



# IAS PARLIAMENT

*Information is a Blessing*

A Shankar IAS Academy Initiative

## MONTHLY MAINSTORMING

NOVEMBER 2020

**Shankar IAS Academy™**

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**NOVEMBER 2020**

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**G.S PAPER I**

**1. GEOGRAPHY**

*Critically analyse the significance of day light saving time followed in various countries.*

**KEY POINTS**

**Daylight Saving Time (DST)**

- DST is the practice of resetting clocks ahead by an hour in spring, and behind by an hour in autumn (or fall). During these months, countries that follow this system get an extra hour of daylight in the evening.
- Because the spring to fall cycle is opposite in the Northern and Southern Hemispheres, DST lasts from March to October/November in Europe and the US, and from September/October to April in New Zealand and Australia.

**How many countries use DST?**

- DST is in practice in some 70 countries, including those in the European Union. India does not follow daylight saving time; countries near the Equator do not experience high variations in daytime hours between seasons.

**What does this system mean to achieve?**

- The rationale behind setting clocks ahead of standard time, usually by 1 hour during springtime, is to ensure that the clocks show a later sunrise and later sunset – in effect a longer evening daytime. Individuals will wake an hour earlier than usual, complete their daily work routines an hour earlier, and have an extra hour of daylight at the end. The key argument is that DST is meant to save energy.

**Countries that want DST gone**

- European Union moved to scrap the custom of DST, with the European Parliament voting 410-192. After 2021, EU member states will choose between “permanent summertime” or “permanent wintertime”. Those who choose the former will reset their clocks for the last time in March 2021; those who choose the latter would do so in October 2021.

*Discuss the significance of northeast monsoon for India. Why it has remained subdued this year?*

**Examine**

**KEY POINTS**

**Significance**

- India receives rainfall during two seasons. About 75 per cent of the country’s annual rainfall is received from the Southwest monsoon between June and September.
- The Northeast monsoon, on the other hand, occurs during October to December, and is a comparatively small-scale monsoon, which is confined to the Southern peninsula.
- Also called the winter monsoon, the rainfall associated with the Northeast monsoon is important for Tamil Nadu, Puducherry, Karaikal, Yanam, coastal Andhra Pradesh, Kerala, north interior Karnataka, Mahe and Lakshadweep.



### **How has the Northeast monsoon season been so far this year?**

- The India Meteorological Department (IMD) had forecast below normal rainfall over Tamil Nadu and normal rainfall over the southern peninsula for the current season.
- This year, the Southwest monsoon withdrew completely from the country on October 28, with a delay of a fortnight. On the same day, the IMD declared the onset of the Northeast monsoon over peninsular India.
- Officials at IMD have linked it to the prevailing La Niña conditions in the Pacific Ocean for deficient rainfall from northeast monsoon this year.

### **How is La Niña linked with the Northeast monsoon?**

- While La Niña conditions enhance the rainfall associated with the Southwest monsoon, it has a negative impact on rainfall associated with the Northeast monsoon.
- During La Niña years, the synoptic systems low pressure or cyclones formed in the Bay of Bengal remain significantly to the north of their normal position. As they lie to the north of their normal position, not much rainfall occurs over southern regions like Tamil Nadu
- The current position of the Inter Tropical Convective Zone (ITCZ) has also contributed to the poor rainfall during the ongoing monsoon season. Currently, the ITCZ is located to the north of its normal position.
- La Niña conditions are expected to prevail until early 2021, with some weather models forecasting it to last even till March. As a result, there are high chances that the southern peninsular region may end up with deficient rainfall by the end of the Northeast monsoon season in December.

## **G.S PAPER II**

### **2. JUDICIARY**

#### ***Online Dispute Resolution could be the post-pandemic disruption that enhances justice delivery to all. Do you agree with this view? Comment***

##### **KEY POINTS**

- The pendency of over 40 million cases in our judicial system remains a focal point for reform and reduction. Nearly a third of these have been pending for three to 30 years due to resource-dwindling litigation, case adjudication and difficulty in consensus resolution.
- The Union minister (law & justice) told the Parliament on September 22 that 62,054 cases were pending at the Supreme Court, 51,57,378 at High Courts (HC) and 3,45,71,854 at the district courts. This seems more than significant, except that the courts are performing in an exemplary fashion to dispose of cases.

##### **The case for online dispute resolution (ODR)**

- It is inevitable that as entrepreneurs innovate, businesses will become multi-layered in terms of operative parties involved. The economy will digitise, transactions will escalate, and hence, disputes will both rise and arise.
- Keeping this context in mind, the growing focus on online dispute resolution (ODR) in India is not without reason. Some might even say it is intuitive. ODR aligns with the current socio-economic milieu, has a global precedent of being extremely successful, and above all, has principles of natural justice in its essence.
- To augment dispute resolution mechanisms, Lok Adalats and Gram Nyayalayas have been created as alternative options for affordable justice.



## Innovation in disputes

- ODR has significantly large-scale potential for innovation. For instance, the feedback rating system in e-commerce, where parties to a transaction criticise or praise each other has incentivised developing a reputation for scaling activity through smooth transactions.

## The Indian ODR

- ODR has the potential to raise equity, fairness, access in the dispute resolution ecosystem in India. The convenience brought by ODR has been exhibited by e-Lok Adalats conducted in several states such as Chhattisgarh, Karnataka, Rajasthan, Gujarat and soon Kerala where disputes were resolved simply over WhatsApp audio/video calls.
- ODR has the potential to be an effective alternative that utilises technology to bridge barriers and access in resolution.
- Through facilitating low cost, remote, technology-augmented, linguistically- friendly, amicable and incentivised dispute avoidance, containment and resolution while adhering to principles of natural justice, ODR could be the post-pandemic disruption that enhances justice delivery to all.

## 3. GOVERNANCE

*The true measure of digital nations is the readiness of governments to use technology to create trust among citizens. Explain*

### KEY POINTS

- Affordable smartphones and Internet access have made India a digital nation with an estimated 750 million connections and a thriving financial technology sector. Citizens inured to queues at dingy utility offices even to pay routine bills find this a major leap, thanks to fintech.
- Digital platforms providing goods and services, including online education and telemedicine, have grown vigorously during the COVID-19 pandemic, while many professionals have maintained productivity by working from home.
- What governance must achieve is a reliable system of digital welfare. A beginning has, no doubt, been made through government-to-citizen services using Common Service Centres, advice to agriculturists, digital payments of welfare benefits through bank accounts and, even legal advice online to four lakh people under the Tele-Law scheme.
- With the emphasis on digitalisation, it should be possible to achieve measurable progress early on at least on one UHC component access to free, essential prescription drugs. A digital health ID would help prescribe and dispense essential medicines free.
- The Planning Commission estimated that the public procurement cost for this, in 2011, would be 0.1% to 0.5% of GDP. If this is a medium-term goal, the more immediate task of distributing COVID-19 vaccines looms as a test for the government.
- At a broader level, efficient digital government depends on transforming internal processes, and fixing deadlines for service delivery. If digital has to become a way of life, redefining the functioning of citizen-centric services would be a good place to start, with deadlines for government departments.

#### 4. GOVERNMENT POLICIES

***Strategic land monetisation can usher in massive transformation of the urban landscape and contribute to economic development. Elaborate.***

##### KEY POINTS

- With the central and state governments facing a dearth of revenue streams, the monetisation of assets is a viable option. Monetisation of land is slowly gaining currency as stakeholders are warming up to the idea of unlocking the tremendous benefits of leasing of land.
- Monetisation of land is a viable option for public sector undertakings and urban local bodies. It will not only generate a revenue stream, but also entails several other benefits. gg
- It puts the land to better use. The commercial development of land accelerates the real estate prospects in the vicinity and fuels the demand for social infrastructure such as retail development, banking.
- Land monetisation will enable the retention of land ownership while realising market rent (if the revision of rent is periodic and on agreed principles). It should be a well-thought process, weighing the potential benefits and viability. The experience and future risks should be considered before choosing a suitable tool. Also, infrastructure-serviced land will fetch better value.
- Mass sensitisation and awareness programmes should be organised for the local community to educate them on the benefits of the process. Every land monetisation process should have a commercial aspect to enable the project to be viable and generate revenues.
- The crucial step in the land monetisation process is to map the vacant lands across the country and enlist these in the public domain. This step will ensure transparency and accountability in the process. It warrants leveraging public-private partnerships (PPP).
- The PPP model has emerged as a viable option for development over the past few years, as it combines the best of both entities public interest of the public sector and professionalism and expertise of the private sector.
- The real estate developers and relevant stakeholders in the segment are formidable partners in the process. Partnering with the government not only allows private players to tap new avenues and geographical regions, but also diversify their offerings and generate revenue. It reinforces their role in contributing to urban development and shaping the growth trajectory of the economy.

***What is meant by Transferable development rights? How does it contribute to the development of the urban areas in the country? Explain***

##### KEY POINTS

- Transfer of Development Rights (TDR) is a zoning technique used to permanently protect land with conservation value (such as farmland, community open space, or other natural or cultural resources) by redirecting development that would otherwise occur on this land (the sending area) to an area planned to accommodate growth and development (the receiving area).
- It is a win-win deal, where property owners get timely and market-based returns from their property, and urban local bodies get space to provide facilities without huge expenditure for a larger public good. By virtue of being a voluntary option, it also protects the rights of property owners.
- This versatile tool can be used for incentivising the conservation of heritage landmarks, expansive touristic lakes and so on as well. It can also be offered as a sop towards slum redevelopment and affordable housing projects.

- The Greater Hyderabad Municipal Corporation has pioneered in taking advantage of this transformation and taken a step forward by launching an online TDR bank, wherein the entire summary of the transaction on the DRC file and the available balance is dynamically updated and put forth in public domain. This makes the whole process more transparent.
- India celebrated when Ahmedabad was announced its first World Heritage City by the UNESCO in 2017. Today, the city government offers a unique variant of TDR, the 'Tradable Development Right', as an incentive for the owners of heritage structures notified in the heritage conservation plan.
- More than 2,500 heritage building owners have the option to avail the benefits under the scheme. These buildings/structures have been classified as 'highest heritage value' and 'high and moderate heritage value' by the government. These buildings are offered TDR on the basis of the utilised Floor Space Index.
- Undoubtedly, it is a fiscal tool and needs to be handled very carefully. It will take skilled planners, professional staff, awareness among citizens and the private sector to channelise TDR into urban reality. Indeed, all urban local bodies already mired under financial stress, human resource deficits and huge development pressure might not have adequate resources, to design and implement a suitable TDR product.
- India is at the brink of a massive transition from being predominantly rural to half urban in the next two decades. Our 7,000-odd cities are minting over 70% of the country's GDP, whilst dismally crumbling under the lack of basic infrastructure and inefficiently used costly urban land.
- Economy rewards timely interventions, and this is an opportune moment to take strategic decisions and make our cities globally-competitive, liveable and economically-productive. TDR perhaps is a win-win deal.

***Centre and states need to incorporate principle of cooperative federalism for better water governance. Analyse***

**KEY POINTS**

- The two bills under Parliament's consideration attend to longstanding issues of inter-state externalities. The Interstate River Water Disputes Amendment Bill 2019 seeks to improve the inter-state water disputes resolution by setting up a permanent tribunal supported by a deliberative mechanism, the dispute resolution committee.
- The Dam Safety Bill 2019 aims to deal with the risks of India's ageing dams, with the help of a comprehensive federal institutional framework comprising committees and authorities for dam safety at national and state levels.
- These include emerging concerns of long-term national water security and sustainability, the risks of climate change, and the growing environmental challenges, including river pollution. These challenges need systematic federal response where the Centre and the states need to work in a partnership mode.
- However, water governance is perceived and practiced as the states' exclusive domain, even though their powers are subject to those of the Union under the Entry 56 about inter-state river water governance.
- The River Boards Act 1956 legislated under the Entry 56 has been in disuse. No river board was ever created under the law. The Centre's role is largely limited to resolving inter-state river water disputes. That, too, a detached one in setting up tribunals for their adjudication.
- Combined with the states' dominant executive power, these conditions create challenges for federal water governance. The country is ill-equipped to address the governance of increasingly federalised waters to pursue its development and sustainability goals.
- Globally, federated systems with comparable organisation of powers have used similar investments to usher key water sector reforms. Australia has plans to make large investments to nudge its federal constituents towards a dialogue under its National Water Act of 2007 and to arrive at the Murray-Darling agreement.



- Drinking water supply is within the states' domain of responsibilities. They are equipped with the institutional channels for this purpose. The mission has to build on these structures for enduring outcomes.
- It has to ensure that the states maintain the assets and facilities created through the mission. Such institutionalisation is most critical for Jal Jeevan Mission's success. States will certainly appreciate the much-needed succour to strengthen their institutions and improve the delivery of this essential service to its populations.

***Will the people of Jammu and Kashmir benefit from the implementation of Forest rights act 2006?  
Critically analyse***

**KEY POINTS**

- Tribal politics in the erstwhile State of Jammu and Kashmir was focused on the twin issues of political reservation and enactment/extension of the Forest Rights Act (FRA) of 2006.
- It is this lack of political reservation that has been a major reason for their marginalisation. The Adivasis have had to largely depend on non-tribal leadership to represent their issues and demands.
- Lack of political reservation meant that their issues were never adequately represented in the Legislative Assembly. The vote share of Adivasis is a major deciding factor in almost 21 Assembly constituencies, yet they remain politically marginalised.

**More evictions**

- In fact, the FRA should have been in place in J&K long time ago — nothing in Article 370 prevented the Legislative Assembly from enacting a similar law.
- Adivasi lands have not been protected, nor have these communities been given ownership rights. Instead, evictions of Adivasis have intensified in the last few years.
- The FRA would have provided Adivasis in J&K access and ownership rights, forest-based livelihood rights, and minor forest produce rights. Adivasis, especially nomads, have neither land rights nor rehabilitation rights.

**Proving ownership**

- Implementing the FRA is a welcome step. However, instead of alleviating fears of displacement and disempowerment, the law has only increased those fears.
- This is primarily because this is happening against the backdrop of the J&K government's decision on October 31 to declare the State Land (Vesting of Ownership to the Occupants) Act, 2001, also known as the Roshni Act, null and void.
- In the rest of India, the FRA provided and recognised the forest rights of forest dwellers who had occupied forest land before December 13, 2005. No such cut-off date has been mentioned in the case of J&K. Without a cut-off date, with land being retrieved after declaring the Roshni Act null and void, and with forceful evictions taking place, many tribal families are unlikely to benefit from the implementation of the FRA.

***A social registry linking Aadhaar to residence info can target aid to the vulnerable during a pandemic. Do you agree with this view? Analyse***

**KEY POINTS**

- 23 per cent of Indians living in Delhi-NCR received a payment of Rs 500 in their Jan Dhan accounts within three weeks of the lockdown being declared.



- Farmers registered for PM-KISAN also received Rs 2,000 in their accounts immediately. However, while using prior registries allowed for quick disbursement of funds, it is not clear that the money reached the most vulnerable households.
- For example, recipients of PM-KISAN were not amongst the poorest households, nor were these the households that were most affected by the COVID-related lockdown.
- The PM-Kisan Yojana applies to landowners, thereby excluding agricultural labourers as well as the urban informal sector workers who were most affected by the lockdown. Similarly, for the PMJDY payment, BPL and non-BPL households record similar receipt transfers.
- It also emphasises the need for post-disaster revalidation of any existing social registration database. These observations suggest that in a disaster response situation, we cannot rely on registries based on individual characteristics to identify beneficiaries.
- Aadhaar linkages of individuals and bank accounts already exist. If residential information in the Aadhaar database can be efficiently structured, this would allow for geographic targeting.
- To the extent that such social registries store only basic information such as location, instead of more sensitive identifiers such as poverty status, they are unlikely to violate privacy.

## 5. HEALTH

*The economic return for investing in child nutrition always remains high and contributes to the country's holistic development. Explain*

### KEY POINTS

- The major influences for this rapid physical and mental development are exerted by the genetic environment and the nurturing biological environment of nutrition. Nutrition can also directly modify the gene structure and mediate the expressions of genetic factors.
- The first 1,000 days play a key role in child brain development. Among these, nutrition in first 1,000 days will have the highest impact on the physical health, cognitive development, academic and intellectual performance of the child.
- With a near-8% teenage pregnancy rate and a high prevalence of anaemia in women, of more than 50% (NFHS-4), women in India enter pregnancy in a nutritionally-deficient state, a prime reason for deficient nutrition of the child in the first 1,000 days. This results in the high incidence of underweight, wasting and stunting in childhood.
- The GoI is implementing a comprehensive programme on anaemia prevention among children, adolescents, women in the reproductive age group, and pregnant and lactating women under Anaemia Mukta Bharat programme. Both, pre-conception and pregnancy periods are covered.

### Promotion of Infant and Young Child Feeding practices in first two years of life:

- Initiation of breastfeeding within one hour of birth: Mother's first yellow milk is vital for baby's nutrition and protection against infection.
- Exclusive breastfeeding for first six months of life: Critical for growth and development in addition to emotional bonding and protective immunity from diseases.
- Timely introduction of complementary feeding at six months of age: Gradual introduction of solid food in addition to milk-feed when most babies have acquired skills to start complementary feeding.
- Age appropriate foods for children from six months to two years: The quality, quantity, frequency and hygiene, especially hand washing, practices are crucial factors.



- After infancy, babies start exercising increasing autonomy in selection of foods. Wide choice of nutritious foods need be offered to respect their autonomy and to encourage self-feeding behavior.

There is a need to develop a strategic, convergent action plan on nutrition-specific and sensitive areas by all stakeholders. There has to be advocacy for the development and enforcement of law, policies and guidelines on ensuring nutritional security.

***The pandemic has signalled that strong immunity and adequate nutrition are two key pillars that determine the severity of a disease. Examine***

**KEY POINTS**

- India continues to be in 'serious' hunger category, and is home to 14% of the world's undernourished population. The country ranks 94th among 107, and is a poor performer in the BRICS high table. It is also behind its South Asian neighbours like Bangladesh, Pakistan, Indonesia and Nepal, among many others.
- There has been a notable reduction in the under-five mortality rate—down to 3.7% in 2020 from 9.2% in 2000. However, we are getting worse in terms of wasting amongst young children—it implies that Indian kids are too thin for their height.
- Schemes such as the Mid-Day Meal and the Integrated Child Development Services operate in a symbiotic fashion, with coordinated efforts from concerned ministries. As high as 90% of the 23.5 crore ration cards have been digitised and linked to Aadhaar numbers of at least one family member.
- Moreover, soon the 'One Nation, One Ration Card' policy shall be fully adopted, which would help not just in protecting the interests of poor and migrant beneficiaries, but also in capturing identity fraud.
- India recently launched the Eat Right India and Fit India movements to encourage a shift in lifestyle, and nudge the countrymen towards instilling physical fitness into their daily routines. There has been a rapid jump in the consumption of processed and ready-to-eat food products not just in urban but also in rural areas.
- This is largely due to their lower prices and easy availability even at mom-and-pop stores and online. In view of the rapidly rising rates of obesity and cardiovascular diseases, India has now publicly committed to eliminate trans fatty acids from its food systems by 2022.
- All-out efforts have been made to promote both production and consumption of millets (now known as nutri-cereals), which are often seen as a poor man's food. Consumer demand for these is being triggered by introducing them in the public distribution system and as part of nutri-gardens. These nutri-cereals are not just good for human health, but also for farmers' welfare and planetary health.
- Unless consumers engage and participate with full spirit in such schemes or interventions, the goal of having a healthy, productive and nutritionally secure India might be difficult to attain.

***Discuss the merits of remote patient monitoring system in the context of Indian health care system.***

**KEY POINTS**

- With India pulling a whopping burden of chronic diseases that happen to be the top killer in the country, accounting for as much as over 53 per cent of the annual deaths, managing chronic conditions has become a mammoth task.
- Non-communicable diseases (NCDs), which happen to be the main trigger of chronic diseases, kill about 5.87 million people in India and contribute to around 38 million of all the deaths globally.



## Remote Patient Monitoring is a boon

- **Helps in improving chronic condition management:** At a time when there is a global crunch of medical resources, remote patient monitoring works wonders in keeping a continuous watch on those suffering from chronic diseases, thereby enhancing care at a reduced burden on the caregivers.
- **Aids in reducing emergency situations:** With remote patient monitoring in action, real-time monitoring of a patient's vitals is possible which helps them to keep the blood sugar, blood pressure, respiratory and cardiac counts on check. As a result, the patient and the caregivers get adequate alerts, preventing costly emergency situations and hospitalisations.
- **Cuts down the burden on healthcare:** Remote patient monitoring helps patients get care from the comfort of their homes, without having to make a visit to the hospital. As a result, it relaxes the burden on healthcare staff as well as nullifies the fear of shortage of medical equipment availability.
- **Enhances patient outcomes:** With remote patient monitoring, any damaging out-of-range values could be detected instantly, trends indicating a change in the care regimen could be recognised real-time. It could also help in providing suggestions on sleep and stress management and prescribing physical activities and more to help patients with specific chronic conditions and considerably improve patient outcomes.
- **Offers better quality of care:** Care-giving is a pivotal part of managing patients with chronic disorders. Remote patient monitoring makes care-giving more efficient by helping the caregivers and the patients go for the right choice about their food habits and lifestyle and daily behaviours which have a major effect on the course of their chronic conditions and health risks.
- **Ideal for seniors living alone:** These days a large number of senior citizens suffering from chronic conditions have to live on their own and away from their children who are settled elsewhere near their respective workplaces. Remote patient monitoring has made it much safer for those who do not have handy support.

*India needs its Ayurveda graduates, to improve the common man's access to decent health care.*

*Elaborate*

### KEY POINTS

#### Identity crisis

- The degree in Ayurvedic medicine became largely an Ayurveda course. However, it was necessary out of a practical career compulsion to teach the basics of modern medicine to these graduates.
- They had to survive in the medical market, which by that time was the dominant form of health care in India. Most Ayurvedic graduates entered general practice.
- More importantly, several of them went on to work in rural and under-served areas. Some set up nursing homes. In rural Maharashtra, several nursing homes were run by integrated graduates.
- In Chiplun in the Konkan, for instance, the only nursing homes offering emergency obstetric and surgical services were run by non-allopathic graduates. In health care, availability is often more important than quality, specialisation and such extravagant ideas.
- In an instance from a hospital, the Ayurvedic surgical assistant employed there closes the abdomen better than new trainees.
- During COVID-19, a large number of the quarantine centres were manned by these doctors. Incidentally, they work for less pay which allows hospitals to control costs and even make profits. All this is not a rationalisation but an explanation which we ought to know.

### **A silver lining**

- Ayurveda graduates including surgeons are a large workforce in search of an identity. India needs them. If they are creatively and properly trained, they can play important roles in our health-care system.
- In fact as we have seen in certain situations, they already do. On site or ambulance care of trauma victims is in a shambles in India. It is effectively delivered by trained paramedics in many countries. Given the right training, pay and identity, Ayurvedic surgeons can be trained to strengthen this service and save hundreds of lives.

## **6. INTERNATIONAL RELATIONS**

*Being a part of US's security architecture shows that, there is a shift in trajectory of India's foreign policy. Examine*

### **KEY POINTS**

The Third India-U.S. 2+2 Ministerial Dialogue between the Foreign and Defence Ministers of India and the U.S. Secretaries of State and Defence took place in Delhi.

#### **The strategic focus**

- The centrepiece of the dialogue was the signing of the Basic Exchange and Cooperation Agreement (BECA) for Geo-Spatial Cooperation, which marked India's entry as a full member into the select category of nations entitled to receive highly classified U.S. defence and intelligence information.

#### **An advantage, but at a price**

- Built into the agreements are provisions for a two-way exchange of information and, while India prides itself on maintaining strategic autonomy, it would be evident with the signing of these agreements, that India's claims of maintaining strategic autonomy will increasingly sound hollow.

#### **Impact on China, regional ties**

- Any number of other cases can be cited. For instance, after having distanced itself from the Quad for years, on account of its security and military connotations and anti-China bias, India has more recently waived its objections, even as the Quad has become more anti-China in its orientation.
- The invitation to Australia to participate in the Malabar Naval Exercises this year, to which the other two Quad members had already been invited, further confirms this impression.
- India's willingness to sign foundational military agreements with the U.S., to obtain high grade intelligence and other sensitive information, would suggest that India has made its choice, which can only exacerbate already deteriorating China-India relations.
- India, again, will need to try and square the circle when it comes to its membership of the Shanghai Cooperation Organisation (SCO), considering its new relationship with the U.S. Reconciling its present fondness for the U.S., with its full membership of the SCO, which has China and Russia as its main protagonists and was conceived as an anti-NATO entity will test India's diplomatic skills.

#### **The Russian link**

- Finally, the impact of India signing on to U.S.-related foundational military agreements, cannot but impact India-Russia relations, which has been a staple of India's foreign policy for more than half a century.
- Admittedly, India-Russia relations in recent years have not been as robust as in the pre-2014 period, but many of the edifices that sustained the relationship at optimum levels, including annual meetings between the Russian President and the Indian Prime Minister have remained. It is difficult to see how this can be sustained, if India is seen increasingly going into the U.S. embrace.

- This, at a time, when Russia-China relations have vastly expanded and a strategic congruence exists between the two countries. This is one relationship which India will need to handle with skill and dexterity, as it would be a tragedy if India-Russia relations were to deteriorate at a time when the world is in a state of disorder.

***India can take respite in the strategic comfort of the India First policy of the newly elected Maldives government. Comment***

**KEY POINTS**

- India and the Maldives have had bilateral relations for centuries. Technology has made connectivity easier for everyday contact and exchanges. Maldivian students attend educational institutions in India and patients fly here for superspeciality healthcare, aided by a liberal visa-free regime extended by India.
- Tourism is the mainstay of Maldivian economy. The country is now a major tourist destination for some Indians and a job destination for others. Given the geographical limitations imposed on the Maldives, India has exempted the nation from export curbs on essential commodities.
- Through the decades, India has rushed emergency assistance to the Maldives, whenever sought. In 1988, when armed mercenaries attempted a coup, India sent paratroopers and Navy vessels and restored the legitimate leadership under Operation Cactus.
- The 2004 tsunami and the drinking water crisis in Male a decade later were other occasions when India rushed assistance. At the peak of the continuing COVID-19 disruption, India rushed \$250 million aid in quick time. New Delhi also rushed medical supplies to the Maldives, started a new cargo ferry and also opened an air travel bubble, the first such in South Asia. It has promised more, as and when required.
- Despite early strains in relations, India rushed help on a humanitarian basis. They forget that massive supplies of drinking water came only aboard Indian Navy vessels and the COVID-19 medicines were delivered aboard an Indian Air Force aircraft. Such assistance helps all Maldivians.
- Yet, India should be concerned about the protests as well as the occasional rumblings within the ruling Maldivian Democratic Party (MDP).
- Despite this, India can take respite in the 'strategic comfort' of the 'India First' policy of the new Maldivian government. Given this background and India's increasing geostrategic concerns in the shared seas, taking forward the multifaceted cooperation.

***East Asia summit shows trajectory of India's productive engagement with Association of South East Asian Nations. Examine***

**KEY POINTS**

- The East Asia Summit (EAS) is the main summit in the Indo-Pacific region, where all the powers that be gather annually. It is usually held just after the second ASEAN summit of the year when the ASEAN also meets its dialogue partners, including India.
- The EAS covers security, economy and functional aspects, which are reflected in the Chairman's Statement a summary and not a negotiated document.
- The situation emanating from the pandemic was the immediate focal point and the Chinese conundrum was ignored by the EAS documents.
- This year, the leaders had documents for the regional economy, marine sustainability, dealing with epidemics and the role of women. Over the years, EAS has been looking more at non-traditional threats including illegal fishing, humanitarian assistance, disaster relief (HADR), migration and the like.
- The EAS provides ASEAN with an opportunity to become more realistic but internal dissensions over China wither its resolve.

- Other areas of interest for India emanating from the leaders documents are regional connectivity with a perceptible shift to the maritime sphere, macroeconomic and financial stability efforts in which India has not so far played a major role.
- India has a role in the ideas behind the statement on marine sustainability since it has dealt with illegal fishing and related issues and could become a part of the proposed regional cooperation for mobility of skilled labour and services. These need to be better covered by a reviewed India-ASEAN FTA.
- India has an important role envisaged in the statement on dealing with epidemics, both in its ability to provide capacity building and crucial manufacturing bases for pharmaceuticals as part of resilient supply chains for medical supplies in the region.

***It is time for India to recalibrate ties with Persian Gulf and seize the new strategic possibilities with the region. Analyse***

**KEY POINTS**

- For decades, India's mercantilism saw the Gulf as a source of oil and a destination for labour exports. Delhi's narrow bureaucratic approach to the Gulf was incapable of a political engagement with the region's interests.
- The Indian elite has long viewed the Gulf as a collection of extractive petro-states run by conservative feudatories. Delhi needs to get real and recognise the impressive structure of finance capital built on the massive accumulation of oil revenues over the last few decades.
- The immediate need to shield India's interests in the post-pandemic turbulence that is enveloping the region. The threat to the region's economic stability is real, and as the Gulf considers cutting back on foreign labour, Delhi would want to make sure its workers in the region are insulated.
- The focus on the new and long-term possibilities for economic cooperation with the Gulf, which is looking at a future beyond oil. The Gulf states have embarked on massive economic diversification and are investing in a variety of new projects including renewable energy, higher education, technological innovation, smart cities, and space commerce. Delhi must get its businesses to focus on the range of new opportunities in the Gulf.
- India also needs to tap into the full possibilities of Gulf capital for its own economic development. The big gap between the investments that the Gulf is ready to offer and India's ability to absorb needs to be reduced.
- The UAE currently chairs the Indian Ocean Rim Association (IORA) and has been eager to work with India in developing joint infrastructure projects. Delhi needs to bring scale and depth to its regional initiatives on connectivity and security in the Indian Ocean. The UAE is a natural choice for it.
- Delhi pays insufficient attention to the significant reforms unfolding in the Gulf that seek to reduce the heavy hand of religion on social life, expand the rights of women, widen religious freedoms, promote tolerance, and develop a national identity that is not tied exclusively to religion. The UAE has been the leader in this regard.
- As it seeks to recalibrate India's ties with the Gulf, the real challenge for South Block is to get the rest of the Indian establishment to discard outdated perceptions of the Gulf and seize the new strategic possibilities with the region.



## G.S PAPER III

### 7. AGRICULTURE

***Agricultural policymakers need to typically focus on investing in improved nutrition for high economic payoffs. Analyse***

#### KEY POINTS

- The highest numbers of women and children suffering from this “hidden hunger” live in South Asia, especially India.
- The primary underlying cause for mineral and vitamin deficiency is low-quality diet. The poor desire, but cannot afford to purchase sufficient quantities of vegetables, fruits, pulses, and animal products, which, gram for gram, contain relatively high amounts of bio-available minerals and vitamins, but whose prices have been rising much faster than staples like wheat, rice and corn over the past several decades.
- There are two broad strategies. The first is to improve the densities of minerals and vitamins in the high amounts of food staples that the poor already consume. The second is to increase their consumption of nutritious non-staple foods. This second broad strategy fundamentally depends on raising incomes and lowering the real prices of non-staple foods.
- The objective, then, within the sub-strategy of focusing on food staples, is to increase densities of nutritious components and decrease the densities of undesirable compounds. One way to do this is through conventional plant breeding. A term has been coined for this process, “bio-fortification.”
- These bio-fortified staples need to be closely linked to India’s food-based welfare programmes including the public distribution system (PDS) the mid-day meal and anganwadis and should become an integral part of the National Nutrition Mission (POSHAN Abhiyan).
- Turning now to vegetables, fruits, pulses, animal products foods already dense in minerals and vitamins the fundamental strategy should be to increase the supply of key foods that can contribute importantly to nutrient intakes.
- For example, the major push by the Indian government, called Operation Flood, improved the efficiency of milk production, a highly nutritious and important food in Indian diets. Supply went up sharply and the relative real price went down significantly. Milk consumption increased.

***e-National Agricultural Market can make digital trading a habit with farmers and traders. Do you agree with this view? Comment***

#### KEY POINTS

##### A trading habit

- Online trading platforms are creating a unified countrywide market for agricultural produce, which is the avowed purpose of recent central legislation.
- The Government of India has notified an Ordinance namely “The Farmers’ Produce Trade and Commerce (Promotion and Facilitation) Ordinance, 2020” to promote freedom of choice of trade with farmers while promoting barrier-free inter-state and intra-state trade in farmers produce.
- This digital initiative of Government of India provides a single window service for all APMC related information and services, including commodity arrivals, quality assaying, competitive bid offers and electronic payment settlement directly into farmers’ accounts.



- The Government has implemented National Agriculture Market (e-NAM) scheme, an online virtual trading platform, to provide farmers with opportunity to directly sell their produce at remunerative prices through competitive online bidding system.
- So far, 1000 wholesale regulated markets across 18 States and 3 Union Territories (UTs) have been integrated with e-NAM platform. Tradable parameters for 175 commodities have been promoted for trade in e-NAM platform.

### Concerns

- Fruits and vegetables which have a short shelf-life don't lend themselves to elaborate quality checks.
- Quality, which falls short will show up as a discount to the invoiced price paid by the buyer. Consistent deficiencies will affect a supplier's ranking. If a buyer defaults or delays payment, it will show up in their ranking too. Suppliers will avoid buyers with low ranks and vice-versa.
- The risk of payment defaults is a real danger in remote trades. At the regulated mandis, commission agents are held responsible and can lose their license for defaults.
- Buyers on e-NAM are at a disadvantage as it is a network of regulated markets. They have to pay charges and fees which can be as high as 8.5% in Punjab mandis on wheat and common rice.

### *The outcomes of India's White revolution must be made sustainable for the overall development of India's dairy sector. Comment*

#### KEY POINTS

- Kurien's efforts helped transform India from a milk deficit nation to a surplus one and eventually as the largest producer globally with farmers' cooperation. This year, India is celebrating the 99th birth anniversary of Kurien.
- Kurien's immense efforts have made India's dairy sector vital to the Indian economy, especially in terms of providing employment to the rural workforce. The dairy sector has helped reduce rural poverty and inequity, and ensured food security for millions of rural households.

#### Disparity among States

- India has achieved self-sufficiency in milk production, thanks to it having the second largest cattle population in the world after Brazil and a robust dairy cooperative network in a few regions.
- However, data show that nine States produced 77 per cent of milk, and in rest of the States the per capita availability of milk is below the national average. Milk production is, therefore, concentrated in those nine States.
- Dairy promotion among small and landless farmers is hence necessary to increase milk availability, as this will also help reduce the nutrition-related problems among rural households.
- Additionally, State governments should channelise milk procurement through formal ways, such as via cooperatives or the AMUL model. This will help boost the income of millions of small and marginal farmers.
- Moreover, strengthening milk cooperatives across States will help generate alternative employment opportunities for millions of rural farmers, especially women and economically disadvantaged communities.
- The Centre recently announced ₹ 15,000 crore under the Atmanirbhar Bharat scheme 'Pashudhan', to support animal husbandry and the livestock sector, to increase milk procurement, milk processing, and for setting up dairy infrastructure.
- Without a flourishing dairy sector, the government will not be able to achieve its objective of doubling farmers' income.



## **8. INDIAN ECONOMY**

***Considering the impact created by pandemic, there is a need to create a permanent fiscal secretariat to rethink on allocation of resources in the country. Discuss***

### **KEY POINTS**

- During Covid-19, ensuring essential food supplies especially for the economically vulnerable population has been a challenging task for the government.
- Apart from rice and wheat—which have been a regular part of supplies through the public distribution system (PDS)—1 kg pulses per month per household as identified under the National Food Security Act (NFSA) are being distributed free of cost from the government buffer maintained under the Price Stabilisation Fund (PSF) for eight months (April to November 2020) under the Pradhan Mantri Garib Kalyan Yojana to alleviate the hardships of the poor.
- Also, the Finance Commission (FC) set up under Article 280 of the Constitution has a vital role to play in the devolution of financial resources from the Centre to states. It is entrusted with evaluation of the state of finances of the Union and state governments, recommend the sharing of taxes between them, and lay down the principles determining the distribution of these taxes amongst states.
- The FC grants devolving to states are crucial in boosting the finances of states as their own revenue handles are relatively limited.
- Considering the extant case of agriculture, interventions by the government are at multilevel (Centre/states). They are funded from different avenues: completely by the Centre (central schemes like PSF/PSS, and others); shared in CSS (PMKSY); or funded by state governments themselves from their own revenues/borrowings/various fund flows from the Centre.
- Given the complex and diverse nature of plethora of interventions (and associated fund flows from various avenues) as outlined above, there is a need to evaluate these in a holistic and integrated manner at the level of states (both individually and collectively) as well as the Centre (state-wise and as a whole).
- This is imperative in understanding the nature of fiscal flows to the agricultural sector in a quantitative manner as well as in qualitative terms .
- The recommendation of the 14th FC of setting up a permanent secretariat of the FC as an autonomous institution as far as the fiscal side (government revenues and expenditure) is concerned, as a counterpart to the Reserve Bank of India, which enjoys the required autonomy to cater to monetary policy of the nation.
- Fiscal expenditure has a crucial role to play in addressing macroeconomic concerns (growth and employment). The Covid-19 pandemic has compelled us to rethink allocation of financial and other resources to priority sectors and initiate reforms.

***SEBI's regulatory framework need to pave the way for a technologically-balanced regime that encourages non-fund based financial services providers to use the latest technologies. Discuss***

### **KEY POINTS**

- SEBI introduced the first set of amendments to its regulatory framework for investment advisors. While the amendments are a step towards protecting retail investors, the technology neutrality of the regulations remains doubtful.
- A predominantly younger Indian demographic has recently made a shift towards using investment distribution and advisory mobile applications for equity investments.



- Automated tools used typically do not have any human intervention, as investment advice is based on a predefined algorithm, which customizes investment plans for each customer platform.
- In late 2019, SEBI came up with another circular aimed at regulating Investment advisors by way of which a restriction was imposed on Investment Advisors from providing free trials for any products and services.
- SEBI also restricted Investment Advisors from accepting part payments for any products or services offered by them. It stipulated that advisers would be required to obtain prior consent and carry out risk profiling for all customers. Such requirements could have unintended consequences for mobile-based apps.
- In case SEBI's concern is that such automated tools may not be suitable for everyone, it could consider requiring mobile apps to put controls in place (such as knock-out questions) to identify and eliminate clients who are unsuitable for using such tools for investment.
- A separate but related perspective is fund-raising for such new-age start-ups. Under FDI norms, foreign investment is permitted for entities engaged in 'financial services activities.
- Minimum capitalization requirements have also been imposed by the Ministry of Finance for unregulated financial services activities. In contrast, no minimum capitalization hurdles exist for regulated financial services activities.
- This distinction imposes a conundrum for new-age businesses at the time of fund-raising. Often, such robo-advisors do not handle customer funds, providing only KYC services to the customers.
- A question for legal practitioners advising such fintech start-ups is whether the investee company should be treated as a provider of unregulated financial services vis-à-vis a mere technology company? The classification has far-reaching consequences, especially for fledgling companies seeking seed funding where the minimum capitalization requirement can play a disruptive role.

***India should make the most of the conducive global environment to attract foreign investment.***

***Explain***

**KEY POINTS**

- Providing tax incentives to foreign investors to invest in areas that need funding such as infrastructure appears to be working in attracting investments such as the ones from the Abu Dhabi sovereign wealth fund
- Prime Minister of India's meeting with the heads of global funds on Thursday to woo foreign investments was aptly timed. With the finances of the government strained due to the decline in tax revenues and increase in pandemic-related spends, it is logical to invite global funds to bridge the gap in public infrastructure and other capital expenditure.
- India's equity market has witnessed net foreign portfolio inflows of more than Rs 95,000 crore so far in FY21.
- It is clear that the resurgence in the Federal Reserve's liquidity boosting measures has had a large part to play in the strong FPI inflows this year; empirical data show that flows into India have a strong linkage with Fed's actions.
- It is notable that foreign portfolio investors have preferred to invest in equities of only India and China in FY20, even as they have withdrawn money out of most other emerging markets. It is clear that these investors still believe in the demographic superiority of India and its long-term growth prospects. FDI flows so far this year are 56 per cent higher compared to the same period last year.
- The Indian government had begun its first term by wooing foreign investments to fund capital expenditure and the strategy is being repeated now. The massive investments attracted by Reliance Industries for its telecom and retail arms show that global investors are willing to put their money in India if the policies are right and the projects promising.



- Providing tax incentives to foreign investors to invest in areas that need funding such as infrastructure appears to be working in attracting investments such as the ones from the Abu Dhabi sovereign wealth fund. The Centre, however, needs to get more serious about improving ease of doing business and avoiding policy flip-flops, if these flows have to sustain.

***India must ensure regulatory certainty in order to attract global investors. Do you agree with this view? Comment***

#### **KEY POINTS**

- As the RBI noted in its latest monetary policy report last month, investment, already in contraction mode since the July-September quarter in 2019, suffered a further massive pandemic shock.
- Fixed investment, which almost halved in the first quarter of the current fiscal, continues to face an uncertain outlook given the weak consumption demand and excess capacity in most industries, especially when coupled with stretched balance sheets that cramp businesses' ability to borrow and invest, according to the RBI.
- And the government's ability to apportion more funds for growth-spurring capital projects is hamstrung by a widening fiscal deficit amid a protracted border stand-off, the health crisis and a debilitating revenue shortfall.
- Asserting that all sectors of the economy were looking up in the wake of the government's resolute tackling of the pandemic, a 13% increase in FDI flows in the first five months of the financial year as reflective of the global investor community's confidence.
- However, what he likely overlooked was that with almost three-fourths of the \$27 billion of FDI equity inflows in that period being accounted for by stake acquisitions in a single large telecom company, a bulk of this investment is unlikely to manifest as new job-creating factories or businesses.
- The Prime Minister needs to ensure that his assurance of stability is buttressed by actions that dispel investors' concerns over policy flip-flops. Centre separately enacted an ordinance to retrospectively amend the arbitration law, ostensibly to deal with contracts that may be underpinned by 'fraud or corruption'. The rule changes in wholesale and online trade are another example of shifting goal posts.

***The Micro Small Medium Enterprise sector holds the key to an Indian economic recovery. Substantiate***

#### **KEY POINTS**

- Among the many indicators, perhaps the most significant is the decline in number of establishments registered with the Employees' Provident Fund Organisation.
- The MSME sector is vital for employment generation, as also for an economic recovery to sustain. The fiscal stimulus announced to boost employment in the MSME sector as part of the Atmanirbhar Rozgar Yojana, under which the government will bear the entire provident fund contributions for two years of all new employees hired.
- Part of the reason these incentives failed to have the desired impact lies in the very nature of the MSME sector and its heterogeneity, which is inherent in its definition as a residual sector once large enterprises are excluded. It comprises manufacturing but also a large part of services, which remain affected by the pandemic.
- Under the large umbrella of the sector are a variety of enterprises, ranging from single-person outfits to those with more than five workers. A 2015-16 survey of the National Statistical Office shows that almost 94% of these enterprises are tiny, with less than four workers, and about 62% are single-person businesses accounting for 78% of all workers in the sector.
- Only 31% are registered under various acts, but these face regulatory hurdles, some of them related to compliance with the goods and service tax (GST). The sector is India's largest employer outside agriculture



and construction, with 111 million workers. Therefore, it is crucial for any broad-based economic recovery, be it from the supply or demand side.

- However, what has also hurt the sector is the political economy of state intervention, which seems biased in favour of large corporations. With most state governments relaxing labour regulations for large companies, even the low-wage advantage that this sector enjoyed has got diminished.
- Despite its importance, the MSME sector has been denied a level-playing field. It has to bear the brunt of policy-induced shocks, like demonetization and GST, as also natural shocks such as those caused by covid.
- Reviving the sector requires not just fiscal stimulus, but also a political-economy approach that prioritizes MSME interests. India needs to ease the regulatory burden of small units and aid their survival through fiscal support. Above all, they need a level-playing field vis-à-vis big businesses.

***The Indian economy must realise the immense export potential to become a strong exporter on the world stage. Examine***

**KEY POINTS**

- For increasing exports, India needs to focus on multiple areas. These include aligning with global standards/global quality, stability and dependability of our policies towards exports, appropriate linkage to technology, among others.
- The DST has entered into a memorandum of understanding (MoU) with the QCI for effective implementation of the GLP certification programme. Here it must also be mentioned that the Organisation for Economic Co-operation and Development (OECD) has laid down principles of GLP and its certified test facilities.
- However, GLP compliance certification in India is voluntary in nature. This implies that it's not compulsory for an exporter to seek this certificate before exporting. This, in a way, explains the poor competitiveness of Indian exports as the law of the land allows exporters to export even if they are not GLP-certified.
- Appropriate linkages to technology: This is specifically in the context of agricultural and food processing industry, and even Ayurveda and wellness-linked food items, where India has a comparative advantage. This area has not been adequately explored by India to allow high-value exports and thus higher earnings for our farmers.
- Access to market using digital technologies has brought a great many changes in the way food markets operate. Also, food markets are witnessing interesting changes within India and globally where tastes are shifting from high-sugar and salt and processed foods to wellness safe foods.
- The ministries of commerce & industry, food processing and agriculture can join hands to explore the possibility of increasing farmers' income through high-value exports. Since the process will need to be digitally-encrypted end-to-end, it will ultimately eliminate leakages through middle men and generate higher earnings for farmers through exports.

***Why Reserve Bank of India's report has recommended that large corporate and industrial houses should be allowed ownership of private banks? Examine***

**KEY POINTS**

RBI on banks, bank licences for corporates, IWG RBI report explained, Reserve bank of India on corporatisation of banks, proposal to allow corporate houses to set up banks, banking sector.

**Why is the recommendation to allow large corporates to float their own banks being criticised?**

- A predominantly government-owned banking system tends to be more financially stable because of the trust in government as an institution.



- Moreover, even in private bank ownership, past regulators have preferred it to be well-diversified — that is, no single owner has too much stake.
- More specifically, the main concern in allowing large corporates — that is, business houses having total assets of Rs 5,000 crore or more, where the non-financial business of the group accounts for more than 40% in terms of total assets or gross income to open their own banks is a basic conflict of interest, or more technically, “connected lending”.

### **What is connected lending?**

- Connected lending refers to a situation where the promoter of a bank is also a borrower and, as such, it is possible for a promoter to channel the depositors’ money into their own ventures.
- The recent episodes in ICICI Bank, Yes Bank, DHFL etc. were all examples of connected lending. The so-called ever-greening of loans (where one loan after another is extended to enable the borrower to pay back the previous one) is often the starting point of such lending.

### **Then why recommend it?**

- The Indian economy, especially the private sector, needs money (credit) to grow. Far from being able to extend credit, the government-owned banks are struggling to contain their non-performing assets.
- Government finances were already strained before the Covid crisis. With growth faltering, revenues have plummeted and the government has limited ability to push for growth through the public sector banks.
- Large corporates, with deep pockets, are the ones with the financial resources to fund India’s future growth.

### ***Discuss the financing mechanisms that can work for the development of social infrastructural projects in the country.***

#### **KEY POINTS**

Social infrastructure projects are foundational assets that support the quality of life of a nation, region or city and go beyond basic economic functions to make a community an appealing place to live healthcare facilities, schools and other educational institutions and water and sanitation, to name some.

#### **Financing mechanisms that can help**

- Partial credit guarantee to help private developers raise cost-effective funds for social infrastructure projects at a portfolio level through capital market instruments and channel long-term institutional investments. Minimum offtake guarantee by government with timely funding of related payment dues, to private borrowers, with liquidity backup to mitigate the risk of default arising from liquidity mismatches for the issuer of a debt instrument.
- Minimum return guarantee for investors. Sectors like airports have in-built characteristics to ensure a minimum return to investors courtesy a stable regulatory mechanism that allows for regulated returns on aeronautical assets, and true-up on account of variation in actuals and forecasts, including traffic variations.
- Pooled funding to allow less-creditworthy entities like small and medium cities to aggregate their financing needs, diversify their credit risks, offering scalable investments for investors besides spreading transaction costs. The mechanism opens up avenues for projects/ entities that have inherent credit risks and might not get funding from a single entity.

#### **Picking appropriate PPP structure is important**

- The revenue model for private developer may be a mix of subsidised and market determined charges based on eligible beneficiaries for a particular government service, while other users pay market-determined prices.
- “Value capture” is one mechanism for the public sector to regain some of the indirect benefits of projects.



## 9. ENERGY

***The Ministry of Power needs to reduce its interference in state electricity matters to ensure affordable power supply. Analyse***

### KEY POINTS

- The Electricity Act of 2003 clearly defines the functions of the government and the regulators under the various statutes of the legislation. Under the Act, all state-specific rules and reforms have to be undertaken by the state electricity regulatory commissions (SERCs) after taking into account their own state's specificities.

### Adhere to the Electricity Act 2003 construct

- Instead of intruding into state matters, the Centre must, indeed, focus on broader and critical aspects such as availability of round-the-clock affordable power supply to consumers without any load-shedding, adherence to merit order despatch, regulatory reforms and de-politicisation of the power sector.
- The Ministry of Power must refrain from framing rules under Section 176 unless it is relatable to power provided under the Act. Instead of prescribing such specific rules, the central government should, instead, issue key guidelines for states, allowing them to come up with their own rules and framework applicable at the respective state level.
- The Electricity Act of 2003 entrusts states to create prescriptive rules in the areas of power generation, supply, distribution and markets. The central government must also invest efforts to promote a fair and healthy competition in the power sector.

### Guide regulatory reforms and competition in the right direction

- A key reform that could be an ideal one would be to amend the Constitution and removing electricity out of the Concurrent List, as in the case of sectors like telecommunications, minerals, coal, hydrocarbons and many other infrastructure areas.
- First and foremost, we must refrain from political interference in regulatory appointments. To create greater accountability on the part of the state regulators, the Appellate Tribunal for Electricity (APTEL) should be granted powers to issue guiding principles for state commissions and have powers to review their functioning. The Electricity Act of 2003 should be amended to give the APTEL a supervisory role to ensure fulfil their roles and responsibilities prescribed under the Act.
- Building a healthy 'competition' across energy value chain can offer a win-win proposition for the customer, business and market development, as well as build an energy economy that is efficient and sustainable.
- A free, fair and healthy competition, indeed, also acts as a self-regulating mechanism. The advent of competition in industries such as telecommunication, retail, travel, e-commerce, aviation, etc, has brought a paradigm shift and enormous benefits to industries, consumer choice and overall economic welfare.



## 10.S & T

***Gender Advancement through Transforming Institutions is the need of the hour to push gender equity in the field of science and technology in the country. Discuss***

### KEY POINTS

#### **GATI (Gender Advancement through Transforming Institutions)**

- India is ranked 108 out of 149 countries in the 2018 Global Gender Gap report. According to DST figures, in 2015-16, the share of women involved in scientific research and development was 14.71% after it had actually increased from 13% in 2000-2001 to 29% in 2014-15.
- The DST has also found that women are either not promoted, or very often drop out mid-career to attend to their families. To get as many institutions as possible to sign up, the DST will need to manoeuvre around government red tape as most universities, barring the IITs and NITs, are run and funded by the government as well.
- This means that these institutions don't have direct control over institutional policies, recruitment and promotions. The DST has tied up with National Assessment and Accreditation Council, under the UGC, aiming to push gender equity through them.
- The DST plans to run intensive gender sensitisation programmes, especially for the top leadership of institutions, and work within existing rules such as pushing for women members on selection committees during recruitment processes.
- In the future, the DST is likely to consider policy changes such as those brought about in the UK providing financial incentives through grants to institutes.
- The British Council is assisting the DST and will facilitate collaboration between selected institutions under GATI with Athena SWAN-accredited institutions in the UK, with each institute here having a partner institute in the UK for guidance.

## 11. DISASTER MANAGEMENT

***How social capital can help deal with outcomes of the pandemic in better ways? Explain***

### KEY POINTS

- Social capital is the interpersonal relations, social networks, shared sense of identity and trust within a society.
- We saw the social capital and collective resilience in action two years ago when one of the worst floods hit Kerala. During the rescue and relief operations, Keralites displayed a high level of intra- and inter-community trust and networking.
- The tech-savvy people coordinated the rescue work through social media platforms, even though sitting in various parts of the globe. The local fishermen took their boats to flood-affected areas saving a large number of people. The local support groups that got formed specifically for the cause took care of food and accommodation of the affected people.
- The social capital in Kerala was not built overnight. According to a study conducted in 1997-98, jointly by Uppsala University of Sweden, JNU and Utkal University, Odisha, Kerala has the highest social capital compared with other States.
- Social network analysis in general studies the behaviour of the individual at the micro level, the pattern of relationships (network structure) at the macro level, and the interactions between the two.



### **Linking social capital**

- Within the bonding and bridging capitals, there are vertical connections across the power gradients in individuals, groups and organisations. These connections are often referred to as the linking social capital.
- In an organisational context, the bonding capital will be the personal connect, feeling of psychological safety and trust the employees feel within their teams and the bridging capital is the relationships they have with members of other teams .
- In a community where people have strong bonding social capital, bridging social capital and linking social capital, their collective resilience is higher compared to communities which lack social capital. Similarly, the leadership actions and strategy could easily be deployed through these networks when social capital is high.
- So the social relationships, trusted connections, support groups, membership in community organisations and social awareness, collectively called social capital, has helped some countries and States deal with the pandemic in a better way.

### ***The multifarious experience of Central armed police forces has helped greatly in combating the pandemic. Discuss***

#### **KEY POINTS**

- When disaster strikes our country in any manner, be it natural or man-made, the government summons the Central Armed Police Forces (CAPFs) to carry out the task of overcoming the disaster, by not only carrying out rescue and relief operations, but also mitigating the pains and problems arising out of the disaster.
- Another 10,000-bed quarantine centre was established in Chhatarpur in New Delhi by the ITBP, where over 10,000 patients have been treated till now,. This is the largest quarantine centre in the world.

#### **Relief measures**

- The expertise acquired by ITBP personnel and the Standard Operating Procedure prepared by the ITBP came handy for the States and other police forces in establishing their own quarantine centres and COVID-19 hospitals.
- Though the National Disaster Response Force (NDRF) has been actively involved in combating the spread of COVID-19, its services have not been adequately mentioned in the media. Mandated to carry out rescue and relief operations in disaster-affected areas, the NDRF has been rendering yeoman's service not only in carrying out rescue and relief operations, but also in training the State Disaster Response Forces personnel in all States.
- Immigration officials entrusted with conducting COVID-19 tests of the passengers arriving in New Delhi were trained by the NDRF. Along with its parent body, the National Disaster Management Authority, of which the Prime Minister is the Chairman, the NDRF has trained over 30,000 personnel in disaster management across the country.

#### **Far-off corners**

- There is, however, a need to augment the strength of trained personnel. Since NDRF personnel are wholly drawn from the CAPFs, there is a good reserve of trained personnel who go back to their parent force after their stint with this specialised force is over.
- Such personnel can be deployed at quarantines centres after short-term courses. A proposal mooted by NITI Aayog last year, to conduct a bridge course for dentists to render them eligible for the MBBS degree, could be revived, and such doctors could be on stand-by to help in such emergency crises.
- It is these CAPF personnel who give a semblance of existence of government administration even in the remotest corners of the country. Their versatile experience can be utilised to the nation's advantage.



## 12. ENVIRONMENT

***For a clean environment the practice of conservation as a culture needs to be constructed in the minds of people. Analyse***

### KEY POINTS

- A considerable contribution to aggravated levels of pollution in the winters is due to inversion-triggered long periods of low ventilation and a consequent build-up of pollutants.
- If high emission peaks of the fuel burning and combustion cycles (fires, fuel burning, shutdowns, etc) are only allowed during periods of good ventilation, build-up is avoided, but the same processes of burning fuel during the periods of low ventilation in winter evenings will add to pollution by trapping the emissions within.
- With a considerable part of pollution coming from natural/area sources also, especially dust, we may need to re-examine the ambient air quality standards that are currently difficult to achieve.
- Under such circumstances, it could be advisable to reconsider the standards, based on the contribution of area sources and meteorological conditions; otherwise, we may have to freeze all further development that is likely to cause an increase in pollution beyond the prescribed standards.
- The Environment Protection Rules, 1986, provide that the ambient air quality shall not be allowed to increase beyond the prescribed standards. The Central Pollution Control Board (CPCB) has evolved the air pollution index.
- Crop stubble burning has been established to play a very significant role in the deterioration of air quality. There is an immediate need to regulate this. If stubble burning is inevitable, it could be allowed by permit only.
- Residual crops could be harvested and utilised in energy production, biogas generation, commercial feedstock for cattle, composting, and conversion in biochar, or as raw material.
- Storage of desilted sludge on roads and embankments has to be prohibited. Staggered business timings, particularly restricting business hours during winter nights, may reduce the emission build-up during fumigation periods.

***The potential of green hydrogen based vehicular fuel looks promising in the country. Examine***

### KEY POINTS

- The transport sector in India contributes one-third of the total greenhouse gas (GHG) emissions, within which the lion's share is that of road transport.
- The new H-CNG technology requires only minor tweaks in the current design of CNG buses. Although the current pilot phase of H-CNG buses is a step in the right direction, it should perhaps be considered as a stop-gap arrangement, at least until a cost-effective variant of green hydrogen blended fuel is discovered, which would address emission mitigation and will also be more economical.
- In the case of green hydrogen, electricity generated from renewable energy is used to split water into hydrogen and oxygen. This is by far the cleanest and perhaps the most expensive method of producing hydrogen at the moment. Majority of the hydrogen production in India takes place via fossil fuels and is used primarily in the chemical and petrochemical sectors.
- It is equally important to take cognisance of the fact that not all aspects of hydrogen as a transportation fuel paint a pretty picture. For instance, the cost of lithium ion-based battery-operated vehicles has been reducing while hydrogen fuel cell technology is still in its nascent stages and is relatively quite expensive.



- To put things in perspective, this implies that a hydrogen-run vehicle achieves an energy efficiency rate of 25-35%, which may vary based on the model. This analysis has been conducted with regard to passenger cars, and the results may differ in the case of heavy-duty vehicles.
- In their quest for becoming carbon neutral by 2035, Reliance Industries plan to replace transportation fuels with hydrogen and clean electricity. Similarly, the National Thermal Power Corporation (NTPC) is considering setting up a green hydrogen production facility in Andhra Pradesh.
- As per a policy brief issued by TERI, demand for hydrogen in India is expected to increase 3-10 fold by 2050. Against this backdrop, the future of hydrogen, particularly green hydrogen, looks promising in India.

***Developing and conserving wetlands in urban areas of the country could be the best possible way to avert water crisis. Elaborate***

**KEY POINTS**

- According to a recent WWF Risk Filter analysis, 100 cities globally will be facing 'severe water scarcity' by 2050. These cities are home to around 350 million people. Climate change and rising population the total population of these cities could increase from 17% in 2020 to around 51% by 2050—have been cited as underlying factors.
- Therefore, countries need to make the spread of urbanisation more even apart from undertaking urgent climate action. Two Indian cities—Jaipur (45) and Indore (75)—feature in the list. Apart from these two, 28 other Indian cities are likely to face 'increasing water risks in the next few decades', including Kolkata, Mumbai, Bengaluru, Lucknow, Delhi and Vishakapatnam.
- Developing urban wetlands and watershed are crucial to containing the crisis. The Smart Cities initiative's framework for water management also must be implemented on a war footing.
- In order to operationalise water management for a water-secure future, public funding for sustainable economic growth is the need of the hour. From cutting greenhouse gas emissions to reclaiming waste ware, cities must have a multi-pronged response.
- Given how India neither has created storage capacity commensurate to the precipitation it receives nor has moved meaningfully on wastewater reclamation, there is a lot of potential in these two areas in terms of bolstering water-security.
- Beyond that, the country needs to implement rainwater harvesting, micro-irrigation, etc, while transitioning away from water-guzzling crops and pricing water correctly to discourage wastage. Without a holistic outlook on water, the country suffers—research shows a clear link between water-stress and conflict.

***Central government needs to empower State pollution control boards to handle the problem of air pollution in the country. Explain***

**KEY POINTS**

- The Central Pollution Control Board (CPCB) based in Delhi is generally well funded and resourced, unlike the state pollution control boards (SPCBs) that are in charge of implementation of the rules that CPCB writes.
- Take the role of a field officer at a SPCB. These officers are in charge of inspections of a wide range of infrastructure and activities. They also have additional duties of conducting awareness programmes, such as those directed at farmers in the case of stubble-burning.

**Challenges of SPCB**

- First, there is a critical shortage of staff in most SPCBs. As an illustration, the Haryana State Pollution Control Board has been operating with a 70 per cent staff shortage. What this means practically is that a single officer



is tasked to handle the demands of pollution control for an entire district without any subordinate technical staff.

- Secondly, officers at the SPCBs do not get to develop any specialisation. The CPCB has a decent workforce and robust laboratories, where scientists once recruited get to work and excel in a particular area such as biomedical waste or hazardous waste or air quality management.
- They are incentivised to specialise and are even promoted on the basis of it. On the other hand, SPCBs don't have such a stratified system, and the same officer is in charge of all these pollution categories, making it impossible to gain expertise and excel in any one area.
- Fourthly, SPCBs are chronically underfunded. For instance, the funds of several SPCBs such as Haryana's largely come from "No Objection Certificates" and "Consent to Operate" that the boards grant to industries and projects, rather than budgetary allocations by the government. Owing to this, SPCB officials are unable to spend on critical functions.
- Finally, SPCB officials are at times given additional responsibilities that are unrelated to pollution control. Haryana's SPCB, for instance, has poultry farms under its ambit.
- Our fight on air pollution rests on the shoulders of these overworked, underfunded, multitasking professionals, who would be successful only if they were given a chance. India must empower SPCBs to act by giving them the necessary funds, human resources, tools and technologies.

***In order to attain the goals of COP- 21 Paris deal, India needs to compete with commitments of other countries. Elaborate***

#### **KEY POINTS**

- The pleasant surprise in these demoralising times was China's announcement to achieve carbon neutrality, that is, effectively generating net-zero emissions, before 2060. This is a welcome step from the world's largest carbon emitter.
- In order to place India's existing Paris commitments in perspective, it is worthwhile to step back and compare them with the commitments of other countries, based on an independent scientific analysis carried out by the Climate Action Tracker, which has assessed the promised climate commitments across developed and developing countries.
- India is one of the only six countries (amongst the 33 that were assessed), and the only G-20 country, whose climate commitments at Paris are on a path compatible to limit warming well below 2°C.
- This cost-effectiveness in renewable electricity has occurred rather rapidly, largely as a result of the global reduction in solar PV and battery prices. Solar electricity is already the cheapest electricity available in India when the sun is shining.
- Another area of attention is increasing urban forestry to compensate for the environmental degradation as a result of rapid urbanisation in several Indian cities.
- This is vital to restore the flow of crucial ecosystem services, including air quality, and increase the resilience of cities to extreme climatic events. Rapid and intermittent urbanisation has resulted in disconnected islands of forests amid urban landscapes.
- At the level of international negotiations, India must initiate a narrative, discussion and dialogue which focuses on each country taking on commitments that move their carbon trajectory towards the Paris agreement goal of limiting global warming to well below 2°C.
- This is necessary not only to reduce the international pressure on India to enhance its commitments — but also to ensure that all countries carry a fair share of the burden. India's G-20 presidency in 2023 could be a great opportunity to jump-start this process.



***As G20 chair in 2022, India needs to focus on carbon capture utilisation technologies. Explain***

**KEY POINTS**

- The primary focus within the theme of cleaner energy systems was Circular Carbon Economy (CCE), wherein the model focusses on adopting a technology-neutral systems approach to ensure energy market stability.
- In line with this, the 'CCE Accelerator' was also released to facilitate CCE implementation, advancing research and development of technologies and aiding national and international cooperation.
- Given the fact that priority areas tabled by the G20 chair country need to be unofficially endorsed by a stipulated number of G20 member countries, India needs to strike a balance between issues that it considers pertinent from the national perspective as well as those which are unlikely to turn into points of contention amongst member countries.
- In line with the notion of CCE, India may consider broadening the scope of the issue of climate change and acknowledge the role played by high material consumption in contributing to the energy demand and by extension to emissions.
- Many of the G20 member countries such as the European Union, Germany, China, Japan, United Kingdom etc. already have policies in place and programmes that foster the adoption of a circular economy.
- India too has made some headway, although modest, in the context of material efficiency. For instance, the release of the Draft National Resource Efficiency Policy (NREP), 2019, that represents a comprehensive framework for resource efficiency.
- Another pathway that is increasingly gaining momentum is the application of carbon capture utilisation. It refers to the recycling of carbon for producing economically valuable products and services.
- The costs associated with carbon capture can be partially offset by the revenue generated from the utilisation measures. India had identified Carbon Capture Utilisation and Storage (CCUS) as a priority area in its Second Biennial Update Report that was submitted to UNFCCC.
- As is evident, although the country is open to exploring the option of CCUS technologies, the appetite for its domestic adoption is limited at the moment. However, as the technology matures and the associated costs fall further, the country may consider designing policies and programs to encourage faster deployment.

***The Central government needs to have a holistic policy that ensures that the environmental impact of data centres does not go unnoticed. Analyse***

**KEY POINTS**

- The ministry of electronics and information technology (MeITY) sought to establish data centres at the state level to further the National eGovernance Plan and released comprehensive guidelines to regulate the same.
- A 'data centre park' is a facility housing multiple data centres that cater for the operational and organisational needs of data-driven companies. Data centres are physical warehouses responsible for the storing and dissemination of data for information services.
- They contain computers, network communications and storage systems, and power systems that keep the centres up and running. In essence, data centres house the IT capabilities required to run data businesses.
- Storing digital data is set to account for 14% of the world's CO<sub>2</sub> emissions by 2040, with emissions currently on par with the airline industry. Moreover, data centres often rely on water-powered cooling towers to achieve efficient power usage.
- This overwhelming reliance on natural resources, coupled with increased greenhouse gas emissions has led to data centres being identified as a potential risk to climate sustainability.

- Reform has also centred on studying methods to re-utilise waste heat generated by data centres. Illustratively, IBM has earmarked \$2 million for Project Thrive—an initiative to develop materials that use waste heat to cool data centres.
- In addition to these measures, businesses and governments have thrown their weight behind renewable energy (RE) to power data centres, thereby reducing emissions.
- Once the policy installs mechanisms to monitor the environmental impact of data centres, it may subsequently look at measures to mitigate the same.

***Clarity on objectives and removing ambiguity on key aspects will be essential for India to achieve forest related national and international commitments. Examine***

#### **KEY POINTS**

- Forest landscapes play a critical role in tackling climate change and provide a broad range of ecosystem services.
- India's NDC target mentions creation of an additional carbon sink of 2.5-3 billion tonnes of CO<sub>2</sub> equivalent from additional forest and tree cover until 2030.
- These national targets on restoration support implementation of national priorities on Sustainable Development Goals while contributing to the achievement of international commitments on climate change, biodiversity and land degradation.
- Forest Landscape Restoration (FLR) is a long-term process to regain ecological functionality, enhance human well-being in deforested or degraded landscapes and deliver a broad range of goods and services for a wide range of stakeholders and across different land-uses.
- However, effective implementation of these FLR initiatives calls for establishing common understanding and coordinated implementation approaches on FLR in India.
- Forest Survey of India's reports identify 63 m ha of potential areas for restoration across different categories, namely, open forest, recently impaired forests, cultural wastelands, agro-forestry plantations, and potential for plantations along roads and railway tracks.
- The Ministry of Environment, Forest and Climate Change and IUCN India have constituted a Bonn Challenge Consultative Committee with a view to guide the progress and achievements in respect of commitments under the Bonn Challenge.
- Another concern is around establishing a baseline for FLR to demonstrate transformational change and assess progress against business as usual scenario.
- Monitoring and reporting are important to understand what worked and what did not, to better support adaptive management and see how local communities benefit from restoration.
- Adequate institutions have been developed over the past three decades under the Joint Forest Management, the Forest Protection Committee, Van Panchayats and Gram Sabhas for bringing stakeholders together at the ground level, in addition to district and State level coordination committees.

***What are desalination plants? Analyse the feasibility of the desalination plants in the country.***

#### **KEY POINTS**

##### **What are desalination plants?**

- A desalination plant turns salt water into water that is fit to drink. The most commonly used technology used for the process is reverse osmosis where an external pressure is applied to push solvents from an area of high-solute concentration to an area of low-solute concentration through a membrane.



- The microscopic pores in the membranes allow water molecules through but leave salt and most other impurities behind, releasing clean water from the other side. These plants are mostly set up in areas that have access to sea water.

### Feasibility

- Desalination has largely been limited to affluent countries in the Middle East and has recently started making inroads in parts of the United States and Australia.
- In India, Tamil Nadu has been the pioneer in using this technology, setting up two desalination plants near Chennai in 2010 and then 2013. The two plants supply 100 million litres a day (MLD) each to Chennai. Two more plants are expected to be set up in Chennai.

### Is it ecologically safe?

- The high cost of setting up and running a desalination plant is one reason why the Maharashtra government has over the last decade been hesitant in building such a plant.
- Desalination is an expensive way of generating drinking water as it requires a high amount of energy.
- The other problem is the disposal of the by-product highly concentrated brine of the desalination process. While in most places brine is pumped back into the sea, there have been rising complaints that it ends up severely damaging the local ecology around the plant.

### *What is meant by a Blue tide? How does it affect the marine ecosystem of the country? Examine*

#### KEY POINTS

#### Blue Tide

- The waves appear blue due to the phenomenon is called 'blue tide', and appears when luminescent marine life make the sea appear a deep shade of blue.
- The spectacle occurs when phytoplankton (microscopic marine plants), commonly known as dinoflagellates, produce light through chemical reactions in proteins, said researchers.

#### Bioluminescence

- Waves disturb these unicellular microorganisms and make them release blue light. Bioluminescence is the property of a living organism to produce and emit light. Animals, plants, fungi and bacteria show bioluminescence.
- A remarkable diversity of marine animals and microbes are able to produce their own light. It is found in many marine organisms such as bacteria, algae, jellyfish, worms, crustaceans, sea stars, fish and sharks.
- Luminescence is generally higher in deep-living and planktonic organisms than in shallow species. It is an antipredatory response.
- Bioluminescence is assumed to startle predators, causing them to hesitate, in a form of predator intimidation. Another explanation is that bioluminescence helps these organisms gather together and make colonies.

#### Ecology

- While smaller blooms may be harmless, slow-moving larger blooms may have an impact on deep-sea fishing.
- According to marine experts, the phenomenon is an indicator of climate change. Factors such as the pattern of the wind and the temperature of the ocean also determine the occurrence of bioluminescent waves.
- It is a spectacle but in reality, it is an ecological indicator of degraded water quality. The phytoplankton shows up where seawater has low dissolved oxygen and high presence of Nitrogen.