the AFSPA?

1) The counterinsurgency campaigns against the Nagas were counterproductive, **2)** In the court’s view, AFSPA clearly provided the context for some Extra-Judicial killings. While upholding the constitutionality of AFSPA in 1997, the court recommended some changes. Such as reviewing the “disturbed area” designation every six months. **3) Justice BP Jeevan Reddy committee** recommended repealing AFSPA and suggested inserting the appropriate provisions in the [Unlawful Activities \(Prevention\) Act \(UAPA\), 1967](#).

In 2016, the Supreme Court had also ruled that the armed forces could not be immune from investigation for excesses committed during the discharge of their duties, even in “disturbed areas”. Hence, the demand for full repeal should be considered, and the government has to ensure the accountability of the Armed forces.

MIGRANT WORKERS AND RELATED ISSUES

7. **Push the policy needle forward on migrant support**

Source: This post is created based on the article “**Push the policy needle forward on migrant support**” published on **5th April 2022** in The Hindu.

Context: After the migrant crisis of 2020, migrants became a focus of large scale relief efforts by governments and civil society. The Government ramped up the **One Nation One Ration Card (ONORC) project**, announced the **Affordable Rental Housing Complexes (ARHC) scheme**, set up the **e-Shram portal** and began to draft a migration policy.

Present status of migrants

Surveys have found that the incomes of migrant households continue to be lower than pre-pandemic levels. Migrants are finding less work and are eating less. A **cohesive migrant policy guidance remains elusive**. Efforts are **fragmented**.

This is not sustainable as a third of the nation’s workforce is mobile. Migrants fuel critical sectors such as **manufacturing, construction, hospitality, logistics and commercial agriculture**.

What are the reasons behind policy ignorance faced by migrant issue?

First, **migration is a highly politicised phenomenon**: The “**Destination States**” experience a tension between economic needs, which require migrant labour, and political needs, which promote nativist policies. The “**Sending States**” are motivated to serve their ‘own people’ because they vote in their source villages. This causes fragmented policy based on State-specific political calculations.

Second, **migrants as a category get overlooked by two larger categories**: the unorganized worker and the urban poor. This pushes the timeline for addressing the migrant issue far out. It is no longer an urgent priority.

Third, migration policy absence of reliable data results in **failure to capture the actual scale and the frequency of internal migration in India**.

Many states have initiated data projects that can track migrants. For example, **Maharashtra’s Migration Tracking System (MTS)**, focusing on women and children. **Chhattisgarh’s State Migrant Workers Policy** is premised on registering migrant workers at source and tracking them through phone-based outreach systems.

What can be done?

In this scenario of fragmentation, Centre needs to play a proactive role by offering policy guidance and a platform for inter-State coordination. **The NITI Aayog’s Draft Policy on Migrant Workers** is a positive step forward in articulating policy priorities and indicating suitable institutional frameworks.

Green Hydrogen and related issues

8. Unlocking the potential of green hydrogen

Source: The post is based on an article “**Unlocking the potential of green hydrogen**” published in the **Indian Express** on **5th April 2022**.

News: The ongoing Russia-Ukraine conflict has increased the prices of crude oil, natural gas and fertilizers, highlighting India’s vulnerability to geopolitical sanctions.

Therefore, the Union Transport Minister’s statement on hydrogen-powered cars in Parliament has brought the green hydrogen economy into focus.

Moreover, hydrogen is an important industrial gas. It is used on a large scale in petroleum refining, steel, and fertiliser production. And India already has a large and growing capacity base in all these industries.

What are the pros with renewable energy (RE) tech?

RE generation is done intermittently. It is because electricity cannot be stored using battery technology at a grid scale. For example, Europe’s renewable generation fell in the last months of 2021.

The financial viability of green power is questionable in India. For example, it is proposed to replace coal-based power which is the cheapest form of energy. In addition, the DISCOMs, the buyer of RE, are not financially sound.

EV (electric vehicle) technologies have limitations. Much of India’s oil is burnt in heavy trucks (not cars and two-wheelers) which are difficult to run on lithium batteries.

Electric vehicles require large quantities of critical minerals (like lithium and cobalt). India does not have their domestic reserves. Therefore, India will have to import them, which is prone to supply chains disruptions.

What are the challenges of creating and distributing hydrogen at a national level?

It requires creation of large-scale refuelling network infrastructure if green hydrogen is used as the transportation fuel.

What are the ways to catalyse a hydrogen economy in India?

Hydrogen-fuelled vehicles (in form of forklifts, cranes, trucks, tractors etc.) can be promoted in some specified gated areas like Airports, ports and warehouses. It will create demand that will allow manufacturers to bring vehicles that can use hydrogen fuel cells into the market.

Promoting hydrogen blended with natural gas: Many gas-fired power generation plants are operating at a very low-capacity due to the high price of natural gas. Therefore, the hydrogen blended with natural gas can be promoted in these plants.

– It can be blended with compressed natural gas (CNG). It can then be used as a fuel for vehicles in Delhi, Mumbai and some other cities. This will partly counter the need for imported natural gas

The government needs to boost private sector participation. For example, start-ups can be promoted in this sector. They should be linked with angel investors, venture capital and private equity backers.

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Also, **India needs some specialist players to execute projects as well as finance them.** The CNG networks in Mumbai and Delhi were created by MGL and IGL, and Petronet LNG was set up for creating India's first LNG terminal.

– Establishing specialised companies with a clear focus has helped projects get off the ground. This approach can be repeated for green hydrogen. However, government participation in such a company must be capped at 50%.

CLOUD INDUSTRY AND ENVIRONMENT

9. The carbon cost of data

Source: This post is based on the article “**The carbon cost of data**” published in **The Business Standard** on **5th Apr 22**.

Syllabus: GS3 – Information Technology, Environment and conservation

Relevance: Environmental concerns related to cloud industry

News: Environmental scientists are beginning to worry about the harmful effects of data on climate. The impact is not exactly due to the data, but the servers, data farms and other hardware required for creating, storing and processing data for the increasingly digital life.

How the pace of generation of data has picked up?

Impact of the internet: The world has been steadily getting interconnected and digitalised since the world-wide-web came into being.

Evolution of digital tech: The rapid evolution of the Cloud, high speed Wi-Fi, and internet of things, and the development of digital goods, have increased the quantity of data being generated, stored and analysed exponentially.

Impact of the pandemic: The trajectory of digitalisation moved up even more sharply when the pandemic struck. Companies were forced to increase their digital footprint. They also moved a lot of their operations to the cloud — which meant moving applications and data to huge server farms.

How cloud industry poses a threat to the environment?

Server farms consume a lot of electricity.

- Power required to run the servers themselves
- Air conditioning systems needed to run them also consume a lot of energy.

Data farms generate **enormous heat**, and need very **powerful air conditioning systems** to maintain optimum temperature.

Water consumption: Studies have shown that data centres tend to use up water resources and heat the cities where they are located, despite all the air conditioning.

As Cloud servers need to offer zero downtime, they work with built-in redundancies, which **increase their energy requirements.**

Then, the buildings themselves are considered **large emitters** — especially older buildings. Older data farms are often in older generation buildings and that contributes to energy requirements too.

It is estimated that the cloud industry consumes more power than many nation states. And it is a bigger emitter than the global aviation industry.

What are the factors on which the carbon footprint of the cloud industry depends?

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Power source: The carbon footprint depends on the power source being used, and also the amount of air conditioning needed.

– Many data firms still primarily depend on **thermal or gas-fired power stations**, though many new ones are being built to utilise mostly renewable power.

Type of silicon chips: The kind of silicon chips used has a role too in the power consumption. Older, more power-guzzling chips have a worse carbon footprint than those that are new and more energy efficient.

Temperature, age and efficiency of the building: Variables like how cold is the geographical area where the server farm is placed as well as the **age** and **energy efficiency** of the building all matter in the actual energy being consumed.

Why the environmental concerns are likely to increase in the future?

Increased pace of digitalisation: This means more data is being generated and captured than ever before.

Web 3.0: When Web 3.0 replaces the current Web 2.0, the consumption of data will increase further. This is simply because the blockchain technology on which Web 3.0 is being built consumes huge quantities of energy.

Need for data localisation to increase: Much of the data today is stored in cross-border servers, but as privacy concerns grow, the need for data to be stored locally is also likely to increase. This will lead to a huge spike in server farms being built around the world.

What are the efforts being made to reduce the footprint?

Companies have built data centres in cold regions but, in general, it has not proved very practical.

Tried building submerged data centres in the sea to ensure they remain cool without the need for air conditioners. But the ecology of the sea changes when the data centres are placed underwater. It adversely affects marine life.

What is the way forward?

Building more energy efficient chips

Use green software

Making data centre operations more energy efficient while also using renewable sources, rather than thermal-fuelled electricity.

GS3 – INDIAN ECONOMY – MONETARY POLICY

DE-DOLLARIZATION BY CENTRAL BANKS

10. **Back the greenback: Grumblings about dollar dominance aren't new**

Source: This post is created based on the article “Back the greenback: Grumblings about dollar dominance aren't new” published in 5th April 2022 in Times of India.

Context: Western powers have slapped sanctions on Russia. These sanctions sting because of the US dollar's dominance across the global economy and finance.

How important is dollar in present global trade?

More than half the global trade is invoiced in dollars and nearly two-thirds of the foreign exchange reserves and global debt are held in dollars.

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Exchange rates between pairs of currencies are set via their parity with the dollar. The sentiment on Wall Street and the decisions of the US Federal Reserve affect markets and economies around the world.

What are the other factors against the dollar dominated economy?

The Global Financial Crisis in 2008 reinforced the bitterness against the dominance of the dollar in global finance and galvanized the search for an alternate reserve currency. The campaign lost its momentum later.

Chinese renminbi as an alternative

This has been a prospect after China started dominating global trade. It became more noticeable after the IMF included the renminbi in the SDR basket of currencies in 2016.

Many experts doubt the capabilities of renminbi in challenging the dollar. The renminbi's **exchange rate is not market determined**, China imposes **controls on capital flows in and out of its economy**. Its **financial regulation standards are not transparent** and predictable. China is also an **authoritarian regime** with a dubious reputation for transparency and rule of law.

What does the future hold?

The sanctions could encourage the emergence of small currency blocs based on trade between separate groups of countries. It is also possible that cryptocurrencies will start displacing dollar as a medium of exchange.

But as a safe haven asset, the dollar remains unrivaled no matter the geopolitics.

GS3 – AGRICULTURE – ISSUES RELATED TO FARMERS
GS3 – ENVIRONMENT – CLIMATE CHANGE

SUSTAINABLE FARMING IN INDIA

11. Why India needs to bring back nature-positive farming

Source: This post is based on the article “**Why India needs to bring back nature-positive farming**” published in **Down to Earth (DTE)** on **5th Apr 22**.

Context: The pandemic showed that human interventions in natural processes can have disastrous consequences. It's time to scale up natural-positive food systems that would simultaneously promote crop, soil and human health.

There is growing consensus among agri-scientists, policymakers and farmers that the Green Revolution has reached its limits and raised several issues of environmental sustainability.

What have been the ill-effects of the Green Revolution?

Due to the Green Revolution (GR), India's food production grew at an unprecedented scale and farm incomes also improved substantially. High yielding varieties of seeds, chemical fertilisers, assured irrigation and pesticides were key components of this .

However, the rise in food production has also led to some unintended consequences:

- Groundwater depletion
- Land degradation
- Yield stagnation

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– Loss of agri-biodiversity and the long-term impact on farmers’ and consumers’ health.

Hence, it’s now time to move from resource-intensive to a sustainable agriculture.

What are the key components of sustainable farming?

Moving away from extractive and input-intensive practices towards a **low external input and sustainable system**. For instance: organic farming, natural farming, Pesticide-free farming etc.

A more holistic approach to farming, and **reducing the use of chemicals** in farming without affecting the yields. For instance:

– **Non-Pesticide Management (NPM) agriculture**: Under this, a farmer is encouraged to engage in synthetic pesticide-free agriculture and create a unique identity for this produce in the consumer market. It involves choosing **pest-resistant varieties** of crops and practicing crop rotation, intercropping and mixed cropping that are well adapted to the local agroecological systems. If there is need, farmers use sprays made of **locally prepared bio-inputs** and **herbal extracts** that keep pests at bay. Most of these bio-inputs are made by the farmers themselves with locally available materials that **reduce their costs and debts** considerably.

Instead of a standardisation, sustainable farming brings back diversity to farming by **promoting crops and crop-varieties suited to different agroecological zones of India**.

What is the way forward?

Immense state support, in the case of the Green Revolution, was a major reason behind its success. Hence, there is a need to provide **end-to-end support to farmers** to create an enabling environment for this transition.

Identify and establish cultivation practices that are crop, soil and region-specific. More agricultural research has to go into developing seed varieties and cultivation practices using locally available materials.

More support is needed for post-harvest management in areas such as transportation, storage and value addition. Since chemical contamination can also occur after the produce leaves the farm, there’s a need to follow the value / supply chain approach and cover all aspects.

The **incentive system available to crops has to change**. The present system of minimum support price-based public procurement is concentrated in a few areas and crops. Diversification of the procurement basket is important to ensure a fair price for the produce.

Provision of financial services like credit and insurance at affordable price is vital for a vibrant and efficient farming system. Crop insurance, as a risk mitigation mechanism, can protect the small and marginal farmers from climate variations.

Farmer collectives and farmer producer organisations (FPO) need to play a big role in the transition to a sustainable and pesticide-free farming system. Organisations can partner with FPOs to procure directly from farmers at the farmgate and give their produce the recognition it deserves.

Support the entry of MSMEs in the pesticide-free food chains and to raise awareness among the consumers on a large scale, to raise demand and develop territorial markets.

NUCLEAR ENERGY IN INDIA

12. Atom-Nirbhar India: Nuclear energy is critical for the future. The civil liability clause deters foreign participation

Source: This post is based on the article “**Atom-Nirbhar India: Nuclear energy is critical for the future. The civil liability clause deters foreign participation**” published in **Times of India** on **5th Apr 22**.

News: Meeting the net-zero carbon emissions pledge by 2070 requires an overhaul of both the logistics and electricity sectors to reduce reliance on fossil fuels.

So far the solar energy sector has received much attention when it comes to India's transition to renewables, but without nuclear energy, India won't be able to fulfil its pledge.

What are some recent developments that highlight India's reliance on fossil fuels?

Two recent developments have brought India's reliance on fossil fuel into sharp focus.

- The **Russia-Ukraine conflict** and the consequent surge in crude oil prices.
- The most recent **IPCC report** on climate, which highlights the energy sector's large contribution to global warming.

What is the situation wrt nuclear energy in India?

It's an area where India was off to an early start, developed relatively high indigenous capabilities in relation to other sectors, but subsequently didn't put enough efforts into it.

Today, nuclear power contributes a **mere 3% of the total electricity generated**, and has a capacity of, 6780 MW.

Dependence on Russia: India's main partner today is Russia. The Kudankulam nuclear plant, which supplies about 26% of the electricity from this source, operates in partnership with Russia. Going forward, the geopolitical situation makes it challenging to depend on just Russians.

Nuclear energy is cost-effective, avoids emission problems and has an acceptable level of risk. Unlike solar energy, it doesn't create challenges of grid stability.

Why India didn't progress on the nuclear energy front?

Civil liability for nuclear damage: After the 2008 India-US civil nuclear deal, progress has been disappointing. The deal did open the pathway to a stable supply of uranium ore from Kazakhstan and Canada. However, the design of the subsequent bill on civil liability for nuclear damage killed the prospect of participation of Western firms.

What is the way forward?

Recent progress on creating **small modular reactors** (*up to 300 MW*) is making the possibility of rapid scale-up of nuclear energy quite feasible.

- SMRs will offer enhanced safety and simpler designs at lower capital costs.

These improvements will be harder to achieve with India's pressurised heavy water reactors. Hence, India should begin by **amending its nuclear liability legislation** in a way that encourages investment by companies that are at the forefront of SMRs, which promise to lower the chance of unsafe release of radioactivity.

IPCC REPORTS

13. **What latest climate report says: No time to waste, but world is not out of options yet**

Source: This post is based on the article “**What latest climate report says: No time to waste, but world is not out of options yet**” published in **The Indian Express** on **7th Apr 22**.

News: Working group III of the IPCC has released the third and **final instalment** of the AR6.

The report cautions that to have any chance of restricting global temperature rise to 1.5-2°C from pre-industrial levels, the world must act now.

It emphasises that strengthening of climate action to keep alive the 1.5 degree target was not just possible, but, to a large extent, also feasible and affordable.

What are some key findings of the report?

As per the report,

- Unless the global **greenhouse gas emissions peaks by 2025**, just three years from now, and is cut by at least 43% from current levels by 2030, the 1.5°C target cannot be achieved. *(This is going to be tough as the global emissions are still showing an increasing trend. Greenhouse gas emissions in 2019 are about 12% higher than in 2010)*
- Global average temperatures have already risen about 1.1°C from pre-industrial times. The **1.5°C threshold would most likely be breached, even in the best case scenario**.
- The climate actions that are currently promised would result in a world that would be about **3.2°C warmer** than pre-industrial times, and that is not a comfortable scenario at all.
- The situation already is so bad that, even after substantial reductions in emissions, human beings would have to rely on futuristic **carbon dioxide removal (CDR) technologies** to bring down the temperatures.

What feasible options are still available?

As per the report,

- **A lot of reductions in the current level of emissions can be achieved** through existing technologies that are not just feasible, but also affordable, though both, the feasibility and affordability, vary across regions and sectors.
- Nearly **half the world’s current emissions can be cut by 2030** using only technologies that cost **less than US\$100** to reduce one tonne of carbon dioxide equivalent.

For example: Large-scale deployment of renewables like **solar or wind energy**, carbon sequestration in soil, reduction in deforestation and improvement of energy efficiency etc.

The cost of solar energy or lithium-ion batteries has come down by nearly 85%, while the cost of wind power has reduced by 55% since 2010

- **25% of the current emissions can be reduced** using technologies that cost **less than US\$ 20** per tonne of CO₂. Such technologies include the shift to electric vehicles, lifestyle changes like adoption of cycles instead of motorized vehicles, and large-scale use of public transport.

What is the way forward?

As per the report,

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– **Traditional sources of energy like oil, gas and coal would have to be almost completely abandoned** over the next few decades if the climate goals have to be achieved. For instance: **Coal** would need to be given up entirely by the year 2050, while the use of **oil and gas** need to be reduced by at least 60 and 70% respectively.

14. How individuals can save a warming planet

Source: The post is based on an article “**How individuals can save a warming planet**” published in the **Indian Express** on **6th April 22**.

News: Recently, the **IPCC report** for the first time included a chapter on “**demand, services and social aspects of mitigation**”. It implies a paradigm shift in the way we think about climate action.

The chapter puts **people** and their **well-being** at the centre of climate change mitigation.

What is this new understanding, as mentioned in the IPCC report?

So far, climate action has been focused on the **supply side**, i.e., what needs to be supplied to people. It ignored the **demand side**, i.e., what people need, demand, and aspire for.

The people aspire for a healthy life, food for daily nutrition, a comfortable home, and transportation system, thermal comfort, communication, and participation in decision-making processes. Therefore, the **burden of mitigation** should be reduced on the **supply side**. And, focus should shift to the **demand side**.

What has been proposed by the report regarding lifestyle changes for climate change mitigation?

Comprehensive demand-side mitigation strategies must be adopted.

– For example, individuals can go for reduction in **food waste, sustainable healthy dietary choices, adaptive heating and cooling choices for thermal comfort** etc.

Individuals having high **socio-economic status** contribute disproportionately to emissions. Therefore, they have the **highest potential** for **emissions reductions**.

Efforts can be made to **reduce inequality** and forms of **status-related consumption**. The consumption of goods and services should be focused on the **well-being** instead of for **social prestige**.

Immediate action can be undertaken in our **lifestyle**. It will enable people to lead low-carbon lifestyles.

– For example, shift in the mode of transport (walking, cycling etc.), industry, buildings, and food. Amongst all, **walking, cycling** and using **electricity-powered transport** can be the biggest contributor in climate change mitigation.

What is the way forward?

Individual choice alone can make only a modest contribution to reducing GHG emissions. It requires **investment** in and **transformation** across every sector. In addition, policy support is also needed which **encourages people** to make **low-carbon choices** in all aspects of their lives.

Structural and cultural changes are important for people to lead **low-carbon lifestyles**. This enables people to make the **right choices**.

– For example, individual’s shift to walking and cycling require urban planning for land use, more green spaces, reallocation of street spaces for walking and physical exercise, etc.

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In addition, the **demand for fossil fuels** has to reduce. The use of **coal** fuel must fall by 90% by 2050. The **use of gas and oil** need to decline by 25-50%. Further reductions would be required in gas and oil by 2100.

The **IPCC** should continue to provide the evidence for **policymakers, investors**, and all other decision-makers to decide what needs to be done ahead.

15. IPCC report on Mitigation of Climate Change scientifically establishes India's position on the historical responsibility of developed countries for consuming the carbon budget

Source: This post is based on the following articles –

“**Explained: What is the IPCC, and why are its Assessment Reports important?**” published in **The Indian Express** on **5th Apr 22**.

“**We must keep hope alive as climate aims slip away**” published in **Livemint** on **6th Apr 22**.

“**IPCC report on Mitigation of Climate Change scientifically establishes India's position on the historical responsibility of developed countries for consuming the carbon budget**” published in **PIB** on **5th Apr 22**

News: IPCC has come out with the third instalment of the IPCC's Sixth Assessment Report (AR6). The IPCC reports are created by its three working groups.

This report, which deals with actions that can be taken to combat climate change, has been prepared by the Working Group III.

Assessment reports by **Working group I** and **II** have already been released earlier.

What are the findings of the report?

Limiting global warming will require **major transitions** in the energy sector and this will mean drastically reducing fossil fuel use, widespread electrification, improved energy efficiency, and the use of alternative fuel

On financial support: It falls short of the levels needed to achieve mitigation goals across all sectors and regions. The challenge of closing gaps is largest in developing countries as a whole. It also states that public finance falls short of the Copenhagen (*reiterated in the Paris Agreement*) goal of USD 100 billion per year by 2020.

– To accelerate the low-carbon transition, developed countries should ensure higher flows of finance and technology transfer in critical areas such as renewables, electric vehicles, green hydrogen, and others.

With a **shrinking remaining carbon budget**, the access to a fair share of this budget for developing countries has become an important question.

Changes in lifestyle and behaviours have a significant role to play in mitigating climate change. The Report **endorses India's view on the need for curbing unsustainable consumption** and is in line with its call of L.I.F.E. – Lifestyles for Environment which it gave at COP26 at Glasgow. Having the right policies, infrastructure and technology in place to enable changes to our lifestyles and behaviour can result in a 70% reduction in greenhouse gas emissions by 2050.

Emissions reduction: There is a need for deep and urgent global emissions reduction. Four-fifths of the total carbon budget for 1.5 deg C temperature increase and two-thirds of the total carbon budget for 2 deg C warming has been already consumed.

Limiting warming to around 1.5°C requires global greenhouse gas emissions to **peak before 2025** at the latest and be reduced by 43% by 2030; at the same time, methane would also need to be reduced by about a third.

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Net-zero: The global temperature will stabilise when carbon dioxide emissions reach net-zero. For 1.5°C, this meant achieving net zero carbon dioxide emissions globally in the early 2050s; for 2°C, it is in the early 2070s.

For a 1.5°C goal of net-zero, the world's dependence on coal must drop 95% by mid-century, on oil 60% and on gas 45%

India

– Both historical cumulative emissions and per capita annual emissions show that India's role (as part of South Asia) is minimal.

– The report justifies **India's emphasis on equity**, stating that it is fundamental to international co-operation on climate change. Equity remains a central element in the UN climate regime, notwithstanding shifts in differentiation between states over time and challenges in assessing fair shares”

– **Coal plants:** There is no place for new coal plants in the world. The report finds that all coal-fired power plants, without the technology to capture and store carbon (CCS), need to be shut down by 2050 if the world aspired to limit global temperature rise to 1.5°C. None of the existing under construction coal-fired power plants in India have CCS facilities.

As per some experts, if all else fails, India can look at **geo-engineering solutions** like placing reflectors in orbit, say, to adjust how much solar heat reaches us. But, any such solution would require a global consensus.

GS3 – INDIAN ECONOMY – ISSUES RELATED TO GROWTH AND DEV

INDIA'S EXPORT POLICY

16. **Export Opportunity**

Source: This post is created based on the article “**Export Opportunity**” published on 7th April 2022 in **Business Standard**.

News: Union Commerce and Food Minister Piyush Goyal's stated optimism about India's wheat exports scaling a new high in FY23, though his projection of the volume of likely shipments being around 10 million tonnes seems rather modest.

What are the new opportunities for Indian exports?

Russia-Ukraine war: Russia and Ukraine together normally **account for 25-30% of the wheat supplies in the global market**. The void caused by their absence can be filled to a sizable extent by India.

Most wheat-importing countries, particularly those in **Africa, West Asia, and Southeast Asia** are now looking towards India to meet their requirements.

States such as **Madhya Pradesh, Uttar Pradesh, and Gujarat**, are already making special efforts to boost exports. The Railways has assured them of full support to move the cargo to Kandla and other ports on priority.

What is India set to gain from these exports?

Food exports are now a **dire necessity rather than merely an opportunity-driven initiative**. This is because the country's food grain output has consistently outpaced consumption.

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Wheat **prices in the international market are now ruling substantially higher than the domestic prices.** It allows exporters to buy stocks from farmers at rates far above the minimum support price (MSP) and yet have a sufficient profit margin.

This would also help **trim official grain stockholding** to a manageable size to rein in the ever-burgeoning food subsidy.

Way Forward: India should grab this export opportunity to create the much-needed export outlet for the surplus grains.

GS3 – ENVIRONMENT – RENEWABLE ENERGY

BIOGAS AND RELATED ISSUES

17. **Biogas: A sustainable solution for curbing pollution, improving livelihoods & enhancing quality of life**

Source: This post is based on the article “**Biogas: A sustainable solution for curbing pollution, improving livelihoods & enhancing quality of life**” published in **Down to Earth (DTE)** on **7th Apr 22**.

News: Pollutants emitted due to the burning of fossil fuels and biomass not only affect the health of people, but are also responsible for climate change.

The organic portion of the Municipal Solid Waste (MSW) produces Methane, when dumped improperly, like in landfills.

Disposing of organic wastes in landfills or burning trash is an environmental as well as health hazard. Apart from causing greenhouse gas (GHG) emissions, such unscientific waste disposal leads to diseases like dengue fever and malaria.

Installing large-scale municipal biogas systems can help cities handle organic waste efficiently to overcome the environmental and socio-economic challenges posed by overburdened landfills.

How can Biogas prove immensely beneficial for India?

As per WHO, over **four million people die every year** all over the world due to high levels of indoor air pollution caused by the burning of fossil fuels and biomass.

The **female members of a household are affected by indoor pollution** as they spend more time inside the house. In this case, switching to biogas could be good for these women because they won't be exposed to harmful smoke and pollution.

Only 26.53% of the total power generated in India is from renewable sources, according to estimates. The high dependence on non-renewable sources is the leading cause of the long-standing **energy problems in the country**.

Installing biogas plants at the micro- and macro-level can **address the critical issues of handling livestock manure and agricultural wastes, deteriorating soil quality, water pollution and deforestation**.

Reduction of carbon emissions: A fully functional biogas digester, for every tonne of feedstock processed, can reduce approximately 2.83 tonnes of carbon dioxide emissions in a year.

Improving soil quality: Biogas also plays a crucial role in improving soil quality. The digestate, a by-product generated in the biogas plants, can be used as a biofertilizer as it is rich in organic content and revitalises the soil. The use of biofertilisers not only increases crop yield but also

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improves the nutrient content of the produce, thereby improving the health and well-being of consumers as well as that of soil.

Biogas can also help in reducing gender inequalities and empowering women. As rural households gain access to biogas as cooking fuel, women and girls do not need to spend time collecting firewood and other fuel and can utilise this spare time for education, acquiring new skills, and community work.

– As more and more women are educated and skilled, they have **access to new employment and business opportunities**. This can help them to be **financially independent and have more decision-making power** in the household. This will further help to **improve the psychological and emotional health** of women.

Biogas can significantly contribute to **achieving several UN-mandated sustainable development goals (SDG)** such as zero hunger; good health and wellbeing; gender equality etc.

As the country aims to provide energy security to every citizen, biogas can play a **critical role in transforming the energy dependence of rural and agricultural communities**, which majorly depends on burning wood, dung, charcoal, etc.

Thus, Biogas can be one of the best available and feasible options for addressing India's socio-environmental issues.

Organic wastes can be turned into green fuel that would **reduce the dependence on the use of biomass and fossil fuels**. This can also save millions of lives. It can also **lower the dependency on natural gas imports**, as India currently imports a little over half of its total consumption of natural gas.

GS3 – ENERGY AND INFRASTRUCTURE – ELECTRIC VEHICLES

EVs and RELATED ISSUES

18. **On fire hazard from e-vehicles: Read the smoke signals**

Source: This post is based on the article “**Read the smoke signals**” published in the **Business Standard** on **8th Apr 22**.

News: Safety concerns have emerged after several recent incidents in which e-scooters have caught fire, causing panic and loss of life. While the government has ordered an enquiry, the authorities must review and reorder the road-safety ecosystem.

What are the reasons behind fire incidents?

Harsh summer driving conditions: The scooter fires could have been caused by the unsuitability of imported lithium-ion battery packs for summer driving conditions.

– India is hotter in summer than most places where e-vehicles are popular, and the standard battery pack designed for North America or China is not tropicalised to withstand Indian summers.

Stressful driving environment: India is also a stressful driving environment, necessitating sudden acceleration/braking, which means a greater load on the battery pack, which therefore gets hotter.

What are some issues with battery packs used in e-vehicles (EVs)?

Spontaneous combustion: A battery pack heated beyond a certain point can spontaneously combust.

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- This can happen if a hot pack is recharged without a cooling-off period.
- It can happen long after a crash because of internal short-circuits, which are invisible to inspection.
- Also, a battery pack can reignite —due to invisible internal reactions — spontaneously 24 hours after the fire has been apparently extinguished.

Battery fires burn hotter than petrol fires, and emit a combination of highly toxic smoke and flammable fumes, which can inflame nearby vehicles and structures.

How are fire hazards caused by EVs and Internal Combustion Engines different from each other?

An ICE faces the danger of an **electrical short circuit** setting off an explosion of the fuel tank, as well as the danger of the fuel line, or the tank being ruptured in a crash, leading to flammable liquid or fumes leakages.

In an e-vehicle crash, the delayed action factor means that the vehicle and/or its battery pack must then be isolated and observed.

- If there is a fire, it cannot be tackled easily. The foam used to smother petrol fires is ineffective.
- The advice is to detach the battery pack if possible, and to direct jets of cool water at it, until it cools, and then it must be kept under observation.

What are the steps that need to be taken?

Packs designed to operate in cooler, less stressful driving conditions must be tested more stringently and, maybe, modified for India. If other technical factors are involved, those must be identified and addressed.

By the Govt

- The government may have to set new standards for battery packs, and warn users to wait for a cool-down before recharging.
- As the number of e-vehicles in service rises, the **fire brigade and the police will need to be retrained**, and, maybe, issued new equipment. This is because a fire caused by ICE and EV is different in nature and need to be tackled accordingly.
- In addition, the **government must launch an outreach campaign** to reassure citizens about the safety of this new class of green vehicles.

What is the way forward?

As green vehicles, including cars and buses, are adopted in larger volumes, the fire safety factor will acquire greater importance. Fire departments and police safety protocols must be updated to deal with them.