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Table of Contents

INSIGHTS into EDITORIAL 3

GENERAL STUDIES I 3

1.Culture and peace: On India's stand against

'UN's selectivity on religions' 4

2.Castes count: On T.N. caste-wise survey 6

3.Madhya Pradesh Cabinet approves anti-

conversion bill 10

4.A 'duet' for India's urban women 13

5.What is Winter Solstice, which made

December 21 the shortest day of the year 17

GENERAL STUDIES II 8

1.A Failure to Enable 22

2. Grain and chaff: On farmer protests 25

3.Thousand days of nutrition, and a billion dreams 28

4.PM-KUSUM will shine when implemented fully 32

5.Public Health Act Needed to Keep Private
Hospitals in Check: Parliamentary Panel 35

6.Skills quotient: The key to accelerate skill development 39

7.Supreme Court stays Andhra HC order to study 'constitutional breakdown' in State 43

8.Article 356 and an activist judiciary 47

9.Law and disorder 50

10.Modi-Hasina summit to highlight infrastructure, connectivity projects 53

11.Regional priorities: On the SCO summit 56

12.European powers as natural partners in constructing a durable balance of power in Indo-Pacific 59

GENERAL STUDIES III 55

1.Economic revival beating predictions: RBI bulletin 64

2.The perils of deregulated imperfect agrimarkets 67

3.Can Covid-19 be an opportunity to boost electric mobility in India? 71

4.This is how we prevent future pandemics, say 22 leading scientists 74

5.Challenges in achieving herd immunity
through vaccination 77
6.Rethinking waste management: Improving
governance in India's North East 80

7. Converting waste to energy 84

8. Hazardous ideas for the Himalayas 87

9.Keeping secrets in a quantum world and going beyond 91

10.We must never forget this grim anniversary 96

ESSAYS 101

INSIGHTS into EDITORIAL

GENERAL STUDIES I

1.Culture and peace: On India's stand against 'UN's selectivity on religions'



Context:

<u>"Culture of Peace" session</u> organised by the UN General Assembly. The UN has organised such sessions each year since 1997.

In a strong statement at the **UN General Assembly** discussing resolutions of the **UN Alliance of**<u>Civilizations (UNAOC)</u> on the 'Culture of Peace', India criticised the world body for what it called "selectivity" in seeking to protect Abrahamic religions — Islam, Christianity and Judaism over others.

Speak for all religions, India tells United Nations:

First Secretary at India's Permanent Mission to the UN, has asked the United Nations to expand its criticism of hatred and violence against religions beyond the three Abrahamic religions — Judaism, Christianity and Islam.

At the outset, state that we fully agree that <u>anti-Semitism</u>, <u>Islamophobia and anti-Christian acts need to</u> be condemned and India firmly condemns such acts.

However, UN resolutions on such important issues <u>speak only of these three Abrahamic religions</u> <u>together</u>.

"This UN resolutions fails to acknowledge the rise of hatred and violence against Buddhism, Hinduism and Sikhism also."

Instances of rise of hatred and violence against Buddhism, Hinduism and Sikhism:

The shattering of the <u>iconic Bamyan Buddha</u> by fundamentalists, the terrorist bombing of the <u>Sikh</u> <u>gurdwara in Afghanistan</u> where 25 Sikh worshippers were killed and the destruction of Hindu and Buddhist temples and minority cleansing of these religions by countries, call for condemning such acts against these religions also.

But the current Member States refuse to speak of these religions in the same breath as the first three 'Abrahamic' religions.

The United Nations however has condemned such acts. For instance, in 2001, the General Assembly adopted a resolution without a vote condemning the Taliban for destroying cultural artefacts, including the Buddhist sculptures in Bamiyan.

Criticism to India by UN on many Incidents:

<u>India's concerns over the UN resolutions</u> that **portray only three religions** as **victims of religious hatred** are completely valid, and it is important that they are **broadened** to include <u>every community that</u> <u>faces religion-based violence</u>.

It is also important that the government thwarts Pakistan's particularly insidious attempts to create a controversy against India at this time, by pushing these resolutions as India steps to take its two-year seat at the UN Security Council.

India has been concerned by an **increase in intrusive language** from the UN bodies concerned as well, given that UNAOC issued a statement of "grave concern" over the Delhi riots in February this year that it said resulted in **casualties of "mostly Muslims".**

India is keen to push back on the UNAOC and other UN arms, like the UN Human Rights Council, that have criticised the Citizenship (Amendment) Act.

As it seeks to do all of this, however, the government must be careful about ensuring that in exposing the UN's "selectivity" it doesn't open a flank for a counter-charge against India.

<u>The Citizenship (Amendment) Act</u>, for example, has been criticised for offering **fast-track citizenship** to only a **select group of religions**, leaving out Muslims.

India cannot call for a culture of peace that stitches together an alliance of faiths, while Indian States bring laws that seek to make difficult inter-faith marriages.

Pakistan transferring the management and maintenance of the <u>Holy Gurudwara Kartarpur Sahib</u> away from the Pakistan Sikh Gurudwara Prabhandhak Committee, a body run by the **minority Sikh Community**, to the administrative control of the Evacuee Trust Property Board, a **non-Sikh body**.

The **unilateral decision by Pakistan** is highly condemnable and runs against the spirit of the Kartarpur Sahib Corridor as also the religious sentiments of the Sikh community at large.

Indian Constitution and concept of Indian Secularism:

- 1. The term 'Secular' was added to the preamble by the forty-second constitution Amendment Act of 1976, (India is a sovereign, socialist, secular, democratic, republic).
- 2. <u>Article 14</u> grants equality before the law and equal protection of the laws to all, <u>Article 15</u> enlarges the concept of secularism to the widest possible extent by prohibiting discrimination on grounds of religion, race, caste, sex or place of birth.
- 3. <u>Article 16 (1)</u> guarantees equality of opportunity to all citizens in matters of public employment and reiterates that there would be no discrimination on the basis of religion, race, caste, sex, descent, place of birth and residence.
- 4. <u>Article 25</u> provides 'Freedom of Conscience', that is, all persons are equally entitled to freedom of conscience and the right to freely profess, practise and propagate religion.
- 5. <u>Article 26</u>, every religious group or individual has the right to establish and maintain institutions for religious and charitable purposes and to manage its own affairs in matters of religion.
- 6. <u>Article 27</u>, the state shall not compel any citizen to pay any taxes for the promotion or maintenance of any particular religion or religious institution.
- 7. <u>Article 28</u> allows educational institutions maintained by different religious groups to impart religious instruction.
- 8. Article 29 and Article 30 provides cultural and educational rights to the minorities.
- 9. **Article 51A** i.e. Fundamental Duties obliges all the citizens to promote harmony and the spirit of common brotherhood and to value and preserve the rich heritage of our composite culture.

India's concerns over the UN resolutions:

The Indian delegate pointed out that previous resolutions of the UNAOC dating back to 2006 had repeatedly decried the hatred against those religions — "Islamophobia, Christianophobia and anti-Semitism" but didn't condemn attacks on other religious groups including Hindus, Sikhs and Buddhists, who have suffered terror strikes and seen their shrines destroyed in Afghanistan and Pakistan.

In particular, India said, the UNGA statement welcomed the Kartarpur Gurdwara corridor agreement between India and Pakistan, but **failed to note** that Pakistan's government has taken over the

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management of the Sikh shrine, which it called a <u>contravention of the agreement and a violation of</u> Sikh beliefs.

India's delegate also accused Pakistan of a "<u>culture of hatred</u>" <u>against "religions in India"</u> and <u>fostering</u> cross-border terrorism and said a culture of peace cannot exist until that is changed.

Above all, the Indian statement said, the UN's selectivity under the aegis of the UNAOC, an organisation that was set up in 2005 to prevent polarisation between societies and cultures and to bridge differences between them, only serves to further the theory of an inevitable "clash of civilisations" instead.

Conclusion:

In the larger analysis, the force of India's argument against the UN's selective resolutions and non-inclusive language as well as the international efforts of adversaries such as Pakistan <u>remains its own secular credentials enshrined in the Constitution and its pluralistic ethos.</u>

2.Castes count: On T.N. caste-wise survey

WHAT HAPPENED TO 2011 CASTE CENSUS?

- ➤ Following all-party consensus, UPA govt in 2011 decided to conduct a Caste Census, the first since 1931
- ➤ Nearly ₹4,900 crore was spent on the Socio-Economic and Caste Census (SECC)
- In 2015, expert group was set up under then Niti Aayog vice-chairman to decide on classification and categorisation of SECC data
- In 2016, all data from SECC barring caste numbers was put in public domain. The caste data still remains unreleased
- In July 2017, the govt told

- Parliament that raw caste data from SECC had been given to the social justice ministry, "who is to form the expert group for classification and categorisation of data"
- One problem with the SECC data cited by experts is that it has thrown up 46 lakh castes, sub-castes, clan names and so on. Categorising these is a mammoth task
- ➤ To avoid this pitfall, enumerators in 2021 will be given a pre-decided list of castes so that they can ask households which of them they fall under

Context:

The Tamil Nadu government announced that a **Commission** would be set up to <u>conduct a **survey for**</u> <u>collecting caste-wise data in Tamil Nadu</u>.

The proposed Commission would examine the <u>methodologies being adopted for collecting caste-wise</u> <u>data</u>, and based on that, it would conduct a survey to collect such data and submit a report to the government.

The idea of a caste census is back in the realm of public debate, following the Tamil Nadu government's decision to establish a commission to collect caste-wise data.

It is in response to the restive pre-election agitation organised by the Pattali Makkal Katchi <u>demanding</u> 20% exclusive reservation in education and government jobs for the Vanniyar community, its main electoral base.

Data on caste was last collected in 1931 Census:

The last time data on caste was collected as part of the decennial Census was in 1931.

Although a socio-economic caste census (SECC) was conducted between 2011 and 2013 in deference to the demand of the powerful OBC lobby, it was part of the rural development ministry's survey of socio-economic status of households.

The decision marks a victory for OBCs, who stridently campaigned for bringing caste back in the Census exercise.

They maintain that they constitute more than 50% of the population and it was time this "reality" was acknowledged through the Census.

There has, in fact, been much heartburn among the backward classes that the government has given a virtual go-by to the OBC enumeration done through the SECC.

The OBC outfits have been complaining that the government did not form the committee to process the data that has been in its possession for the last three years.

Sources, however, said the SECC, which was purely a response-based exercise with respondents being asked to mention their castes, threw up a mountain of data which was full of anomalies.

While a <u>reliable and accurate headcount of OBCs</u> marks a victory for the "backwards" who have cornered the lion's share of reservation in government jobs and educational institutions, what might take away their happiness is that this will happen in tandem with a <u>simultaneous exercise to subcategorise OBCs</u> so as to identify the most backward classes among them that lag far behind the "creamy" layer in terms of ability and achievement.

Expert Group on SECC, 2011:

1. The <u>Ministry of Rural Development</u> commenced the Socio Economic and Caste Census (SECC) 2011, in June 2011 through a comprehensive door to door enumeration across the country.

7

- 2. However, because of the lack of reliability of the data collected, or its political and electoral sensitivity, the caste portion of the SECC has not been disclosed so far.
- 3. The State government could possibly seek access to this data pertaining to Tamil Nadu as part of its exercise.
- 4. In 2017, government constituted an Expert Group under the <u>Chairmanship of former Finance</u> Secretary Shri Sumit Bose for:
 - a. Studying the objective criteria for allocation of resources to States and
 - b. <u>Identification and prioritization of beneficiaries under various programme using Socio Economic and Caste Census (SECC) data.</u>
- 5. Expert Group has observed that <u>regular updation and verification of SECC data is essential for improved targeted delivery of essential services.</u>

Need for collecting and compiling caste-wise data:

- 1. It is equally true that there is a social and legal necessity for compiling caste-wise data.
- 2. The Supreme Court has been asking States to produce <u>quantifiable data to justify their levels of reservation</u>, and it would <u>help Tamil Nadu to retain its 69% total reservation</u>.
- 3. At the same time, some castes that have <u>either electoral or numerical importance across India</u> have been restive about the manner in which <u>affirmative action programmes</u> based on classes and communities have been implemented so far.
- 4. <u>Be it the Gujjars, or Jats or the Patidars, or the Vanniyars</u>, some sections have been linking their prospects of advancement to exclusive reservation.
- 5. It will present the correct picture of socio-economic status of various castes in any particular state.
- 6. Such data will help the state government to ensure <u>how much reservation is actually necessary</u> for any given caste.
- 7. <u>Comprehensive caste-based data</u> will help to figure out the economic status of various castes in different states.
- 8. State can plan accordingly their welfare schemes for the <u>most backward castes based on their</u> <u>need and socio-economic conditions.</u>
- 9. In Tamil Nadu, <u>sections of the Vanniyars</u>, whose violent 1987-88 agitation resulted in the creation of a '<u>most backward classes</u>' <u>category</u> entitled to <u>20% reservation</u>, are apparently dissatisfied about being clubbed with over a hundred other castes.

- 10. It is a sobering reflection on <u>how reservation operates that some castes feel crowded out in the competition and aspire for the safety of exclusive reservation.</u>
- 11. The proposed commission may not conduct an elaborate enumeration on the lines of the Centre's decennial census.
- 12. Its mandate is **to examine** the <u>methodology for collecting caste-wise particulars, conduct a survey based on that and submit a report.</u>
- 13. It will be quite a challenge to arrive at a sound assessment of the social and educational backwardness of each caste.

What was the Centre's initiative in this regard?

- 1. The Census of India has not collected caste-wise data since 1931, with the exception of details about SCs and STs.
- 2. The Centre conducted a 'socio-economic caste census (SECC)' in 2011.
- 3. It was an attempt to link the collection of caste data along with socio-economic data.
- 4. This was done so that there could be a **comprehensive assessment of levels of deprivation and backwardness in society**.
- 5. However, presumably because of the <u>lack of reliability of the data collected</u>, or its political and electoral sensitivity, the caste portion of the SECC has not been disclosed so far.
- 6. The State government could possibly seek access to this data pertaining to Tamil Nadu as part of its exercise.
- 7. However, it should <u>not treat this as a politically expedient move to quell a possible electoral setback</u> due to the agitation of one party or community.

Conclusion:

Collecting caste-wise data should seek to <u>rationalise and deepen its social justice policy</u> with a true assessment of the backwardness of various castes.

After all, progress towards a casteless and equal society ought to remain the state's ultimate goal.

Thus, <u>a casteless and equal society</u> should be government's ultimate goal along with knowing the true socio-economic status of each caste in India.

3. Madhya Pradesh Cabinet approves anti-conversion bill



Context:

<u>The Madhya Pradesh Freedom of Religion Bill, 2020</u>, which provides for a <u>prison term of up to 10</u> <u>years</u> and a **fine of ₹1 lakh** for conversion through "marriage or by any other fraudulent means" got the State Cabinet's approval.

The Bill, in some ways, is similar to the Prohibition of Unlawful Conversion of Religion Ordinance, 2020, notified by the Uttar Pradesh last month, which too provides for a maximum punishment of 10 years' imprisonment for "fraudulent conversions", even for the sake of marriage.

During **British Raj**, some of the **Indian princely states** such as Kota, Patna, Surguja, Udaipur and Kalahandi passed laws against religious conversions in an attempt to preserve Hindu religious identity in the face of British missionaries.

Stringent laws for mass conversions:

- 1. In cases of **religious conversion** of members of the Scheduled Castes, the Scheduled Tribes and minors, a provision has been made for imprisonment of two to 10 years and ₹50,000 fine, he said.
- 2. There is provision of three to 10 years of imprisonment and fine of ₹50,000 in cases of marriage carried out by hiding religion, misrepresentation or impersonation.
- 3. In case of <u>mass conversions</u> (of two or more persons), a provision of five to 10 years of imprisonment and a minimum fine of ₹1 lakh has been made.

- 4. Repeat offenders would face five to 10 years of imprisonment, he said, adding that the registration of any organisation involved in such violation would be cancelled.
- 5. Religious conversion in violation of this law would be considered null and void.
- 6. <u>Parents, legal guardian or custodian and brothers and sisters of the converted person can lodge</u> a complaint.
- 7. Offences would be investigated by an officer not lower than sub-inspector's rank, and it would be the responsibility of the accused to prove his innocence.
- 8. A child born to the victim women will be entitled <u>to get maintenance under the proposed law</u>. Such children would be entitled to inherit the father's properties too.

Definitions mentioned in convesion bill:

- i) Allurement- Temptation in the form of a gift, gratification, easy money or material benefit, employment, free education in any reputed school run by any religious body, better lifestyle, divine displeasure and so on.
- **ii) Coercion-** To compel an individual to act against his/her will, using psychological pressure or physical force causing bodily injury or threat.
- iii) Conversion- To renounce one's own religion to adopt another religion.
- iv) Force- To threat someone in any way.
- v) Fraudulent means- Impersonation of any kind-- false name, religion, surname and so on.
- vi) Mass conversion- Conversion of two or more people.
- vii) Minor- A person below 18 years of age.
- **viii) Religion-** Any organised way of worship pattern, faith, belief, lifestyle prevailing in any part of India and defined under any law or custom for the time being in force.
- **ix) Religion convertor-** Person of any religion who performs any act of conversion from one religion to another such as Father, Maulvi, Karmkandi, etc.
- **X)** Undue influence- Unconscientious use of power or influence by one person over another to persuade the other to act in accordance with the will of the person exercising such influence.
- xi) Unlawful conversion- Conversion which is not in accordance with law of the land.

Features of the New Legislation by MP: The Madhya Pradesh Freedom of Religion Bill, 2020:

1. The law in Madhya Pradesh would be the most stringent in the country.

- 2. Offences under the proposed law would be cognisable and non-bailable. The Bill, which seeks to replace the Religious Freedom Act of 1968, would be tabled in the Assembly.
- 3. The **new legislation** will **prohibit religious conversion** or such efforts by <u>misrepresentation</u>, <u>allurement</u>, force, undue influence, coercion, marriage or any other fraudulent means.
- 4. Abetment and conspiracy for religious conversion will also be prohibited under it.
- 5. Any marriage solemnised in violation of the proposed law would be considered null and void.
- 6. Those willing to convert would need to apply to the district administration 60 days in advance.
- 7. The religious leaders facilitating the conversion would also have to inform about it 60 days in advance.
- 8. Violation of these provisions would attract a jail term of three to five years and a fine of ₹50,000.

States opting for laws on freedom of religion for marriage ('love jihad'):

Recently, the State governments of U.P. Haryana and Karnataka announced intentions to enact such laws and planning a law that would invite five years' imprisonment for 'love jihad'.

The Uttar Pradesh Prohibition of Unlawful Religious Conversion Law, 2020 is a law enacted by the Government of Uttar Pradesh, India to prohibit unlawful conversion from one religion to another by misinterpretation, force, undue influence, coercion, allurement or by any fraudulent means or by marriage.

Article 25: Freedom of Conscience and Free Profession, Practice and Propagation of Religion:

Article 25 says that all persons are equally entitled to freedom of conscience and the right to freely profess, practice and propagate religion.

- 1. **Freedom of conscience**: Inner freedom of an individual to mould his relation with God or Creatures in whatever way he desires.
- 2. **Right to Profess**: Declaration of one's religious beliefs and faith openly and freely.
- 3. **Right to Practice**: Performance of religious worship, rituals, ceremonies and exhibition of beliefs and ideas.
- 4. **Right to Propagate**: Transmission and dissemination of one's religious beliefs to others or exposition of the tenets of one's religion.

Supreme Court on Marriage and Conversion:

1. The Apex Court of India in its several judgements has held that faith, the state and the courts have no jurisdiction over an adult's absolute right to choose a life partner.

- 2. <u>Intimacies of marriage</u> lie <u>within a core zone of privacy</u>, which is inviolable and the choice of a life partner, whether by marriage or outside it, is part of an <u>individual's 'personhood and identity'</u>.
- 3. India is a <u>'free and democratic country'</u> and any interference by the State in an adult's right to love and marry has a <u>'chilling effect' on freedoms</u>.
- 4. The **absolute right of an individual** to choose a life partner is not in the least affected by matters of faith.

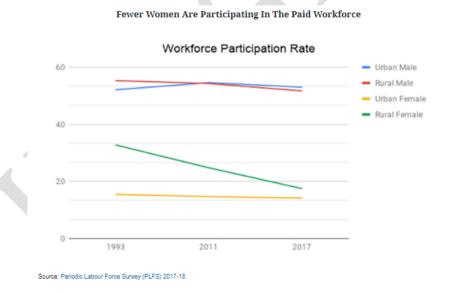
Conclusion:

The **essence of secularism** lies in **accommodation of varied social groups** and overcome tendencies that destructs the **social fabric of the any society**.

In India where differences exists in terms of different religions and cultures secularism plays a crucial role.

It is evident that **Indian secularism** since ancient India **embraced many religions, sects, communities** showing **tolerance and true sense of accommodation**, leading to a **tolerant nation with social cohesion.**

4.A 'duet' for India's urban women



Context:

The COVID-19 crisis has drawn attention to the insecurities that haunt the lives of the urban poor.

Generally, urban poor are **less insecure** than the rural poor, partly because fallback work is easier to find in urban areas if only pulling a rickshaw or selling snacks.

Still, the urban poor are **exposed to serious contingencies**, both individual (such as illness and underemployment) and collective (lockdowns, floods, cyclones, financial crises and so on).

Conditions of urban poor women are more deplorable than rural women:

- 1. <u>Nuclear families in slums</u>, usually without caste-community affiliations. Husband has less fear of relatives or elders of the community. Could be more abusive / domestic violence than rural.
- 2. Crime, Drugs, Liquor, Gambling, Juvenile Delinquency more prominent in urban slums than rural.
- 3. When male members of a poor family engage in these evils, it has repercussion on the females of the house as well.
- 4. Urban areas have higher cost of living. So, Urban poor woman has to engage herself in **petty-labour** while looking after the **household chores and childcare**.
- 5. Rural women might have the help of grandparents / family elders / in-laws to take care of raising the children and dividing the domestic chores. So, she may have slightly better peace of mind.
- 6. <u>Urban slums have unhygienic conditions</u>, and they are <u>more prone to damage in urban floods</u> <u>results in disease, financial distress</u>.
- 7. In Rural floods, Government relief and compensation packages are bigger and arrives more quickly due to the electoral politics.
- 8. Urban slums more prone to eviction during anti-encroachment drives compared to rural slums.
- 9. Thus, due to aforementioned challenges, the condition of urban poor women more deplorable than their rural counterparts.

To secure Urban Poor:

- 1. There has been much discussion, in recent months, of a <u>possible urban employment guarantee</u> <u>act.</u>
- 2. The nuts and bolts of the act, however, are not so clear, and we have little experience of relief work in urban areas.
- 3. Further, it takes some optimism to expect a national urban employment guarantee act to materialise in the current political climate. A stepping stone would help.
- 4. There is, thus, a <u>need for better social protection in urban areas</u>. There are not many options.

- 5. <u>Universalising the Public Distribution System in urban slums</u> would be a step forward (and it can be done under the National Food Security Act), but food grain rations do not take people very far.
- 6. <u>Employment-based support</u> is one way of doing more. It has <u>two major advantages: self-targeting</u>, and the possibility of generating valuable assets or services.

Idea of Decentralised Urban Employment and Training (DUET):

- 1. Activists and social scientists had proposed an <u>urban employment scheme</u> called <u>Decentralised</u> <u>Urban Employment and Training (DUET).</u>
- 2. The government, State or Union, would **issue "job stamps"**, each standing for one day of work at the minimum wage.
- 3. The job stamps would be <u>liberally distributed to approved public institutions</u> such as universities, hostels, schools, hospitals, health centres, museums, libraries, shelters, jails, offices, departments, railway stations, transport corporations, public-sector enterprises, neighbourhood associations and urban local bodies.
- 4. These institutions would be <u>free to use the stamps **to hire labour** for odd jobs and small projects</u> that do not fit easily within their existing budgets and systems.
- 5. Wages, paid by the government, would go <u>directly to the workers' accounts against job stamps</u> <u>certified by the employer.</u>
- 6. To avoid collusion, an <u>independent placement agency</u> would take charge of assigning workers to employers.
- 7. This approach would have **various advantages**: activating a multiplicity of potential employers, avoiding the need for special staff, facilitating productive work, among others.
- 8. <u>It would also ensure that workers have a **secure entitlement to minimum wages**, and possibly other benefits.</u>

In implementation of Decentralised Urban Employment and Training (DUET):

Many States have a <u>chronic problem of dismal maintenance of public premises</u> — <u>DUET could provide</u> a first line of defence against it.

Some projects may require a modest provision for material expenditure, but that seems doable.

To work well, DUET would have to <u>include some skilled workers</u> (masons, carpenters, electricians and such). That would widen the range of possible jobs.

It would also help to <u>impart a training component in the scheme</u> workers could learn skills "on the job", as they work alongside skilled workers.

Roping in skilled workers, however, will take some effort: they tend to get a fair amount of work in urban areas, and to earn relatively good wages.

Aside from prompting a lot of useful and mostly enthusiastic feedback when it was placed in the public domain, the DUET proposal was the subject of a recent symposium by '<u>Ideas for India'</u>, where many eminent economists **shared valuable thoughts and doubts**.

Of course, many practical issues are likely to arise in the design of the scheme. But the idea seems worth pursuing at least.

Merits: Women first

- 1. To facilitate women's involvement, most of the work could be organised on a part-time basis, say four hours a day.
- 2. A part-time employment option would be attractive for many poor women in urban areas.
- 3. Full-time employment tends to be very difficult for them, especially if they have young children.
- 4. Wage employment for a few hours a day would be **much easier to manage**. It would give them **some economic independence** and **bargaining power** within the family, and help them to **acquire new skills.**
- 5. Remember, the economic dependence of women on men is one of the prime roots of gender inequality and female oppression in India.
- 6. Giving priority to women would have two further merits. First, **it would reinforce** the **self-targeting feature** of DUET, because women in relatively well-off households are unlikely to go (or be allowed to go) for casual labour at the minimum wage.
- 7. Second, it would <u>promote women's general participation in the labour force</u>. India has one of the lowest rates of female workforce participation in the world.
- 8. According to **National Sample Survey data for 2019**, only 20% of urban women in the age group of 15-59 years spend time in "employment and related activities" on an average day.
- **9.** This is a loss not only for women, who live at the mercy of men, but also for society as a whole, insofar as it stifles the **productive and creative potential of almost half of the adult population.**
- 10. If wages are paid directly to the workers' accounts, siphoning DUET funds off would require collusion with workers, real or dummy.

Conclusion:

The conditions of urban poor women are deplorable than rural poor women. The need of the hour is to provide them with opportunities for health, education, work through initiatives like SHGs, NGO programs and Government initiatives like DAY-NULM, PM Awas Yojana, ICDS etc.

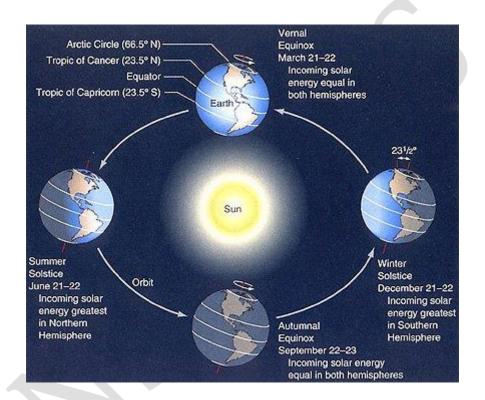
It is, thus, not easy to guess how intensively job stamps will be used.

There is nothing to lose: if DUET does not work, we shall learn from it at least.

The best way to find out is to give the scheme a chance. As it happens, that can easily be done, by way of a pilot scheme in select districts or even municipalities.

This would help us in achieving the SDG-5 which empowers all women & achieve gender equality.

5. What is Winter Solstice, which made December 21 the shortest day of the year



Context:

December 21, is **Winter Solstice**, the **shortest day of the year** in the **Northern Hemisphere**. In Delhi, making the day 10 hours, 19 minutes, and 3 seconds long.

December 22, will be one second longer, at 10:19:04, in Delhi.

In the **Southern Hemisphere**, conversely, **December 21** is **Summer Solstice** in places like Australia, New Zealand and South Africa, therefore, December 21 is the year's longest day. So, in Melbourne, marking a day that is 14:47:19 long.

This situation will be **reversed six months from now** — on **June 21, 2021**, the Northern Hemisphere will see the Summer Solstice when the day will be the year's longest. And the Southern Hemisphere will see the year's shortest day — or longest night.

What does 'solstice' mean?

The term 'solstice' derives from the Latin word 'solstitium', meaning 'Sun standing still'.

On this day the Sun seems to stand still at the Tropic of Capricorn and then reverses its direction as it reaches its southernmost position as seen from the Earth. Some prefer the more teutonic term 'sunturn' to describe the event.

The winter solstice happens **every year** when the Sun reaches its most southerly declination of **-23.5 degrees**. In other words, it is when the North Pole is tilted farthest away from the Sun, delivering the fewest hours of sunlight of the year.

The <u>Sun is directly overhead of the Tropic of Capricorn</u> in the Southern Hemisphere during the December solstice and is closer to the horizon than at any other time in the year.

The day after the winter solstice marks the beginning of lengthening days, leading up to the summer solstice in June.

Why are the hours of daylight not the same every day?

- 1. The explanation <u>lies in Earth's tilt</u>. And it's not just the Earth <u>every planet in the Solar System</u> is tilted relative to their orbits, all at **different angles**.
- 2. The **Earth's axis of rotation** is tilted at an **angle of 23.5° to its orbital plane**. This tilt **combined** with factors such as Earth's spin and orbit leads to variations in the duration of sunlight that any location on the planet receives on different days of the year.
- 3. The Northern Hemisphere spends half the year tilted in the direction of the Sun, getting direct sunlight during long summer days.
- 4. During the other half of the year, it tilts away from the Sun, and the days are shorter. Winter Solstice, December 21, is the day when the North Pole is most tilted away from the Sun.
- 5. The tilt is also responsible for the different seasons that we see on Earth. The side facing the Sun experiences day, which changes to night as Earth continues to spin on its axis.
- 6. On the Equator, day and night are equal. The closer one moves towards the poles, the more extreme the variation.
- 7. During summer in either hemisphere, that pole is tilted towards the Sun and the polar region receives 24 hours of daylight for months. Likewise, during winter, the region is in total darkness for months.

- 8. The Earth's tilt helps define some familiar imaginary lines, which are also key to determining when a Solstice occurs. These are latitudes, which are a measure of a location's distance from the Equator.
- 9. At latitudes of 23.5° (matching the tilt) are the Tropics of Cancer and Capricorn, north and south of the Equator. At 66.5° (or 90° minus 23.5°) are the Arctic and Antarctic Circles, to the north and south.
- 10. It is at latitudes higher than 66.5° (in either direction) that days of constant darkness or light occur.

The Phenomenon of Seasons:

The phenomenon or change of seasons is <u>caused chiefly by the revolution of the earth round the sun</u> and the <u>inclination of the earth's axis at an angle of 66 1/2° to the plane of its orbit</u> which constantly points to the same direction.

It can be understood from the diagram on the article which shows four positions of the earth during its revolution round the sun.

Celebrations associated with the Winter Solstice:

For centuries, this day has had a **special place in several communities** due to its **astronomical significance**, and is celebrated in many ways across the world.

- 1. Jewish people call the Winter Solstice 'Tekufat Tevet', which marks the start of winter.
- 2. Ancient Egyptians celebrated the birth of Horus, the son of Isis (divine mother goddess) for 12 days during mid-winter. In China, the day is celebrated by families coming together for a special meal.
- 3. In Iran and neighbouring Afghanistan, Uzbekistan, Tajikistan, Turkmenistan, Azerbaijan, and Armenia, the Winter Solstice is celebrated as **Yalda or Shab-e-Yalda**.
- 4. The festival marks the last day of the Persian month of Azar, and is seen as the victory of light over darkness. It is also the birthday of the sun god Mithra, a pre-Islamic deity.
- 5. Families celebrate Yalda late into the night with special foods such as ajeel nuts, pomegranates and watermelon, and recite works of the 14th century Sufi poet Hafiz Shirazi.
- 6. In the Southern Hemisphere, where the Winter Solstice in June, Peru celebrates the day with a festival called **Inti Raymi**, meaning "sun festival" in the Quechua language.
- 7. Before Peru's colonisation by <u>Spain</u>, the Inca civilisation honoured the sun god Inti by fasting for three days, and celebrated on the fourth day with feasts and sacrifices. The festival was banned

- under Spanish rule, but was later revived in the 20th century and continues today, with mock sacrifices.
- 8. In pre-Christian Europe, <u>solstice was celebrated as the start of winter</u>. People slaughtered their farm animals so they would not have to feed them. Wine created during the summer months was also ready for consumption.
- 9. Hence, the **solstice turned into an occasion for a feast**, often a community one, before snow covered most of the land and people were forced to spend their time indoors.
- 10. In **Vedic tradition**, the northern movement of the Earth on the celestial sphere is implicitly acknowledged in the **Surya Siddhanta**, which outlines the **Uttarayana** (the period between Makar Sankranti and Karka Sankranti). Hence, <u>Winter Solstice is the first day of Uttarayana</u>.
- 11. The **Yule festival**, which used to be celebrated in pre-Christian Scandinavian lands for 12 days, later became associated with Christmas as Yule-tide.
- 12. The **Winter Solstice** also **influenced culture to the extent** that ancient people built **several architectural structures** aligned to the phenomenon.
- 13. Some of these structures include the <u>Stonehenge and Glastonbury (England)</u>, <u>Chichen Itza (Mexico)</u>, <u>Goseck Circle (Germany)</u>, and <u>Temple of Karnak (Egypt)</u>.

Conclusion:

For many cultures around the world, the winter solstice (which falls on Dec. 21 this year) marks an important milestone.

It's the shortest day of the year and the longest night of the year, and signals a **powerful transition point** between seasons that is impossible to ignore.

Because of this, it has been celebrated and revered in ancient civilizations, indigenous cultures, and various religions, all of which have their own rituals for taking advantage of the unique energy.

Earth's axial tilt plays a much bigger role than its near-circular orbit in governing annual seasons.

Earth makes its closest annual approach of the sun about two weeks after the December solstice, during the Northern Hemisphere's winter.

Earth is farthest from the sun about two weeks after the June solstice, during the Northern Hemisphere's summer.

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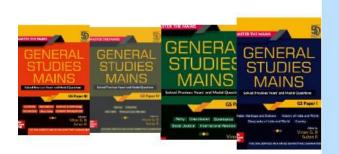
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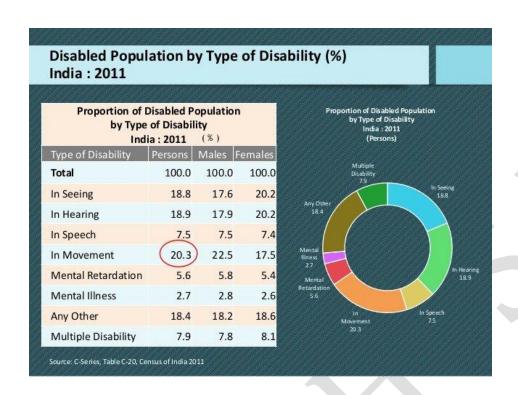
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GENERAL STUDIES II

1.A Failure to Enable



Context:

December 3, is the <u>annual International Day of Persons with Disabilities</u>, established by the United Nations in 1992 to "promote the <u>rights and well-being of persons with disabilities in all spheres of society and development</u>, and to increase awareness of the situation of persons with disabilities <u>in every aspect of political, social, economic and cultural life".</u>

It is also a stark reminder of how far we in India need to go in meeting the needs of the disabled.

Differently-abled persons rights passed by United Nations:

About a <u>billion people internationally live with a disability</u>, with 80 per cent of these being residents of the developing world.

In 2007, the <u>UN passed the **Convention on the Rights of Persons with Disabilities**</u>. This was a landmark step toward treating disabled persons as full members of society, rather than objects of pity or charity or, as was shamefully the norm for much of our past, fear and ridicule.

The population with disabilities constitutes the world's largest 'unrecognised minority' group.

In India, according to the 2011 population census, the population with disabilities is around 26.8 million, constituting **2.21% of India's total population**.

<u>India is a state party to the convention</u>, and the World Bank estimates that there may be well <u>over 40</u> <u>million Indians living with disabilities</u>.

Constitutional framework for disabled population:

<u>Article 15(1):</u> It enjoins on the Government not to discriminate against any citizen of India (Including disabled) on the ground of religion, race, caste, sex or place of birth.

<u>Article 17:</u> No person including the disabled irrespective of his belonging can be treated as an untouchable. It would be an offence punishable in accordance with law.

Article 21: Every person including the disabled has his life and liberty guaranteed.

<u>Article 23:</u> There can be no traffic in human beings (including the disabled), and beggar and other forms of forced labor is prohibited and the same is made punishable in accordance with law.

<u>Article 29(2):</u> The right to education is available to all citizens including the disabled. No citizen shall be denied admission into any educational institution maintained by the State or receiving aid out of State funds.

<u>Article 32:</u> Every disabled person can move the Supreme Court of India to enforce his fundamental rights and the rights to move the Supreme Court.

Real problem lies in implementation of letter and spirit:

- 1. Most Indians regard them with disdain or at best indifference to their plight.
- 2. A significant proportion of people see a person with disabilities as an object of 'sympathy' and 'pity' thereby leading to their 'othering' and their treatment as a third-class citizen in the country.
- 3. There is a <u>lack of awareness</u>, <u>lack of care</u>, <u>and lack of good and accessible medical facilities</u>.

 Further, there is a lack of accessibility, availability, and utilization of rehabilitation services.
- 4. These factors affect the preventive and curative framework for PwDs.
- 5. Provisions exist in law, but getting the authorities anywhere in India to implement them is another story altogether.
- 6. The Rights of Persons with Disabilities Act was passed in 2016 but our country is still largely devoid of ramps on its footpaths or government buildings.
- 7. The best that can be said is that the passage of the law may have helped shift the treatment of disabled persons in society towards rights-focused thinking. But acting is a different matter.

Representation of differently abled people in various spheres of society:

- 1. Indians with disabilities are far more likely to <u>suffer from poor social and economic</u> development.
- Shockingly, <u>45 per cent of this population is illiterate</u>, making it difficult for them to build better, more fulfilled lives.
- 3. This is compounded by the <u>community's lack of political representation</u>: Despite the vast population of people with disabilities in India, in our seven decades of independence we have had just <u>four parliamentarians and six state assembly members who suffer from visible</u> disabilities.
- 4. This is hardly a surprise when considering that, unfortunately, several political leaders have even used discriminatory language and derogatory comments to talk about people with disabilities.
- 5. This **lack of representation**, and these general attitudes, translate directly into policy that **undermines the well-being of people with disabilities.**
- 6. Last year, for example, the government inexplicably decided to depart from convention and render people suffering from cerebral palsy ineligible for the Indian Foreign Service.
- 7. Suggesting that persons with disabilities are unable to serve their country with loyalty, devotion, and strength is an insult to them, and to any Indian who wishes to see their fellow citizens treated equally, regardless of physical condition.
- 8. But it's not only about ramps for wheelchairs, text-to-speech facilities for the visually challenged or sign language explanations for the deaf.
- 9. Some of the most debilitating disabilities are those that are not apparent to the naked eye.

Way Forward:

<u>Preventive health programs</u> need to be strengthened and all children need to be screened at a young age.

Kerala has already started an early prevention programme. **Comprehensive Newborn Screening (CNS) programme** seeks early identification of deficits in infants and reduce the state's burden of disability.

People with disabilities need to be better integrated into society by overcoming stigma.

There should be awareness campaigns to educate and aware people about different kinds of disability.

Success stories of people with disabilities can be showcased to <u>inculcate positive attitude among</u> <u>people.</u>

Conclusion:

Building on the extraordinary work of civil society activists, India has made some progress in the right direction.

The government has had some admirable initiatives to improve the lot of Indians with disabilities, such as the **ADIP scheme for improving access to disability aids**.

<u>The Sugamya Bharat Abhiyan, or Accessible India Campaign</u>, has aimed to make public transport, buildings and websites more accessible.

But as is too often the case with this government, between rhetoric and reality there falls the long shadow of poor implementation. Unfortunately, the **Accessible India Campaign** has largely remained half-done since the scheme's inception in 2015.

It is critical that the government work with civil society and individuals with disabilities to craft an India where everyone feels welcome and treated with respect, regardless of their disabilities.

Only then can we welcome the next International Day of Persons with Disabilities without a sense of shame.

2.Grain and chaff: On farmer protests



Source: DGCIS, APEDA

al agri exports from India to US -- the largest importer

Context:

With the farmers' organisations calling for a **blockade of Delhi's highways** to Jaipur and Agra by December 12, tensions may escalate further.

Both sides unrelenting in their contradictory positions, an agreement between the Narendra Modi government and the agitating farmers on the question of three controversial Farm Bills appears elusive.

A large number of these farmers from the neighbouring States of the national capital are camping at locations around it for two weeks now.

After several rounds of talks, the Centre has now offered a **written assurance** that government **procurement at minimum support price** would remain, along with proposals **to amend the laws** to deal with farmers' concerns <u>regarding parity between State-run and private mandis, registration of traders, and dispute resolution mechanisms</u>.

These assurances are in response to the concerns being raised by the farmers, but they find them inadequate and half-hearted.

They have decided to **intensify the strike**, demanding <u>complete repeal of the controversial laws</u>. The government has ruled out their repeal, setting the stage for a showdown.

Complete market forces exists in no country till now:

- 1. Farmers, howsoever politically empowered they might be in some parts of the country, are at the mercy of market forces and government policy all the time.
- 2. The Centre appears willing to brazen it out in the face of stiff opposition from the people most affected by the laws.
- 3. In this battle of unequal's, the government should look at a just settlement, not a political compromise.
- 4. The underlying premise of the Centre that farmers will be better off in an <u>open market needs to</u> be qualified.
- 5. No country serious about food security can <u>leave farming and marketing of produce entirely to market forces.</u>

Even the most free market countries and the WTO acknowledge this.

What are the farmers' concerns?

Farmers are apprehensive about **getting Minimum Support Price** for their produce.

Other concerns include the upper hand of agri-businesses and big retailers in negotiations, thus putting farmers at a disadvantage.

The benefits for small farmers from companies are likely to reduce the engagement of sponsors with them. The farmers also fear that the companies may dictate prices of the commodities.

What farmers need and are asking for is <u>legally guaranteed remunerative prices</u>, that the government should commit within the same legislation to maximum procurement of various commodities tied with local food schemes, market intervention from the state, agri-credit reforms to benefit small and

marginal holders and particular neglected regions, as well as reforms in crop insurance and disaster compensation.

It is also <u>important to empower FPOs</u> as enabled players in the market and keep them out of the purview of overzealous regulation.

Export promotion would help strengthen agricultural economy:

- 1. The Rajasthan government is examining the <u>scope for increasing the export of agricultural</u> <u>commodities</u> after strengthening agro-processing units amid the limited opportunities available during the COVID-19 pandemic.
- 2. The State agro-processing, agri-business and agri-export promotion policy, released 2019, encourages agricultural exports and seeks to increase farmers' incomes.
- 3. The policy also seeks to promote the <u>capacity of agro-processing sector</u> to upscale the operations through capital infusion, technology transfer and hand holding support.
- 4. The State government has tried to <u>accelerate capital investments</u> in value and supply chain of agriculture and allied sectors while implementing the policy.
- 5. The policy has made a provision for a ₹500-crore fund in the Rajasthan State Cooperative Bank to disburse loans to farmers and allocated a grant of up to ₹20 lakh every year on the export of organic farm produces.
- 6. The State Agricultural Marketing Board will help the farmers in the **export of cumin, oilseeds** and isabgol.
- 7. <u>Export promotion</u> would help strengthen agricultural economy, which in turn would <u>enhance</u> <u>productivity and employment</u>.
- 8. Attempts would be made to promote the <u>outreach of ethnic food items, organic produce and value-added farm products</u> in the international market.

Need of reform in Agricultural Marketing:

- 1. India's agriculture marketing and its crop pattern both undoubtedly require reforms. And reforms do trigger resistance.
- 2. The way forward is not by questioning democracy itself but the Centre must be more cognisant of the fact that the farmers and the farm sector are **both under its protection**, and **they cannot be free market actors**.
- 3. They do not have enough leverage to protect their own interest in negotiations with big corporations.

- 4. There is no point in replacing existing distortions in the agriculture sector with reforms that do not inspire confidence among the farmers.
- 5. As a start, the Centre must go ahead and fulfil all the promises it made to the agitating farmers, rather than use those as a negotiating position.
- 6. It must legislate the guarantee of MSP and reassure farmers on procurement and subsidies.

About one third of the increase in farmers' income is easily attainable through <u>better price realization</u>, <u>efficient post-harvest management</u>, <u>competitive value chains and adoption of allied activities</u>.

This requires comprehensive reforms in market, land lease and raising of trees on private land.

Most of the development initiatives and policies for agriculture are implemented by the States. Therefore, it is essential to mobilise States and UTs to own and achieve the goal of doubling farmers' income.

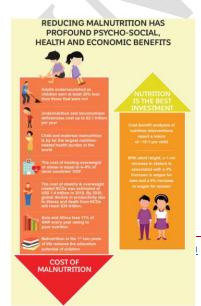
Conclusion:

To secure future of agriculture and to improve livelihood of half of India's population, adequate attention needs to be given to improve the welfare of farmers and raise agricultural income.

It is essential to mobilize States and UTs to own and <u>achieve the goal of doubling farmers' income with</u> <u>active focus on capacity building</u> (technology adoption and awareness) of farmers that will be the <u>catalyst to boost farmers income</u>.

Since India is a diverse country where majority of agriculture is monsoon dependent therefore interventions are needed which includes research, technology promotion, extension, post harvest management, processing and marketing, in consonance with comparative advantage of each State/region and its diverse agro-climatic features; and then the Country can indeed achieve the goal of doubling farmers' income by the year 2022.

3. Thousand days of nutrition, and a billion dreams



28 INSIGHTS IAS

Context:

How far India goes in <u>realising its billion plus dreams</u> over the next decade or two will be determined by <u>how well it nourishes the **physical well-being and mental potential** of its people, particularly its children.</u>

If one has to pick the single gravest threat that blocks the promise of this young nation at the foundational level, it has to be **arguably malnutrition**.

Malnourished children tend to fall short of their real potential physically as well as mentally.

That is because malnutrition leaves their bodies weaker and more susceptible to illnesses.

<u>In 2017, a staggering 68% of 1.04 million deaths of children under five years in India was attributable to malnutrition, reckoned a **Lancet study in 2019**.</u>

Recent Findings:

- 1. Malnutrition was the predominant risk factor for death in children younger than 5 years of age in every state of India in 2017, accounting for 68·2% of the total under-5 deaths, and the leading risk factor for health loss for all ages, responsible for 17·3% (16·3–18·2) of the total disability-adjusted life years (DALYs).
- 2. The <u>malnutrition DALY rate</u> was much higher in the low SDI than in the middle SDI and high SDI state groups.
- 3. This rate varied 6⋅8 times between the states in 2017, and was highest in the states of Uttar Pradesh, Bihar, Assam, and Rajasthan.
- 4. The prevalence of low birthweight in India in 2017 was $21\cdot4\%$ ($20\cdot8-21\cdot9$), child stunting $39\cdot3\%$, child wasting $15\cdot7\%$, child underweight $32\cdot7\%$, anaemia in children $59\cdot7\%$, anaemia in women 15-49 years of age $54\cdot4\%$, exclusive breastfeeding $53\cdot3\%$, and child overweight $11\cdot5\%$.
- 5. If the trends estimated up to 2017 for the indicators in the NNM 2022 continue in India, there would be 8.9% excess prevalence for low birthweight, 9.6% for stunting, 4.8% for underweight, 11.7% for anaemia in children, and 13.8% for anaemia in women relative to the 2022 targets.
- 6. For the additional indicators in the <u>WHO and UNICEF 2030 targets</u>, the trends up to 2017 would lead to 10·4% excess prevalence for wasting, 14·5% excess prevalence for overweight, and 10·7% less exclusive breastfeeding in 2030.
- 7. <u>The prevalence of malnutrition indicators, their rates of improvement, and the gaps between projected prevalence and targets vary substantially between the states.</u>

Post-COVID challenges in proving Nutrition:

As the flagship programme (<u>POSHAN Abhiyaan</u>) completes <u>1,000 days this week</u>, <u>it is time to renew</u> our commitment to nutrition for **two reasons**.

First, because it <u>conveys the deeply symbolic value of the first 1,000 days from conception of a child</u> <u>till the child turns two years old, marking the most crucial period for nutrition interventions in a lifecycle, which once missed could result in irreversible damage to the child's physical and mental wellbeing.</u>

Second, <u>focus on nutrition is critical</u> as COVID-19 threatens to derail the gains India has made in nutrition in more than one way.

For one, COVID-19 is pushing millions into poverty, reducing incomes of many more and disproportionately affecting the economically disadvantaged, who are also most vulnerable to malnutrition and food insecurities.

Second, <u>pandemic-prompted lockdowns disrupted essential services</u> — such as supplementary feeding under anganwadi centres, mid-day meals, immunisation, and micro-nutrient supplementation which can exacerbate malnutrition.

Heavy burden will face in the long-run:

- 1. Children who survive malnutrition do not do as well as they could. Without necessary nutrients, their brains do not develop to the fullest.
- 2. No wonder then, they end up performing poorly at school than they otherwise would.
- 3. Malnutrition places a burden heavy enough for India, to make it a top national priority.
- 4. About half of all children under five years in the country were found to be stunted (too short) or wasted (too thin) for their height, estimated the **Comprehensive National Nutrition Survey**, carried out by the Ministry of Health and Family Welfare with support of UNICEF three years ago.
- 5. The country has been **making progress on nutrition** for the last two decades, but it was after the Prime Minister launched the Prime Minister's Overarching Scheme for Holistic Nutrition (POSHAN) Abhiyaan in 2018, that a holistic approach to tackle malnutrition started gathering momentum.
- 6. Under it, the government <u>strengthened the delivery of essential nutrition interventions</u> so that more children have the <u>right start in life for optimum growth, health, development and a prosperous future.</u>

Financial commitments:

To ensure this, the country needs to retain its financial commitments for the nutrition schemes it already runs and earmark additional funds to preserve nutritional security in vulnerable communities, particularly women and children in slum areas, migrants, the population in tribal areas and districts with malnutrition rates.

<u>Pandemic spurred challenges</u> have also negatively hit other proven underlying drivers of malnutrition.

For instance, <u>economic insecurities</u> often force girls into early marriage, early motherhood, discontinue their schooling, and reduce institutional deliveries, cut access to micronutrient supplements, and nutritious food which largely tend to be perishable, all of which may worsen malnutrition.

Accelerating efforts to address these will be needed to stop the regression into the deeper recesses of malnutrition.

Way Ahead to solve the problem of Nutrition:

- 1. It is in this challenging backdrop, leaders from academia, civil society, development partners, community advocates and the private sector have come together as part of 'commitment to action' to seek and support the government in a six-pronged action that can save and build on the advances India has made in nutrition.
- 2. These clear action points include <u>commitments around sustained leadership</u>, <u>dedicated finances</u>, <u>multi-sectoral approach and increased uninterrupted coverage of a vulnerable population under programmes enhancing nutrition</u>.
- 3. One reason **POSHAN Abhiyaan** succeeded in galvanising action so fast was because it was led by the Prime Minister himself.
- 4. That example must be sustained so that leadership of food and nutrition security rests with the Prime Minister at the national level, a Chief Minister at the State level, a district magistrate at the district and panchayat at the village level.
- 5. This was already imperative for POSHAN Abhiyaan to succeed, but it has now become critical as COVID-19 compounds an already complex challenge.
- 6. In terms of policies, vision, strategies, India already has some of the <u>world's biggest early</u> <u>childhood public intervention schemes</u> such as the Integrated Child Development Scheme, the mid-day meal programme, and Public Distribution System.
- 7. <u>India needs to ensure coverage of every single child and mother, along with 12 months of</u>

 <u>Poshan Maah (Nutrition Month)</u>, 52 weeks of breastfeeding weeks and 365 days of take-home ration.

Conclusion:

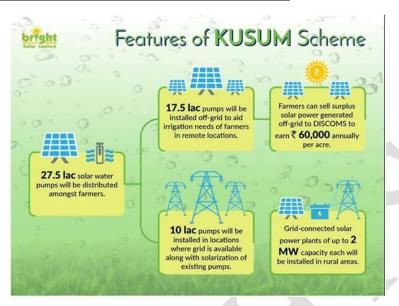
To truly grasp the depth and breadth of the COVID-19-caused nutrition crisis, the country <u>must track</u> <u>nutrition indices through data</u> systems.

Evidence generated through data will also serve well to track the positive impact of POSHAN Abhiyaan, and course correct on the long journey to a well-nourished India.

It takes time for nutrition interventions **to yield dividends**, but once those accrue, they can **bring transformative generational shifts**.

<u>Filling in the nutrition gaps</u> will guarantee a level-playing field for all children and strengthen the foundations for the making of a future super-power.

4.PM-KUSUM will shine when implemented fully



Context:

Recently, central government came out with guidelines for implementation of feeder-level solarisation.

The <u>eligibility for participation in the centralised tender</u> has also been amended to allow a joint venture of manufacturer of solar pump, panel, and solar pump controller with integrators to bid.

But the fact is that <u>manufacturers lack workforce in the field</u> and are <u>dependent on local integrators for</u> this purpose, which has caused delay in installation of solar pumps.

Kisan Urja Suraksha evam Utthaan Mahabhiyan:

- "The farmer focus of <u>PM-KUSUM</u> has given a fillip to the <u>farmer-oriented scheme</u> involving <u>decentralised solar power production</u> up to <u>28,250 MW</u> over a <u>period of five years</u>, known as KUSUM Scheme.
- 2. <u>The Kisan Urja Suraksha evam Utthaan Mahabhiyan (KUSUM) scheme</u> would provide <u>additional income to farmers</u>, by giving them the option to sell additional power to the grid, through solar power projects set up on their barren lands.

- 3. Government's Budget for 2020-21 expanded the scope for the scheme with 20 lakh farmers to be provided assistance to install standalone solar pumps; another 15 lakh farmers to be given help to solarise their grid-connected pumpsets; and
- 4. Enabling farmers to set up <u>solar power generation capacity on their fallow/barren lands and to sell it to the grid.</u>
- 5. While all this was happening, it also generated a <u>serious debate on **depleting water tables**</u>. As an environmentalist said, anything that is available free of cost, has its disadvantages.

What are the objectives of KUSUM? And what happens when there are similar schemes already existing in States?

PM-KISAN consists of three components and aims to add a solar capacity of 30.8 GW by 2022:

- 1. <u>Component-A:</u> 10,000 MW of decentralised ground mounted grid connected renewable power plants.
- 2. Component-B: Installation of two million standalone solar powered agriculture pumps.
- 3. Component-C: Solarisation of 1.5 million grid-connected solar powered agriculture pumps.

The total central financial support provided under the scheme would be ₹34,000 crore.

The objectives are:

- 1. Promote decentralised solar power production;
- 2. Reduce transmission losses;
- 3. <u>Support the **financial health of DISCOMS** by reducing the burden of subsidy to the agriculture sector;</u>
- 4. Help States meet the RPOs (renewable purchase obligation) targets;
- 5. **Promote energy efficiency** and water conservation;
- 6. <u>Provide water security to farmers</u> through provision of assured water sources through solar water pumps both off-grid and grid connected;
- 7. Provide reliable power to utilise the irrigation potential created by State irrigation departments; and
- 8. <u>Fill the void in solar power production in the **intermediate range** between rooftops and large parks.</u>

PM-KUSUM scheme benefits:

1. The scheme will **open a stable and continuous source of income** to the rural land owners for a period of 25 years by utilisation of their dry/uncultivable land.

- 2. Cultivated fields are chosen for setting up solar power project, the farmers could continue to grow crops as the solar panels are to be set up above a minimum height.
- 3. Scheme would ensure that sufficient local solar/ other renewable energy-based power is available for feeding rural load centres and agriculture pump-set loads, which require power mostly during the day time.
- 4. As these power plants will be located closer to the agriculture loads or to electrical substations in a decentralized manner, it will result in **reduced Transmission losses for STUs and DISCOMS**.
- 5. The solar pumps will <u>save the expenditure incurred on diesel for running diesel pump</u> and provide the <u>farmers a reliable source of irrigation through solar pump</u> apart from preventing harmful pollution from running diesel pump.

Sounds brilliant, but success lies in implementation:

- 1. Consensus between the Centre and States is the key to the success of this <u>decentralised solar</u> power scheme.
- 2. Any reform in India's power space cannot take place unless there is consensus between the Centre, States and stakeholders. Till then, it will be like a half-baked cake.
- 3. According to the Ministry, India has <u>30 million agriculture pumps</u>, of which, 22 million are electric and eight million are diesel operated.
- 4. <u>Electricity for agriculture is highly subsidised</u> and is often termed as the <u>main cause for rapid</u> <u>groundwater depletion</u> and <u>poor financial position of DISCOMs</u>.
- 5. Annual electricity consumption for agriculture is around 200 billion units, which is 18 per cent of total electricity consumption.
- 6. Covid-19 did slow the progress during first half of 2020-21, but now its on track again.
- **7.** For effective implementation and serious participation by stakeholders, the scheme should be more attractive in terms of benchmark prices in view of the challenges on account of **higher** costs of implementation and comprehensive maintenance.

Conclusion:

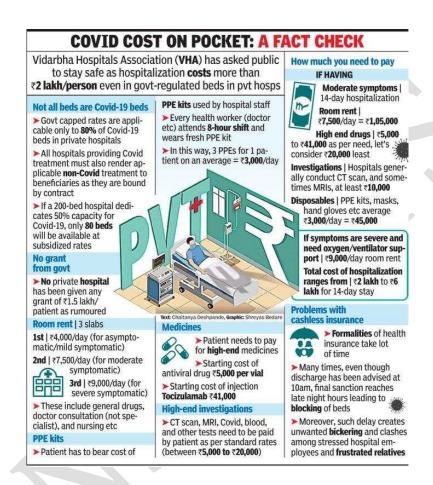
The Scheme will have substantial environmental impact in terms of savings of CO2 emissions.

All three components of the Scheme combined together are likely to result in <u>saving of about 27 million</u> tonnes of CO2 emission per annum.

Further, Component-B of the Scheme on standalone solar pumps may result in <u>saving of 1.2 billion</u> <u>litters of diesel per annum and associated savings in the foreign exchange due to reduction of import of crude oil.</u>

The scheme has <u>direct employment potential</u>. Besides increasing self-employment, the proposal is likely to <u>generate employment opportunity equivalent to 6.31 lakh job years for skilled and unskilled</u> workers.

5. Public Health Act Needed to Keep Private Hospitals in Check: Parliamentary Panel



Context:

Any vaccine against COVID-19 should be granted emergency use authorisation only after proper consideration and conducting its trials on a sufficient sample size, a parliamentary panel has recommended to the government.

In a report submitted to Rajya Sabha chairman and vice-president, the <u>Parliamentary Standing</u>

<u>Committee on Home Affairs</u> also said there was a need for a <u>comprehensive public health law</u> to keep a <u>tab on private hospitals and check black-marketing of medicines.</u>

The report comes even as the government considers applications of at least three firms seeking emergency approval to roll out their vaccines against the coronavirus in India.

Need of the hour: Comprehensive public health law:

There should be a <u>comprehensive public health Act</u> with suitable legal provisions to **keep checks and controls over private hospitals** in times of a pandemic and to <u>curb black marketing</u> of medicines, the standing committee on Home Affairs, has said in a report that was <u>submitted to Rajya Sabha Chairman</u>.

There had been several reported instances of beds reserved for COVID-19 patients in private hospitals being **sold at exorbitant rates**, the report noted.

The committee strongly recommends a comprehensive public health Act, preferably at the national level with suitable legal provisions to support the government in keeping checks and controls over private hospitals as there have been reports about the selling of hospital beds by them.

Government should be proactive in Health care Expenditure:

- 1. It is also necessary to make people aware through campaigns on cheaper and effective repurposed medicines to prevent them from panicking and spending a huge amount of money on expensive drugs.
- 2. The committee recommends that good quality and affordable medicines be provided to everyone, especially at a cheaper or subsidised rate to the marginalised sections of the society especially at the time of Pandemic like COVID-19.
- 3. The parliamentary committee report noted that the committee of Central Drugs Standard Control Organisation (CDSCO) has given **no emergency use authorisation in the past**, and suggested that all necessary and mandatory requirements must be duly fulfilled and all trial phases completed.
- 4. The Act, it stated, should keep a check on black marketing of medicines and product standardisation.
- 5. It flagged the initial confusion over medicines that 'helped' in containing the COVID-19 infection and how they were sold at higher rates.
- It suggested that the government should be proactive by holding awareness campaigns on cheaper and effective repurposed medicines to prevent people from panicking and spending a huge amount of money on expensive drugs.

COVID-19 insurance:

- 1. The committee observed that in the initial phase of the pandemic, <u>medical insurance</u> was not <u>extended to patients with COVID-19 infection</u>. With exorbitant charges levelled by private hospitals, many had to suffer.
- 2. There is **need to have regulatory oversight on all hospitals** working in the country to prevent refusal to accept insurance claims.
- 3. The committee strongly recommends that the target should be to make COVID-19 treatment cashless for all people that are having insurance coverage.
- 4. While appreciating the work done by the <u>National Disaster Management Authority (NDMA)</u> by coming out with standard operating procedures (SOPs), guidelines and awareness generation, and most importantly, acting as a nodal centre for **funding manpower deployment** to meet exigencies, the committee said the ongoing pandemic was unlike any natural disaster that the NDMA had handled.
- 5. The committee recommends that a **separate wing** may be formed in the NDMA that will specialise in handling /managing pandemics like COVID-19 in future.
- 6. This wing may take a leading role in building a partnership of government with the public sector, corporates, NGOs and other stakeholders.
- 7. At the time of a pandemic, <u>measures should be taken to avoid social stigma and fear of isolation</u> <u>and quarantine</u>, by making people aware and treating them with respect and empathy.

Schemes implementation:

- 1. On the economic front, the committee said that while the government had taken a **host of measures** to ameliorate the **impact of the pandemic on the economy,** many schemes have not been implemented properly.
- 2. The committee observes that few of these schemes need effective implementation at the ground level. The problems being faced by farmers, non-corporate and non-farm small/micro enterprises in getting loans need to be addressed.
- 3. **Consumption had been severely curtailed** due to huge job loss and fall in income due to the lockdown.
- 4. It would take some time to mend, especially after the GDP having a contraction of 23.9% in the first quarter of 2020-21.
- 5. The report said that more interventions and schemes were required to support the recovery and to sustain this economic revival especially for the MSME (Micro, Small and Medium Enterprises) sector.

On Mid-day meal:

The committee expressed concern that with **schools shut down** now for more than nine months, **many children** were **deprived of mid-day meal**. Many States continued the scheme by delivering dry ration to students at their homes or giving them allowances. But this was not uniform.

"The committee, therefore, strongly recommends that the Ministry of Home Affairs, along with the Department of Food and Public Distribution, take up the matter with the State governments **to ensure that the local administrations** are **delivering the rations/ allowances in time** and this should be continued until the schools reopen.

Learnings from Cuba's Healthcare system:

- 1. The Cuban health system is recognized worldwide for its excellence and its efficiency.
- 2. Cuba's health care system is **based on preventive medicine** and the results achieved are outstanding. Despite extremely limited resources and the dramatic impact caused by the economic sanctions imposed by the United States for more than half a century, Cuba has managed to guarantee access to care for all segments of the population and obtain results similar to those of the most developed nations.
- 3. The Cuban healthcare system, borne out of its revolutionary socialist ideology, regards accessibility to healthcare as a fundamental right of its citizens. It focuses heavily on a preventative approach to medicine and offering the simplest check-up to the most complex surgery, free of charge. Dental care, medicines and even home visits from doctors are all covered by the system.
- 4. The centrepiece of this system is the **community-based polyclinic**, each of the 498 nationwide serving a catchment area of between 30 000 and 60 000 people.
- 5. The polyclinics act also as the **organizational hub** for 20 to 40 neighbourhood-based family doctor-and-nurse offices, and as <u>accredited research and teaching centres</u> for medical, nursing and allied health sciences students. These are the backbone of Cuba's health system.

Conclusion:

Therefore, <u>more fund should be allocated to public hospitals</u> to strengthen the <u>public health</u> <u>infrastructure</u>, so that they can equip themselves appropriately to handle such pandemics in the future, the committee suggested in the report.

It also recommended that **learning from the experience of the pandemic**, there is a **need for a comprehensive public health act** preferably at the national level with suitable legal provisions to

support the government in keeping checks and controls over the private hospitals "as there have been reports about the selling of hospital beds by them".

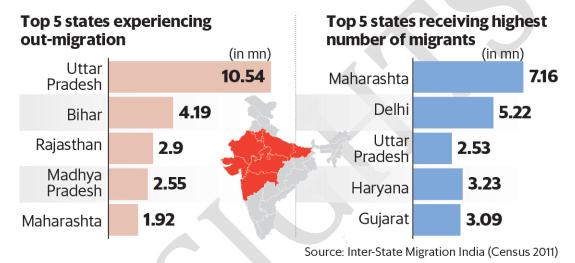
This is the right time for the legislative body of India to introduce Public Health Bill-2020 to empower the governments to handle such unforeseen situations like the COVID-19 pandemic.

This Bill will dawn a new era of healthcare wherein every citizen of the country would be able to <u>avail</u> the basic healthcare facilities with due deliberation.

6.Skills quotient: The key to accelerate skill development

Back to base

States that see high rates of out-migration to urban areas are also the ones that have high unemployment rates. It may be difficult for states with high rural poverty rates like Uttar Pradesh and Bihar to absorb the returning migrants.



Context:

The <u>humungous reverse migration of workers</u> during the Covid-19 lockdown has presented an **unprecedented challenge** for states, demographic dividend notwithstanding.

With Uttar Pradesh, Bihar, Odisha, Madhya Pradesh, West Bengal and Jharkhand expecting the <u>number of returnee migrant workers to run into millions</u>, the preparedness of their home states to **provide local employment** is being put to test.

India has **487 million workers**, and over a <u>million join the labour force every month</u>. However, at the same time, about two-thirds of employers in India report that they struggle to find workers with the right skills.

India ranks 78th on a list of 122 countries as per the <u>Human Capital Development report of the World</u> Economic Forum.

Statistics of migrant workers:

- 1. The <u>Economic Survey of India 2017</u> estimates that the magnitude of inter-state migration in India was close to 9 million annually between 2011 and 2016.
- 2. According to the **Census 2011** the total number of internal migrants in the country (inter- and intra-state movement) at a staggering 139 million.
- 3. **The Hindi belt** is the main source of migrants as four states, Uttar Pradesh, Bihar, Rajasthan and Madhya Pradesh accounted for 50% of India's total inter-state migrants.
- 4. Delhi and Mumbai are widely considered migrant magnets.

Lockdown Impact on economy:

- 1. As India reopens the economy post the lockdown, **labour shortage** in urban centres has implications and can **delay economic recovery**, which can **affect social stability**.
- 2. The **construction industry**, which is the nation's largest job creator, is already facing severe labour shortage.
- 3. The productivity of the workforce involved in agriculture is lower than the urban workforce.
- 4. Millions of workers going back to the rural economy could bring national productivity levels down and prolong economic recovery post covid-19.
- 5. States that experience <u>high rates of out-migration to urban areas</u> are also the ones that have high rates of unemployment.
- 6. It might be exceedingly difficult for them to absorb returning migrants.
- 7. On the other hand, the rich states of western and south India who host migrant workers are in a hurry to send them home to avoid unrest.

Solutions to reverse migration:

- 1. The answer to the question of <u>gainful local employment does not lie in market-based</u> <u>opportunities alone</u>, as there are <u>massive regional inequalities</u> where regions with <u>higher</u> population growth have the dubious distinction of being underdeveloped, too.
- 2. In the wake of this challenge, the governments of many of these states have announced elaborate arrangements.

- 3. Registering returnees and their skill levels and collating job opportunities in projects funded by the central or state governments are some of the measures announced.
- 4. Although the process is still under way, it is becoming clear that an exercise of this nature calls for <u>strong ground-level institutions with serious capacities of planning and implementation.</u>

 The situation brings back old-fashioned decentralisation, centre-stage.
- 5. It is evident that <u>building adequate capacities at the grass-roots levels</u> for identifying employment opportunities early and anticipating skill requirements at the level of districts is critical for an <u>outcome-focused skills training system</u>.

Skill Development Programmes in recent years:

- 1. Considering the <u>demographic</u>, <u>economic</u>, <u>cultural</u> and <u>resource</u> diversity of <u>our country</u>, putting such an ecosystem in place would continue to be an in-progress project for a long time.
- 2. With at least 20 government departments running skill development programmes in recent years, India should be doing better than that.
- 3. The outcome of skill development, unlike education, varies with employers and society.
- 4. Therefore, the <u>skill training ecosystem</u> must take an **integrated view** of existing and potential demand, trainees, training providers and employers.
- 5. <u>Decentralised skill programme formulation and implementation</u> would systematically capture demand, which, in turn, would result in supply rearranging itself to meet this demand.
- **6.** The organisation and management of training infrastructure, with attendant issues of labour welfare and security which, thanks to the Covid-19 crisis, figures prominently on state governments' agenda now will **ensure better alignment of demand and supply locally.**
- 7. Effective decentralisation presupposes utilising existing institutions to greater effect.

Decentralised planning in skills development:

- 1. The Ministry of Skill Development and Entrepreneurship (MSDE) is responsible for national skills training policy and management, and is aided by many institutions.
- 2. The State Skill Development Missions (SSDMs) were launched in nearly all states to manage their skill development.
- 3. Most states have also created <u>designated district committees</u> (generally called **DSCs**, but known by different appellations across states) to manage skill development.
- 4. Thus, decentralised planning in skills is a concept already implicit in the skill development ecosystem of India.

- 5. **DSCs** are composed of <u>district-level government officials of various departments</u>. Besides, a DSC can also <u>co-opt local chambers of commerce and industry, civil society organisations, etc.</u>
- 6. DSCs are expected to deliberate upon and plan for access to viable skill training and employment for district human resources <u>based on economic profile</u>, <u>market conditions and institutional infrastructure</u>.
- 7. DSCs are expected to, inter alia, <u>reduce the supply-demand mismatch</u>, facilitate inclusion for all marginalised sections of the society, manage labour migration issues, and <u>provide for robust monitoring</u>.

Where exactly do DSCs stand today and their achievement of all the above?

In many cases, DSCs have not been able to arrive at action plans to achieve their objectives. They <u>lack</u> <u>leadership as well as financial resources</u>.

Most do not have a working secretariat. Their positioning and role at the district level is yet to be clearly spelled out. Their efficacy is subject to the personal engagement of individuals.

In many cases, a district skill development plan (DSDP) has been produced by many a DSC, but their real contribution or even participation in the process has been illusory.

Should DSCs be the starting point of this decentralisation?

Yes, simply because they offer a ready-made platform from which all skill development planning and implementation could be given direction and focus.

<u>Governments need to strengthen DSCs by providing adequate financing.</u> Professionals and subjectmatter experts must be engaged for <u>economic potential mapping and aligning skills to opportunities.</u>

<u>A robust working linkage</u> is needed between state skill missions (SSDM) and DSCs, so that opportunities and capacity at the national and state levels can be factored into the DSDPs.

Conclusion:

The sudden imposition of the national lockdown has rendered workers jobless and <u>thus drying up the</u> source of remittances.

It is important for the government to engage those migrant workers in **employment generated in the local area.**

The families of migrant workers from under-developed states like Bihar, Uttar Pradesh, Jharkhand etc depend on the remittances they receive every month.

What is really the beginning, <u>decentralisation</u> has to be logically extended beyond DSCs to gram panchayats.

A robust DSC underpinned by gram panchayats, active in skill planning and implementation, would not only help handle the current challenges of rural distress and sustained livelihood, but also <u>improve</u> <u>qualitative</u> growth of the labour market.

7.Supreme Court stays Andhra HC order to study 'constitutional breakdown' in State



Context:

The Supreme Court stayed an Andhra Pradesh High Court order intending to <u>embark on a judicial</u> <u>enquiry</u> into whether there is <u>a constitutional breakdown in the State machinery</u> under the present government, requiring a declaration of President's rule.

"Has anybody seen an order like this before... As the apex court, we find this disturbing. We are staying this order... We will take up this case immediately after the vacations," Chief Justice of India (CJI), heading a three-judge Bench, observed.

Solicitor General asked why the High Court "should go into whether there is a constitutional breakdown in the State".

The government, represented by advocate, said it was not up to the High Court to enquire and recommend President's rule in a State.

Brief Background for High Court comments:

On October 1, the High Court, while hearing a <u>clutch of habeas corpus petitions</u>, said "on the next hearing date, the learned senior counsel appearing on behalf of the State may come prepared to assist the Court as to whether in the circumstances which are prevailing in the State of Andhra Pradesh, <u>the</u> Court can record a finding that there is a Constitutional breakdown in the State or not".

The state government, in its appeal, said the High Court "in an unprecedented manner and without any basis or pleadings by any of the parties to that effect, has framed the... question".

The state government has been on a collision course with the High Court and Chief Minister sent a letter to the CJI on October 6, <u>alleging judicial impropriety</u> on the part of some judges of the High Court and senior Supreme Court judge.

Andhra Pradesh government side arguments regarding findings of Constitutional Breakdown:

- 1. The state said "under the scheme of the Constitution, it is Article 356 that deals with <u>failure of Constitutional machinery in a State</u>.
- 2. Under this Article, if the **President**, on receipt of a **report from the Governor** of a State or otherwise, is **satisfied that a situation has arisen** in which the government of the State cannot be carried on in accordance with the provisions of the Constitution, the <u>Hon'ble President can impose President's Rule</u>".
- 3. This is a **power exclusively vested in the Executive**. The power in this regard, like sending a report either to the Hon'ble President or to the Hon'ble Governor or to <u>record a finding in that regard, cannot be exercised by the Judiciary.</u>
- 4. The appeal contended that the High Court order is "uncalled for; violative of the basic structure of the Constitution; and, it is most respectfully submitted, grossly misconceived".
- 5. The state pointed out that "under the Constitutional framework, it is not for the Courts to decide as to whether there is a Constitutional breakdown in a State" and "the said power has been specifically conferred upon a different Constitutional Authority and rightly so".
- 6. The said fact is **essentially an executive function** and is necessarily required to be based on a **detailed factual analysis**. The courts simply do not have any means to decide such a question.

7. According to the state, the High Court order "is a serious encroachment on the powers of the executive as enumerated under the Constitution and is thus <u>violative of the doctrine of separation of powers</u>".

What is Article 356 of Indian Constitution?

- 1. It is <u>Article 356</u> that deals with <u>failure of constitutional machinery in a State</u>... This is a power [to impose President's rule] exclusively vests in the Executive.
- 2. The power in this regard, like sending a report either to the Hon'ble President or to the Hon'ble Governor or to record a finding in that regard, cannot be exercised by the judiciary.
- 3. Article 356 of the Constitution of India gives President of India the power to suspend state government and impose President's rule of any state in the country "if he is satisfied that a situation has arisen in which the government of the state cannot be carried on in accordance with the provisions of the Constitution".
- 4. It is also known as 'State Emergency' or 'Constitutional Emergency'.
- 5. Upon the imposition of this rule, there would be no Council of Ministers.
- 6. The state will fall under the <u>direct control of the Union government</u>, and the Governor will continue to head the proceedings, representing the President of India.
- 7. The "unprecedented" order of the High Court, on October 1, came while deciding habeas corpus petitions filed by relatives of persons remanded in judicial custody or on bail.

The Executive and the Judiciary in the Indian constitution:

The rapport between the judiciary and the executive has always been sensitive.

A society **governed by Rule of law** always demands for separation of the judiciary from the executive.

The rule of law is always exposed to the risk of being intruded by the executive.

Therefore, proper functioning of a democracy requires a clear separation of the two.

The primary function of the judiciary is the administration of justice and justice can never be rightly administered without the fear or favour unless there is a separation of the judiciary from the executive.

<u>Article 50 of the Constitution</u> provides that "The State shall take steps to separate the judiciary from the executive in the public services of the State."

The intention of the developers of the Constitution was to bring about changes wherever possible and shall be done immediately, without any delay, and where immediate operation of this principle is not possible, it shall however be accepted as an imperative responsibility.

The Constitution of India lays down a functional separation of the organs of the State in the following manner:

<u>Article 50:</u> State shall take steps to separate the judiciary from the executive. This is for the purpose of ensuring the independence of judiciary.

<u>Article 122 and 212</u>: validity of proceedings in Parliament and the Legislatures cannot be called into question in any Court. This ensures the separation and immunity of the legislatures from judicial intervention on the allegation of procedural irregularity.

Judicial conduct of a judge of the Supreme Court and the High Courts' cannot be discussed in the Parliament and the State Legislature, according to <u>Article 121 and 211 of the Constitution.</u>

<u>Articles 53 and 154</u> respectively, provide that the executive power of the Union and the State shall be vested with the President and the Governor and they enjoy immunity from civil and criminal liability.

<u>Article 361</u>: the President or the Governor shall not be answerable to any court for the exercise and performance of the powers and duties of his office.

Conclusion:

According to AP government petitioner, It is needless to mention that the <u>constitutional courts do not have any judicially discoverable and manageable standards to determine if there has been a constitutional breakdown.</u>

The Constitution of India expressly provides for a <u>system of checks and balances</u> in order to <u>prevent</u> <u>the arbitrary or capricious use of power</u> derived from the said supreme document.

Though such a system appears dilatory of the doctrine of separation of powers, it is <u>essential in order</u> to enable the just and equitable functioning of such a constitutional system.

By giving such powers, a mechanism for the control over the exercise of constitutional powers by the respective organs is established.

This clearly indicates that the Indian Constitution in its plan does not provide for a strict separation of powers.

Instead, it creates a system consisting of the three organs of Government and confers upon them both exclusive and overlapping powers and functions. Thus, there is no absolute separation of functions between the three organs of Government.

8.Article 356 and an activist judiciary

ARTICLE 356

- Article 356 is inspired by sections 93 of the Government of India Act, 1935,
- which provided that if a Governor of a province was satisfied that a situation had arisen in which the government of the province cannot be carried on in accordance with the provisions of the said Act, he could assume to himself all or any of the powers of the government and discharge those functions in his discretion.
- The Governor, however, could not encroach upon the powers of the high court

Context:

The recent order of the **Andhra Pradesh High Court** directing the Andhra Pradesh government to come prepared to argue on the 'breakdown of constitutional machinery in the state' is shocking as it opens up the possibility of use or even misuse of Article 356 by the judiciary.

Though the Supreme Court of India has stayed the order, we need to go deeper into this observation and look at the **controversial provision of Article 356** because of which the High Court could make such an observation. The devil is in the provision itself.

Judicial activism may be good as a rare exception but an <u>activist judiciary</u> is neither good for the country nor for the judiciary itself as it would <u>encourage the government to appoint committed judges</u>.

Sometimes even the collegium's recommendations on transfer of judges and chief justices today looks more like an executive order transferring IAS officers.

Background of the article 356:

1. Both India and Pakistan borrowed this provision from the **Government of India Act, 1935.**

- 2. Interestingly, the leaders of our freedom struggle were so very opposed to this provision that they forced the British government to suspend it.
- 3. The provision which we had opposed during our freedom struggle was incorporated in the Constitution strangely in the name of democracy, federalism and stability.
- 4. It was agreed in the Constituent Assembly that the Governor could use this emergency power.
- 5. By this time the Governor was supposed to be elected by the people of the State rather than nominated by the Centre.
- 6. After several revisions, provision became Article 278 (now Article 356).

The record:

Article 356 has been <u>used/misused more than 125 times</u> though B.R. Ambedkar had assured that it would remain a dead letter.

Both on Article 356 and the Governor, experience has proven Ambedkar wrong. In almost all cases it was **used for political considerations** rather than **any genuine breakdown of constitutional machinery** in the States.

All Presidents signed presidential proclamations without demur except K.R. Narayanan who twice returned the cabinet's recommendation on October 22, 1997.

The issue with the word 'otherwise' for Article 356:

- 1. H.V. Kamath criticised the word 'otherwise' and said only god knows what 'otherwise' means.
- 2. As the Governor had been made a nominee of the Centre by this time, he asked why the President could not have confidence in his own nominees.
- 3. 'Otherwise' can include anything including a presidential dream of breakdown of constitutional machinery in a state.
- 4. The Andhra Pradesh High Court could pass such an order due to this very term 'otherwise'.
- 5. This word negates the ideals of constitutionalism by giving unlimited powers to the Centre, also allowed the High Court to overstepped the line.
- 6. But this is not the first instance of judicial overreach on this issue.
- 7. On August 13, 1997, a Patna High Court had observed that the High Court could also report to the President about the breakdown of constitutional machinery in the State.

President's Rule Article 355 & Article 365:

Article 355 states that it shall be the duty of the Union to protect every State against external aggression and internal disturbance and to ensure that the Government of every State is carried on in accordance with the provisions of this Constitution.

Article 356 states that President rule can be imposed in any state on grounds of failure of Constitutional Machinery, and failure is of two types:-

If President on receipt of report by Governor of a State or otherwise is satisfied that a situation has arisen in which govt of that state can't be carried in accordance with provisions of the Constitution then President Rule can be imposed.

Article 365 states that every state shall comply with all directions given by Union on matters it empowers to do so. If any state fails to comply with directions of union then President Rule can be imposed.

Article 163 says that **Governor** has to be advised by Council of Ministers to discharge his functions but in case of any question arises under which Governor has to act in his discretion according to constitution then decision of governor shall be final.

This <u>discretionary power of Governor under Article 163</u> is one of the major reasons behind misuse of president rule in India because he has no binding to consult Council of Ministers while preparing and sending the report to President.

Way Forward:

- 1. In order for the **smooth functioning of democratic government** and **strengthening the spirit of federalism**, it is important that the governor must act judiciously, impartially and efficiently while exercising his discretion and personal judgment.
- 2. In this context, the recommendations of the <u>Sarkaria Commission and Punchhi Commission</u> should be followed in true spirit.
- 3. The President's Proclamation should include the 'reasons' as to why the State cannot be run as per the normal provisions of the Constitution.
- 4. As far as possible, the Centre should issue a warning to the State government before resorting to the use of Art. 356.
- 5. It should not be used to serve political purposes.
- 6. **Art. 356** should be **amended** so that the President be empowered to dissolve the State Legislature only after approval by the Parliament.
- 7. On the question of invoking Article 356 in case of failure of Constitutional machinery in States, the **Punchhi Commission** would recommend suitable amendments to incorporate the guidelines

set forth in the landmark judgement of the Supreme Court in <u>S.R. Bommai V. Union of India</u> (1994).

8. The <u>Punchhi Commission</u> recommended <u>provision of 'Localized Emergency'</u> which means that centre govt can tackle issue at town/district level without dissolving the state legislative assembly while at same time carrying out duty of the Union to protect States under Article 355.

Conclusion:

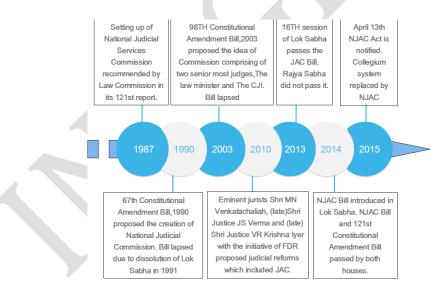
Today, when **many constitutional experts** are of the view that the judiciary is increasingly becoming more executive-minded than the executive itself, the observations of the Andhra Pradesh High Court are a worrisome sign.

The <u>spirit of "cooperative federalism"</u> can preserve the balance between the Union and the States and promote the good of the people and not an attitude of dominance or superiority.

The role of governor in this regard is indispensable for the successful working of the constitutional democracy which will ensure proper utilisation of provisions of article 356.

Ideally, the **word 'otherwise'** should be deleted from Article 356 and the provision be used only sparingly and to never remove a majority government.

9.Law and disorder



Context:

The citizens of the country expect the institution of Supreme Court and its constituents to be ideal, and the challenge of the Supreme Court is to come to terms with that reality.

However, it is not the Supreme Court alone that matters in the **justice delivery system.**

As a result of the **unrelenting focus** on the anguished knocks at the doors of the highest court, the other inadequacies of the system don't get as much public attention.

A few important ones are dealt with below:

Issue of Spending on judiciary:

- 1. Most often, the issue of spending on judiciary is equated with a <u>call for increasing the salaries of</u> judges and providing better court infrastructure.
- 2. Such perceptions are unfortunate. <u>India has one of the most comprehensive legal aid</u> programmes in the world, **the Legal Services Authority Act of 1987.**
- 3. Under this law, all women, irrespective of their financial status, are entitled to free legal aid.
- Scheduled Castes and Scheduled Tribes and children too are entitled to free legal aid. This
 means that a <u>significant proportion of the population</u> falls or is supposed to fall under a free
 legal aid regime.
- 5. However, in reality, this law is a dead letter. There has been **little effort** on the part of successive governments to provide a task force of carefully selected, well-trained and reasonably paid advocates to provide these services.
- 6. In comparison, the <u>system of legal aid in the U.K.</u> identifies and <u>funds several independent solicitor offices to provide such services.</u>
- 7. If support is withdrawn, many solicitor offices that provide these invaluable services would collapse and with that, the rule of law. India is yet to put in place anything similar to this.

Poor judge-population ratio:

- 1. The judge-population ratio provides one of the most important yardsticks to measure the health of the legal system.
- 2. The U.S. has about 100 judges per million population. Canada has about 75 and the U.K. has about 50. India has only 19 judges per million population.
- 3. Of these, at any given point, <u>at least one-fourth is always vacant</u>. While much is written on <u>vacancies to the Supreme Court and the High Courts</u>, hardly any attention is focused on this <u>gaping inadequacy in lower courts</u> which is where the <u>common man first comes into contact</u> (or at least should) with the justice delivery system.
- 4. These inadequacies are far more important to the common man than the issues relating to the apex court that are frequently highlighted in the public space.

5. In <u>All India Judges Association v. Union of India (2001)</u>, the <u>Supreme Court had directed the Government of India to increase the judge-population ratio to at least 50 per million population within five years from the date of the judgment. This has not been implemented.</u>

Access to justice

- 1. Though 'access to justice' has not been specifically spelt out as a fundamental right in the Constitution, it has always been treated as such by Indian courts.
- 2. In <u>Anita Kushwaha v. Pushpa Sadan (2016)</u>, the Supreme Court held unambiguously that if "life" implies not only life in the physical sense but a bundle of rights that make life worth living, there is no justice or other basis for holding that denial of "access to justice" will not affect the quality of human life.
- 3. It was for the first time that the Supreme Court had attempted a near-exhaustive definition of what "access to justice" actually means.
- 4. Further, the court pointed out **four important components of access to justice**.
- 5. It pointed out the need for adjudicatory mechanisms. It said that the mechanism must be conveniently accessible in terms of distance and that the process of adjudication must be speedy and affordable to the disputants.
- 6. It is of course a paradox that this judgment, which emphasises the **concept of speedy justice**, was passed in 2016 in a batch of transfer petitions that were filed between 2008 to 2014.

These are other issues crying for attention:

- 1. Increasing tribunalisation of the justice delivery process;
- 2. The extortionate court fees payable to access justice in civil suits in some States;
- 3. The poor integration of technology into the system are some issues that readily come to mind.

Solution: All India Judicial Services (AIJS):

Recently, the proposal of the All India Judicial Services (AIJS), has been revisited by the legal think tank Vidhi.

The idea of creating an All India Judicial Services (AIJS) was first introduced by the <u>14th Report of</u> the Law Commission in 1958.

It <u>aims at creating a centralized cadre of District Judges</u> who will be recruited centrally through an all-India examination and allocated to each State along the lines of the All India Services (AIS).

It has been pitched as a solution to judicial vacancies, lack of representation for the marginalised and the failure to attract the best talent.

- 1. There is need to ensure that service is **insulated from the influence** of both the Central Government and State Government, right from the process of appointment to the process of removal.
- 2. The <u>116th report of the Law Commission</u> recommends that appointments, postings and promotions to the AIJS be made by a proposed National Judicial Service Commission consisting of retired and sitting judges of the Supreme Courts, members of the bar and legal academics.
- 3. Any change in the judicial set up of the country must be concurred in by the States and the High Courts as also members of the legal fraternity.
- 4. It may be more prudent to investigate the reasons and causes for the large number of vacancies in the poorly performing States.
- 5. Intensive training can imparted to the recruits for picking up one more language would certainly provide adequate and effective knowledge of the local language of the State to which he or she is allocated.

Conclusion:

A <u>disproportionate amount of attention</u> that is given to the functioning of the Supreme Court, important as it is, distracts from these and similar issues.

Let us assume that the apex court achieves the distinction of being "ideal" in the near future, of being all things to all people.

Still, a fine mind alone is of little avail if the rest of the body lies disabled, as the justice delivery system is today.

The state in all its glorious manifestations — the executive, judiciary and the legislature — <u>there is a</u> <u>need to draw out a national policy and road map for clearing backlogs and making these concepts real.</u>

10.Modi-Hasina summit to highlight infrastructure, connectivity projects



Context:

A **virtual summit** will be held between PM Narendra Modi and Bangladesh PM Sheikh Hasina on December 17.

They would hold **comprehensive discussions** on ties, including <u>strengthening cooperation in the post-</u>Covid era.

The signalling of the summit is also important, coming as it does when there is speculation in the popular discourse of a dilution in this strategic partnership.

It said both the countries have continued **to maintain regular exchanges** at the highest level. Ties between India and Bangladesh have witnessed a significant upswing in the last few years.

Both sides have scaled up trade and economic engagement besides implementing a number of connectivity and infrastructure projects, the ministry said.

Bangladesh is commemorating **2020-21** as 'Mujib Borsho' on the occasion of the centennial birth anniversary of 'Sheikh Mujibur Rahman, the founding leader of the country.

India-Bangladesh ties:

India's links with Bangladesh are civilizational, cultural, social and economic.

India played the great role in emergence of **independent Bangladesh** and was the <u>first country to</u> <u>recognise Bangladesh as separate state.</u>

The historic land boundary agreement signed in 2015 opened a new era in the relations.

Both the countries are the common members of SAARC, BIMSTEC, IORA and the Commonwealth.

India has always stood by Bangladesh in its hour of need with aid and economic assistance to help it cope with natural disasters and floods.

Recent Agreements between India and Bangladesh:

- 1. The <u>use of the Chattogram and Mongla ports</u> in Bangladesh for movement of goods to and from India, particularly from Northeastern India.
- 2. Use of **Bangladesh's Feni river** for drinking water supply in Tripura.
- 3. However, no progress was reported on the long pending Teesta water sharing agreement.
- 4. Exchange of data and information to prepare a framework of interim sharing agreements for six rivers Manu, Muhuri, Khowai and Gomati rivers of Tripura and Dharla river of Bangladesh and Dudhkumar river of West Bengal.

- 5. Daudkanti (Bangladesh)-Sonamura (Tripura) inland water trade route to be included under Protocol of the Inland Water Transit and Trade.
- 6. Consensus on lifting restrictions on entry and exit from land ports in India for Bangladeshi citizens travelling on valid documents.
- 7. Implementation of the Lines of Credit (LoCs) committed by India to Bangladesh.

Agreements to be sign in virtual summit:

Virtual summit will include <u>more connectivity and "high-impact" infrastructure</u> projects and a possible mechanism to oversee projects under <u>concessional Lines of Credit (LoCs) of nearly \$10 billion from</u> India in 2017.

Progress on a petroleum '<u>friendship' pipeline from Siliguri to Bangladesh's Dinajpur</u> that was agreed to in 2018 and began construction, will also be discussed.

In addition, talks are on for a <u>sub-regional electricity grid sharing project</u> which would see Bhutan and Bangladesh contribute power, but officials said they are awaiting Cross-Border Trade in Electricity (CBTE) guidelines from India.

"Major issues" including the <u>water sharing agreement for the Teesta</u> and at least six other rivers as well as continued reports of killings of its nationals at the border would also be raised by PM Hasina.

Contentions that need to be solved:

- 1. <u>Teesta river water sharing agreement</u> has not been signed due to opposition from West Bengal. (River is a State subject is notable in this context).
- 2. The two countries have also had **initial talks on water sharing** for other **peninsular rivers** including the Monu, Muhuri, Khowai, Gomti, Dharla and Dudhkumar.
- 3. India shares a **porous border** with Bangladesh and as a result illegal immigration from Bangladesh to Indian territories like West Bengal and North Eastern states have become a source of conflicts in these areas.
- 4. Indian visa for Bangladeshi travellers is not easy to obtain.
- 5. Bangladesh recently suffers from political and social crisis due to communal violence and increase in terrorist activities.

Concerns regarding NRC and CAA:

Meeting would also seek to set aside concerns in Bangladesh over the Modi government's plans for a <u>National Register of Citizens (NRC) and the Citizenship (Amendment) Act (CAA)</u>, which led to **massive protests** in Dhaka last year ahead of PM Modi's visit there, which was subsequently cancelled.

Four ministerial visits to India from Bangladesh were also cancelled.

Bangladesh's Foreign Secretary had also formally raised the issue of blacklisting and arresting more than 2,500 Bangladeshi Tablighi Jamaat members, who had been accused of violating the coronavirus lockdown, but were released by the courts.

Mr. Modi will hold talks with Ms. Hasina a day after <u>Bangladesh's "liberation day</u>", the anniversary of the day in 1971 the Pakistani army surrendered, which is celebrated in both <u>India and Bangladesh as</u> <u>Bijoy or Vijay Diwas</u>.

The timing of the virtual summit was significant and the two sides would "acknowledge the contributions of the then Indian Prime Minister [(Indira Gandhi]" in Bangladesh's victory.

Conclusion:

Deepening relationship with Bangladesh has become a necessity in the face of **shifting geo-economics**.

Bangladesh, with its growing economic success, and with its 8 percent growth rate provides a vital partnership in the region.

There is scope for India-Bangladesh ties to move to the next level, based on cooperation, coordination and consolidation as Prime Minister has <u>termed the present period of</u> relationship between the two countries as 'Sonali Adhyay' (golden chapter).

India needs to consolidate the golden chapter in India-Bangla relations by jointly developing and pursuing with Dhaka an **ambitious framework for shared prosperity.**

11.Regional priorities: On the SCO summit



Context:

Three years after joining the <u>eight-nation Shanghai Cooperation Organisation (SCO)</u>, India hosted the SCO heads of governments (HoG) meeting for the first time.

The focus of the 66-point joint communiqué at the end of the virtual conference was in developing a "Plan of Priority Practical Measures for 2021-2022 to overcome the socio-economic, financial and food consequences of COVID-19 in the region".

Brief Background:

Shanghai Cooperation Organisation (SCO):

- 1. SCO is a <u>Eurasian political, economic, and military organisation</u>. Along with BRICS, SCO is seen as an attempt by China & Russia to challenge the Western dominated **global order** and counterbalance the activities of United States and NATO in Central Asia.
- Currently, <u>SCO has 8 Member States-China, Kazakhstan, Kyrgyzstan, Russia, Tajikistan, Uzbekistan, India and Pakistan</u>; 4Observer States-Afghanistan, Belarus, Iran and Mongolia and 6 Dialogue Partners-Azerbaijan, Armenia, Cambodia, Nepal, Turkey and Sri Lanka.
- 3. It has two permanent bodies—the SCO Secretariat based in Beijing and the Executive Committee of the Regional Anti-Terrorist Structure (RATS)based in Tashkent.
- 4. Its driving philosophy is known as the "Shanghai Spirit" which emphasizes harmony, working by consensus, respect for other cultures, non-interference in the internal affairs of others, and non-alignment.
- 5. Culture has become an important element of the SCO, attuned to the group's search for an inclusive Eurasian identity.
- 6. The Prime Minister of India, in his address to SCO in Bishkek Summit, presented his vision for the organization in the form of HEALTH(healthcare cooperation, economic cooperation, alternate energy, literature and culture, terrorism-free society and humanitarian cooperation), which closely tied with the declaration.

India hosted the summit for the first time:

- 1. Members committed to <u>strengthening multilateralism</u> and the <u>UN charter</u> while welcoming the fact that the grouping is now being seen as an <u>"influential and responsible participant in the modern system of international relations"</u>. The meeting also showed up persisting differences.
- 2. Although the HoG Council consists of the Prime Ministers of all SCO countries, neither Prime Minister Narendra Modi nor Pakistan Prime Minister Imran Khan attended the meet, ostensibly

due to a **protocol mismatch** between the position of PMs in parliamentary democracies versus those in the former Soviet bloc and China.

- 3. Mr. Modi was represented by Vice-President Venkaiah Naidu, who made <u>strong observations on cross-border terrorism</u>; he called it the <u>SCO region's "biggest challenge</u>", in comments aimed at Pakistan.
- 4. Pakistan's representative too spoke of the need to combat what she called "state terrorism" in disputed areas, in a reference to Jammu and Kashmir.
- 5. The SCO is a rare forum where India-Pakistan troops take part in joint exercises under the **Regional Anti-Terror Structure**, although it would seem the two countries have come no closer on the issue.
- 6. Neither statement on terrorism was reflected in the final joint statement, which focused on trade and economic issues.
- 7. India also marked its differences with China over the BRI by not joining other SCO members in a paragraph endorsing the BRI.
- 8. Mr. Naidu made a pitch for "<u>transparent and trustworthy" trade practices</u>, seen as a sidebar aimed at China.

China's OBOR/BRI initiative:

The SCO was created as a regional organisation to <u>tackle peace and security</u>, to tackle the challenges of terrorism, extremism and separatism, and to promote trade and cooperation and cultural partnerships.

That is why Article 2 of the SCO charter specifically prohibits bilateral issues from being raised, because it only serves to vitiate the atmosphere.

However, with the exception of India, all other SCO members, including Kazakhstan, the Kyrgyz Republic, Russia and Tajikistan expressed their support for China's "One Belt One Road" initiative (OBOR/BRI), and the "joint implementation" of projects with the Eurasian Economic Union, in the joint communiqué.

India refused to join the BRI in 2017, in protest over Chinese projects through <u>Pakistan occupied</u> <u>Kashmir</u>, and <u>lack of "transparency and sustainability" in the initiative.</u>

'Constructive' role to be played by India:

India hopes to play a 'constructive' role in enriching the agenda of the SCO by placing humans at the centre of its 'thoughts and actions' to foster well -being and greater prosperity of the region.

He also talked about India's civilizational links with Central Asian Nations.

Also, India's **growing economic potential** and vast experience and expertise can **add greater value** to SCO's ongoing projects and can also share best practices in newer areas to forge a common vision for the region.

Conclusion:

Regardless of the differences, the Indian government has consistently maintained the <u>importance of the SCO grouping</u>, referred to as the "<u>Asian NATO</u>" although it does not mandate security alliances.

The SCO is one of the few regional structures India is a part of now, given a decline in its engagement with SAARC, BBIN and the RCEP.

The SCO provides India a <u>convenient channel for its outreach trade and strategic ties to Central Asian</u> <u>countries.</u>

It has afforded a platform, when needed, for bilateral discussions with the two countries India has the most tense ties with: China and Pakistan.

Above all, the SCO has been seen as a grouping worth pursuing as it retains India's geopolitical balance, a useful counterpoint to New Delhi's otherwise much more robust relations with the western world, and hosting the SCO meeting was one more step towards developing that engagement.

12. European powers as natural partners in constructing a durable balance of power in Indo-Pacific



Context: India's international coalitions:

As the problem of reversing Chinese aggression in the Ladakh region carries over from 2020, strengthening India's international coalitions becomes an important priority for Indian foreign and security policies in 2021.

If the intensification of security cooperation with the United States has become an **important** milestone in India's foreign policy in 2020, <u>integrating Europe into India's new strategic calculus</u> ought to be a major objective in 2021.

India's changing strategic perceptions of Europe:

Three recent developments underline India's changing strategic perceptions of Europe.

- 1. One is <u>India's support for France's membership</u> of the <u>Indian Ocean Rim Association (IORA)</u>.
- 2. Second, India's backing for a larger European role in the Indo-Pacific. India has welcomed the interest of Germany and Netherlands in building a <u>new geopolitical architecture in the Indo-Pacific.</u>
- 3. Third, <u>security cooperation in the Indo-Pacific</u> is also emerging as an important theme in the plans to work out a decade-long **road map to transform** the partnership between Delhi and London, which is in the throes of separating from Europe and defining a new international role for itself.
- 4. On the face of it, the three moves appear part of South Block's quotidian diplomacy.

<u>India's concept of Indo-Pacific includes: "inclusiveness", "openness", "ASEAN centrality" that is not directed against any country:</u>

<u>Openness:</u> A free, open, and inclusive order in the Indo-Pacific, based upon respect for sovereignty and territorial integrity of all nations, peaceful resolution of disputes through dialogue and adherence to international rules and laws.

<u>Inclusiveness:</u> India's concept of the Indo-Pacific is inclusive in nature, and supports an approach that respects the right to freedom of navigation and overflight for all in the international seas.

ASEAN-Centrality: India's Indo-Pacific vision is premised upon the principle of 'ASEAN-Centrality'.

India's approach is based on cooperation and collaboration, given the **need for shared responses to shared challenges** in the region.

But a closer look suggests two important conceptual departures:

- 1. One, India is looking beyond the **bipolar geopolitical competition** between the US and China.
- 2. India has also begun to shed the postcolonial mental block **against regional security cooperation** with post-imperial Europe.
- 3. As Delhi's difficulties with Beijing continue to mount, the US becomes an even more important security partner for India.

- 4. But Delhi also wants to **insure against** the **inevitable volatility** in the **complex dynamic** between Washington and Beijing.
- 5. Although the **US-China relationship** has rapidly soured in the Trump years and the return to an era of mutual trust seems unlikely, Delhi should be prepared for a Sino-US relationship <u>marked</u> <u>by intense competition and significant cooperation</u>.
- 6. China is already teasing the incoming Biden administration with the **promise of a reset in bilateral relations** and hinting at its support for the new US president's **ambitious goals on mitigating climate change.**
- 7. Meanwhile, the political questioning of the costs and benefits of America's alliances in Europe and Asia initiated by Donald Trump is likely to continue under Biden.
- 8. To cope with the **uncertain political trajectory of the US**, Delhi is already supplementing its American partnership with a **network of mini-lateral groups** with other middle powers, such as the **India-Australia-Japan forum** and **the trilateral dialogue with France and Australia**.

India and European Union: Natural Partners:

- 1. India now sees European powers, individually as well as collectively through the European Union, as natural partners in constructing a durable balance of power in the Indo-Pacific.
- 2. **Rebuilding ties with Europe** needs a significant corrective to India's traditional strategic neglect of the continent.
- 3. **Both the bipolar Cold War dynamic** (the East-West dimension) and **the North-South framework** (developing world versus the developed) prevented Delhi from taking a more nuanced view of Europe's political agency after WWII.
- 4. Attempts to impart strategic momentum after the Cold War did not really succeed. When Europe looked at Asia, China loomed large as an attractive commercial partner.
- 5. As the <u>economic gap between China and India widened, so did the scale of European interest in</u> both countries.
- 6. Communist China, with its special sensitivity to "inter-imperialist" contradictions, invested massive political and diplomatic effort to cultivate European political classes and economic elites. That began to pay off handsomely. India, in contrast, appeared rather indifferent to Europe.
- 7. France has been an exception. Through the 1990s, in the name of **promoting a multipolar world**, Paris had reached out to Delhi.
- 8. France President Emmanuel Macron's visit to India in early 2018 unveiled an expansive framework for **revitalising the strategic partnership**.

- 9. India's partnership with France now has a strong regional anchor the Indo-Pacific.
- **10.** France, with its territories in the **Western Indian Ocean** and the **South Pacific** as well as a **historic naval presence**, was quick to see the challenges arising from **China's maritime**<u>expansion</u> and the <u>emergence of the Indo-Pacific as a new political geography.</u>
- 11. The rest of Europe and Britain have now woken up to the China challenge and are ready to pay greater attention to Asian geopolitics and the Indo-Pacific.
- 12. India, too, is breaking out of its past approaches to the Indo-Pacific defined by such binaries as "North versus South" and "regional vs extra-regional".
- 13. What was once a political taboo in Delhi—<u>regional security cooperation</u> with the former imperial powers of Europe has now become a strategic necessity.
- 14. The rise of China and the consequent geopolitical instabilities are inevitably producing new coalitions that break out of an old political paradigm.
- 15. To be sure, France and Britain have **lingering disputes** left over from the era of decolonisation in parts of the Western Indian Ocean.

Mobilise Massive economic resources:

India will have to contribute to the amicable resolution of those problems.

It is also true that the European ability to project military power into the Indo-Pacific is limited.

But in combination with Asian democracies, Europe can certainly make a difference.

It can mobilise massive economic resources for **sustainable development of regional infrastructure**, **wield political influence** and leverage its significant soft power to shape the Indo-Pacific discourse.

A close bilateral relation between India and the EU has far-reaching economic, political and strategic implications on the crisis-driven international order.

Both sides should realise this potential and must further the growth of the bilateral ties with a strong political will.

Above all, it can significantly boost India's own comprehensive national power.

Conclusion:

Until now, Asians have **undervalued the potential** European role in the eastern waters.

Most Europeans had convinced themselves that managing Asian geopolitics was America's burden.

But as China transforms the Eurasian landmass as well as the Indo-Pacific, it is abundantly clear that the US alone cannot redress the imbalance.

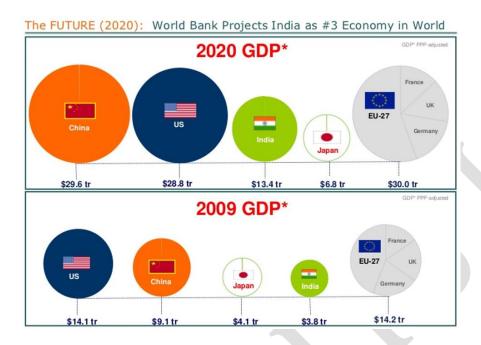
<u>A strong coalition of Asian and European middle powers</u> must now be an indispensable element of the geopolitics of the East.

Such a coalition can't be built overnight. But India could push for a solid start in 2021.



GENERAL STUDIES III

1.Economic revival beating predictions: RBI bulletin



Context:

There is now more evidence to show that the Indian economy "is pulling out of COVID-19's deep abyss and is reflating" at a pace that beats most predictions, RBI officials, including Deputy Governor said in an article in the central bank's monthly bulletin.

RBI released an article titled "State of the Economy" stating that, Economic conditions continued to improve through November on the back of the uptick in agriculture and manufacturing. **Financial conditions** embodied in interest rates are perhaps at their easiest in decades.

It added that **despite headwinds**, efforts by all stakeholders could put **India on a faster growth trajectory**.

In another article in the bulletin on the half-yearly review of government finances, officials of the Fiscal Division of RBI's Department of Economic and Policy Research warned that <u>notwithstanding the severe impact of COVID-19 on government finances</u>, it was <u>imperative for the Centre and States to continue</u> with the countercyclical fiscal measures to sustain the momentum of the recovery.

Vision of 'Aatmanirbhar Bharat':

According to **forecasts by the OECD**, by end-2021, the US economy is likely to be the same size as it was in 2019, but China is expected to be 10% larger.

Europe and Japan would languish below their pre-pandemic level of output and could do so for several years.

From India's perspective, **recovery in GDP growth** is firmly on track and sets the foundation to regain our position as the fastest-growing major economy next year.

For India to claim its rightful position in the new world order, it is imperative that the <u>vision of</u>

<u>'Aatmanirbhar Bharat'</u> is globally integrated to harness the opportunities created by the emerging shifts.

At this critical juncture, it is important to set the vision of positioning Aatmanirbhar Bharat in the **new** world order with priorities closely linked with our global aspirations.

Five pillars of a self-reliant India:

PM iterated that a self-reliant India will stand on five pillars viz.

- 1) **Economy**, which brings in quantum jump and not incremental change
- 2) Infrastructure, which should become the identity of India
- 3) **System**, based on 21st-century technology-driven arrangements
- 4) Vibrant Demography, which is our source of energy for a self-reliant India and
- 5) **Demand**, whereby the strength of our demand and supply chain should be utilized to full capacity

Several of the reform measures like opening up more sectors for private participation and enhancing foreign direct investment are not to be seen as part of COVID relief but long-term structural changes.

The effect of these measures will have to be watched carefully.

Social sector support:

<u>Revenue expenditure</u> measures undertaken <u>to enhance social protections</u> to the underprivileged and to <u>address labour market dislocations</u> might need to continue as the recovery is likely to be uneven across sectors.

<u>Capital expenditure</u>, which collapsed in the first half of this fiscal, will **need to be scaled up as a priority**.

Public investment in healthcare, social housing, education and environmental protection is the **need of the hour** to build a **more resilient and inclusive economy**.

Sectors such as <u>auto and capital goods</u> that were severely impacted in lockdown are expecting a turnaround in forward earnings.

<u>Healthcare</u>, information technology and fast moving consumer goods firms were sighting stronger earnings outlook.

Turning crisis situations into opportunities:

- 1. Talking about turning a crisis into an opportunity, gave the example that the production of PPE kits and N-95 masks in India has gone up from almost being negligible to 2 lakh each, daily.
- 2. Remaking that self-reliance is the only way out for India, the PM quoted from our scriptures "Eshah Panthah", that is self-sufficient India.
- 3. Self-reliance will make **globalization human-centric**. The definition of self-reliance has changed in a globalized world and it is different from being self-centred.
- 4. India's fundamental thinking and tradition of "Vasudhaiva Kutumbakam" provides a ray of hope to the world. This should be seen in the context of Human-Centric Globalization versus Economy Centralized Globalization.
- 5. Self-reliance does not mean cutting India off from the world. India believes in the **welfare of the** world and <u>India's progress is linked with the world</u>. The world trusts that India has a lot to contribute to the development of the entire humanity.
- 6. The strategy of Atmanirbhar Bharat Abhiyan seems to give a **strong supply-side push** by boosting the availability of capital on easy terms and through supporting agriculture and business sectors.
- 7. The additional allocation to MNREGA will help in productively employing returning migrants.
- 8. States are now allowed to borrow within a higher limit but with clear reform conditionalities.

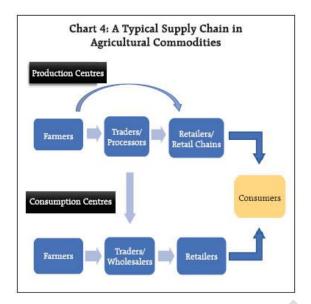
Conclusion:

Linking the **vision of Aatmanirbhar Bharat** with global strategic priorities of <u>enhancing 3Cs</u> of commerce, competitiveness & currency internationalisation can be a cornerstone to strengthen India's position in the post-pandemic new world order.

India is presently known as one of the **most important players** in the **global economic landscape**.

Its trade policies, government reforms and inherent strengths in the economy have attributed to its standing as one of the most sought-after destinations for foreign investments in the world.

2.The perils of deregulated imperfect agrimarkets



Context:

The <u>eruption of massive farmers' protests across India against the Farm Acts</u> has shocked those in the seat of power in Delhi.

The massive farmers' protests erupted in New Delhi and adjoining areas against the newly introduced Farm Acts.

Government view:

According to the government, <u>many private markets will be established</u>, <u>middlemen would disappear</u>, <u>farmers would be free to sell to any buyer and farmgate prices would rise</u>.

But the protesting farmers do not accept these claims. They believe that <u>farmgate prices</u> would <u>fall</u> <u>with the intensification of a corporate presence in agricultural markets</u>.

They also believe that the government, ultimately, <u>wants to phase out the Minimum Support Price</u> (MSP) system.

The focus here will be on the Farmers' Produce Trade and Commerce (Promotion and Facilitation) Act, 2020 (FPTC Act):

Farmers are forced to sell outside the mandis: More mandis needed

An important assumption behind the FPTC Act is that mandis controlled by Agricultural Produce Marketing Committees (APMC) are <u>monopsonies in rural areas</u>. This assumption itself is specious.

First, official data show that even for paddy and wheat, respectively, only 29% and 44% of the harvest is sold in a mandi, while 49% and 36% is sold to either a local private trader or an input dealer.

In other words, de facto, a <u>large proportion of Indian harvest is not directly sold in a mandi.</u>

Farmers are forced to sell outside the mandis for two reasons.

The first is that there are **not enough mandis**. In 1976, there were 4,145 large markets in India, with the average area served at 775 km2.

- 1. The National Commission on Agriculture (NCA) had recommended that every Indian farmer should be able to reach a mandi in one hour by a cart. Thus, the average area served by a mandi was to be reduced to 80 square km.
- 2. For this, the number of mandis was to increase to at least 41,000. But there were only 6,630 mandis in 2019 with an average area served of 463 square km.
- **3.** Using another set of criteria, a government committee in 2017 had recommended that India should have at least 10,130 mandis. **So, by all counts, India needs not less but more mandis.**

2. Economies of Transport cost to Mandis:

- 1. The second reason is that most small and marginal farmers, given their small marketable surplus, do not find it economical to bear the transport costs to take their harvests to mandis.
- 2. Thus, they end up selling their harvest to a village trader even if at a lower price.
- 3. Even if private markets replace mandis, small and marginal farmers will continue to sell to traders in the **village itself**.
- 4. The situation will change only if economies of scale rise substantially at the farm-level.

The freedom to sell outside mandis already exists in many States:

- 1. Already, 18 States have allowed the <u>establishment of private markets outside the APMC</u>; 19 States have allowed the <u>direct purchase of agricultural produce from farmers</u>; and 13 States have allowed the <u>establishment of farmer's markets outside the APMC</u>.
- 2. Despite such legislative changes, <u>no significant private investment</u> has flowed in to establish private markets in these States.
- 3. Private markets have emerged in some pockets for some crops, but these are by no means widespread.
- 4. The reason for **poor private investment in markets** is the presence of high transaction costs in produce collection and aggregation.
- 5. When **private players** try to take over the role of mandis and the village trader, they incur **considerable costs** in opening collection centres and for salaries, grading, storage and transport.

- 6. The more the number of small and marginal farmers are, the higher will these costs be.
- 7. Corporate retail chains face additional costs in urban sales and storage, as well as the risk of perishability. This is why many retail chains prefer purchasing bulk quantities of fruits and vegetables from mandis rather than directly from farmers.

Transaction costs and Mandi Taxes:

- 1. Even **if private markets emerge**, the <u>size of transaction costs</u> are likely to offset any decline in mandi taxes.
- 2. As a result, there is **no assurance** that farmers would receive a higher price in private markets.
- 3. In the existing private markets too, there is no evidence of farmers receiving higher prices than in the mandis.
- 4. In fact, if transaction costs exceed mandi taxes, the costs would be transferred to the farmers as a **lower price**. This, then, would imply a stronger squeeze on the farmer than at present.
- 5. Many commentaries treat taxes in mandis as wasteful. This assertion is not fully true.
- 6. First, much of the mandi taxes are reinvested by APMCs to improve market infrastructure. A fall in mandi taxes would reduce the surplus available with APMCs for such investment.
- 7. Second, in States such as Punjab, the government charges a market committee fee and a rural development fee.
- 8. The Punjab Mandi Board uses these revenues to construct rural roads, run medical and veterinary dispensaries, supply drinking water, improve sanitation, expand rural electrification and provide relief to farmers during calamities.
- 9. Such rural investments will also be adversely affected if mandis are weakened.

The fate of MSPs: Farmer's fear with regard to MSP:

- 1. Without doubt, MSPs would continue to survive on paper as the government will have to procure to **maintain a minimum buffer stock**.
- 2. However, many policy signals point to a strategic design to weaken the MSPs.
- 3. First, <u>input and labour costs are rising sharply in agriculture</u>. This necessitates a regular upward revision of MSPs to keep pace with costs of living.
- 4. However, MSPs are rising at a far slower rate over the past five to six years than in the past. Second, the government has not yet agreed to fix MSPs at 50% above the C2 cost of production.
- 5. As a result, farmers continue to suffer a price loss of Rs.200 to Rs.500 per quintal in many crops.

- 6. Third, the Commission for Agricultural Costs and Prices (CACP) has been recommending to the government that <u>open-ended procurement of food grains should end.</u> These policy stances have set alarm bells ringing among farmers.
- 7. In Punjab, Haryana and western Uttar Pradesh, most crop sales are at the MSP through procurement centres including the mandis.
- 8. The farmers in these regions legitimately feel that they have been dealt a double whammy.
- 9. If mandis weaken and private markets with no commitment to MSPs expand, they fear a gradual erosion of their entitlement to a remunerative price.
- 10. If mandis weaken and private markets do not sufficiently replace them, they fear that the <u>void</u> would be filled by unscrupulous and unregulated traders.

Way Forward steps:

Discussions between the government and the farmers can be **structured using a broad framework based on two focus points.**

- 1. First, India needs an <u>increase in the density of mandis</u>, expansion of investment in mandi infrastructure and a spread of the MSP system to more regions and crops.
- 2. This should happen hand-in-hand with a <u>universalisation of the Public Distribution System</u> as an affordable source of food for the poor.
- 3. Second, we need not just more mandis, but also **better mandis**.
- 4. <u>APMCs need internal reform</u> to ease the entry of new players, reduce trader collusion and link them up with national e-trading platforms.
- 5. The <u>introduction of unified national licences for traders</u> and a single point levy of market fees are also steps in the right direction.

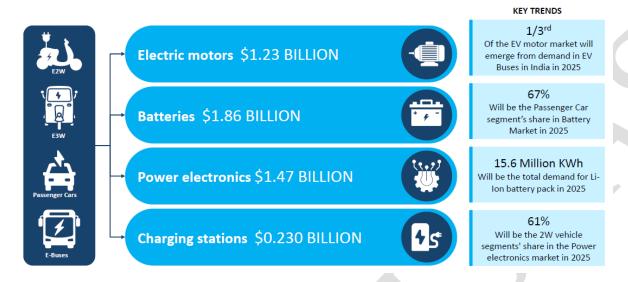
The Farm Acts were legislative measures that were passed without elaborate discussion with stakeholders.

Thus, government has to take steps to address the genuine fears of farmers.

3.Can Covid-19 be an opportunity to boost electric mobility in India?

PERSPECTIVE: MARKET SIZE OF EV COMPONENT INDUSTRY IN 2025

ELECTRIC VEHICLE VALUE CHAIN IN INDIA IS EXPECTED TO REACH \$4.8 BILLION IN 2025



Context:

The <u>sudden drop in air pollution levels</u> in metropolitan cities due to the lockdown was one of the few positive impacts of the early days of the pandemic.

<u>Emissions fell drastically</u>, skies cleared, and residents of New York, London, Shanghai, Mumbai and other major metro cities enjoyed clean air for the first time in decades.

Mobility Consumer Index Report, 2020 on emission levels:

As per <u>Mobility Consumer Index Report, 2020</u>, monthly per capita emissions of carbon dioxide (CO2) fell globally across all three travel segments—<u>work travel, social and household travel, and leisure and entertainment</u>.

This broadly tracks the decline in journey numbers already noted.

<u>Substantial reduction in emission levels</u> was also noted; 56% for work travel, 58% for social and household travel, and 62% for leisure and entertainment.

National E-Mobility Mission Plan 2020:

1. The plan was launched by the Government of India in 2013 with the <u>objective of achieving</u> national fuel security by promoting electric and hybrid vehicles.

- 2. <u>It had set a target of achieving a sale of seven million EVs by 2020</u> and thereby <u>aimed to cut total</u> carbon dioxide emissions by three per cent from the 'do nothing' scenario.
- 3. The government would **provide fiscal and monetary incentives for this industry**.
- 4. The plan had made several recommendations for the adoption of electric vehicles (EVs), including electric-powered government fleets and public transportation and subsidies for those who opt for EVs.

To reduce air pollution and to kick-start the economy by spurring demand.

Delhi experiences a public health emergency every winter due to the rise in air pollution, which has become a recurrent annual crisis.

During the Covid-19 induced lockdowns, the capital witnessed a drastic reduction in the PM10 and PM2.5 levels.

To address both problems of the high cost of purchase and the lack of sufficient charging infrastructure. To register at least 5,00,000 EVs in Delhi in the next five years.

Future towards low-carbon transport:

Policymakers across the globe are now trying with conviction to push the future towards low-carbon transport and automakers are increasingly working on their commitments to bring new models of zero-emission vehicles.

As per the <u>Society of Manufacturers of Electric Vehicles (SMEV)</u>, EV sales in FY20 were 156,000 units, which were up by 20% year-on-year.

The market cap of global EV manufacturers has witnessed a historic rise (over \$500 billion) in this fiscal year.

This is more than the combined market cap of the global traditional top-five automotive giants.

Constraints in adoption of Electric Vehicles:

- 1. <u>High upfront capital cost</u> is the <u>major obstacle</u> impeding the adoption of EVs and their growth in India.
- 2. The <u>most critical component of battery pack</u> leads decides the cost of an EV, considering that the cost of this component is about **40% of the total vehicle cost**.
- 3. In the current scenario, selling EVs is a thin- or negative-margin business, due to **high battery prices** that account for a significant percentage of the vehicle purchase price.
- 4. **Future advances in technology and greater economies of scale** will, in all probability, make batteries more affordable.

- 5. In the meantime, corporates who want to procure EV fleets may find leasing as a more attractive option than purchasing these vehicles. This trend is likely to make the <u>way for a secondary</u> financing market.
- 6. As a new business model, few EV manufacturers and original equipment manufacturers (OEMs) are in the planning phase for offering the option to purchase the vehicle and separately lease the battery which typically needs to be replaced after 7-10 years.
- 7. In addition, third-party players have started to develop battery-as-a-service business models focused on **bringing more moderately-priced battery** replacement solutions to the public.
- 8. <u>Moreover, the market also holds opportunities to repurpose and recycle EV batteries.</u> A typical EV battery, after being removed, retains the power capacity of 50-70%.
- 9. This has the <u>potential to be repurposed for tasks</u> such as power backup, renewable-energy storage and grid stabilisation. Upon completion of a battery's second life, the **final stage is recycling**.

EV charging stations operators:

In terms of EV charging stations, although there are many infrastructure operators in India, a <u>standard</u> business model is yet to be established.

Utilities, oil majors, network operators and software developers are also becoming active in the market to get the early-mover advantage.

More than operations and maintenance, **installation services** can serve as the primary revenue driver in this market.

Many state utilities are <u>offering special tariffs/plans for retailing electricity for EV charging</u>, while operators of charging networks typically provide charging station hardware, cloud-based software services, technical support and other electric vehicle supply equipment (EVSE) management services, such as payment processing.

Conclusion:

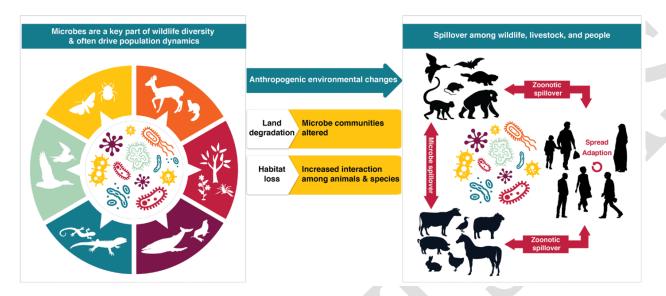
As India has demonstrated its leadership in compact cars and the SUV segment, the stage is set for Indian manufacturers to get a **global EV product on the same lines where affordability, efficiency and size become India's differentiator.**

<u>Affordable</u>, accessible, inclusive and safe mobility solutions are primary strategic levers for <u>rapid</u> economic development and improving 'Ease of Living'.

Establishing the right coordination among three pillars of EV industry <u>viz. urban planning</u>, <u>transportation and power sectors will assist in systematic adoption of EVs.</u>

Even the largest global EV OEM is taking about a compact mass-market car **to expand its footprint in the market.**

4.This is how we prevent future pandemics, say 22 leading scientists



Context:

The emergence of COVID-19 in late 2019 as a major global pandemic is part of a pattern of disease emergence that highlights linkages among biodiversity, global environmental change and human health.

COVID-19 and other pandemics are **rooted in biodiversity**. They are caused by micro-organisms that are themselves a **critical part of biodiversity** and are **hosted and transmitted by diverse animal species**, including humans

- 1. COVID-19 is the latest in a series of diseases that are **caused by wildlife-origin viruses** and have emerged due to **anthropogenic environmental changes** that bring wildlife, livestock and people into closer contact
- 2. These diseases include SARS, Ebola and Nipah virus disease, Zika and influenza, and reflect a predominance of zoonotic (animal origin) viral diseases among the emerging infectious diseases affecting people over the last few decades.

Over the past few years, a series of scientific papers have been published that suggest the **same environmental changes** that **threaten biodiversity loss on a global scale** (e.g. land use change, such as deforestation or encroachment into wildlife habitat; climate change; unsustainable trade and consumption of wildlife; agricultural intensification; globalized trade and travel) are also driving the increasing spill over, amplification and spread of these novel viral diseases.

Relationship between people and biodiversity underpins disease emergence:

There are <u>clear links between pandemics and biodiversity</u>. New pathogens usually emerge from a 'pool' of previously undescribed, potentially zoonotic microbes that have co-evolved over millions of years with their wildlife hosts.

The diversity of microbes likely increases proportionally with the biodiversity of their hosts. RNA viruses are particularly important as emerging pathogens because they have high mutation rates, undergo recombination and have

other characteristics allowing them to evolve diverse assemblages over time 19-21.

An estimated <u>1.7 million viruses occur in mammals and water birds</u> (the hosts most commonly identified as origins of novel zoonoses), and of these, 631,000-827,000 could have the ability to infect humans.

This far exceeds the current catalogued viral diversity from these hosts of less than 2,000 (even if lower estimates of viral diversity prove correct 23) and suggests that less than 0.1% of the potential zoonotic viral risk has been discovered.

Biodiversity loss: Increase transmission of microbes from animals to people:

On a global scale, the <u>emergence of new zoonoses correlates with wildlife (mammalian) diversity</u>, human population density and anthropogenic environmental change.

- 1. There is also evidence that <u>biodiversity loss may increase transmission of microbes from</u>
 <u>animals to people</u> under certain circumstances. The potential mechanisms are complex. For some microbes with multiple reservoir host species, certain hosts may play a more important role than others, i.e. have high 'competence'.
- 2. This may be because they are preferentially infected, produce and excrete more microbes, have higher contact rates, or otherwise contribute more to pathogen dynamics than low competence hosts.
- 3. Thus, in regions with high biodiversity a "dilution effect" may exist for some pathogens, whereby highly competent reservoirs represent a small proportion of the available reservoirs, and transmission risk to people is reduced.

Land use and climate change as drivers of pandemic risk and biodiversity loss:

Land use change is defined as the full or partial conversion of natural land to agricultural, urban and other human-dominated ecosystems, including agricultural intensification and natural resource extraction, such as timber, mining and oil. **Land use and climate change** are **two of the five most**

<u>important direct drivers of biodiversity loss</u>, and are projected to cause significant future threats to biodiversity and to continue driving the emergence of infectious diseases.

Changes in land use practices have benefited people through economic and social development, but have also damaged human health, driven biodiversity loss and impaired ecosystem functions and the provision of ecosystem services.

Land use change has increased exponentially since the industrial revolution, and through a 'Great Acceleration' of Earth System indicators that is considered to mark the beginning of the Anthropocene.

Between 1992 and 2015, agricultural area increased by 3% (~35 million ha), mostly converted from tropical forests 124. By 2015, human use directly affected more than 70% of global, ice-free land surface: 12% converted to cropland, 37% to pasture and 22% as managed or plantation forests.

The remaining land with minimal human use consisted of 9% intact or primary forests, 7% of unforested ecosystems and 12% of rocky or barren land. With continued growth in global human population (a 30% increase from 6 billion in 1999 to 7.7 billion in 2019) and global consumption (a 70% increase in global GDP from US\$84 trillion in 1999 to \$142 trillion in 2019).

The trend of increased land use change is expected to continue, with potentially 1 billion ha of land cleared globally by 2050.

Way forward to reduce zoonotic diseases:

- 1. Linkages among consumption, livestock farming, health, habitat destruction, climate change and emerging diseases have led to a number of calls for taxation to act as an incentive to reduce consumption and provide resources to tackle these negative consequences.
- These include calls for: a 'meat tax' on traded meat or meat products to fund zoonotic disease surveillance and prevention from a US Institute of Medicine Committee, and analysis of taxation options;
- 3. A tax on meat consumption to provide <u>incentives to reduce climate change</u>; a tax on red and processed meat to reduce the direct health consequences of meat over-consumption; and
- 4. A <u>review of a 'livestock levy' option</u> to tackle infectious disease threats including the rise of antimicrobial resistance and climate change.
- 5. <u>Conservation programs</u> that aim to conserve intact habitat, reduce land use change by sustainably <u>managing land and reverse ecosystem degradation</u> by restoring forest and other intact habitats may reduce the risk of disease emergence if they also reduce contact among people, livestock and wildlife.
- 6. <u>Restoration programs</u> that are designed to <u>increase wildlife movement</u> among patches of landscape (e.g. formation of wildlife corridors), or to <u>create 'mosaic' landscapes</u> of wildlife,

livestock and human communities, could increase zoonotic disease risk by increasing contact and microbial transmission among animals and people.

7. This is supported by modelling studies of <u>corridor building and forest fragmentation</u> as well as empirical studies of <u>fragmented habitat mosaics</u>.

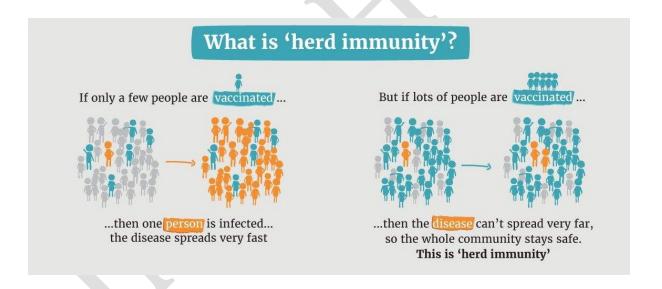
Conclusion:

<u>Wildlife and microbial diversity, human populations, domestic animals and landscapes are **strongly** <u>interconnected</u>, with complex dynamic feedbacks that can drive or reduce pathogen transmission.</u>

Microbes that exploit these interactions can infect any of these populations separately, and sometimes more than one. Their emergence begins with anthropogenic drivers, and their impacts can be exacerbated by human activities.

Furthermore, reducing pandemic risks substantially through <u>better management of environmental</u> resources would cost 1-2 orders of magnitude less than <u>estimates of the economic damages caused by</u> global pandemics.

5. Challenges in achieving herd immunity through vaccination



Context:

On December 1, Health Secretary said that the government has never spoken about vaccinating the entire country against COVID-19.

Adding to that, Director-General of ICMR said: "If we're able to vaccinate a critical mass of people and <u>break virus transmission</u>, then we may not have to vaccinate the entire population."

The government's idea of <u>vaccinating a "critical mass of people"</u> for the purpose of <u>breaking the virus</u> <u>transmission chain</u> is riddled with challenges.

Clarity about Herd Immunity:

- 1. Herd immunity (or community immunity) occurs when a <u>high percentage of the community is</u> <u>immune to a disease</u> (through vaccination and/or prior illness), <u>making the spread of this disease</u> <u>from person to person unlikely.</u>
- 2. Even individuals not vaccinated (such as new borns and the immunocompromised) are offered some protection because the disease has little opportunity to spread within the community.
- 3. <u>Vaccines prevent many dangerous and deadly diseases</u>. In the United States, smallpox and polio have both been stamped out because of vaccination.
- 4. However, there are certain groups of people who cannot get vaccinated and are vulnerable to disease: babies, pregnant women, and immunocompromised people, such as those receiving chemotherapy or organ transplants.
- 5. For example, the earliest a baby can receive their first pertussis or whooping cough vaccine is at two months, and the earliest a child can receive their first measles vaccine is at one year, making them vulnerable to these diseases.
- 6. <u>Herd immunity depends on the **contagiousness of the disease**</u>. Diseases that spread easily, such as measles, require a higher number of immune individuals in a community to reach herd immunity.
- 7. <u>Herd immunity protects the most vulnerable members of our population</u>. If enough people are vaccinated against dangerous diseases, those who are susceptible and cannot get vaccinated are protected because the germ will not be able to "find" those susceptible individuals.

Breaking the transmission chain through vaccination:

Unlike the mRNA vaccines from Pfizer and Moderna, the interim analysis of Phase-3 trial of the Oxford vaccine has shown <u>promise to prevent virus transmission.</u>

But the prime objective of the Phase-3 trials was to test the ability to prevent severe disease.

It is only when the final analysis of Phase-3 data of the Oxford vaccine and other vaccines in development become available can the government be certain of breaking the transmission chain through vaccination.

We need a clear enunciation of the plan. If it is to vaccinate a subset of the population, <u>we need to see</u> a scientific rationale for that choice, and how the decision to select the subset was made.

Uneven transmission of virus spreading:

- 1. For instance, the **levels of immunisation** needed for **herd immunity** are determined by <u>how the</u> virus spreads in the population, and makes the assumption that spread is homogenous.
- 2. But SARS-CoV-2 virus spread exhibits a <u>high level of uneven transmission</u>. This is the reason why there have been a **number of super-spreading events** where some infected individuals spread the virus to very a large number of people while most infected individuals transmit the virus only to a few or none.
- 3. While targeted vaccination of sex workers and injection drug users, where more HIV cases are seen, can <u>help prevent the virus from spreading to the general population</u>, such concentration of cases is not seen in the case of coronavirus.
- 4. Unlike HIV, for SARS-CoV-2 we do not have any such groups. Even healthcare workers with PPE now have low levels of transmission so much so that many countries are thinking about not prioritising them.
- 5. Considering that two doses of the vaccine are needed for full protection and <u>increased vaccine</u> <u>hesitancy</u> particularly as the vaccine development and testing are seen to be rushed, <u>achieving</u> <u>herd immunity of 70% to break the chain would be challenging.</u>
- 6. It was only in January this year that India achieved 90% coverage of all vaccines to be given in infancy.
- 7. If there is a drop in vaccine coverage in children beyond their first year of life in the immunisation programme, it becomes particularly difficult in the case of SARS-CoV-2.

Ethical challenges in identifying the high-priority groups:

- 1. Considering that the government has already listed out the **high-priority groups** that will **receive the vaccine**, the issue of choosing other sections of the population that needs to be vaccinated to **achieve herd immunity** will be **ethically challenging**.
- 2. **Objective, transparent processes** for making priority-setting decisions are extremely important to maintain trust in the vaccination plans.
- 3. These should be **communicated publicly**, including the rationale for the choices, and there should be a mechanism of appeal. Public inputs are crucial.
- 4. Incidentally, the intent behind identifying the high-priority groups to receive the vaccine first was to safeguard them <u>from severe disease and not to break the virus transmission chain</u>.
- 5. Breaking the chain of transmission with partial vaccination of populations is not a concept.
- 6. <u>Control of transmission requires either very high levels of coverage or combining vaccination at a reasonable level with well implemented testing and isolation.</u>

7. The **purpose for prioritisation** was to protect those at risk of severe disease first and then move to lower risk groups.

Conclusion:

<u>Clinical trials test the efficacy of the vaccine</u>, while the actual effectiveness of the vaccine will be known only when a large number of people are vaccinated post-licensure.

Also, the duration of protection is not known and hence how frequently the vaccine has to be administered remains unknown.

It is critically important to understand these to make sure that **no resources** are **diverted** from existing immunisation programmes that need to continue.

For a disease where everyone is equally affected, <u>immunisation should be available to all when</u> vaccines are ready. It is important to remember that vaccines are a tool to promote health equity.

Those who have had mild or no symptoms either due to low viral inoculation dose or with better immune response, or both might respond better with vaccination.

If the **goal is to achieve herd immunity**, we will **need about 70% of the population to be covered**. Unlike other infections where groups which have high risk of transmission can be identified, the <u>task is complicated</u> for SARS-CoV-2.

6.Rethinking waste management: Improving governance in India's North East



Introduction:

In recent years <u>municipal solid waste (MSW) management</u> has been one of the most environmental concerns for all urban areas of India.

Most of the urban centres have neither adequate land nor any facility for MSW disposal. In view of scarcity of lands for making landfill sites, solid wastes can be used for energy recovery resulting in volume reduction, thus requires less area for its disposal.

North East India is the land of rising sun and has an abundance of fresh water sources.

India's North East is perhaps the **greenest region in India**, abundant with fresh water. The **pristine nature and clean water** have often been the talk of the town.

But that may not remain so in the coming days.

The <u>world's largest, fully habituated river island Majuli</u> is situated in the **middle of Brahamputra**, with the **Kaziranga National Park** touching Jorhat and Nagaon.

Yet, none of these places have any waste management system or a waste water treatment plant.

Waste management system in North-East:

The <u>waste accumulates in rivers, lakes, ponds and wetlands</u>. The situation is conspicuous in almost in all cities and towns in the North East, except in a few villages such as Mawlynnong and Rangsapara.

This has led to <u>serious public health concerns</u>. At least 85 per cent of the waste in the North East is unceremoniously dumped, <u>without processing and treatment in the Ganga, Yamuna and Brahmaputra.</u>

The <u>waste is burned in environmentally sensitive areas</u> including river banks, wetlands, forests and water bodies.

Several dumpsites in India's north-eastern states are located at wetlands or river banks.

If the <u>Municipal Solid Waste Management Rules, 2016</u> are implemented in letter and spirit, **more than 12,000 jobs** can be created in these towns.

If extended to all villages, nearly 40,000 jobs related to door-to-door collection, composting and recycling value chain can be created. This will help improve the **wellbeing of nearly 50 million people**.

But municipalities in the North East <u>lack the technical know-how</u>. There is also a <u>lack of political</u> <u>commitment</u> from the local elected representatives. Some staff members <u>lack adequate training and</u> <u>exposure.</u>

Most trainings are organised for commissioners and engineers but seldom for collection staff or sanitary supervisors.

The following myths further aggravate the conundrum of mismanagement:

More money, more staff required:

- 1. Most municipalities in India as well as other developing nations argue that there is a need for more financial and human resources to cater to growing urban waste problem.
- 2. But were these cities any cleaner when rapid urbanisation had not occurred? No.

Case study: cleanest cities of India:

- 1. If we look at the **top five cleanest cities of India**, did they do it because they received money for the work? No.
- 2. Surat, Suryapet, Namakkal, Nagpur, Latur, Indore, Warangal, Saluru, Mysuru, Bobbili, Coimbatore and Alappuzha made their cities cleaner without a lot of additional resources.
- 3. It was and is sheer power of what called as <u>commitment</u>, <u>honesty</u>, <u>will power</u>, <u>passion for cleanliness and high moral values of the commissioners and mayors</u>.

State of the art technology:

- 1. The bigger the state of art technology is, the higher the chances of collection and processing failure for countries.
- 2. They want compactors, tippers, waste incineration, pyrolysis, plasma arc plants because all of them require big investment that translates into bigger commissions.
- **3.** Any agency that receives a contract from a municipality needs to offer a bribe to get their bills approved. The *failure of "bigger is better" technology in India is conspicuous*.
- 4. The solution for India lies in <u>strengthening the existing system</u> and <u>integrating the informal sector in collection and recycling.</u>
- 5. The informal sector can remove more than 60 per cent of inorganic waste from dumpsites with little investment and save more energy through recycling.

Big contractors, local or multi-nationals can help:

- 1. In the name of **providing integrated solid waste management**, there is often an inclination to call tenders that favour large companies, including putting certain harsh conditions that keep the small but good players out.
- 2. But experience from the last 15 years has not given any such evidence. None of the cities figured in the cleanest city of the country when it employed these large companies in last two decades.
- 3. The cities mentioned above did **not employ any large contractors**. They <u>relied on good local players</u>, including self-help groups for women, waste picker cooperatives or even local non-profits and small contractors.

4. A lack of municipal by-laws or enforcement of penalties regarding littering and non- segregation are the two worst forms of waste governance deficits. If you do not enforce it, you can never keep your city clean for long time.

Is there a link between cleaner cities and corruption-free cities?

Corruption vs cleaner cities:

- 1. Look at the top 10 cleanest cities of the world: Calgary, Honululu, Helsinki, Kobe, Oslo, Adelaide, Brisbane, Wellington etc. Now look at their corruption index.
- 2. They figure in the top 20 least corrupt cities of the world. There is a <u>close link between good</u> waste governance and cleaner cities; India in general is no exception to it.
- 3. Assam needs to reform its municipal governance along with building capacity of the lower staff of the municipal systems.
- 4. The Swachh Bharat Mission will not succeed as long as we do not see commitment **from the** administration.
- 5. **Corruption in public services** is not only the **worst form of disease**, but also has a **direct impact on the lives of all citizens** who deserve better living conditions.

Way Forward:

For the successful running, the plant needs to ease the challenge of handling inorganic waste, the efficiency of organic waste processing/composting plants.

With the increasing waste generation in the coming years, there is a need for more such plants which are environment friendly.

It is important that <u>Bio-mining and Bio-remediation is made compulsory</u> for areas wherever it can be applied.

It shouldn't be left to the discretion of municipalities to decide whether there are geographical constraints that prevent the use of the aforementioned techniques.

It is important that <u>waste management is decentralized</u>. Ambikapur in Chhattisgarh and Vellore present a very good example of the same where the waste was collected in a decentralized manner, composted naturally and is planted.

Conclusion:

<u>Article 51 A (g) of the Constitution of India</u> makes it a **fundamental duty** of every citizen of India to protect and improve the natural environment including forests, lakes, rivers, and wildlife, and to have compassion for living creatures.

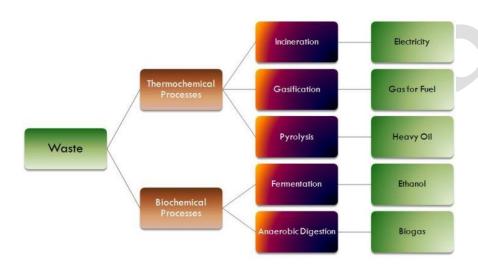
Developed countries like Singapore, Switzerland, the United States are not clean because its population is educated or disciplined, it is the fear of laws that makes it work.

It is important that **people must learn to pay for services**. The provision for payment for waste services are there in the laws but are not enforced because of objections by politicians. Surveys suggest that people will pay segregate their waste if there are systems in place.

They are reluctant to object to service fee because municipalities have never provided that kind of **efficient and quality services**, that one can go and ask for service fee for SWM.

If citizens want good services and improving their own wellbeing, they must learn to pay.

7. Converting waste to energy



Context:

Recently, Karnataka Chief Minister laid the foundation stone for a **11.5 MW waste-to-energy plant** near Bidadi.

This plant is expected to process <u>600 tonnes per day of inorganic waste</u>. Bengaluru generates close to 5,000 tonnes of waste daily, of which about 2,500 tonnes is organic, about 1,000 tonnes inert material (sweeping waste) and 1,500 tonnes inorganic.

This **inorganic material**, which consists of bad quality plastics and used cloth pieces, can be processed as **Refuse Derived Fuel (RDF)**.

This material has a calorific value of more than 2,500 kJ/kg, and can be used to generate steam energy, which can be **converted into electric energy** instead of burning coal and other materials used in traditional waste-to-energy plants.

What are wastes to energy plants?

Waste-to-Energy (WtE) or Energy-from-Waste (EfW) is a form of energy recovery and the <u>process of</u> generating energy in the form of electricity and/or heat by processing of waste into a fuel source.

Modern waste-to-energy plants are very different from the trash incinerators as the latter plants usually did not remove hazardous or recyclable materials before burning.

Most waste-to-energy plants **burn municipal solid waste**, but some burn industrial waste or hazardous waste.

A modern, properly run waste-to-energy plant sorts material before burning it and can co-exist with recycling.

Waste-to-energy plants are similar in their design and equipment with other steam-electric power plants, particularly **biomass plants**.

A few plants use gasification, but most combust the waste directly **because it is a mature, efficient technology.**

A well-planned plant:

In the context of climate change, focus on renewable source of energy and burgeoning population, the Waste to Energy's approach is <u>needed to address the growing energy need in a sustainable way</u>. However, it is also important to ensure their effectiveness.

The waste-to-energy plants usually accept the RDF material generated in organic composting plants. They also <u>segregate the wet and inorganic material near the plant, convert organic waste to compost, and inorganic waste to energy</u>.

Typically, about 50 tonnes of RDF generate 1 MW of power, which indicates that the plant at Bidadi has been appropriately designed.

Although about 30%-40% of the material received is segregated organic waste and the remainder is mixed waste, the latter consists of about 40% inorganic waste which can be converted into RDF.

Handling inorganic waste that is not fit for recycling has always been a challenge.

Benefits of wastes to energy plants:

- 1. In terms of volume, usually waste-to-energy plants <u>incinerate 80 to 90 percent of waste</u>, thus helping large cities from choking due to unmanageable waste.
- 2. Most wastes that are generated find their way into land and water bodies without proper treatment, causing severe water and air pollution.

- 3. Waste to energy generates <u>clean, reliable energy from a renewable fuel source</u>, thus reducing dependence on fossil fuels, the combustion of which is a major contributor to Greenhouse Gas (GHG) emissions.
- 4. Sometimes, the **residue ash is clean enough** to be used for some purposes such as raw materials for use in manufacturing cinder blocks or for road construction.
- 5. In addition, the metals that may be burned are collected from the bottom of the furnace and sold to foundries.
- 6. <u>Some waste-to-energy plants convert salt water to potable fresh water as a by-product of cooling processes.</u>
- 7. Waste-to-energy plants cause less air pollution than coal plants.
- 8. It is <u>carbon-negative processing waste into biofuel</u> releases considerably less carbon and methane into the air than having waste decay away in landfills or the lake.

Challenges faced in installing Waste-to-Energy plants:

- 1. Over the last decade, several Indian cities have been trying to set up such plants but a good demonstration model is <u>yet to be established</u>.
- 2. **Technology suppliers** are international organisations who struggle with the **change in quality** and nature of waste generated in Indian cities. A few plants in India have stopped operations for this reason.
- 3. Waste-to-Energy is still a new concept in India. Most of the proven and commercial technologies in respect of urban wastes are required to be imported.
- 4. The costs of the projects are high as critical equipment for a project is required to be imported.
- **5.** In view of low level of compliance of Solid Waste Management Rules, 2016 by the Municipal Corporations/ Urban Local Bodies, segregated municipal solid waste is generally **not available at the plant site**, which leads to **non-availability of waste-to-energy plants.**
- 6. Lack of financial resources with Municipal Corporations/Urban Local Bodies.
- 7. <u>Lack of conducive policy guidelines from State Governments</u> in respect of allotment of land, supply of garbage and power purchase / evacuation facilities.
- 8. The quality of waste generated in Bengaluru itself could be a hurdle. The plants require fine inorganic material with less than 5% moisture and less than 5% silt and soil contents, whereas the moisture and inert content in the mixed waste generated in the city is more than 15%-20%.
- 9. Since <u>segregation at source doesn't happen in the city</u>, the collected waste material needs to be sieved using 80mm-100 mm sieving machines, which lets through organic material with more than 80mm-100 mm particle sizes into the **inorganic waste**.

- 10. In addition, the sticky silt and soil particles can also reduce the calorific value.
- 11. The other big challenge for this plant is **the power tariff.** Generally, the tariff at which the power is purchased by such plants across the country is around Rs.7-8 KwH which is higher than the Rs.3-4 per KwH generated through coal and other means.
- 12. This could be a serious challenge to KPTCL as the selling price of power cannot be increased corresponding to the purchasing price.

Conclusion:

If the plant eases the challenge of handling inorganic waste, the efficiency of organic waste processing/composting plants would become better.

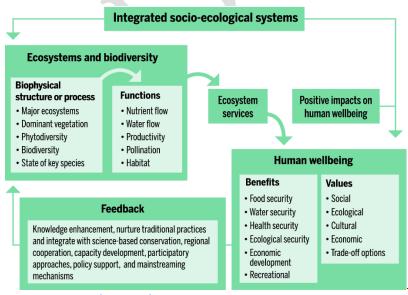
If it is successful, the city would require three more waste-to-energy plants of similar size or six plants of smaller size considering the potential to recover 2,500-3,000 tonnes per day RDF in the coming years.

Urban local bodies (ULBs) should invest in preparing an action plan on waste management in accordance with the Solid Waste Management (SWM) rules, 2016 within a **time-bound approach** and promote and adopt the key elements of waste hierarchy as **refuse**, **reduce**, **reuse**, **recycle and recover**.

It is also important to focus on segregation at source, spreading awareness, preparing an action plan for the city for waste management by adopting decentralised technologies.

This will not only improve effectiveness of Waste To Energy's, but will also **ensure protection** and improvement of **our environment** as envisaged in **Article 51 A(g)** of our Constitution.

8. Hazardous ideas for the Himalayas



Context:

China announced that it is planning to build a **major hydropower project** as a part of its 14th Five-Year Plan (2021-25), on the **Yarlung Zangbo River**, in Medog County in Tibet.

The hydropower generation station is expected to provide 300 billion kWh of electricity annually. The Chinese authorities say the project will help the country <u>realise its goal of reaching a carbon emission</u> peak before 2030 and carbon neutrality before 2060.

China hydropower company plans first downstream dam on Brahmaputra:

Chinese hydropower company to construct the first downstream dam on the lower reaches of the **Brahmaputra river**, or **Yarlung Zangbo** as it is known in Tibet, marking a new phase in China's hydropower exploitation of the river with potential ramifications for India.

A report in the Chinese media said the State-owned hydropower company POWERCHINA had last month signed "a <u>strategic cooperation agreement</u>" with the Tibet Autonomous Region (TAR) government to "implement hydropower exploitation in the downstream of the Yarlung Zangbo River" as part of the new Five-Year Plan (2021-2025).

India has expressed concerns to China over the four dams on the upper and middle reaches, though Indian officials have said the dams are not likely to impact the quantity of the Brahmaputra's flows in India greatly because they are only storing water for power generation and the Brahmaputra is not entirely dependent on upstream flows with an estimated 35% of its basin is in India.

<u>A dam at the Great Bend</u>, if approved, would raise fresh concerns considering its location downstream and just across the border from Arunachal Pradesh.

Hydroelectric dams in Himalayan Eco-sensitive zones:

Over the past 20 years, both China and India have been competing with each other to **build hydroelectric dams** in this **ecologically fragile and seismically vulnerable area**.

There are two hydropower projects in the works in **Arunachal Pradesh** on the **tributaries of the Brahmaputra**: the 600 MW **Kameng project** on the **Bichom and Tenga Rivers** and the 2,000 MW **Subansiri Lower Hydroelectricity Project**.

On the other side of the border, China has already completed 11 out of 55 projects that are planned for the Tibetan region.

In executing these hydroelectric projects at a maddening pace, the two countries overestimate their economic potential and grossly underestimate the earthquake vulnerability of the region.

Seismic ground shaking and slope gradients results in Earth quakes and Landslides:

- 1. The **1950 earthquake** just south of the McMahon Line was of 8.6 magnitude. It was the **largest continental event** ever recorded, and devastated Tibet and Assam.
- 2. The earthquake killed thousands, and caused extensive landslides, widespread land level changes and gaping fissures. It resulted in water and mud oozing in the Himalayan ranges and the upper Assam valley. This dammed the rivers.
- 3. Later the dams were breached generating flash floods in the downstream sides, seriously silting the drainage systems. The earthquake was felt over an extensive area comprising parts of India, Tibet, erstwhile East Pakistan and Myanmar.
- 4. This event gives us grim pointers of what we can expect in the north-eastern bend of the Himalayas if a similar event was to take place in the background of the fast-developing hydro projects.
- 5. To take a more recent example, the **2015 Gorkha earthquake of magnitude 7.8 in central Nepal** resulted in huge losses in the hydropower sector.
- 6. Nepal lost about 20% of its hydropower capacity consequent to the earthquake. About 30 projects with a capacity of 270 MW, mostly located along the steep river valleys, were damaged. The cost of physical damage is calculated to be about \$200 million.
- 7. The study published in a 2018 paper in Geophysical Research Letters, by Wolfgang Schwanghart and others, for example, is quite revelatory on the earthquake-borne damage sustained by hydropower projects in Nepal.
- 8. The main mechanisms that contributed to the **vulnerability of hydropower projects** were **found to be landslides**, which depend on the <u>intensity of seismic ground shaking and slope gradients.</u>
- 9. <u>Heavy siltation from giant landslides expected in the project sites and headwater region from future earthquakes will severely reduce the water-holding capacity and life expectancy of such dams.</u>
- 10. Even without earthquakes, the steep slopes made of soft rocks are bound to slide due to deforestation and road-building. These activities will get intensified as part of the dam-building initiatives.
- 11. Desilting of dams is not an economically viable proposition and is technologically challenging.
- 12. From these perspectives, the <u>northeast Himalayan bend with its deep gorges</u> is the <u>most unsuitable locale</u> within the Himalayas for giant dams.
- 13. Also, we do not know how reservoirs with their water load would alter the existing stresses and strains on the earth's crust in the long term, impacting the frequency of earthquakes and their mechanisms.

Importance of Himalayas and suggestions by author:

- 1. The Himalayan range is a **transnational mountain chain** and is the **chief driver of the Asian climate.**
- 2. It is a source for numerous Asian river systems and glaciers which are now under the threat of degradation and retreat due to global warming; these river systems provide water for billions of people.
- 3. This legacy of humanity has now become highly contentious with territorial disputes between two nuclear powers India and China.
- 4. The ongoing low-level military confrontations between these two countries have led to demands for further infrastructural development on both sides, including all-weather roads, much to the peril of regional biodiversity and the livelihoods of the indigenous population.
- 5. **High seismic zones** coincide with areas of **high population concentration** in the Himalayan region where landslides and glacial lake outburst floods are common.
- 6. About 15% of the great earthquakes of the 20th century (with a magnitude of more than 8) occurred in the Himalayan region.
- 7. The northeast Himalayan bend has experienced several large earthquakes of magnitude 7 and above in the last 100 years, more than the share from other parts of the Himalayas.
- 8. In a **recent article in Nature**, Maharaj K. Pandit, a Himalayan ecologist, says in recent years, the Himalayas have seen the <u>highest rate of deforestation and land use changes</u>.
- 9. He suggests that the upper Himalayas should be converted into a **nature reserve** by an **international agreement**. He also says the possibility of a Himalayan River Commission involving all the headwater and downstream countries needs to be explored.

Conclusion:

According to author, India and China both ignore <u>how unviable such 'super' dams projects are</u>, given that they are being <u>planned in an area that is geologically unstable</u>.

It is high time that India and China sat together to deliberate on the <u>consequences of such</u> <u>misadventures in an area where **massive earthquakes** are bound to take place.</u>

Rather than engaging in **unsustainable dam-building activities**, India and China, the major players in the region, would be <u>well advised to disengage from military adventurism</u> and seek ways of <u>transforming this 'roof of the world'</u> into a <u>natural reserve for the sake of humanity.</u>

<u>Carbon neutrality should not be at the expense of the environment.</u>

9.Keeping secrets in a quantum world and going beyond



Introduction: Encryption of Data in normal computers:

Every online transaction we make with another person is **protected** so that a third person cannot read it <u>without the permission of the two people exchanging the information in the first place.</u> This process is called **encryption of the data**.

In the time of the classical computer, the lock in question consists of a problem that is mathematically hard for the computer to solve.

For example, Alice takes a two very large prime numbers, that is, numbers that are only divisible by themselves and by one. She multiplies the two and creates an even larger number.

She uses this number to encrypt or lock her message to Bob. Kate, now is in trouble because, in order to break the lock, she has to factorise a very large number whose factors are large prime numbers.

This is difficult because if the prime factors are large enough, the problem becomes very difficult to crack for a classical computer. It would take the classical computer "exponentially large" time to guess the factors.

This mathematical problem known as **integer factorisation** is one of the methods presently **used to encrypt our secret or private messages**.

There are other methods using the so-called **discrete logarithm problem**, which again would take a normal computer exponentially large time to crack.

What is quantum computing?

- 1. An ordinary computer chip **uses bits.** These are like tiny switches, that can either be in the off position represented by a zero or in the on position represented by a one.
- 2. Every app you use, website you visit and photograph you take is <u>ultimately made up of **millions**</u> of these bits in some combination of ones and zeroes.
- 3. This works great for most things, but it doesn't reflect the way the universe actually works.
- 4. In nature, things aren't just on or off. **They're uncertain**. And even our best supercomputers aren't very good at dealing with uncertainty. That's a problem.
- 5. That's because, over the last century, physicists have discovered when you go down to a really small scale, weird things start to happen.
- 6. <u>They've developed a whole new field of science to try and explain them. It's called **quantum** mechanics.</u>
- 7. Quantum mechanics is the foundation of physics, which underlies chemistry, which is the foundation of biology.
- 8. So, for scientists to accurately simulate any of those things, they need a better way of making calculations that can handle uncertainty. Enter, quantum computers.

What is the difference with Quantum computing?

- 1. <u>Classical bits can take the value 0 or 1</u>, allowing for a binary system to be set up and the lowest level of computer language is done manipulating these bits.
- 2. A qubit on the other hand can <u>exist as a superposition of two states 0 and 1</u>. So if you have an n-qubit number, <u>it can exist as a superposition of 2n states</u>. This also <u>allows for immense</u> amount of parallel processing.
- 3. Hence the question of whether these problems which are "hard" for the classical computer become <u>easier for a quantum one has the disturbing answer yes</u>.
- 4. So, a **new cryptography** has to be devised, and that is where IIT Madras professor, Shweta Agrawal's work comes into play.
- 5. She works not just with **quantum cryptography** but with **post quantum cryptography** a field which deals with **additional possibilities** offered by a quantum system, which goes <u>beyond being</u> <u>able to break the integer factor code</u>.

What makes a quantum computer so powerful?

In their <u>research paper published in the journal Nature</u>, scientists have announced that their **Sycamore computer** has solved a problem that is considered intractable for classical computers.

This was achieved by developing architecture of what is **known as "qubits**".

"Qubits" is short for "quantum bits", which are to quantum computers what bits are to traditional computers.

The more the number of qubits, the higher the amount of information, which increases exponentially compared to the information stored in the same number of bits.

Top Applications of Quantum Computing:

Computational Chemistry:

- 1. IBM, once said, one of the most promising quantum computing applications will be in the field of computational chemistry.
- 2. It is believed that the number of quantum states, even in a tiniest of a molecule, is extremely vast, and therefore difficult for conventional computing memory to process that.
- 3. The ability for quantum computers to focus on the existence of both 1 and 0 simultaneously could provide immense power to the machine to successfully map the molecules which, in turn, potentially opens opportunities for pharmaceutical research.
- 4. Some of the **critical problems** that could be solved via quantum computing are **improving the nitrogen-fixation process** for creating ammonia-based fertilizer; creating a room-temperature superconductor; removing carbon dioxide for a better climate; and creating solid-state batteries.

Drug Design & Development:

- 1. **Designing and developing a drug** is the most challenging problem in quantum computing.
- 2. Usually, drugs are being developed via the trial and error method, which is not only very expensive but also a risky and challenging task to complete.
- 3. Researchers believe quantum computing can be an effective way of understanding the drugs and its reactions on humans which, in turn, can save a ton of money and time for drug companies.
- 4. These advancements in computing could **enhance efficiency dramatically**, by allowing companies to carry out **more drug discoveries** to uncover new medical treatments for the **better** pharmaceutical industry.

Cybersecurity & Cryptography:

1. The **online security space** currently has been **quite vulnerable** due to the **increasing number of cyber-attacks** occurring across the globe, on a daily basis.

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- 2. Although companies are establishing **necessary security framework** in their organisations, the process becomes daunting and impractical for classical digital computers.
- 3. And, therefore, **cybersecurity** has continued to be an **essential concern** around the world.
- 4. With our increasing dependency on digitisation, we are becoming even more vulnerable to these threats.
- 5. Quantum computing with the help of machine learning can help in developing various techniques to combat these cybersecurity threats. Additionally, quantum computing can help in creating encryption methods, also known as, quantum cryptography.

Financial Modelling:

- 1. For a finance industry to find the <u>right mix for fruitful investments</u> based on expected returns, the risk associated, and other factors are important to survive in the market.
- 2. To achieve that, the <u>technique of 'Monte Carlo'</u> simulations is continually being run on conventional computers, which, in turn, <u>consume an enormous amount of computer time</u>.
- 3. However, by applying quantum technology to perform these massive and complex calculations, companies can not only <u>improve the quality of the solutions</u> but also <u>reduce the time to develop them</u>.
- 4. Because financial leaders are in a business of handling billions of dollars, even a tiny improvement in the expected return can be worth a lot for them.
- 5. <u>Algorithmic trading</u> is another **potential application** where the machine uses complex algorithms to automatically trigger share dealings analysing the market variables, which is an advantage, especially for high-volume transactions.

Logistics Optimisation:

- Improved data analysis and robust modelling will indeed enable a wide range of industries to optimise their logistics and scheduling workflows associated with their supply-chain management.
- 2. The operating models need to continuously calculate and recalculate optimal routes of traffic management, fleet operations, air traffic control, freight and distribution, and that could have a severe impact on applications.
- 3. Usually, to do these tasks, conventional computing is used; however, some of them could turn into more complex for an ideal computing solution, whereas a quantum approach may be able to do it.

- 4. <u>Two common quantum approaches</u> that can be used to solve such problems are quantum annealing and universal quantum computers.
- 5. **Quantum annealing** is an advanced optimisation technique that is expected to surpass traditional computers.
- 6. In contrast, universal quantum computers are capable of <u>solving all types of computational problems</u>, not yet commercially available.

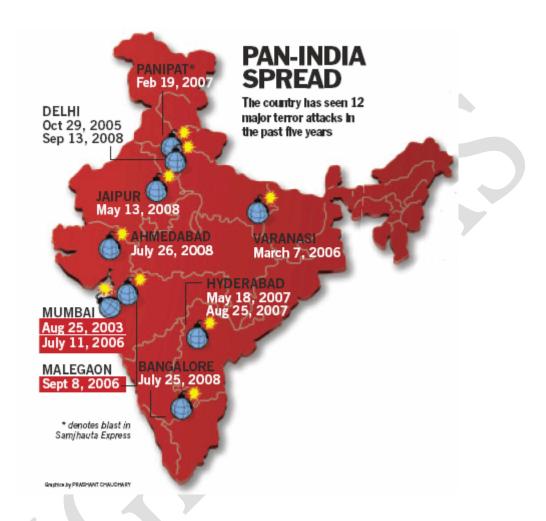
Weather Forecasting: predict the changing weather patterns:

- 1. Currently, the process of analysing weather conditions by traditional computers can sometimes take longer than the weather itself does to change.
- 2. But a quantum computer's <u>ability to crunch vast amounts of data</u>, in a short period, could indeed lead to <u>enhancing weather system modelling</u> allowing scientists to <u>predict the changing</u> <u>weather patterns</u> in no time and with excellent accuracy something which can be essential for the current time when the world is going under a climate change.
- 3. <u>Weather forecasting</u> includes several variables to consider, such as air pressure, temperature and air density, which makes it difficult for it to be predicted accurately.
- 4. Application of quantum machine learning can help in <u>improving pattern recognition</u>, which, in turn, will make it easier for scientists to predict extreme weather events and potentially save thousands of lives a year.
- 5. With quantum computers, meteorologists will also be able to generate and analyse **more detailed climate models**, which will provide **greater insight into climate change and ways to mitigate it.**

Conclusion:

Thus, it follows as: "In modern cryptography, not only can we create **locks on information** so that quantum computers **cannot break them**, we can <u>even **design the locks**</u> so that the information inside the locks can be manipulated without even opening the locks!"

10.We must never forget this grim anniversary



Context:

Mumbai, the financial capital of India and its busiest metropolitan city, has been a prime target for **terrorist attacks**.

In the last two decades, the number of terrorist attacks in Mumbai have caused over 700 fatalities.

On 26 November 2008, ten transnational terrorists attacked Mumbai, which included the busiest railway station in peak hour, five-star hotels, a café shop and hospitals.

The multiple attacks and control measures lasted for three days, leading to the deaths of over 149 people which included civilians, foreign nationals, security personnel and hospital staff.

The attack was a meticulously planned and executed act of terrorism where explosive devices and gunfire were used to cause the maximum number of casualties and lasted for 60 h.

This attack was therefore different from previous attacks which were serial blasts in Mumbai in 2006.

The modes of transport of patients were mainly taxis, handcarts, fire brigade vans, ambulances and private vehicles, assisted by local people. The in-hospital disaster plan was activated immediately, as large numbers of patients were expected.

Terrorism:

Terrorism is the <u>unlawful exercise of random and ruthless violence against property or individuals</u>, usually innocent civilians, in order to intimidate governments or societies for political or ideological purposes.

Terrorism is hardly a postmodern phenomenon. Several of the terror attacks in the 21st century reflect a paradigmatic change in the tactics of asymmetric warfare and the practice of violence.

Attacks carried out in different corners of the world by al-Qaeda and its affiliates, the Islamic State, al-Shabaab, and similar terror outfits, are very different from those witnessed in the previous century.

The tactics employed may vary, but the objective is common, viz. achieving mass casualties and widespread destruction.

26/11 Attack in Mumbai:

The 26/11 Mumbai terror attack was one of a kind and not a mere variant of previous instances of terrorist violence.

It was the rarest of rare cases, where one state's resources, viz. Pakistan's were employed to carry out a series of terror attacks in a major Indian city.

It was a case of 'war by other means', in which the authorities in Pakistan, the Inter-Services Intelligence Directorate, the Pakistani armed forces, were involved.

The Mumbai terror attack was not based on a sudden impulse. <u>Several years of planning and preparation had preceded the attack, even as the **peace talk was going on between India and Pakistan.**</u>

From an Indian standpoint, it was for the first time that an operation of this nature involved <u>Rapid Action Force personnel</u>, <u>Marine Commandos (MARCOS)</u>, the <u>National Security Guard (NSG)</u> and the Mumbai Police.

Work in progress in coastal areas:

Police forces have also been equipped with fast motorboats and anti-terror equipment.

<u>A continuous dialogue with the fishing and shipping agencies</u> has led to better coordination and fishing boats are being installed with Automatic Identification Systems.

More coastal police stations have been set up and CCTV cameras installed in several important places and in areas with high human density.

The Navy regularly coordinates joint exercises between these agencies. Our ships spend long days at sea extending our surveillance layers.

However, it is important to strike a note of caution here. The sea is essentially a fluid medium and one cannot build impregnable fences or walls on water.

Further, over-regulation can adversely impact freedom of navigation and trade.

<u>Coordination between multiple agencies</u> may lead to unintended communication gaps and inherent time delays. Many such creases need to be ironed out; our training, equipment and preparedness always need to be ahead of the curve. So, coastal security is a constant work in progress.

While the Navy will continue to patrol the seas and guard our coasts, it requires every citizen to be conscious, aware and vigilant.

Terrorism takes new forms:

Internet is often utilized to promote and support acts of terrorism, in particular with respect to propaganda (including for the purposes of recruitment, radicalization and incitement to terrorism), training and financing, planning and executing such acts.

Emphasis is also placed on the opportunities offered by the Internet to prevent, detect and deter acts of terrorism.

These may include the gathering of intelligence and other activities to prevent and counter acts of terrorism, as well as the gathering of evidence for the prosecution of such acts.

Counter-narratives and other strategic communications may be an effective means of disrupting the process of radicalization to extremist ideals, which may in turn be manifested through acts of terrorism.

A demonstrated understanding of the broader issues underpinning radicalization is also important in engaging in constructive dialogue with potential recruits to a terrorist cause, and in promoting alternative, lawful means to pursue legitimate political, social or religious aspirations.

Comprehensive Convention on International Terrorism:

- 1. Respect for human rights and the rule of law is an integral part of the fight against terrorism.
- 2. In particular, Member States reaffirmed those obligations in the United Nations Global Counter-Terrorism Strategy, recognizing that "effective counterterrorism measures and the protection of human rights are not conflicting goals, but complementary and mutually reinforcing".
- 3. The effective implementation of a **rule-of-law approach** to countering the use of the Internet for terrorist purposes must be continually assessed during all stages of counter-terrorism initiatives, from **preventive intelligence-gathering** to ensuring due process in the prosecution of suspects.

Objectives of CCIT:

- 1. To have a universal definition of terrorism that all 193-members of the UNGA will adopt into their own criminal law
- 2. To ban all terror groups and shut down terror camps
- 3. To prosecute all terrorists under special laws
- 4. To make cross-border terrorism an extraditable offence worldwide.
- 5. India condemned terrorism in its all forms and stressed that it requires a holistic approach and collective action to tackle it.
- 6. Despite India's efforts, the conclusion and ratification of the CCIT remains deadlocked, mainly due to opposition from three main blocs the US, the Organization of Islamic Countries (OIC), and the Latin American countries.
- 7. All three have objections over the "definition of terrorism" and seek exclusions to safeguard their strategic interests.
 - a. For example, the OIC wants exclusion of national liberation movements, especially in the context of Israel-Palestinian conflict.
 - b. The US wanted the draft to exclude acts committed by military forces of states during peacetime.

Global Counter-Terrorism Strategy:

Member States have resolved, pursuant to the Global Counter-Terrorism Strategy, to take urgent action to prevent and combat terrorism in all its forms and manifestations and, in particular:

- (a) To consider becoming parties without delay to the existing international conventions and protocols against terrorism, and implementing them, and to make every effort to reach an agreement on and conclude a **comprehensive convention on international terrorism**;
- (b) To implement all General Assembly resolutions on measures to eliminate international terrorism, and relevant General Assembly resolutions on the protection of human rights and fundamental freedoms while countering

terrorism;

(c) To implement <u>all Security Council resolutions</u> related to international terrorism and to cooperate fully with the counter-terrorism subsidiary bodies of the Security Council in the fulfilment of their tasks.

Conclusion:

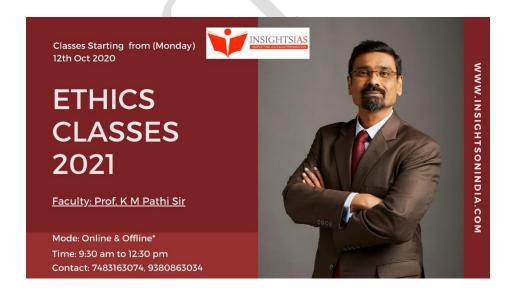
In addition to the resilience and resolve that we constantly demonstrate, let us also remind ourselves that eternal vigilance is indeed the price of liberty.

Dealing with the menace of terrorism would require a **comprehensive strategy** with involvement of different stakeholders, the Government, political parties, security agencies, civil society and media.

A strategy for fighting terror in India has to be evolved in the overall context of a national security strategy. To tackle the menace of terrorism, a **multi-pronged approach is needed.**

<u>Socio-economic development</u> is a priority so that vulnerable sections of society do not fall prey to the propaganda of terrorists promising them wealth and equity.







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