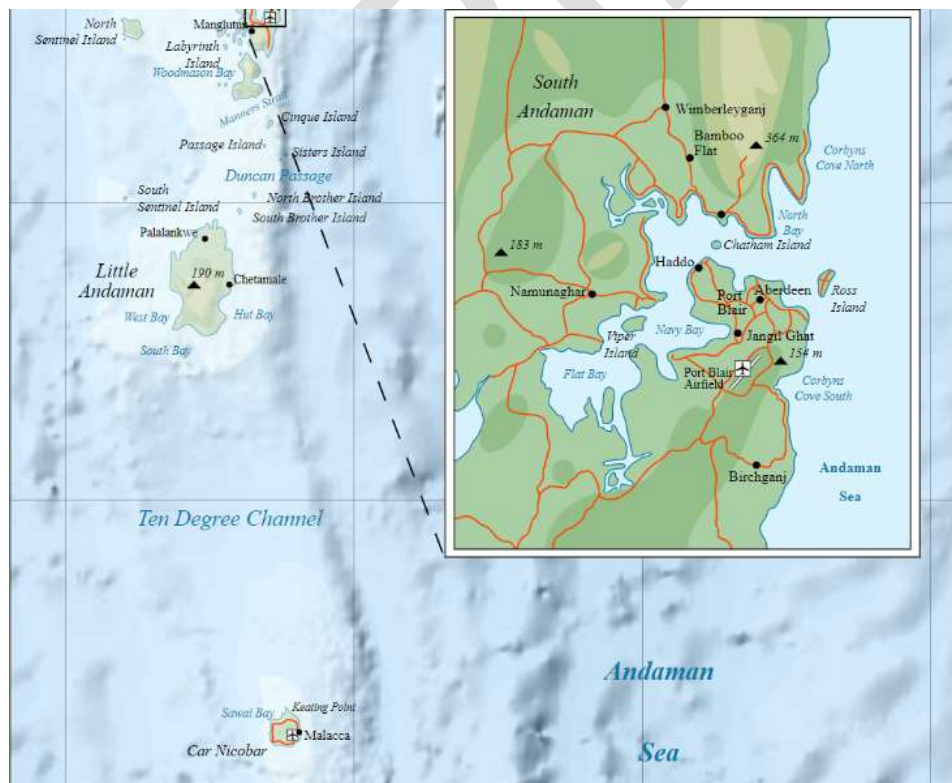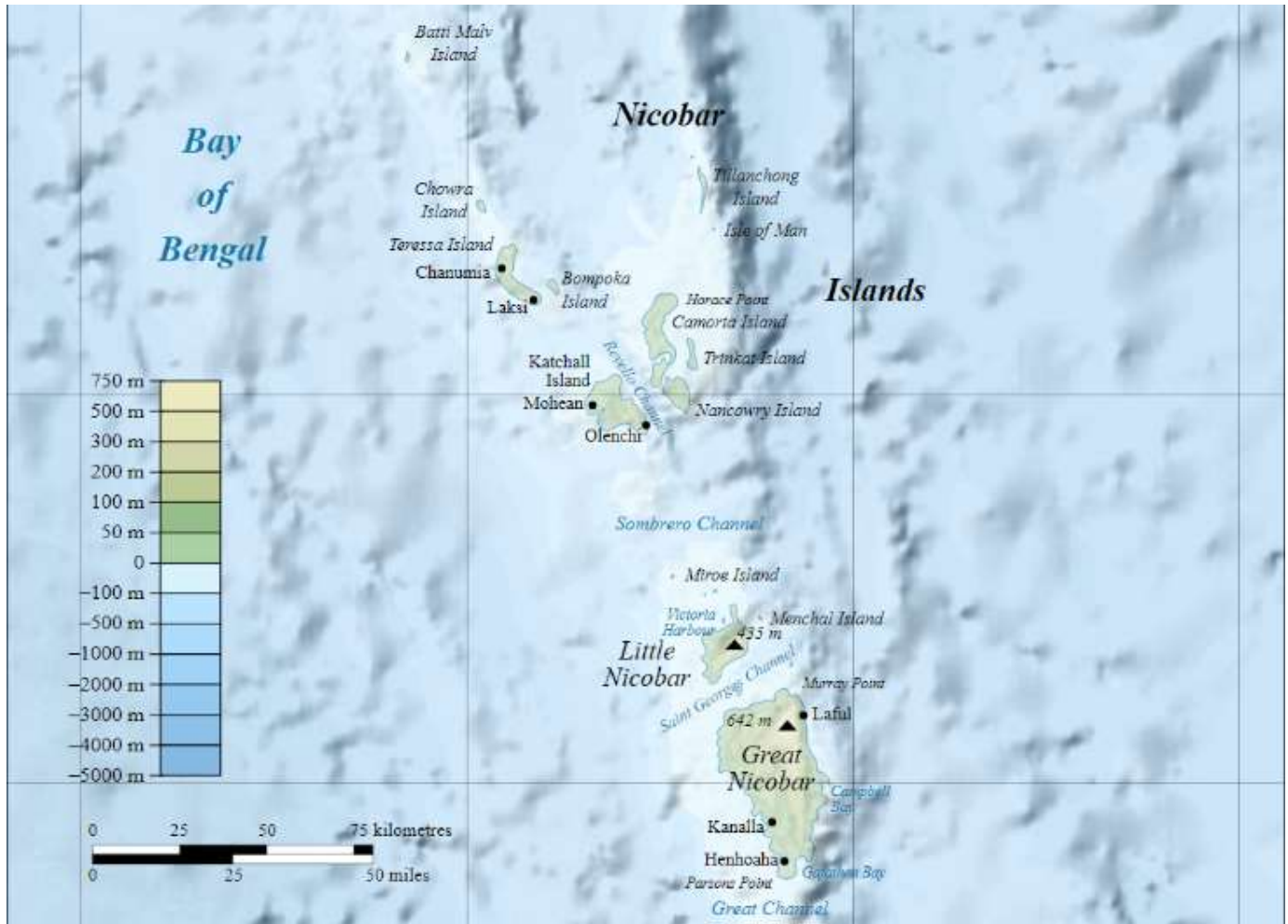# GS - I

Megacity plan for Little Andaman

- The proposed construction of a m**ega financial-tourist complex on Little Andaman Island** will place at risk a fragile ecosystem and result in habitat loss of the vulnerable **Onge tribe** and rare wildlife
- A plan for the sustainable and holistic development of the 680 sq km, fragile Little Andaman Island in the Andaman and Nicobar group has raised the alarm among conservationists.
- The '**Sustainable Development of Little Andaman Island - Vision Document', is the NITI Aayog's proposal** to leverage the strategic location and natural features of the island.
- This, the vision says, will be done by building a **new greenfield coastal city** there, that will be developed as a free trade zone and will compete with **Singapore and Hong Kong**.

Other provisions
- There will be '**underwater'** resorts, casinos, golf courses, convention centres, plug-and-play office complexes, a **drone port** with fully automated drone delivery system, nature cure institutes and more.
- An **international airport** capable of handling all types of aircraft will be central to this development vision because "all successful case studies and references" studied by the visioning team indicate that an international airport is key for development.
- The only jetty on the island will be expanded and a marina will be developed next to the tourist entertainment district.
- A 100 km greenfield ring road will be constructed parallel to the coastline from east to west and will be supplemented with a mass rapid transit network with stations at regular intervals.
- The vision plan is not in the public domain, even though it is said to have been finalised months ago. The comparison with Singapore, for instance, is one key.
- The vision document, described by conservationists as a first bullet through the heart of the island, is to be followed by a second one soon.

- The proposal is pivoted along 3 development anchors and zones.
    1. Zone 1 — spread over 102 sq km along the east coast of Little Andaman — will be the financial district and medi city and will include an aerocity, and a tourism and hospital district. Spread over 85 sq km of pristine forest,
    2. Zone 2, the leisure zone, will have a film city, a residential district and a tourism SEZ.
    3. Zone 3 — on 52 sq km of pristine forest — will be a nature zone, further categorised into three districts: an exclusive forest resort, a nature healing district and a nature retreat, all on the western coast.
- There will be 'underwater' resorts, casinos, golf courses, convention centres, plug-and-play office complexes, a drone port with fully automated drone delivery system, nature cure institutes and more.
- An international airport capable of handling all types of aircraft will be central to this development vision because "all successful case studies and references" studied by the visioning team indicate that an international airport is key for development.

Challenges to development

- There are certain factors, the vision document notes, that could prevent Little Andaman from becoming the new Singapore — factors that are "stopping us from developing these into veritable jewels for the country".
- These include **lack of good connectivity with Indian mainland and global cities, a fragile biodiversity and natural ecosystems** and certain Supreme Court notifications that pose an impediment to development.
- Another key factor is the "**presence of indigenous tribes and concerns for their welfare**".
- There are other concrete obstacles that the vision takes note of: **95% of Little Andaman is covered in forest**, a large part of it the pristine evergreen type. Some 640 sq km of the island is Reserve Forest under the Indian Forest Act, and nearly 450 sq km is protected as the Onge Tribal Reserve, creating a unique and rare socio-ecological-historical complex of high importance.
- The vision document has **maps with no legends or explanations and uses inappropriate photographs plagiarised from the Internet**.
- It talks of conservation of national park/wildlife sanctuary on Little Andaman when none exist here and it has no mention of the geological vulnerability of the place, which was amongst the worst-affected in the earthquake-tsunami combination in 2004.
- The plan has **no financial details, no budgeting, or inventorisation of forests and ecological wealth and no details of any impact assessment**.
- The nature resort complex proposed at West Bay on the western coast is to have theme resorts, floating/underwater resorts, beach hotels, and high-end residential villas. It is today a secluded and difficult to reach part, one of the most important nesting sites of the globally **endangered Giant Leatherback sea turtle** which is being studied by the Dakshin Foundation, the Andaman and Nicobar Environment Team and the island administration's Forest Department.
- The only jetty on the island will be expanded and a marina will be developed next to the tourist entertainment district. A 100 km greenfield ring road will be constructed parallel to the coastline from east to west and will be supplemented with a mass rapid transit network with stations at regular intervals.
- The vision plan is not in the public domain, even though it is said to have been finalised months ago. The comparison with Singapore, for instance, is one key. It has a map of Little Andaman overlaid on Singapore's, along with the following statistics: "The population density of the Andaman and Nicobar is 47 people per sq km while it's (sic) 7,615 persons per sq km in Singapore. Its per capita income is $1,789 compared to Singapore's $55,182."

ZSI for the 1st time came up with a database of all faunal species found on A&N island.

It has 10% of faunal species in India. For example Nicobar Megapode (builds nest on ground), Nicobar Treeshrew, Long tailed Nicobar Macaque and Andaman Day Gecko.
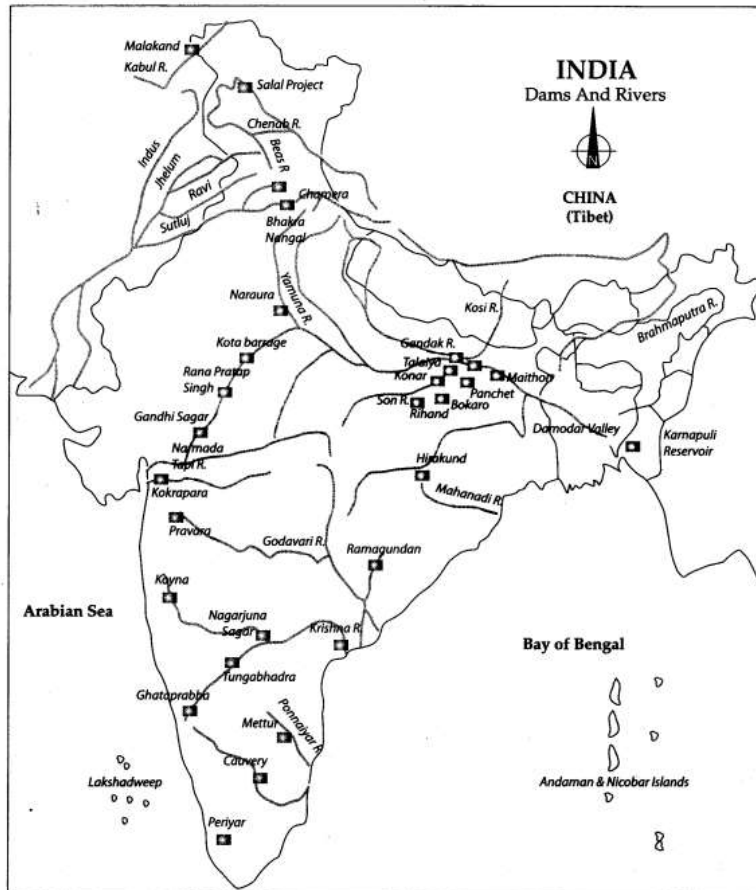Critically Endangered are = Andaman shrew, Jenkin's shrew and Nicobar shrew.
Vulnerable = Dugong/ Sea cow and Indo Pacific Humpback Dolphin.
6 PVTG = Nicobarese & Shompen (Mongoloids) and Onge, Jarawa, Sentinelese, Andamanese (Negroids).

Govt relaxed the Restricted Area Permit (RAP) for some foreign nationalities till Dec 31, 2022.

The problem of ageing dams

INDIA
Dams And Rivers

- Dams and reservoirs are believed to secure our water needs for the future. However, data and studies show that they can threaten our water security. Here is how.
- It is not a secret anymore that India's dams are now ageing and concomitantly, reservoir water is being replaced by soil, technically known as silt or sediment.

Becoming obsolete
- India is ranked third in the world in terms of building large dams. Of the over 5,200 large dams built so far, about 1,100 large dams have already reached 50 years of age and some are older than 120 years.
- The number of such dams will increase to 4,400 by 2050. This means that 80% of the nation's large dams face the prospect of becoming obsolete as they will be 50 years to over 150 years old.

- The situation with hundreds of thousands of medium and minor dams is even more precarious as their shelf life is even lower than that of large dams.
- Krishna Raja Sagar dam was built in 1931 and is now 90 years old. Similarly, Mettur dam was constructed in 1934 and is now 87 years old. Both these reservoirs are located in the water-scarce Cauvery river basin.
- As dams age, soil replaces the water in the reservoirs. Therefore, the storage capacity cannot be claimed to be the same as it was in the 1900s and 1950s.
- To make matters worse, studies show that the design of many of our reservoirs is flawed.
- In a paper, 'Supply-side Hydrology: Last gasp', published in 2003 in Economic & Political Weekly, Rohan D'Souza writes that the observed siltation rate in India's iconic Bhakra dam is 139.86% higher than originally assumed. At this rate, he wrote, "the Bhakra dam is now expected to function for merely 47 years, virtually halved from the original estimate of 88 years".
- Similarly, the actual siltation rate observed for the Hirakud, Maithan and Ghod dams are way higher at 141.67%, 808.64% and 426.59%, respectively. Studies in later years showed similar findings.
- Almost every scholarly study on reservoir sedimentation shows that Indian reservoirs are designed with a poor understanding of sedimentation science. The designs underestimate the rate of siltation and overestimate live storage capacity created.
- Therefore, the storage space in Indian reservoirs is receding at a rate faster than anticipated. Reservoirs are poised to become extinct in less than a few decades with untold consequences already under way.

Consequences
- When soil replaces the water in reservoirs, supply gets choked. The cropped area begins receiving less and less water as time progresses. The net sown water area either shrinks in size or depends on rains or groundwater, which is over-exploited.
- Crop yield gets affected severely and disrupts the farmer's income.
- In fact, the farmer's income may get reduced as water is one of the crucial factors for crop yield along with credit, crop insurance and investment.
- It is important to note that no plan on climate

change adaptation will succeed with sediment-packed dams.

- The flawed siltation rates demonstrated by a number of scholarly studies reinforce the argument that the designed flood cushion within several reservoirs across many river basins may have already depleted substantially due to which floods have become more frequent downstream of dams.
- The flooding of Bharuch in 2020, Kerala in 2018 and Chennai in 2015 are a few examples attributed to downstream releases from reservoirs.
- The nation will eventually be unable to find sufficient water in the 21st century to feed the rising population by 2050, grow abundant crops, create sustainable cities, or ensure growth.
- Therefore, it is imperative for all stakeholders to come together to address this situation urgently.

Dam Safety Bill, 2018
- India ranks 3rd after China and the USA in terms of the number of large dams.
- The Bill applies to all specified dams in the country.
- Onus of dam safety is on Dam Owner.
- It provides for Penal provisions for violations.
- **National Dam Safety Authority (NDSA)** as a regulatory authority and a State Committee on Dam Safety by State govt.
    1. NDSA liasons with State Dam Safety Organizations (SDSO).
    2. It maintains National level database & examine the causes of dam failures.
    3. It also accredits organizations.
- Owners of specified dams are required to provide a dam safety unit in each dam.

DRIP (Dam Rehabilitation & Improvement Project)
- It started in 2018, now for 250 dams. It is a 6 year project.
- Ministry of Jal Shakti and World Bank (80% fund) is implementing DRIP.
- Objectives:
    1. Improve safety & performance of existing dams.
    2. Strengthen dam safety institutional setup at Center and in participating States.
- The CDSO of Central Water Commission, assisted by a Consulting firm, is coordinating

and supervising the Project implementation.

DHARMA:
- Dam Health & Rehabilitation Monitoring App.
- It is a software programme to digitise all dam related data effectively.

Education Data: Gender issues
- Each year in December, the prestigious Nobel Prize is awarded to scientists who, during the preceding year, have conferred the greatest benefit to humankind.
- However, since its inception in 1901, only 25 women have won a Nobel Prize in Physics, Chemistry, Medicine and Economics — a distressing disparity that reflects deeply ingrained gender stereotypes, biases and male-dominated cultures.
- Worldwide, women are not encouraged to pursue educations and careers in science and technology. Biases, both conscious and unconscious, limit girls' and women's progress within these fields.
- Not only are people more likely to associate science and technology with men than with women, but also often hold negative opinions of women in "masculine" positions like computer scientists and engineers.
- Moreover, women are often judged less competent than their male colleagues. The few women who decide to pursue careers in science and technology are also paid less for their work compared to men and experience huge difficulties in advancing in their careers.
- India tops world rankings in producing **female graduates in STEM with 43% but employs only 14% of them**.
- In comparison, **Sweden** produces 35% female STEM graduates and employs 34% of them.
- According to research from New York University's AI Now Institute, 80% of AI professors are male and the situation is equally distressing on the industry side.
- Tech giants like Facebook and Google might be on the cutting-edge of AI technology and research, but only 10-15% of their AI workforces are women. This is problematic as **algorithms** written by men end up skewed to favour men, especially white men.
- When deployed in society (and increasingly so at a large scale), this translates into preferential treatment for one group **(white men)**, while other groups may be ignored.
- With **the rapid digitisation** transforming

global societies at an unprecedented scale, the under-representation of women in science and technology puts them at the high risk of being displaced by technology.

- The fight against gender disparity in science and technology must be fought by all — families, educational institutions, companies and governments.
- Gender equality is not just an ethical imperative, but also a business priority. Organisations with greater diversity among their executive teams tend to have higher profits and greater innovation capability.
- In fact, McKinsey & Company's Global Institute report found that narrowing the gender gap could add **between $12 and $28 trillion to the global GDP**.

Inclusionary Urbanisation

Context
- With a clear focus on expansion of Metro Rail and bus services through Central funding, Budget 2021 has recognised a core component of urbanisation.

Clean and Green mass mobility
- **Comfortable, safe and affordable commuting** has well-recognised **multiplier effects for the economy and more generally for public health,** although COVID-19 has had the perverse effect of driving people away to the safety of personal car and two-wheeler bubbles.
- There is little doubt that when the pandemic is under control, more people will return to **clean and green mass mobility**.

Upcoming metro projects
- Central funding of ?1,957 crore, ?63,246 crore and ?14,788 crore for the **Kochi, Chennai and Bengaluru Metro projects**, respectively, gives these big cities greater certainty that they can meet targets.

Is the PPP model for public bus transport viable?
- Less certain, however, is the impact of the proposed ?18,000 crore plan to augment public bus transport using a PPP model that will enable private sector players to finance, acquire, operate and maintain over 20,000 buses.
- **India's ratio of buses to population** is a **low 1.2 per 1,000 people, compared to 8.6 in**

Thailand and 6.5 in South Africa, although **some States like Karnataka are well ahead of the national average, as per NITI Aayog data**.
- **Licensed private urban bus services** remain a politically sensitive topic in many States, where State monopolies coexist with unregulated paratransit, and it will take a major effort to convince them that a bus renaissance is a good post-pandemic recovery strategy.
- The amended Motor Vehicles Act has provisions for the Centre to take the lead here.
- The challenge of urbanisation goes beyond standalone interventions such as Metro and bus system grants.
- State governments, which retain effective control over urban development rather than city administrations, have failed to operationalise the umbrella authorities to regulate transport.
- **Common mobility cards** that would help **citizens use bus, train and feeder networks** seamlessly were largely in pilot project mode even before the pandemic.

Exclusionary urbanisation
- There is valid criticism that the existing paradigm is one of "exclusionary urbanisation", which **makes Metro and bus services expensive for the majority,** particularly for those forced to live in the suburbs due to housing costs, and sometimes **making the per kilometre cost of using a two-wheeler more attractive.**
- Moreover, **Census 2011** showed that the **number of Census Towns,** which are urban for census purposes but not named urban local bodies, **grew tremendously over a decade**.
- They **lack access to funding, infrastructure and capacity** to meet the needs of large populations even now.

Conclusion
- Enhanced ambition, therefore, requires the Centre to work with State governments to **integrate key areas with its transport vision**, such as **affordable inner-city housing**, including **rental projects**, **access to civic services and health care, and enhanced sustainability, greenery and walkability.**
- **All these are covered by Central budgetary schemes for cities. Only integration can bring about *inclusive urbanisation*.**

Rashtriya Sanskriti Mahotsav

- Nodal Ministry: It is a festival started by the **Ministry of Culture** in the year **2015**.
- Objective: It enhances mutual **understanding and bonding** between people of diverse cultures. Thereby it secures stronger unity and integrity of India.
- Participation of Zonal Centres: The festival witnesses the active participation of **Seven Zonal Culture Centres**.
- Significance: The festival is instrumental in **showcasing folk and tribal art, dance, music, cuisines & culture** of one state in other states.
- It is reinforcing the cherished goal of "Ek Bharat Shreshtha Bharat" and at the same time supporting their livelihood.

Ek Bharat Shreshtha Bharat programme:

- It was launched by the Prime Minister in **2016**.
- It will promote engagement amongst the people of different States/UTs to enhance mutual **understanding and bonding** between people of diverse cultures.
- The states carry out activities to promote a sustained and structured **cultural connect**.
- Activities are taken in the areas of **language learning, culture, traditions & music, tourism & cuisine, sports**, and sharing of best practices.

Data on Mineral Resources of India

Data on Minerals
Types of mining: Open Cast and Underground mining

Highlights

- World's **largest producer of mica** blocks and mica splitting.
- World's **2nd largest producer of crude steel** in jan-dec2019.
- **2nd** rank among the **chromate** producers of the world.
- **3rd** in production of **Coal & Lignite, Chromite.**
- **5th in Manganese** ore production.
- **Bauxite: 5th** in production.
- The mineral production (excluding atomic miner als and Minor Minerals) in India increased by 2.9% as per Index of Mineral Production during 2018-19.

View Complete chart on :
https://www.aspireias.com/current-affairs/17-02-2021

Data on Agriculture
Contribution to GDP

- The **share of agriculture in GDP** increased to **19.9** per cent in 2020-21 from 17.8 per cent in 2019-20. -ECONOMIC SURVEY(ES).
- While **COVID induced lockdowns** adversely affected the performance of the non-agricultural sectors, the **agriculture sector** came up with a robust **growth rate** of **3.4** per cent at constant prices during 2020-21.
- During 2020-21, while the **GVA for the entire economy contracted by 7.2 per cent**,Growth in GVA for agriculture maintained a positive growth of 3.4 per cent.
- **54.6** per cent of the total **workforce** in the country is still engaged in agricultural and allied sector activities.
- Within the agriculture sector, the **share of crops has fallen from 11.2 per cent in 2014-15 to 9.4** Per cent in 2018-19. The decline in the share of crops has been made up by an **increase in the Share of livestock and fisheries sector.**

Livestock

- Livestock sector contributed **4.2% of total GVA** in 2018-19.
- With livestock sector growing at a **CAGR** of nearly **8.4%** over the last five years, it assumes an important role in income, employment and nutritional security. As per the estimates of National Accounts Statistics **(NAS) 2020.**
- The total Livestock **population** is **535.78 million** in the country showing an **increase of 4.6%** over Livestock Census2012
- With livestock sector growing at a **CAGR** of nearly **8.4%** over the last five years, it assumes an important role in income, employment and nutritional security. As per the estimates of National Accounts Statistics **(NAS) 2020.**
- **FAOSTAT production data (2019)**, India **ranks 5th** in **meat production** in the World. The annual growth rate of meat production was 5.98 per cent in 2019-20.
- The **Contribution of Livestock in Total Agriculture** and allied sector GVA(at constant prices) has increased from 24.32 per cent (2014-15) to **28.63** per cent (2018-19).

Cattle

- India's **Cattle Inventory** amounted to over 303 million in 2020 which is about **56.7% of the total livestock** population of India.

- India continues to be the **largest producer of milk** in the world. Milk production in the country was 198.4 million tonnes in 2019-20 and registered a **growth rate of 6.5%** over the previous year.
- While the global cattle population stood at over 987 million, India had the highest cattle population **followed by Brazil, the United States, and China**.
- There is a **Decline of 6% in the total Indigenous (both descript and non-descript) Cattle population** over the previous census. However, the pace of decline of Indigenous Cattle population during 2012-2019 is much lesser as compared to 2007-12 which was about 9%.

Poultry

- FAOSTAT production data (2019), India ranks **3rd in egg production in the world**.
- Annual **Growth rate of egg production was 4.99% in 2014-15**, thereafter, there has been a significant improvement in the egg production with **10.19%** growth **in 2019-20** over the previous year.

Fisheries

- In 2018-19, **71% of marine** Fisheries Potential and **58% of inland Fisheries Potential had been harnessed**.
- Although fishing is carried on in almost all parts of the country, about 97% of India's marine fish and about 75% of the country's inland fish are caught in the littoral states like Andhra Pradesh, West Bengal, Gujarat, Kerala, Tamil Nadu, Maharashtra.
- The **Share of Marine Products in Total Agricultural Export Value** has remained the **largest** over the period. Its share in total agricultural export value increased from 14.5% in 2015-16 to close to **19% in 2019-20**.
- India is the **2nd largest fish producing country** in the world and accounts for **7.58 percent of the global production.** The fisheries sector contributes 1.24 per cent to the GVA and 7.28 per cent to the agricultural GVA.

Monsoon dependence.

- Close to **53% of cropped area** is **water stressed**.

Agri diversity

- **Staple crop** occupy **77% of the total GCA, contribute 41% output of the crop sector**.

High value crops on the other hand contribute and almost similar amount to total output as staples do, but they occupy only 19% of GCA.
- Committee on Doubling the farmers income has identified that **diversification to the fruits and vegetables** segment is likely to **benefit small and medium farmers more than the large ones**.
- Predominance of food grains- more than **85% of net sown area is under food grains**.
- Use of **Hybrid Technology** in vegetables: Shift to using hybrid varieties for vegetables. At present, **10 per cent of the cropped area under vegetables is under hybrids**. Shifting to hybrids has the potential to **increase yields by 1.5 to 3 times** and provide a significant increase in income.
- To protect the agrobiodiversity, **17 Agro BioDiversity Hotspots** have been identified Jointly by the Protection of Plant Varieties and Farmer's Rights Authority **(PPVFRA)** and the National Biodiversity Authority (**NBA**).
- The National Biodiversity Authority has issued Guidelines to states for identifying biodiversity Heritage. Under **Section 37 of the Biodiversity Act, 2002,** the state may declare as biodiversity Hotspot areas that contain significant domesticated Biodiversity components and/or representative agro-Eco-systems with ongoing agricultural practices that Sustain this diversity.

Land holdings

- Agriculture is characterised by an extremely **fragmented Landholding structure** with an average farm size of **1.15 hectares** and the predominance of small and marginal farmers, with those holding less than 2 hectares (accounting for 85 per cent of agricultural households). This makes it difficult for them to access credit or new technology, severely affecting farm productivity and hence, farmers' incomes.

Fertilizers

- **70% of growth in agriculture** production can be attributed to increased fertilizer application.
- India is **third largest producer of of fertilizers** after China and USA and **second largest consumer after China** in the world
- Ideal application Ratio of N:P:K fertilizers 4:2:1.

Irrigation

- Pradhan Mantri Krishi Sinchai Yojana

(**PMKSY**) aims to expand irrigation coverage whilst promoting water use efficiency, Area under **micro irrigation has grown 2.5 times in the last four years**.

- Sustainable water use in agriculture: About **83% of water is used in agriculture**. The solution to resolving India's imminent water crisis lies in conserving water in agriculture. Therefore more efficient irrigation technologies, water harvesting and better crop selection must be encouraged.
- It is estimated that **yields of irrigated crops are 50 to 100 per cent higher** than those of the unirrigated crops under similar geographical conditions.
- **Irrigated area** accounts for nearly **48.8% of the 140 million hectare (mha) of agricultural land** in India. The remaining 51.2 per cent is rainfed.
- The overall **Irrigation Efficiency** of the major and medium irrigation projects is estimated to be around **38 per cent**, that is., "The efficiency of surface irrigation system can be improved from about 35-40 per cent to around 50-60 per cent and that of groundwater from about 65-70 per cent to 72-75 per cent.

Storage facilities

- **Parse Committee** estimated the **Post-Harvest Losses at 9.3%** of which nearly **6.6% occurred due to poor storage** conditions alone.

Agriculture Marketing

- The expected returns to the farmers over their cost of production are estimated to be highest in the case of bajra (83 per cent) followed by urad (64 per cent), tur (58per cent) and maize (53 per cent). For the rest of the crops, return to farmers over their cost of production is estimated to be at least 50 per cent.
- 85% of wheat in UP 90% of jute in WB, 70% of oil seeds in Punjab is sold by farmers in village itself. Indicates absence of organised marketing structure and dominance of private traders and middle men.

Processing

- During the last 5 years ending 2018-19, **Food processing industries (FPI)** has been growing at an Average Annual Growth Rate of around **9.99 per cent** as compared to around 3.12 per cent in agriculture and 8.25 per cent in manufacturing at 2011-12 prices.

Exports

- The major export destinations were USA, Saudi Arabia, Iran, Nepal and Bangladesh.
- The top agriculture and related products exported from India were marine products,Basmati rice, buffalo meat, spices, non-basmati rice, cotton raw, oil meals, sugar, castor oil and Tea. While India occupies a leading position in global trade of aforementioned agri- products, its Total agri-export basket accounts for a little over 2.5 per cent of world agri-trade.

Capital

- **All India Rural Credit Survey Committee** shows that share of money lenders in 1950-51 stood at as high as 68.6 % total rural credit and after 25 years, in 1975-76 declined to 43% of credit needs of the farmers. Due to farm land by cooperative, rural and commercial banks.
- The share of **southern region in agricultural credit was more than 40 per cent while it was less than 2 percent for the north-eastern region (NER)**. This low coverage of the agricultural credit in NER is because the **Total Cultivable Area in North Eastern States is only about 2.74 % of the total GCA of the country.**

Farm Income

- The country took 22 years to double farmers' income at an annual growth rate of 3.31 per cent during 1993-1994 to 2015-16; doubling farmers' income between 2015-16 and 2022-23 will require an annual growth rate of 10.4 per cent in farmers' real income -Economic Survey.

Technology

- The survey says that the micro-irrigation is a proven technology which has gained immense popularity amongst the farmers. Farmers have been able to save irrigation water from 20 to 48 per cent; energy saving from 10 to 17 per cent; saving of labour cost from 30 to 40 per cent; saving of fertilizers from 11 to 19 per cent and increase in crop production from 20 to 38 per cent

Research

- **Agri research spending** is currently at **0.3 %.** Ashok Debroy committee recommends it to be increased to at least 1% of agricultural GDP.

Government Plans

- Government has taken several steps to improve private investment in agriculture. **100 per cent foreign direct investment (FDI) was allowed in 2016-17**. Similarly, the SAMPADA scheme targets creation of food processing infrastructure. The budget allocation to the food processing sector was doubled in the Union Budget 2018-19

Insurance

- **Cropping intensity(CI)** is the indicator of efficiency of land-use. higher the index of intensity of cropping, higher is the efficiency of land use. CI of the country as a whole is calculated to be **142.2 percent**. States like HR,WB,SK,PN cropping intensity higher than the country's average. States with low cropping intensity GJ,CG,JH,TN.

Climate change and Agriculture

- Agriculture is an important source of Green House Gas (GHG) emissions and **17.6 per cent Of the annual emissions were from agriculture**. In India during 2007 (INCCA, 2010). The major sources of emission in agriculture sector are **enteric fermentation (63.4%), rice cultivation (20.9%), agricultural soils (13.0%), manure management (2.4%) and on-field burning of crop residues (2.0%)**.

Puppetry of India

- In Sanskrit terminology Puttalika and Puttika means 'little sons'. The root of Puppet is derived from the latin word 'Pupa' meaning a doll.
- India is said to be the home of puppets, but it is yet to awaken to its unlimited possibilities.
- The earliest reference to the art of puppetry is found in Tamil classic '**Silappadikaaram'** written around the 1st or 2nd century B.C.
- Natyashastra does not refer to the art of puppetry but the producer-cum-director of the human theatre has been termed as '**Sutradhar'** meaning the holder of strings.

Types of Puppetry in India

A. String Puppets

- India has a rich and ancient tradition of string puppets or **marionettes**. Marionettes having jointed limbs controlled by strings allow far greater flexibility and are, therefore, the most articulate of the puppets.
- **Rajasthan, Orissa, Karnataka and Tamil Nadu** are some of the regions where this form of puppetry has flourished.

1. Kathputli, Rajasthan

- The traditional marionettes of Rajasthan are known as Kathputli.
- Carved from a single piece of wood, these puppets are like large dolls that are colourfully dressed.
- Their costumes and headgears are designed in the medieval Rajasthani style of dress, which is prevalent even today.
- The Kathputli is accompanied by a highly dramatised version of the regional music. Oval faces, large eyes, arched eyebrows and large lips are some of the distinct facial features of these string puppets.
- These puppets wear long trailing skirts and do not have legs.
- Puppeteers manipulate them with two to five strings which are normally tied to their fingers and not to a prop or a support.

2. Kundhei, Orissa

- The string puppets of Orissa are known as Kundhei. Made of light wood, the Orissa puppets have no legs but wear long flowing skirts.

- They have more joints and are, therefore, more versatile, articulate and easy to manipulate. The puppeteers often hold a wooden prop, triangular in shape, to which strings are attached for manipulation.
- The costumes of Kundhei resemble those worn by actors of the Jatra traditional theatre. The music is drawn from the popular tunes of the region and is sometimes influenced by the music of Odissi dance.

2. Gombeyatta, Karnataka

- The string puppets of Karnataka are called Gombeyatta. They are styled and designed like the characters of Yakshagana, the traditional theatre form of the region.
- The Gombeyatta puppet figures are highly stylized and have joints at the legs, shoulders, elbows, hips and knees. These puppets are manipulated by five to seven strings tied to a prop.
- Some of the more complicated movements of the puppet are manipulated by two to three puppeteers at a time.
- Episodes enacted in Gombeyatta are usually based on Prasangas of the Yakshagana plays. The music that accompanies is dramati

3. Bommalattam, Tamil Nadu

- Puppets from Tamil Nadu, known as Bommalattam combine the techniques of both rod and string puppets.
- They are made of wood and the strings for manipulation are tied to an iron ring which the puppeteer wears like a crown on his head.
- A few puppets have jointed arms and hands, which are manipulated by rods. The Bommalattam puppets are the largest, heaviest and the most articulate of all traditional Indian marionettes.
- A puppet may be as big as 4.5 feet in height weighing about ten kilograms.
- Bommalattam theatre has elaborate preliminaries which are divided into four parts - Vinayak Puja, Komali, Amanattam and Pusenkanattam

B. Shadow Puppets

- Shadow puppets are flat figures. They are cut out of leather, which has been treated to make it translucent.
- Shadow puppets are pressed against the screen with a strong source of light behind it.
- The manipulation between the light and the screen make silhouettes or colourful shadows, as the case may be, for the viewers who sit in front of the screen.
- This tradition of shadow puppets survives in **Orissa. Kerala, Andhra Pradesh, Karnataka, Maharashtra and Tamil Nadu**.

1. Togalu Gombeyatta, Karnataka

- The shadow theatre of Karnataka is known as Togalu Gombeyatta. These puppets are mostly small in size.
- The puppets however differ in size according to their social status, for instance, large size for kings and religious characters and smaller size for common people or servants.

2. Tholu Bommalata, Andhra Pradesh

- Tholu Bommalata, Andhra Pradesh's shadow theatre has the richest and strongest tradition. The puppets are large in size and have jointed waist, shoulders, elbows and knees.
- They are coloured on both sides. Hence, these puppets throw coloured shadows on the screen.
- The music is dominantly influenced by the classical music of the region and the theme of the puppet plays are drawn from the Ramayana, Mahabharata and Puranas.

3. Ravanachhaya, Orissa

- The most theatrically exciting is the Ravanachhaya of Orissa. The puppets are in one piece and have no joints. They are not coloured, hence throw opaque shadows on the screen.
- The manipulation requires great dexterity, since there are no joints. The puppets are made of deer skin and are conceived in bold dramatic poses.
- Apart from human and animal characters, many props such as trees, mountains, chariots, etc. are also used. Although, Ravanachhaya puppets are smaller in size-the largest not more than two feet have no jointed limbs, they create very sensitive and lyrical shadows.

C. Rod Puppets

Rod puppets are an extension of glove-puppets, but often much larger and supported and manipulated by rods from below. This form of puppetry now is found mostly in West Bengal and Orissa.

1. Putul Nautch, West Bengal

- The traditional rod puppet form of West Bengal is known as Putul Nautch. They are carved from wood and follow the various artistic styles of a particular region. In Nadia district of West Bengal, rod-puppets used to be of human size like the Bunraku puppets of Japan. This form is now almost extinct.
- The Bengal rod-puppets, which survive are about 3 to 4 feet in height and are costumed like the actors of Jatra, a traditional theatre form prevalent in the State. These puppets have mostly three joints. The heads, supported by the main rod, is joined at the neck and both hands attached to rods are joined at the shoulders.
- The technique of manipulation is interesting and highly theatrical. A bamboo-made hub is tied firmly to the waist of the puppeteer on which the rod holding the puppet is placed. The puppeteers each holding one puppet, stand behind a head-high curtain and while manipulating the rods also move and dance imparting corresponding movements to the puppets.

- While the puppeteers themselves sing and deliver the stylized prose dialogues, a group of musicians, usually three to four in numbers, sitting at the side of the stage provide the accompanying music with a drum, harmonium and cymbals.
- The music and verbal text have close similarity with the Jatra theatre.
- The Orissa Rod puppets are much smaller in size, usually about twelve to eighteen inches. They also have mostly three joints, but the hands are tied to strings instead of rods.
- Thus elements of rod and string puppets are combined in this form of puppetry. The technique of manipulation is somewhat different. The Orissa rod-puppeteers squat on the ground behind a screen and manipulate.
- Again it is more operatic in its verbal contents since impromptu prose dialogues are infrequently used. Most of the dialogues are sung. The music blends folk tunes with classical Odissi tunes. The music begins with a short piece of ritual orchestral preliminary called Stuti and is followed by the play.
- The puppets of Orissa are smaller than those from Bengal or Andhra Pradesh. Rod puppet shows of Orissa are more operatic and prose dialogues are seldom used.

2. Yampuri, Bihar

- The traditional Rod puppet of Bihar is known as Yampuri. These puppets are made of wood.
- Unlike the traditional Rod puppets of West Bengal and Orissa, these puppets are in one piece and have no joints.
- As these puppets have no joints, the manipulation is different from other Rod puppets and requires greater dexterity.

D. Glove Puppets

Glove puppets, are also known as sleeve, hand or palm puppets. The head is made of either papier mache, cloth or wood, with two hands emerging from just below the neck. The rest of the figure consists of a long flowing skirt. These puppets are like limp dolls, but in the hands of an able puppeteer, are capable of producing a wide range of movements. The manipulation technique is simple the movements are controlled by the human hand the first finger inserted in the head and the middle finger and the thumb are the two arms of the puppet. With the help of these three fingers, the glove puppet comes alive.

The tradition of glove puppets in India is popular in Uttar Pradesh, Orissa, West Bengal and Kerala. In Uttar Pradesh, glove puppet plays usually present social themes, whereas in Orissa such plays are based on stories of Radha and Krishna. In Orissa, the puppeteer plays on the dholak with one hand and manipulates the puppet with the other. The delivery of the dialogues, the movement of the puppet and the beat of the dholak are well synchronised and create a dramatic atmosphere.

1. Pavakoothu, Kerala

- In Kerala, the traditional glove puppet play is called Pavakoothu. It came into existence during the 18th century due to the influence of

Kathakali, the famous classical dance-drama of Kerala, on puppet performances. In Pavakoothu, the height of a puppet varies from one foot to two feet. The head and the arms are carved of wood and joined together with thick cloth, cut and stitched into a small bag.

- The face of the puppets are decorated with paints, small and thin pieces of gilded tin, the feathers of the peacock, etc. The manipulator puts his hand into the bag and moves the hands and head of the puppet. The musical instruments used during the performance are Chenda, Chengiloa, Ilathalam andShankhathe conch. The theme for Glove puppet plays in Kerala is based on the episodes from either the Ramayana or the Mahabharata.

Data on Disability
Disability
- Less than 7% of public buses in the country were fully accessible to wheelchair users as of December 2020, with the target of 25% of buses being accessible by June 2022 under the Accessible India Campaign.
- Only 0.2% of 1.02 lakh intercity buses are when chair accessible.
- Upto 45000 buses operating in urban areas, only 22.3% are fully wheelchair accessible.
- Data by: The Social Justice and Empowerment Ministry's Department of Empowerment of Persons with Disabilities(DEPwD) via a Ministry of Road Transport and Highways report in January,2021.

Data on Higher education in marginalised communities.
- RTI data showed that **SC students constituted only 7.6% and STs were just 1.2%**.
- The **reservation policy** requires that **15% of seats be allocated to SCs and 7.5% to STs.**
- The **Acceptance Rate** (refers to the number of students admitted for every 100 applicants) is very low . While General Category (GC) students, which in the case of the IITs predominantly refers to those from privileged, communities, had an acceptance rate of 4.4%, it was **2.9% for SCs and 2.7% for STs**.
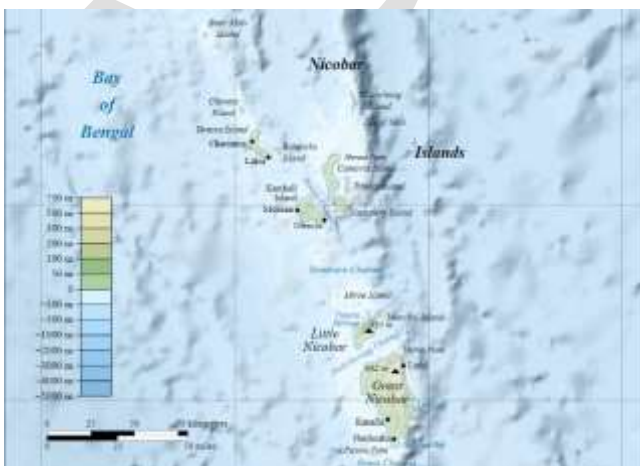
- Only 167 of the 5,855 SC applicants and 27 of the 991 ST applicants were selected.
- **29.8% of the seats went to OBC** candidates **against the 27% of minimum allocation** to be done as per reservation norms. The **remaining 61.6% seats went to the GC category**.
- Of the **3874 admission**s, **64.4% went to GCs**, **27.9% to OBCs,** and only **6.4% to SCs** and **1.3% to STs**.

Aerial mapping of Islands by INCOIS
- The Indian National Centre for Ocean Information Services (INCOIS) is planning to take the help of the **National Remote Sensing Centre (NRSC)** for aerial mapping of the **Andaman and Nicobar Islands and Lakshadweep** to get a better picture of the **ocean floor, also called 'bathymetric' study**.
- "NRSC has already done a similar high resolution topographic **Airborne Laser Terrain Mapping (ALTM)** for the entire coastal areas of the country and we are in the process of integrating the data for a 3D multi-hazard mapping of both the east and west coastline for a more precise picture of the ocean floor," said director T. Srinivasa Kumar, in an exclusive interaction.
- Such a study has become imperative in view of the recent tsunamis of the Indonesian coasts where more than the quake related high waves, damage was due to landslides under the sea beds causing sudden wave surges leading to much damage without giving sufficient time to alert people, he pointed out.
- The research institute, under the Ministry of Earth Sciences, had also identified 'gaps' across the coast of Andhra Pradesh and Odisha for installing more tide gauges for better monitoring of the sea and more accurate prediction of impending disasters like cyclones.
- These will be in addition to the 36 already in the Bay of Bengal, said senior scientist E. Pattabhi Rama Rao.
- INCOIS scientists with their counterparts in the Chennai-based National Institute of Ocean Technology and an United States independent scientific agency, Massachusetts-based Woods Hole Oceanographic Institution, have been mining the data recorded by a unique

'Flux Buoy' retrieved from the Bay of Bengal off the Kolkota coast recently.

About INCOIS, Hyderabad

- INCOIS provides a number of free services for users in the marine realm.
- The institute is an **autonomous** organisation under the **Ministry of Earth Sciences**.
- INCOIS prioritises requests for specific services from its diverse user community that ranges right from fishermen to offshore oil exploration industries.

Inscription on Krishnadevraya's death (of Vijayanagar) discovered

- The first-ever epigraphical reference to the date of death of Vijayanagar king Krishnadevaraya has been discovered at **Honnenahalli in Tumakuru district**.
- As per the inscription, Krishnadevaraya, one of the greatest emperors of India who ruled from the South, died on October 17, 1529, Sunday, and incidentally this day was marked by a lunar eclipse.
- The inscription (written in Kannada) is engraved on a slab kept on the north side of the Gopalakrishna temple at Honnenahalli in Tumakuru district.
- It records the demise of K?ish?ad?var?ya — (V?rak?ish?ar?ya mah?r?yalu y? tath? tithiyalu astamayar?galu)_ in ?aka 1451, Vir?dhi, ?u. 15, lunar eclipse, which corresponds to 1529 AD, October 17, Sunday, according to Prof. Munirathnam.
- The inscription also registers gift of village Honnenahalli in Tumakuru for conducting worship to the god Veeraprasanna Hanumantha of Tumakuru.

The Vijayanagar Empire (1336-1646 A.D.)

- **Harihara and Bukka are the founders** of the Vijayanagar City in 1336 A.D. on the southern banks of Tungabhadr.
- They made **Hampi** as the capital city. Hampi is on the banks of Tungabhadra River.
- They served under Vira Ballala III, the Hoysala King
- Vijayanagar Empire was ruled by four important dynasties and they are: **Sangama, Saluva, Tuluva, Aravidu and Harihara I**.
- In 1336 A.D. Harihara I became the ruler of Sangama Dynasty. He captured Mysore and Madurai.
- In 1356 A.D. Bukka-I succeeded him

Krishnadeva Raya (1509-1529 A.D.)

- Krishnadeva Raya of the Tuluva dynasty was the most famous king of the Vijayanagar Empire
- According to Domingo Paes, a Portuguese traveller "Krishnadeva Raya was the most feared and perfect king there could possibly be".

Krishnadeva Raya's Conquests

- He conquered Sivasamudram in 1510A.D and Raichur in 1512A.D
- In 1523 A.D. he captured Orissa and Warangal
- His empire extended from the river Krishna in the north to River Cauvery in the south; the Arabian Sea in the west to Bay of Bengal in the east.

Significance of Krishnadevaraya

(a) Political

1. Character: Great miltary ability, imposing personality, high intellectual quality.
2. He restored the former glory of Vijaynagar empire and even surpassed it.
3. His was the period of expansion and consolidation. He wrested back Krishna-Godavari delta, defeated an alliance of Bijapur and Odisha and kept Portuguese in check.
4. He also kept internal law and order.

(b) Cultural

1. Though a Vaishnavite, he respected all. He was a great patron of Telugu, Tamil and Kannada literature as well as Sanskrit.
2. Ashtadiggajas (8 eminent scholars) were at his court with Alladi Pesanna (Manuchitram) being the greatest.
3. He wrote Amukhtamalayada (Telugu) & Sanskrit Jambavati Kalyanam and Ushaparinayam. He was ka Andhra Bhoja.
4. He was a great builder. He constructed a new town near Hampi named Nagalapuram (after his mother), Vithhalaswamy and Hazara Ramaswami temples at Vijaynagar and built massive tank there and temples, added many gopurams.

(c) Social

1. Although the kingdom remained in constant military preparedness, it flourished under unparalleled peace and prosperity.
2. He give complete religious freedom to his subjects.
3. Anybody could settle down and move freely in his kingdom without any distinction of religion.

His Contributions

- An able administrator.
- He built large tanks and canals for irrigation.
- He developed the naval power understanding the vital role of overseas trade.
- He maintained friendly relations with the Portuguese and Arab traders.
- He increased the revenue of his government.
- He patronized art and architecture.
- It was during his period the Vijayanagar Empire reached its zenith of glory.
- Krishnadeva Raya was a great scholar.
- Ashtadiggajas: A group of eight scholars adorned his court and they were:
    1. Allasani Peddanna – the author of Manucharitram, he was also known as Andhra Kavitapitamaha'
    2. Nandi Thimmana – the author of Parijathapaharanam
    3. Madayagari Mallana
    4. Dhurjati
    5. Ayyalaraju Ramabhadra Kavi
    6. Pingali Surana
    7. Ramaraja Bhushana
    8. Tenali Ramakrishna

Battle of Talikota (1565 A.D.)

- The successors of Krishnadeva Raya were weak

- The combined forces of Ahmednagar, Bijapur, Golconda and Bidar declared war on Vijayanagar during the rule of Aliya Rama Raya
- Aliya Rama Raya was defeated. He and his people were killed mercilessly.
- Vijayanagar was pillaged and ruined.

Contribution to Architecture and Literature

- The Hazara Ramasami temple and Vittalaswamy temple was built during this period
- The bronze image of Krishnadeva Raya is a masterpiece.
- Sanskrit, Tamil, Telugu and Kannada literature were developed.
- Sayana wrote commentaries on Vedas.
- Krishnadevaraya wrote Amuktamalyada in Telugu and Usha Parinayam and Jambavathi Kalyanam in Sanskrit.

The decline of the Empire
- The rulers of the Aravidu dynasty were weak and incompetent.
- Many provincial governors became independent.

The rulers of Bijapur and Golconda seized some areas of Vijayanagar.

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Census to postpone to 2022?

- The Centre is on track to push the 2021 Census to 2022 on account of the country's continuing preoccupation with the COVID-19 pandemic, a senior government official told The Hindu.
- "Our hands are full dealing with the COVID-19 pandemic," the official said, pointing out that first it was the measures taken to deal with the pandemic and now the massive vaccination programme under way across the country.

What is the Census of India?

- The decennial Census of India has been conducted 15 times, as of 2011.
- While it has been undertaken every 10 years, **beginning in 1872 under British Viceroy Lord Mayo**, the **first complete census was taken in 1881**.
- Post-1949, it has been conducted by the Registrar General and Census Commissioner of India under the **Ministry of Home Affairs**, Government of India.
- All the censuses since 1951 were conducted under the **1948 Census of India Act**.
- The last census was held in 2011, whilst the next will be held in 2021.
- The Census of India, one of the largest exercises of its kind, enumerates and collects demographic and socio-economic information on the Indian population.

About Census 2021

- Census exercise will be conducted in **February 2021**. It will have the facility of **self enumeration**.
- The Census exercise was to be conducted in two phases —
1. Phase 1: House Listing and Housing Census from April to September 2020 and
2. Phase 2: Population Enumeration from February 9 to February 28, 2021.
- The first phase of the Census and the updating of the National Population Register (NPR) were initially to be rolled out in some States on April 1, 2020, but were postponed due to the pandemic.

Prelims Pointers for Census 2021

- **1st time data would be stored in electronically and 1st time OBC** will be collected.
- The Census 2021 will be conducted in **18 languages** out of the 22 scheduled languages (under 8th schedule) **and English**, while

Census 2011 was in 16 of the 22 scheduled languages declared at that time.
- It also will introduce a **code directory** to streamline the process
- The option of "Other" under the gender category will be changed to "**Third Gender**". There were roughly 5 lakh people under "other" category in 2011.
- For the first time in the 140 year history of the census in India, data is proposed to be collected through a **mobile app by enumerators** and they will receive an additional payment as an **incentive**.
- The Census data would be available **by the year 2024-25** as the entire process would be conducted digitally and data crunching would be quicker.

Why the Census is important?

- Enumerating, describing and understanding the population of a society and what people have access to, and what they are excluded from, is important not only for **social scientists but also for policy practitioners and the government**.
- It is also important for the **Delimitation exercise**.
- It gives data on the Citizens of India which is important to plan **tailormade schemes** for **bottom up planning** and analyse the issues more closely that is going on in the country.
- Since **Data is a public good**, it is important that such data if used in an optimum way can **bring equity** in the most vulnerable sections of the society and especially those people who have been affected by the COVID Pandemic.
- It can also be used to analyse the **Demographic attributes** of India and work accordingly.

Challenges in Census Exercises

- However, as early as the 1940s, W.W.M. Yeatts, Census Commissioner for India for the 1941 Census, had pointed out that, "the census is a large, immensely powerful, but blunt instrument unsuited for specialised enquiry".
- This point has also surfaced in later critiques offered by scholars who consider the Census as both a data collection effort and a technique of governance, but not quite useful enough for a detailed and comprehensive understanding of a complex society.
- As historian and anthropologist Bernard Cohn

had demonstrated, the Census may in fact produce an imagination of society, which suggests the epistemological complexities involved.

India – Iran relations: Chabahar

- In its latest push to develop Iran's Chabahar port project, India handed over two 140-tonne cranes for loading and unloading equipment to the Iranian government.
- The cranes, part of a full consignment of six Mobile Harbour Cranes (MHC) worth about $25 million were sourced from Italy and formally released at a ceremony at **Chabahar's Shahid Beheshti port** after official talks between India and Iran.
- India's plans to invest further in the port project are seen as an indicator that the government expects some easing up in U.S. sanctions in the upcoming months, once the new Biden administration begins to address its policy on re-entering the Iran nuclear deal.
- Sources told The Hindu that the Ministry of External Affairs (MEA) will also hold a quadrilateral meeting in Delhi with officials from **Afghanistan, Iran, Uzbekistan** and "another Central Asian countries as observer" to discuss Chabahar connectivity and transit trade opportunities.
- "We are happy to supply the port of Chabahar with two cranes… This can solve some of the problems in loading and unloading cargos," MEA Joint Secretary for Iran-Pakistan-Afghanistan J.P. Singh said, according to Iranian news agencies.
- He also pointed out that the port has handled 75,000 tonnes of wheat donated by India to Afghanistan so far, along with other products.
- The Iranian Ministry of Foreign Affairs (MFA) said the MEA delegation had also held "political consultations" with their Iranian counterparts.
- "Recent international and regional developments attach particular importance to this round of general political dialogue," tweeted MFA official Rasoul Mousavi, indicating that the possible shift in the U.S.'s Iran policy was discussed.
- Earlier this month, the Ministry of Shipping and Ports had said the delivery of the cranes "shows India's commitment to the strategic connectivity of Chabahar port project that will provide access to markets in Central Asia,"

explaining that the consignment was part of a bilateral contract between India and Iran signed in May 2016 for $85 million to equip and operationalise the port.
- The MEA delegation's visit comes a month after transport officials of India, Iran and Uzbekistan held their first "Trilateral Working Group Meeting" on the joint use of Chabahar Port.

Myanmar Military rule

- In one swift operation, Myanmar's military establishment has wiped out a decade of the country's democratisation process.
- **By arresting President Win Myint, State Counsellor Aung San Suu Kyi** and the rest of the ruling National League for Democracy (NLD) leadership, and declaring **military rule** under a state of emergency for at least a year, **General Min Aung Hlaing** has made it clear that it is the military that is in charge, and he is not particularly concerned about the opposition to or condemnation of the move.
- The immediate reason for the coup was that the newly elected National Assembly was due to meet in **Naypyidaw**, despite the Tatmadaw's (Army's) claims that the November general elections had several irregularities, and its contestation of the NLD's landslide victory.
- Ms. Suu Kyi had refused to bow to Gen. Hlaing's demand that the results, which also saw the military-backed Union Solidarity and Development Party with a reduced strength in Parliament, be set aside.
- Clearly, the **Army, which still nominates a fourth of the parliamentary seats** and retains the important Defence, Borders and Interior portfolios, felt it was better to dismiss the NLD government before it increased its clout.
- Gen. Hlaing is due to retire this year, and it is possible that the move was meant to extend his longevity in power.
- Backed by a silent Beijing, the junta leadership may also have gambled that it was better to take drastic action against the democratic leaders before the new U.S. administration finds its feet.

Failure of Ms. Aung San Suu Kyi

- The return to Army rule was also helped to some extent by Ms. Suu Kyi, who came to

office in 2015, but has lost opportunities to put her country more firmly on the road to democracy.
- She has accepted a dual power system in the state.
- Daw Suu, as she is known, has also failed to bring democracy to her party, and been criticised for her autocratic style.
- Her refusal to rein in the Generals when the Tatmadaw unleashed a pogrom on the Rohingya between 2016-17, had lost the Nobel Peace laureate much international support.
- Regardless of the reasons for the coup, the step is a setback for the international community's efforts to engage with Myanmar, after a strict sanctions regime.

What should India do?
- For India, which had cultivated a careful balance, between nudging along the democratic process by supporting Ms. Suu Kyi, and working with the military to ensure its strategic interests to the North East and deny China a monopoly on Myanmar's infrastructure and resources, the developments are unwelcome.
- The government will need to craft its response taking into consideration the new geopolitical realities of the U.S. and China as well as its own standing as a South Asian power, and as a member of the UN Security Council.
- New Delhi's immediate reaction, to merely express "deep concern" and counsel following the rule of law and democratic processes, is unlikely to suffice as a long-term strategy.

India Sri Lanka ties: East Container Terminal at Colombo Port

- In a flurry of meetings a day after Sri Lanka backed out of an **agreement with India and Japan to develop the East Container Terminal (ECT) at the Colombo Port**, Indian High Commissioner Gopal Baglay met President Gotabaya Rajapaksa, Prime Minister Mahinda Rajapaksa and Foreign Minister Dinesh Gunawardena.
- In the India – Sri Lanka ties, India was of the view that Colombo must adhere to its commitments in the tripartite agreement of May 2019, to jointly develop the strategic terminal with the Sri Lanka Ports Authority (SLPA) holding a 51% stake and India and

Japan holding 49% together.
- The Adani Group from India, along with Japanese companies, was to invest in the project expected to cost up to $700 million, as per official estimates.

Mixed signals
- The Indian side, it is learnt, conveyed that the signals emanating from Sri Lanka should boost the confidence of potential investors.
- President Gotabaya Rajapaksa has pledged to draw foreign direct investments to the country, rather than take loans.
- The three high-level meetings follow the Sri Lankan government's cabinet decision, in the wake of raging protests by port workers' unions opposed to foreign investment in the facility, that the operation of the ECT would be "100%" with the SLPA, while the West Container Terminal would be offered to India instead, on a 35-year arrangement for development.
- This is the **second instance of Sri Lanka reversing an agreement on a large infrastructure project involving Japan**, after the government scrapped the $1.5 billion, **Japan-funded Light Rail Transit system** last year.
- The development has sparked alarm in India and Japan, according to diplomatic sources, who said Sri Lanka had neither conveyed its decision, nor offered the alternative proposal to either of the partners.
- Asked how Sri Lanka would mobilise funds to develop the SLPA, especially after the economic impact of the pandemic, Udaya Gammanpila, a Cabinet spokesman, on Tuesday said, "SLPA is going to use its own funds, as well as borrow money from local commercial banks."
- On whether Sri Lanka had discussed the option of developing the West Container Terminal with India, he said, "This is a sensitive diplomatic issue. Sri Lanka is always keen to maintain cordial diplomatic ties with India. Sri Lanka has commenced discussions with the Government of India, but I don't think this is the stage to disclose those details."
- While the ECT, which is in its first stage and awaits upgrade, has a 450-metre-long quay wall and water depth of 18 metres, equipping it to accommodate large vessels, the West Container Terminal (WCT) exists merely as a proposal, with no infrastructure yet.

Budget as an instrument of politics

Upcoming infrastructure projects in election-going states

- The largesse to the **election-going States of Kerala, Tamil Nadu, West Bengal and Assam** in the Budget presented by Finance Minister Nirmala Sitharaman on Monday was unmistakable.
- The massive outlay of **?65,000 crore** for the **development of the NH 66 corridor in Kerala,** as well as the **announcement of the second phase of the Kochi Metro** and the **development of the Kochi fishing harbour** as a **commercial hub are big ticket budget proposals by any standard**.
- Ms. Sitharaman announced that **national highway** works worth **?19,000 crore are in progress in Assam** and projects of more than ?34,000 crore covering over 1,300 km of national highways will be undertaken in the State within the next three years.
- **For West Bengal**, there is a **new "Economic Corridor"** covering 675 km of national highway, with an expected investment of ?25,000 crore.
- **For Tamil Nadu,** the proposed projects could cost up to one lakh crore rupees. This includes the **Chennai Metro Rail** (phase two) of 118.9 km for ?63,246 crore and two expressways connecting Chennai.

Social sector interventions in election-going states

- Budget also seeks notable **social sector interventions** in these States**. Assam and West Bengal** get a special scheme, with a ?**1,000 crore outlay**, for the **welfare of tea workers**, especially women and children.
  - **Plantation workers and descendants** — or **"tea tribes" and "ex-tea tribes" — comprise almost 20%** of **Assam's total population**, and are a decisive factor in many Assembly seats, in Assam and West Bengal.

Conclusion

- The Budget is an instrument of politics, but it should not be predicated entirely on immediate electoral calculations.
- The projects here will take a few years to complete, but have considerable transformative potential.

USA extends the New START nuclear treaty with Russia

- U.S. President Joe Biden's administration extended the New START nuclear treaty with Russia by five years, saying it hoped to prevent an arms race despite rising tensions with Moscow.
- "President Biden pledged to keep the American people safe from nuclear threats by restoring U.S. leadership on arms control and nonproliferation," Mr. Blinken said in a statement.
- "The United States is committed to effective arms control that enhances stability, transparency and predictability while reducing the risks of costly, dangerous arms races."
- Russian President Vladimir Putin signed off on legislation extending the accord, meaning that the treaty — signed by then-President Barack Obama in 2010 — will run until February 5, 2026.
- The last remaining arms reduction pact between the former Cold War rivals, New START caps to 1,550 the number of nuclear warheads that can be deployed by Moscow and Washington.
- Former President Donald Trump's administration tore up previous agreements with Moscow and unsuccessfully sought to expand New START to cover China.
- Mr. Blinken said the U.S. would use the coming five years to pursue diplomacy that addresses "all" of Russia's nuclear weapons and to "reduce the dangers from China's modern and growing nuclear arsenal".

New START (Strategic Arms Reduction Treaty)

- New START is a nuclear arms reduction treaty between the United States and the Russian Federation with the formal name of Measures for the Further Reduction and Limitation of Strategic Offensive Arms.
- It was signed in 2010 at **Prague**, and, after ratification entered into force in 2011, it is expected to last at least until 2021.
- New START replaced **the Treaty of Moscow (SORT)**, which was to expire in December 2012. It follows the START I treaty, which expired in December 2009; the proposed START II treaty, which never entered into force; and the START III treaty, for which negotiations were never concluded. The treaty calls for halving the number of strategic nuclear missile launchers.

- A new inspection and verification regime will be established, replacing the SORT mechanism.
- It does not limit the number of operationally inactive nuclear warheads stockpiled by Russia and the United States, a number in the high thousands.
- The deadlock over the New START and the collapse of the 1987 Soviet–U.S. Treaty on the Elimination of Intermediate-Range and Shorter-Range Missiles (INF Treaty) in 2019 suggest that the era of bilateral nuclear arms control agreements between Russia and the U.S. might be coming to an end.

Colombo's East Container Terminal
Context
- **Sri Lankan government's decision to overturn tripartite agreement** to develop **Colombo's East Container Terminal** is a setback to India and Japan.

East Container Terminal project
- The project, worth an estimated **$500-$700 million**, was a key marker for **infrastructure investment** in the island nation where Chinese projects are most prominent.
- More than two-thirds of trans-shipment at this port is tied to India, making it **an important trade and connectivity link**.
- **Japan** has been a keen supporter of Sri Lanka's growth story, with its **loans of about ¥1.1 trillion and grants and technical cooperation of about ¥300 billion.**
- As a joint venture for India and Japan to invest in, the ECT project was also expected to showcase how the two Indo-Pacific partners, and also Quad members, could provide South Asia with viable, transparent and sustainable alternatives for financing and development.

Disappointment to India and Japan
- The sharp statements from New Delhi and Tokyo now reflect their deep disappointment and their suspicions about the motivations.
- The ostensible reason for the decision is **growing pressure** from **port union groups** which have **opposed any foreign participation**, and threatened a **"work-to-rule" agitation** if ECT operations were handed to the Adani group, as proposed.
- India has also had some misgivings about whether the Rajapaksa brothers, who became

President and Prime Minister in 2019-2020, would in fact honour the commitments made by the previous government, given the acrimony between the two governments.
- Similar commitments made by former PM Ranil Wickremesinghe during a visit to Delhi when he signed an MoU for developing the Eastern city of Trincomalee through oil and infrastructure projects also appear to have fallen by the wayside.
- The larger question of a possible **Chinese role** in the ECT decision also hangs over the decision, given that **other terminal projects at the Colombo Port such as the Colombo International Container Terminal**, have not faced similar pushback.
- It is also curious that given its financial difficulties, Sri Lanka felt confident in taking a decision guaranteed to upset such important donors.

West Container Terminal
- New Delhi has said it continues to engage Sri Lanka on the ECT issue, although it remains cold to **Colombo's alternative offer of developing the West Container Terminal.**

Recent steps taken by India to strengthen Sri Lanka ties
- Over the past year, the Modi government has invested much time and resources to India-Sri Lanka ties, including a **new credit line**, **currency swap agreement**, and **COVID-19 assistance and vaccines**.
- NSA Ajit Doval and EAM S. Jaishankar have visited Colombo more than once, and Mr. Modi has hosted President Gotabaya and Prime Minister Mahinda.
- India has also set much store by its partnership with Japan, which could be a template for similar projects, as a counter to China's BRI.

Conclusion
- There is much at stake for all three countries to derail the partnership.

Issue of Tamil Nadu Governor under Article 161
Context
- **Tamil Nadu Governor Banwarilal Purohit** has decided that only the President can decide the issue of granting **remission** to the **seven life convicts in the Rajiv Gandhi**

assassination case.

View of the Supreme Court
- It has often been stressed by the Supreme Court that the clemency powers of the **President, under Article 72, and the Governor, under Article 161,** stand on an **equal footing**, and are exercised **solely on Cabinet advice**.

Article 161 in The Constitution Of India 1949
- The Governor of a State shall have the power to grant pardons, reprieves, respites or remissions of punishment or to suspend, remit or commute the sentence of any person convicted of any offence against any law relating to a matter to which the executive power of the State extends

Limitation of A.161
- The **only limitation in Article 161** is that it should relate to "the sentence of any person convicted of any offence against any law relating to a matter to which the executive power of the State extends".

Details
- It may be that the Governor decided that it is beyond the State's executive power because the Rajiv Gandhi case was tried under a central **anti-terrorism law and under CBI probe**.
- Further, in a situation arising from the State government's attempt in 2014 to remit their sentences under the Cr.P.C., the apex court had ruled in 2015 that such remission would require the Centre's concurrence.
- However, this is not a tenable argument, as the same judgment made it clear that its opinion was limited to the Cr.P.C. and would not bind the sovereign power conferred on the President or the Governor under the Constitution (**A.72 and A.161**).
- Also, it cannot be forgotten that the apex court had dropped charges under the now-defunct TADA, and sentenced the convicts only under the IPC for the murder conspiracy.
- As the only surviving sentences are under the IPC, there seems to be nothing in law that bars the Governor's jurisdiction.

Conflict between the State cabinet and the Governor
- It took Mr. Purohit more than two years —

since the State Cabinet advised him in September 2018 to order the convicts' release — to decide the question.

Centre's dimension of 'Zero tolerance' towards crime
- One could speculate that the delay reflected the Centre's concern about releasing those involved in the plot to assassinate a former Prime Minister, and its ramifications for its policy of 'zero tolerance' towards terror.

Humanitarian dimension
- The Court should settle this. The convicts' continuing incarceration for nearly 30 years, notwithstanding the gravity of their crime, has acquired a humanitarian dimension to many.

Way forward
- It is vital that **law and compassion, rather than politics and electoral considerations, form the basis** for any decision on their release.

Media as target
Introduction
- ED's raids in the office of independent digital news platform **NewsClick** have invited justified condemnation from organisations representing the media.
- There is every likelihood that this operation is linked to the platform's in-depth **coverage of ongoing protests** as well as the various struggles of the people and the grassroot organisations that represent them.
- The ED is said to be investigating **alleged money-laundering** to the tune of ?30 crore.
- Not much is known about the nature of the police case, but the agency is empowered by the **Prevention of Money-Laundering Act** to investigate if the proceeds of crime related to a 'predicate offence' have been laundered.

Case of suspicion
- It is difficult to brush aside the suspicion that the website is being targeted for its coverage of the **farmers' agitation** as well as last year's country-wide protests against the **Citizenship (Amendment) Act.**
- The present regime's record is quite dismal when it comes to the obvious use **of central agencies such as the CBI, ED, IT and even the NIA, to rein in dissenting voices.**
- It is unfortunate that **specialised agencies** are **allowing themselves** to be **used**

as force multipliers in political battles against sections of the Opposition.

- Laws that are serious in nature and ought not to be invoked lightly are being used with abandon against those seen to have invited the establishment's wrath.
- This may explain the frequency with which the **offence of sedition (Section 124A)** is being invoked for speeches and writings, while allegations of anti-national activity peddled by those groomed to build such narratives lead to action under the **Unlawful Activities (Prevention) Act.**
- In other instances, cases of promoting social enmity or outraging religious sentiments are also slapped selectively to 'discipline' comedians and script-writers.
- The Supreme Court's intervention has protected prominent journalists from arrest for defamation for tweets that turned out to be incorrect.

India – China border disputes

- The disengagement on the south bank of **Pangong Tso (lake)** will see Indian troops moving to their post in **Chushul** and Chinese troops to the **Moldo garrison**.
- In the next phase, additional Indian troops will move further down, around 40 km, to Tara-Rhongo post and Chinese troops to Dorjo, a senior government official told The Hindu.
- The main phase of disengagement on both banks of the lake is expected to begin on Saturday. "We will verify each step by all means, physical as well as electronic. The next priority is Depsang and Gogra-Hot Springs, where the face-off continues," the official said.
- The official spoke on background on a day the Defence Ministry said in a statement that the Line of Actual Control was at Finger 8 and not at Finger 4 at Pangong Tso. At the same time, the Ministry said India had not conceded any territory as a result of this agreement.
- In August 2020, Indian troops had taken advantageous positions on the hills on the south bank following which China matched presence, leading to an eyeball-to-eyeball confrontation.
- This incident followed China blocking Indian patrols at multiple locations in eastern Ladakh — **north Pangong, Gogra-Hot Springs, Galwan, Depsang and CNN sector in Demchok** — followed by amassing of troops and armaments. The official said the moratorium on patrolling had been recorded in the agreement signed by the military commanders.

Endless war between Saudi Arabia and Yemen

Introduction

- The Biden administration's decision to **end U.S. support for Saudi Arabia's Yemen war** is a signal to Riyadh that the Trump-era open support it had enjoyed is a matter of the past.

Background

- The U.S. offered support to Saudi Arabia's campaign against the **Houthi rebels** in Yemen when Barack Obama was the President.
- Donald Trump continued that policy, overlooking the disastrous effects of the war that has turned Yemen**, one of the poorest Arab** countries, into a humanitarian catastrophe.
- Trump State Department **designated the Houthis**, who are backed by Iran, as

a **terrorist organisation**.

- Rights groups have condemned the move, saying that the designation would complicate aid efforts as the Houthis control a sizeable part of Yemen, including the capital (Sanaa).

Rewriting U.S.'s West Asia Policy

- Mr. Biden has now initiated steps to remove the Houthis from the terror list, among other actions.
- This is part of his larger attempts to rewrite the U.S.'s West Asia policy which, under Mr. Trump, was almost entirely focused on containing Iran.
- Saudi Arabia ended a nearly **four-year-long blockade of Qatar,** another American ally, after Mr. Biden was elected President.
- Saudi Arabia also signalled that it would carry out **domestic reforms keeping human rights in focus.** But it is yet to make any definite moves to wrap up the Yemen conflict.

Situation at Yemen

- Yemen is a case study for a war that has gone wrong on all fronts.
- When the Saudis started bombing the country in March 2015, their plan was to oust the Houthis from Sana'a and restore a pro-Riyadh government.
- Despite the Saudi-led attacks, the Houthis held on to the territories they captured, while the **Saudi-backed government** of President **Abdrabbuh Mansur Hadi** was teetering on the brink of collapse.
- After five years of fighting, the United Arab Emirates pulled out of the war last year.
- And the **UAE-backed Southern Transitional Council** wants **southern Yemen** to be an independent entity.
- While these multiple factions continued to fight, more than 10,000 people were killed in attacks and tens of thousands more died of preventable diseases.
- Yemen also stares at **famine**.
- It is a **lose-lose war for everyone**.
- **Saudi Arabia** has failed to oust the Houthis from Sana'a and is now facing frequent rocket and **drone attacks by the rebels**.
- The **Houthis** are living in **permanent war**, **unable to provide even basic services to the people in the territories they control**.

Conclusion

- Yemen's internationally recognised government practically lacks any power and legitimacy at home as the war is being fought by other players.
- Ending the war is in the best interest of all parties. Mr. Biden should push Saudi Arabia and its allies to end their blockade of Yemen and initiate talks with the country's multiple rebel factions.

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Yemen: Areas of control and conflict

- Conflict zones
- Yemeni government forces
- Houthi forces
- UAE-backed anti-Houthi forces opposed to government
- UAE-backed Southern Transitional Council (STC) forces

Source: Sana'a Center for Strategic Studies, May 2020

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India's road safety

India's Road Safety Month
- This year instead of "Road, Safety Week", a month-long campaign **"National Road Safety Month"** will be observed from 18th January 2021 to 17th February 2021.
- The **theme** of this year is, **"Sadak Suraksha-Jeevan Raksha".**

India's road safety data
- India has the world's worst record on road safety.
- India has, according to the just-**released World Bank-commissioned report, Traffic Crash Injuries and Disabilities:**
  - 1% of the world's vehicles but 11% of all road accident deaths;
- The Union Transport Ministry put the number of dead in 2019 at 1,51,113, and injured at 4,51,361.
- Those who suffer the most are from low income households, especially in rural areas, and women bear the long-term financial and psychological impact of the losses more.
- India's highways have witnessed 61% of deaths from just 5% of all accidents, as per 2019 data.
- Political parties and others fix illegal flag poles and spears on car bonnets and metal contraptions to SUV bumpers, which are deadly in an accident.

Steps to be taken
- The Centre must now set a timeline to operationalise **the National Road Safety Board**, to lay **down engineering standards** and **complaints procedures** that will help citizens hold States to account.
- Need for **technical investigation** which will be conducted **by safety experts.**

Way ahead
- Ending the "silent pandemic" of accidents will **need education, civil society cooperation and professional policing.**

Removal of Puducherry's Lieutenant Governor

Context
- Kiran Bedi's ouster is a result of her failure to stick to her constitutionally mandated role
- The removal of Kiran Bedi as Puducherry's Lieutenant Governor has provided a sense of relief to the elected government, led by the Congress, in the Union Territory.
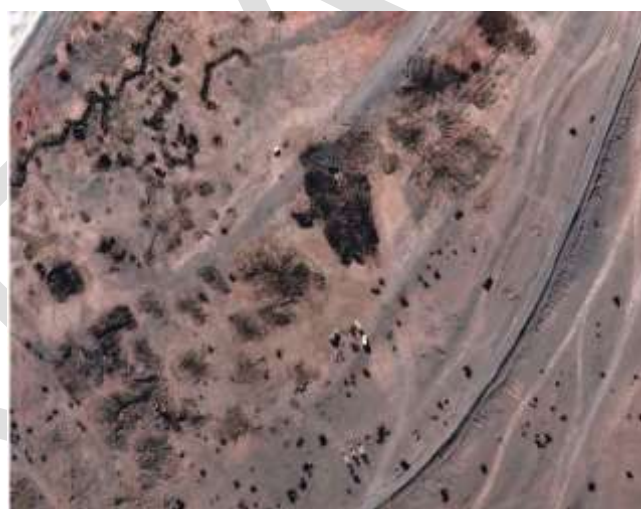
LG's disruption of smooth administration
- Her acrimonious relationship with Chief Minister V. Narayanasamy over the last four and a half years, eventually led the Centre to being forced to act against its own nominee to enable **smooth administration** at a time when the announcement of the Assembly elections is just round the corner.
- Despite her laying emphasis on sanitation, rejuvenation of waterbodies, and transparency and accountability in the administration, Ms. Bedi ended up, in the eyes of the public, being someone who was disrupting administration.
- Be it the suspension of an official over obscenity on social media, the helmet rule for two-wheeler riders, the free rice scheme, the appointment of the State Election Commissioner, the quota for government students in medical admission, or even the manner of release of money from the CM's Fund, she was caught up in a war of words with the CM instead of being more discreet.

Way ahead
- She should have shown more restraint as a constitutional functionary and adopted a consensual approach on matters affecting the people directly, even though the Lt. Governor in a Union Territory, as the President's nominee, enjoys powers superior to those of the CM and the Council of Ministers.
- On assuming charge as the **officiating Lt. Governor on Thursday, Tamilisai Soundararajan**, the **Telangana Governor**, ordered a floor test to be held on February 22.
- Ms. Bedi's innings in Puducherry should serve as a lesson to those in constitutional positions that however well meaning one's actions may be, one should not go beyond the mandated role.

India – China Border disputes: Pangong Tso

- India and China have completed disengagement on the north and south banks of Pangong Tso (lake) in eastern Ladakh, and the 10th round **of Corps Commander talks** are to be held in **Moldo** on the Chinese side to discuss pullbacks from other friction areas.
- Disengagement was fully complete as per an agreement and had been jointly verified by both sides. In line with the agreement, all landforms have been restored to that as existed **before April 2020**.
- As per the agreement for Pangong Tso, the next commanders talk is to be held within 48 hours after the completion of withdrawal from the lake.
- The other major friction areas between the two countries are **Gogra, Hot Springs and Depsang Plans**.
- To ensure that there is no violation of the agreement by China, there is monitoring by unmanned aerial vehicles (UAV) and cameras have been installed at several locations, the second official stated, adding that the entire

area was visible from multiple heights.

- On the north bank, Chinese troops have withdrawn to east of Finger 8, while Indian troops have moved back to the Dhan Singh Thapa post near Finger 3.

NITI Aayog meeting

Way forward

The NITI Aayog meeting had six key issues on its agenda

- Making India a manufacturing powerhouse
- Re-imagining agriculture
- Improving physical infra
- Accelerating human resources development
- Improving service delivery at the grassroots level
- Health and nutrition

We have to honour this enthusiasm of the private sector and give it as much opportunity in the Aatmanirbhar Bharat campaign

NARENDRA MODI
PRIME MINISTER

- States should work towards reducing compliance burden for citizens to ensure ease of living and to promote ease of doing business, stressing the importance of a better coordination between the Centre and the States for the development of the country.
- "There are thousands of compliance requirements within the government that we can remove for the common man... There is no need to ask people again and again when there is technology. States should come forward. I have also said this in the Government of India and our Cabinet Secretary is following this. The number of compliance requirements has to be reduced. This is also very important for ease of living," Mr. Modi said, speaking at the sixth meeting of the NITI Aayog Governing Council.
- Twenty-six Chief Ministers, three Lieutenant-Governors and two administrators attended the meeting, besides Union Ministers, special invitees and NITI Aayog officials.

NITI Aayog
- The NITI Aayog was formed on January 1, 2015. NITI stands for "National Institution for Transforming India".
- It is the country's premier policy-making institution that is expected to bolster the economic growth of the country.
- It aims to construct a strong state that will help to create a dynamic and strong nation. This helps India to emerge as a major economy in the world.
- The NITI Aayog's creation has two hubs called "Team India Hub" and "Knowledge and Innovation Hub".
1. Team India: It leads to the participation of Indian states with the central government.
2. The Knowledge and Innovation Hub: it builds the institution's think tank capabilities.

Objectives of NITI Aayog
1. The active participation of States in the light of national objectives and to provide a framework 'national agenda'.
2. To promote cooperative federalism through well-ordered support initiatives and mechanisms with the States on an uninterrupted basis.
3. To construct methods to formulate a reliable strategy at the village level and aggregate these gradually at higher levels of government.
4. An economic policy that incorporates national security interests.
5. To pay special consideration to the sections of the society that may be at risk of not profiting satisfactorily from economic progress.
6. To propose strategic and long-term policy and programme frameworks and initiatives, and review their progress and their effectiveness.
7. To grant advice and encourage partnerships between important stakeholders and national-international Think Tanks, as well as educational and policy research institutions.
8. To generate knowledge, innovation, and entrepreneurial support system through a shared community of national and international experts, etc.
9. To provide a platform for resolution of inter-sectoral and inter-departmental issues to speed up the accomplishment of the progressive agenda.
10. To preserve a state-of-the-art Resource Centre, be a repository of research on good governance and best practices in sustainable and equitable development as well as help their distribution to participants.
11. To effectively screen and assess the implementation of programmes and initiatives, including the identification of the needed resources to strengthen the likelihood of success.
12. To pay attention to technology improvement and capacity building for the discharge of

programs and initiatives.

13. To undertake other necessary activities to the implementation of the national development agenda, and the objectives.

The NITI Aayog is based on the **7 pillars of effective Governance**. They are:

1. Pro-people: it fulfils the aspirations of society as well as individuals
2. Pro-activity: in anticipation of and response to citizen needs
3. Participation: involvement of the citizenry
4. Empowering: Empowering, especially women in all aspects
5. Inclusion of all: inclusion of all people irrespective of caste, creed, and gender
6. Equality: Providing equal opportunity to all especially for youth
7. Transparency: Making the government visible and responsive

NITI Aayog Composition

- Prime Minister of India is the Chairperson
- Governing Council consists of the Chief Ministers of all the States and Lt. Governors of Union Territories in India.
- Regional Councils will be created to address particular issues and possibilities affecting more than one state. These will be formed for a fixed term. It will be summoned by the Prime Minister. It will consist of the Chief Ministers of States and Lt. Governors of Union Territories. These will be chaired by the Chairperson of the NITI Aayog or his nominee.
- Special invitees: Eminent experts, specialists with relevant domain knowledge, which will be nominated by the Prime Minister.
- The full-time organizational framework will include, in addition to the Prime Minister as the Chairperson:
1. Vice-Chairperson (appointed by the Prime Minister)
2. Members:
- Full-time
- Part-time members: Maximum of 2 members from foremost universities, leading research organizations, and other innovative organizations in an ex-officio capacity. Part-time members will be on a rotational basis.
3. Ex Officio members: Maximum of 4 members of the Council of Ministers which is to be nominated by the Prime Minister.
4. Chief Executive Officer: CEO will be appointed by the Prime Minister for a fixed tenure. He will be in the rank of Secretary to the Government of India.

Military coup in Myanmar

Introduction

- The military, which had shared power with Aung San Suu Kyi's National League for Democracy (NLD) for five years, orchestrated the coup on February 1, hours before the country's newly elected Parliament, in which the NLD had a huge majority, was set to convene.

Details

- The military, which controlled Myanmar through direct rule for almost 50 years since independence from Britain in 1948, has now deployed the familiar repressive tactics .
- Tatmadaw has detained **Ms. Suu Kyi, President Win Myint** and several of the NLD's other top leaders, **suspended the Internet, blocked social networks** and warned the public of repercussions if they joined protests.

Rising protests in demand for restoration of democratically elected government (Revival of the Saffron Revolution)

- But protests have only grown by the day.
- On Saturday, two unarmed protesters were killed by security forces in Mandalay.
- They demand the Generals free the detained elected leaders and restore democracy.
  o Myanmar's military has been one of the most consistent enemies of democracy.
- In the past, challenges to its powers were met with brutal crackdowns. Still, the junta has continued to face popular resistance.
- The crackdown on the protests of August 8, 1988 did not prevent the **'saffron revolution' of 2007** — **protests led by Buddhist monks**.
- **Than Shwe**, the then leader of the country, suppressed them but had to offer a **new Constitution in 2008** as a compromise.
- This Constitution was the basis of the partial transition to democracy in 2015 when the NLD came to power.
- The protesters have called **for civil disobedience, stoppage of work, sit-ins and mass demonstrations.**

Conclusion

- The strike has already paralysed the banking system at a time when the economy, hit hard by COVID-19, is struggling to stand on its feet.

- The military is also facing international sanctions and condemnation.
- There is no easy way out for **Gen. Min Aung Hlaing**, the commander-in-chief and the coup's main architect, from the crisis he has put himself in.

Way ahead
- The Generals should realise that years of repression have not killed Myanmar's aspirations for democracy.
- They should not repeat 1988 or 2007. They should stand down, respect the election results, release the leaders and hand power back to the elected government.

Nepal's present political crisis
Introduction
- A Constitution Bench of the Supreme Court of Nepal quite rightly overturned Prime Minister K.P. Oli's decision **to unilaterally dissolve Parliament in December 2020** and which was later approved by President Bidya Devi Bhandari.

Reason for dissolution of the Parliament
- The **Court** correctly observed that there was the possibility of the formation of a new government in case Mr. Oli did not enjoy the confidence of Parliament, and therefore ruled his decision **unconstitutional.**
- The ostensible reason for Mr. Oli's decision was **inner party intrigue** within the ruling **Nepal Communist Party (NCP).**
  - The NCP has since then **fractured politically** into two factions, one led by Mr. Oli and the other by **Pushpa Kumar Dahal and Madhav Kumar Nepal**, both former Prime Ministers who belonged to the erstwhile Nepali Maoists and the Communist Party of Nepal (Unified Marxist-Leninist), respectively.
  - These parties had merged into the NCP in 2018.
  - But this fracture is not yet formalised even though the Dahal-Nepal faction has "expelled" Mr. Oli from the party.
- The Court also went on to scrap all appointments made by the government after the dissolution of Parliament on December 20, 2020.

Split of NCP

- The NCP's vertical split into two near-equal factions in Parliament should allow the formation of a new government if the **Dahal-Nepal faction** chooses to support an alternative — **it has already pledged support to Nepali Congress (NC) leader Sher Bahadur Deuba** if the NC stakes claim to form a new coalition government.

Missed opportunity by NCP
- The repeated changes in government should not surprise anyone as Nepal has a **history of unstable regimes** and frequent changes in **Singha Durbar's** occupants since the **end of absolute monarchy in 1990.**
- But the NCP missed a historic opportunity after it came to power with a two-thirds majority in the bicameral Federal parliament and in six of the seven provinces.
  - Mr. Oli could have used the mandate in 2018 to ensure a stable regime, and governance and development in a country battered by the 2015 earthquake, political instability, and now the COVID-19 threat.
  - The electorate's expectations of a stable regime, the first elected one since the promulgation of its Constitution, have been belied yet again due to the failure of the political leadership.

India Pakistan relations
- In a first joint statement issued by the two sides in years, India and Pakistan said they have agreed to a "strict observance of all agreements, understandings and cease firing along the Line of Control (LoC) and all other sectors" with effect from the midnight of February 24/25 (Wednesday).
- The decision was announced after discussions between the Director Generals of Military Operations (DGsMO).
- "The agreement comes in the wake of over 5000 CFVs [cease-fire violations] last year, the highest in 19 years, and this shows the realisation in New Delhi and Islamabad that they cannot afford to let violence spiral out of control given its inherently escalatory nature,".
- According to data provided by the Ministry of Defence in Parliament earlier this month, there were 5133 instances of CFVs along the LoC and other areas in Jammu and Kashmir, resulting in 46 fatal casualties in 2020, and

3,479 CFVs in 2019.
- In May 2018, the DGsMO agreed during a similar hotline conversation to observe the ceasefire strictly, but subsequent tensions over the Pulwama attack, Balakot air strikes and the Article 370 move led to a sharp spike in CFVs.

What is the November 2003 Ceasefire Agreement?
- It came after a long cycle of violence along the 725-kilometre-long Line of Control (LoC) which divides Jammu and Kashmir into two parts.
- It followed a framework of military confidence-building measures (CBMs) that kept the artillery pieces at least 20 km away from the LoC, thus promising a sustained halt to heavy firing.
- On November 26, 2003 the ceasefire took effect along the entire stretch of the India-Pakistan frontier i.e. the IB, the LoC and the AGPL.
- For the first time in several decades, the guns along this frontier went silent, bringing much needed respite to the shelling-scarred lives of people in hamlets along the LoC and to soldiers guarding the border posts.
- It facilitated the opening of the Srinagar-Muzaffarabad and Poonch-Rawalkot routes, paving the way for bus and truck services linking the two Kashmirs for the first time in six decades and encouraging cross-LoC contacts, exchanges, travel, and trade.
- The ceasefire also enabled India to complete the construction of a fence near the LoC to prevent Pakistan's infiltration of terrorists into Kashmir, a project that it had begun a couple of decades earlier but had to suspend due to Pakistan's artillery fire.
- This ceasefire agreement, reached between Pakistani President Pervez Musharraf and Indian Prime Minister Manmohan Singh, was respected until 2008. From 2008, there were occasional spikes in firing across the LoC. This situation changed in late 2012 – around the time that India began to build additional bunkers along the LoC. Firing across the LoC has now increased.

What is LoC?
- The 435 mile stretch along the Kashmir divide has been termed the LoC since the 1972 Simla Agreement.
- What India terms the International Border, and what Pakistan terms the Working Boundary,

runs southward from the LoC.

U.S., EU & UN welcomes India-Pak. ceasefire agreement
- The United States has welcomed the announcement by India and Pakistan that they would observe the 2003 ceasefire along the Line of Control (LoC).
- The White House called for the two countries to build upon this progress and the State Department encouraged a reduction in tensions and violence along the LoC
- Even the UN and EU have welcomed the deal.

What is the role of USA?
- In response to a question on the role of the U.S., if any, in brokering the agreement between India and Pakistan, Mr. Price did not identify any specific actions but articulated the general U.S. position — a reduction in tensions and a condemnation of cross-border terror as well as a dialogue on Kashmir and other issues.
- "When it comes to the U.S. role, USA continue to support direct dialogue between India and Pakistan on Kashmir and other issues of concern.
- This is an important step in the interest of regional peace and stability on which to build further bilateral dialogue.

Electoral Reforms in India: No Postal ballots for NRIs in Assembly Elections
- Non-Resident Indians (NRIs) will have to wait longer to be able to vote by postal ballots,

as **Chief Election Commissioner Sunil Arora** said that the facility would not be extended to them for the upcoming elections to the **Assam, Tamil Nadu, Puducherry, Kerala and West Bengal Assemblies**.

- The Election Commission of India (ECI) had written to the Law Ministry on November 27 last year with the proposal of extending postal ballots to overseas electors. "The commission is technically and administratively ready to extend this facility in general elections to Legislative Assemblies of Assam, West Bengal, Kerala, Tamil Nadu and Puducherry," the EC's letter said.
- After announcing the poll schedule on Friday, Mr. Arora said NRIs would not get the postal ballot facility this time. He said after the EC sent its note, it was further referred to the Ministry of External Affairs. The MEA was of the opinion that a wider meeting of stakeholders should be held, he said, adding that a meeting would be organised during the period of the five elections.
- Another EC official said extending the facility would take some time as an amendment was required.

Prelims PT Pointers regarding Electoral Reforms
- 1st Electoral Reforms committee was V M Tarkunde Panel during Janta Party Government.
- Dinesh Goswami Committee – Electoral reforms.
- Indrajit Gupta Committee. – State funding of elections.
- Election Commission of India established on 25th Jan, 1950. Hence Voters Day is celebrated on this day 1st time in 2011.
- 1st General Elections conducted in 1951-52.
- EVM universalised in 2000. SVEEP launched in 2010.
- Introduction of NOTA and filing of Affidavit by Candidates in 2013.
- National Voter's Services Portal (NVSP) launched in 2015.
- Use of VVPAT in 2017. Electoral Literacy Club launched in 2018.
- 2019: Record participation of 67.4% voters in 2019. Gender gap reduced to 0.1%. Special facilitation to PwD and Senior Citizens.

Chronology of Electoral Reforms
Electoral Reforms Pre-2000
- **Lowering of Voting Age**: The 61st Amendment Act to the Constitution reduced the minimum age for voting from 21 to 18 years.
- **Deputation to Election Commission**: All personnel working in preparing, revising and correcting the electoral rolls for elections shall be considered to be on deputation to the EC for the period of such employment, and they shall be superintended by the EC.
- **Increase in the number of proposers and the security deposit**: The number of electors required to sign as proposers in the nomination papers for elections to the Rajya Sabha and the State Legislative Councils has been raised to 10% of the electors of the constituency or ten such electors, whichever is less chiefly to prevent frivolous candidates.
- The security deposit has also been hiked to prevent non-serious candidates.
- **Electronic Voting Machine (EVMs)**: First introduced in 1998 during the state elections of Delhi, Madhya Pradesh and Rajasthan, EVMs are used widely now as they are fool-proof, efficient and a better option in terms of the environment.
- **Disqualification on conviction for violating the National Honours Act, 1971**: This shall lead to disqualification of the person for 6 years from contesting to the Parliament and the state legislatures.
- **Restriction on contesting from more than 2 constituencies**: A candidate cannot contest from more than 2 constituencies.
- **Death of a contesting candidate**: Previously, the election was countermanded on the death of a contesting candidate. In the future, no election will be countermanded on the death of a contesting candidate. If the deceased candidate, however, was set up by a recognized national or state party, then the party concerned will be given an option to nominate another candidate within 7 days of the issue of a notice to that effect to the party concerned by the Election Commission.
- It is prohibited by law to go to or near a polling booth bearing arms. This is punishable by imprisonment for up to 2 years.
- On poll days, employees of organisations get a paid holiday and violation of this is punishable by a fine.
- **Prohibition on sale of liquor**: No liquor or other intoxicants shall be sold or given or distributed at any shop, eating place, or any other place, whether private or public, within a polling area during the period of 48 hours ending with the hour fixed for the conclusion

of poll.

- **Time limit for bye-elections**: Bye-elections to any House of Parliament or a State Legislature will now be held within six months of the occurrence of the vacancy in that House. (Read about Parliament & State Legislature in the linked article.)
- The period of campaigning has been reduced.

Electoral Reforms Post 2000

The electoral reforms target the election process in the country. The list of such electoral reforms are given below:

- **Ceiling on election expenditure**: At present, there is no limit on the amount a political party can spend in an election or on a candidate. But, the Commission has put a cap on individual candidates' spending. For the Lok Sabha elections, it is Rs. 50 – 70 lakh (depending on the state they are contesting the Lok Sabha seat from), and Rs. 20 – 28 lakh for an assembly election.
- **Restriction on exit polls**: The EC issued a statement before the 2019 Lok Sabha elections saying that exit poll results could be broadcast only after the final phase of the elections were over. This was done to avoid prospective voters being misguided or prejudiced in any manner.
- **Voting through postal ballot**: In 2013, the EC decided to expand the ambit of postal ballot voting in the country. Previously, only Indian staff in missions abroad and defence personnel in a limited way, could vote via postal ballots.
- **Now, there are 6 categories of voters who can use the postal ballot**: service voters; special voters; wives of service voters and special voters; voters subjected to preventive detention; voters on election duty and Notified voters.
- **Awareness Creation**: The government decided to observe January 25th as 'National Voters Day' to mark the EC's founding day. Read more on the National Voters' Day here.
- Political parties need to report any contribution in excess of Rs 20000 to the EC for claiming income tax benefit.
- Declaring of criminal antecedents, assets, etc. by the candidates is required and declaring false information in the affidavit is now an electoral offence punishable with imprisonment up to 6 months or fine or both.

Voter Verified Paper Audit Trail (VVPAT)

- VVPAT is an independent verification printer machine and is attached to
- electronic voting machines.
- It allows voters to verify if their vote has gone to the intended candidate.
- When a voter presses a button in the EVM, a paper slip is printed through the VVPAT. The slip contains the poll symbol and name of the candidate.
- It allows the voter to verify his/her choice.
- After being visible to the voter from a glass case in the VVPAT for seven seconds, the ballot slip will be cut and dropped into the dropbox in the VVPAT machine and a beep will be heard.
- VVPAT machines can be accessed by polling officers only.

cVIGIL APP

- The cVIGIL App provides time-stamped, evidence-based proof of the Model
- Code of Conduct / Expenditure Violation, having live photo/video with auto location data.
- Any citizen can lodge a complaint through the Mobile App. Flying Squads will then investigate the matter and the Returning Officer takes the decision.
- The status of cVIGIL can be shared with the cVIGIL complainant within a specified time limit.

Electronic versions of the elector photo ID card, or e-EPIC

- In another development, electors will be able to download electronic versions of the elector photo ID card, or e-EPIC with the Election Commission launching it during the National Voter Day celebration.
- The digital version of EPICs would be available for download from the voter helpline app, voterportal.eci.gov.in and nvsp.in, the EC said.
- The e-EPIC would be a non-editable PDF version of the EPIC that can be downloaded on the phone and stored on the DigiLocker app or printed from a computer.
- All general voters who have valid EPIC numbers would be able to do so from February 1 and those who applied in November and December will be able to download it from Monday till January 31.

GS - III

Analysis of Economic Survey 2020-21

- The Economic Survey for 2020-21 is an expansive attempt at reviewing the developments in the Indian economy during the current financial year and providing an outlook for its near-term prospects.
- Spread over 700 pages, the survey opts for a **self-congratulatory tone** while highlighting the policy achievements of the government in steering the economy through the treacherous shoals of "the most unfathomable global health emergency experienced in modern history".
- Citing an approach that used 'graded public health measures to transform the short-term trade-off between lives and livelihoods into a win-win that would save both lives and livelihoods over the longer term', the survey asserts that India established a globally unique model of strategic policymaking in containing the COVID-19 pandemic while helping the economy recover quickly from its deleterious impact.
- There is no denying that the country appears to have not only flattened the curve but also, crucially, so far avoided a bruising second wave of infections seen in much of Europe and the U.S.
- While it may be debatable as to how much of the turn in the pandemic's progress could be attributed wholly to proactive policy measures, the survey's contention that India has turned the crisis into an opportunity to strengthen its long-term growth potential through 'seminal reforms' sounds off-key, especially given the ongoing farmers' agitation against the new farm laws as well as the plight of the struggling small and medium-scale industries and informal sectors.
- The survey goes on to forecast that the economy is currently experiencing a V-shaped recovery that would enable GDP to expand, even by a 'conservative estimate', by 11% in real terms in 2021-22.
- Still, to achieve that level of real growth, retail inflation must moderate substantially to average 4.4% or less over the 12-month period through March 2022, given that the survey has projected nominal growth at 15.4%.
- Also, while batting for a fiscal push to support the reviving economy, it posits an upside to the growth prognosis predicated on, among other factors, a rapid roll-out of the COVID-19 vaccines and a recovery in demand in the battered services sector.

- However, the document fails in providing an honest assessment of the on-ground economic situation by overlooking key aspects including the extent of unemployment even as it hints at the level of rural joblessness, which followed the return of millions of urban casual workers in the wake of last year's hastily implemented lockdown.
- This it does by taking credit for a record 311.92 crore person-days of work generated over the last 10 months under MGNREGA.
- And in contending that growth should be prioritised over inequality in tackling poverty, when the pandemic has exacerbated the gap between the rich and the poor and the Finance Minister is set to present her Budget, the survey seems to privilege wealth creation over all else.

Biomethanation plants

- Prime Minister Narendra Modi, during his first Mann Ki Baat address for the year, made a mention of the garbage-to-power plant being commissioned inside the Dr. B.R. Ambedkar Agriculture Market in Bowenpally, Telangana.
- Vegetable and fruit waste is used to generate power to the extent of 500 units a day and 30 kilos of green manure at the plant.
- This is being done by making use of 10 tonnes of left over market waste. The power generated is being used to light up the market and also run the canteen in the premises enabling the market committee to make substantial savings in power bills.
- In his address, Mr. Modi said, it was amazing that the market waste was being used profitably. "This is the power of innovation, it was nice to learn about it. This is the journey of turning garbage into gold," the Prime Minister remarked.
- The CSIR-Indian Institute of Chemical Technology (IICT) has designed and patented the high rate biomethanation technology-based Anaerobic Gas lift Reactor (AGR) for this ?3 crore project funded by the Department of Biotechnology and the Telengana government's Agriculture Marketing Department.
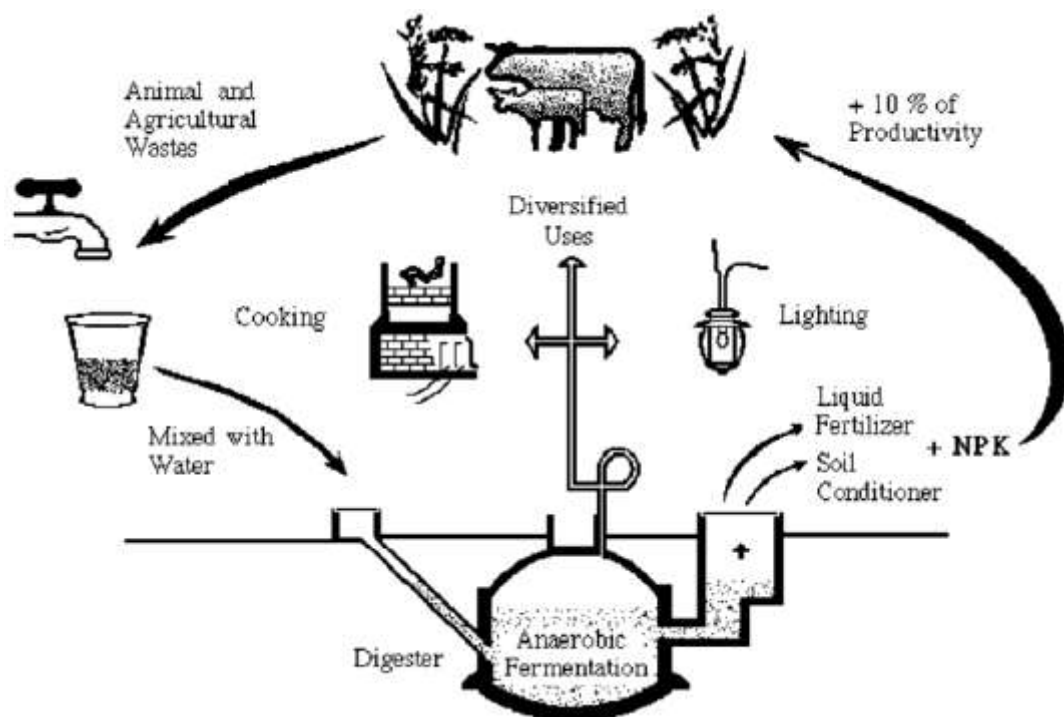
What is Biomethanation?
- Biomethanation is a process by which organic material is microbiologically converted under

anaerobic conditions to biogas.

production of energy from organic residues and wastes. It will help to reduce the use of fossil fuels and thus reduce CO_2 emission.

- Three main physiological groups of microorganisms are involved:
    1. Fermenting bacteria,
    2. Organic acid oxidizing bacteria, and
    3. Methanogenic archaea.
- Microorganisms degrade organic matter via cascades of biochemical conversions to methane and carbon dioxide.
- Syntrophic relationships between hydrogen producers (acetogens) and hydrogen scavengers (homoacetogens, hydrogenotrophic methanogens, etc.) are critical to the process.
- Determination of practical and theoretical methane potential is very important for design for optimal process design, configuration, and effective evaluation of economic feasibility.
- A wide variety of process applications for biomethanation of wastewaters, slurries, and solid waste have been developed.
- They utilize different reactor types (fully mixed, plug-flow, biofilm, UASB, etc.) and process conditions (retention times, loading rates, temperatures, etc.) in order to maximize the energy output from the waste and also to decrease retention time and enhance process stability.
- Biomethanation has strong potential for the

An introduction to Budget 2021-22

Introduction
- There is greater spending on health care and some fiscal push to undergird the struggling demand in the pandemic-hit economy.
- The Union Budget for 2021-2022 presented to Parliament on Monday, instead reveals an estimated health outlay of ?74,602 crore, almost 10% lower than the revised estimate of ?82,445 crore earmarked for health spending in the current fiscal year.

More focus on drinking water and sanitation
- The Minister, however, has claimed a 137% increase in the budgetary outlay on 'health and well-being' by including a one-time expenditure of **?35,000 crore set aside for the COVID-19 vaccination programme**, **?60,030 crore budgeted for the department of drinking water and sanitation**, as well as the **Finance Commission's grants** for both water and sanitation and health totalling to almost **?50,000 crore.**
- In fact, **the Economic Survey** had eloquently made the case for providing a massive boost to health spending, which it reasoned would serve as a direct means to raising overall economic output by reducing the economic

burden of illnesses.

PM Atma Nirbhar Swasth Bharat Yojana

- The government intends to introduce **a new centrally sponsored scheme, 'PM Atma Nirbhar Swasth Bharat Yojana'**, to **develop primary, secondary, and tertiary care capacities** over the **next six years**, at an estimated cost of ?64,180 crore.

Fiscal deficit

- While the revised estimates for the current financial year project a **fiscal deficit of 9.5% of GDP** on account of expenditure surging to ?34.50-lakh crore, the Minister has opted for a mere ?33,000 crore increase in the overall expenditure outlay in her Budget estimates for the next fiscal.
- Here again, she has pointed to the ?5.54-lakh crore set aside for capital expenditure to contend a 34.5% increase in outlay over the current year's Budget estimate.
- Far from being an expansionary Budget, Ms. Sitharaman has opted to contain overall spending so as to rein in the **fiscal deficit to 6.8%** in the coming fiscal itself (2021-22).
  - o The country cannot afford a premature scaling down of fiscal support at a time of rising inequality.

Increasing the non-tax revenues

- The Budget has accounted for **?1.75-lakh crore** in capital receipts from disinvestment.
- She also proposes to **privatise two more public sector banks** and a **general insurer in 2021-22** and has committed to ensuring that the necessary legislative amendments to enable the **LIC's IPO** are introduced in the current session of Parliament.
- The Budget also throws open the doors for **increased FDI in insurance** — the foreign ownership limit would be **raised to 74%** after amendments to the **Insurance Act, 1938**.

Issue with the FDI in insurance sector

- Still, it remains to be seen how eager overseas insurers may be to raise their stakes, given the **government's intention** to make its **proposal** politically acceptable by including safeguards such as **mandating that a majority of board positions and key management personnel be restricted to resident Indians** and **requiring the companies** to set aside a **specified percentage of profits as general reserve**.

National asset monetisation pipeline

- Also on the block for possible sale or lease through concessions are state-owned undertakings' land assets that the government intends to monetise.
- In finding the capital for its National Infrastructure Pipeline, the Budget proposes an **asset monetisation pipeline** that would include **highways, airports and ports.**

Bad bank

- The Budget proposes establishing both an **Asset Reconstruction Company and an Asset Management Company** that would consolidate and take over existing stressed debt and then help dispose of the assets.
- It is these plans to **privatise two state-run banks** and also undertake a clean up of the stressed assets that have prompted the Minister to set aside just ?20,000 crore to recapitalise the remaining public banks.

Conclusion

- The aggressive stance on privatisation notwithstanding, the government is still likely to face an uphill task in achieving its ambitious disinvestment goal given that private investment is still anaemic.

TRAI Regulations

- The Delhi High Court on Wednesday ordered the Telecom Regulatory Authority of India (TRAI) to ensure "complete and strict" implementation of the regulation issued by it in 2018 **for curbing unsolicited commercial communications (UCC)**.

Telecom Regulatory Authority of India

- It was established in **1997**. It is a **statutory** body.
- It is an **independent regulator** for telecom services and tariffs in India. Before TRAI, Central Govt used to regulate it.
- **Objectives**: Digital India: Ubiquitous and Affordable Connectivity.
- In 2000 it was amended to include **TDSAT (Telecom Disputes Settlement Appellate Tribunal)**. It has adjudicatory functions of TRAI.

- A Bench of Chief Justice D.N. Patel and

Justice Jyoti Singh also directed the telecom service providers (TSPs), including Bharat Sanchar Nigam Ltd (BSNL), Reliance Jio, Airtel and Vodafone, to ensure **strict compliance with the Telecom Commercial Communications Customer Preferences Regulations (TCCCPR) 2018 issued by TRAI**.

Telecom Commercial Communication Customer Preference Regulation (TCCCPR), 2018
- The regulation seeks **to curb the problem of Unsolicited Commercial Communication (UCC) or spam calls and messages**.
- The regulation says that the companies will have to register themselves for commercial SMS and calls. This will help the regulator to regulate the fraud companies.

The salient features of the regulation:
   a. Adoption of **Distributed Ledger Technology (or blockchain)** as the RegTech to ensure regulatory compliance while allowing innovation in the market.
   b. **Co-regulation** where Telecom Service Providers/ Access Providers establish and arrange the framework, which is legally backed by regulation.
   c. Enabling compliance through innovation in technology solutions that are demonstrated in a **regulatory sandbox**.
   d. Enhanced controls and new options for all entities to perform their functions and to carry on their businesses efficiently.

- Paytm had, in its plea, alleged that telecom operators are not blocking those who are defrauding its customers by "phishing" activities over various mobile networks. Paytm had contended that the telecom majors are violating their obligations under the TCCCPR 2018, to curb problem of unsolicited commercial communications
- Paytm claimed that under the regulations, the telecom companies are required to verify purported telemarketers seeking registration (called registered telemarketers or RTMs) with them before granting access to their customer data and also take action immediately against all fraudulent RTMs. It contended that the telcos "failure" to undertake proper verification prior to such registration enables fraudulent telemarketers to carry out phishing activities.

Budget 2021 and Public Transportation

- With a clear focus **on expansion of Metro Rail and bus services** through Central funding, Budget 2021 has recognised a core component of **urbanisation**.
- Comfortable, safe and affordable commuting has well-recognised **multiplier effects** for the economy and more generally for public health, although COVID-19 has had the perverse effect of driving people away to the safety of personal car and two-wheeler bubbles.
- There is little doubt that when the pandemic is under control, more people will return to clean and green mass mobility.
- Finance Minister Nirmala Sitharaman's announcement of Central funding of ?1,957 crore, ?63,246 crore and ?14,788 crore for the **Kochi, Chennai and Bengaluru Metro projects**, respectively, gives these big cities greater certainty that they can meet targets.
- Less certain, however, is the impact of the proposed ?**18,000 crore plan to augment public bus transport** using a PPP model that will enable private sector players to finance, acquire, operate and maintain over 20,000 buses.
- India's ratio of buses to population is a low 1.2 per 1,000 people, compared to 8.6 in Thailand and 6.5 in South Africa, although some States like Karnataka are well ahead of the national average, as per NITI Aayog data.
- **Licensed private urban bus services** remain a politically sensitive topic in many States, where State monopolies coexist with unregulated paratransit, and it will take a major effort to convince them that a bus renaissance is a good post-pandemic recovery strategy.
- The amended Motor Vehicles Act has provisions for the Centre to take the lead here.

Challenges of Urbanisation
- The challenge of urbanisation goes beyond standalone interventions such as Metro and bus system grants.
- State governments, which retain effective control over urban development rather than city administrations, have failed to operationalise the umbrella authorities to regulate transport.
- Common mobility cards that would help citizens use bus, train and feeder networks seamlessly were largely in pilot project mode even before the pandemic.
- There is valid criticism that the existing

paradigm is one of "**exclusionary urbanisation",** which makes Metro and bus services expensive for the majority, particularly for those forced to live in the suburbs due to housing costs, and sometimes making the per kilometre cost of using a two-wheeler more attractive.

- Moreover, Census 2011 showed that the number of Census Towns, which are urban for census purposes but not named urban local bodies, grew tremendously over a decade.
- **Census Towns lack access to funding, infrastructure and capacity** to meet the needs of large populations even now.
- Enhanced ambition, therefore, requires the Centre to work with State governments to integrate key areas with its transport vision, such as affordable inner-city housing, including rental projects, access to civic services and health care, and enhanced sustainability, greenery and walkability.
- All these are covered by Central budgetary schemes for cities. Only integration can bring about inclusive urbanisation.

Government's notice to Twitter

Context
- The Government's notice to Twitter after it reinstated 257 handles that mentioned a controversial hashtag "#farmergenocide", which the government wanted blocked, marks a critical point in an already uneasy relationship between a powerful government and an influential technology platform.

What is the Twitter issue?
- A showdown seems inevitable now, what with the Government threatening Twitter with penal action under **Section 69A of IT ACT,2000**, for not complying with its orders.
- The issue pertains to tweets put out by some handles on the ongoing farmer protests as also a hashtag that suggested that a farmer genocide was being planned.
- The **Ministry of Electronics and IT** ordered these handles (257 URLs and one hashtag) to be **blocked on the grounds** that they were **spreading dangerous misinformation** about the protests.
- Twitter initially complied with the order but then restored these tweets and handles, which included those of media houses.

Section 69A of the Information Technology Act, 2000

- The Government's initial order was issued under Section 69A of the Information Technology Act, 2000, under which it can direct an intermediary to block any information for public access "in the **interest of sovereignty and integrity of India, defence of India, security of the State, friendly relations with foreign States or public order or for preventing incitement to the commission of any cognizable offence relating to above**…"

- This is the **same Section** under which hundreds **of Chinese apps have been banned in recent months.**
- The world over, technology platforms have enough safeguards to act as intermediaries without being liable for the content that is published.
- But Twitter's act of defying the orders as per the law means it is on slippery territory.
- Though the **use of Section 69A** has been often criticised for the secrecy surrounding the process, it was upheld by the Supreme Court in the landmark **Shreya Singhal vs Union of India (2015).**
- The Court then was satisfied with the safeguards available.
- The technology platform's stance may perhaps even lead to a legal challenge to the provisions of the Section.

Conclusion
- On the other hand, while there are many grounds on which this Government's handling of the farm protests can be criticised, including its hyper-sensitivity to any criticism, reflected in the FIRs filed against many journalists, it has to be unequivocally said that the hashtag that it wanted blocked was not merely distasteful but seriously problematic, and indefensible on the grounds of freedom of speech.
- In a very sensitive setting, one that at least at one point was simmering with the potential for large-scale violence, provocation of any kind is unacceptable.
- What further happens in this face-off will be of interest not just for the two parties but for the governments of the world as well as the platforms of the world.

Serological survey of ICMR

Context

- The results of the **ICMR's third serological survey** to ascertain the spread of COVID-19 show that nearly **one in five Indians** — about 270 million — may have **been infected.**

Serological Survey

- A serological survey is conducted to assess the **prevalence of a disease in a population.** It is done by detecting the presence of specific antibodies that are produced against the virus.

- A serological survey includes the **IgG Enzyme-Linked Immunosorbent Assay (ELISA) test.** It estimates the proportion of the population exposed to SARS-CoV-2 infection.

Results of serological survey

- However, what is known so far is that compared to August — when data for the second serological survey was announced — there has been a **three-fold rise in infections.**

- There has also been a **five-fold rise** (in percentage terms) of the infection in those aged **10-17 years.**

- The third edition also included a serological survey of doctors, nurses and paramedical staff, revealing that nearly 25% — significantly above the national average — had been infected.

- Experts of various hues point to the **declining trend in infections since September**, and the **absence of multiple peaks in coronavirus cases** as a pointer to the spread being far wider and speeding up **'herd immunity'.**

Herd immunity

- A state when a significant proportion of people in a locale have been infected, thereby retarding future spread

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Way ahead

- This survey nor any city-wide survey has evaluated how long antibodies persist and if certain virus mutant variants can overcome the protection from antibodies.

- Such surveys must shift focus to asking more granular questions:

  o Should the rise in spread among teenagers and children mean that they be considered for vaccination earlier than scheduled?

  o Should companies accelerate trials to test protection in children?

  o Should the rise in rural India — the survey is designed in a way to sample more villages than urban pockets — mean that they be given vaccines earlier?

Conclusion

- It would be wrong to derive comfort from this situation.

- The ICMR emphasises that the results point to a significant number still potentially vulnerable, underscoring the need to be vaccinated and continuing with distancing and masking up.

- The ICMR and the government health facilities must coordinate with a broader spectrum of specialists to investigate questions that can be used to guide and modify vaccination policy.

RBI on prioritising economic growth

Present Stance of RBI

- The **RBI's Monetary Policy Committee (MPC)** has expectedly yet again left **benchmark interest rates unchanged** and reiterated that it will continue with its **accommodative stance (cheap money policy)**, at least into the next fiscal year, in order to secure a **sustained economic recovery**.

- The central bank's rate setting panel has reasoned that while there are promising signs in the welter of data that it has looked at, the ongoing recovery is "still to gather firm traction" making it crucial to provide continued policy support for **restoring growth**.

Retail inflation in India

- The **sharp deceleration in retail inflation** in December, when headline **CPI inflation eased to 4.6%** after being stuck above the RBI's upper tolerance **threshold of 6% (nominal anchor rate)** for six straight months, clearly appears to have smoothed the brow for the six

members of the committee and provided them the space to stay focused in the near term on **prioritising growth**.

Parameters restoring confidence on India's economic growth:

- The rollout of the **COVID-19 vaccination programme** as well as the **Union Budget's proposals** to give a **boost to infrastructure, and innovation and research**, among other things, have been recognised as factors likely to restore confidence and lend a fillip to the growth momentum, respectively.

Impact due to farmer's protest

- While overall rabi sowing has been 2.9% higher year-on-year as on January 29, the **farmers' agitation** involving cultivators from key crop-growing States including Punjab, Haryana and U.P. is a cause for concern as a protracted impasse has the potential **to disrupt farm output** threatening both growth and inflation dynamics.

Recent measures taken by RBI

- The two main measures involve extending the enhanced 'held-to-maturity' dispensation for banks buying debt issued by the Centre and States by a year up to March 31, 2023, and allowing **retail investors** to make direct online purchases of government securities via a **'Retail Direct'** gilt securities account held with the RBI.

Impact of government borrowing on economy

- With the **Centre alone** targeting to borrow as much as **?12-lakh crore** at the gross level in the coming financial year, the debt manager faces the unenviable task of ensuring that the flood of debt not only finds takers at a price that does not **push up borrowing costs** for the rest of the real economy but also of trying and preventing it from **crowding out demand for private investment credit.**

Conclusion

- With interest rates being held at near record lows and inflation still persisting above the RBI's benchmark repo rate of 4% resulting in negative real returns for savers, the RBI can ill afford to drop its guard on vigilance over prices.

Uttarakhand floods

Introduction

- The staggering collapse of part of a glacier in **Uttarakhand's Nanda Devi mountain** and the **ensuing floods** that have claimed many lives come as a deadly reminder that this **fragile, geologically dynamic region**.

Reason of flash floods

- A significant slice of the glacier, **dislodged by a landslide**, produced roaring torrents in the **Rishiganga and Dhauliganga rivers** in **Chamoli district**, trapping unsuspecting workers at two hydro power project sites (**Tapovan project and Tapovan-Vishnughad project**).

Risks of hydroelectric power projects

- Once the crucible of **environmentalism**, epitomised by *Sunderlal Bahuguna, Gaura Devi and the Chipko movement*.
- The **State's deep gorges and canyons** have attracted many **hydroelectric projects and dams**, with little concern for **earthquake risk**.
  - **Example:** Red flags have been raised repeatedly, particularly after the **moderate quake in 1991** in the region where the **Tehri dam** was built and the **2013 floods that devastated Kedarnath**, pointing to the *threat from seismicity, dam-induced microseismicity, landslides and floods* from a variety of causes, *including unstable glacial lakes and climate change.*
- India is heavily invested in dam development and growth of hydropower, largely in the Himalaya region — especially to cut carbon emissions.
  - **Data:** By one estimate, if the **national plan** to construct dams in 28 river valleys in the hills is realised in a few decades, the Indian Himalayas will have **one dam for every 32 km**, among the **world's highest densities**.
- There may be a miscalculation for reasons, including *potential earthquake impacts, monsoonal aberrations* that could repeat a Kedarnath-like **flood, severe biodiversity loss and extreme danger to communities downstream**.
- The **life of dams is often exaggerated**, and **siltation, which reduces it, is grossly**

underestimated:
  - o **Case study:** In the **Bhakra dam in Himachal Pradesh**, for instance, **siltation was higher by 140% than calculated**.

Way forward
- The need is to rigorously **study the impact of policy** on the Himalayas and **confine hydro projects** to **those with the least impact.**
- Relying more on **low impact run-of-the-river power projects** that need no destructive large dams and reservoirs.

Cutting trans fat
Introduction
- Come January 1, 2022, India will join a select group of countries **limiting industrial trans fat to 2% by mass of the total oils/fats present in the product**.
- India would thus be achieving the WHO target a year in advance (WHOs target is by 2023).

Trans fat content limit
- In mid-**2016,** the **trans fat content limit was halved from 10% to 5%,** and in **December 2020, the Food Safety and Standards Authority of India (FSSAI) capped it to 3% by 2021**. Now India has committed to limit trans fat to 2% by 2022.

Details about trans fat
- While **trans fat is naturally present in red meat and dairy products**.
- The focus is on **restricting the industrially produced trans fat used solely to prolong the shelf life of products at less cost**.
- While the government's notification specifically mentions **edible oils and fats** and **emulsions** such as margarines are the **major sources of industrial trans fat.**
- Also, even **when the fat/oil contains less than 2% trans fat**, **repeated use at high temperature can increase the trans fat content**.

Harmful impacts of transfat
- **Trans fat negatively alter the lipoprotein cholesterol profile** by **increasing** the **level of bad cholesterol (LDL)** while **decreasing the level of HDL or good cholesterol**.
- These changes in the lipoprotein cholesterol profile **increase the risk of cardiovascular**

diseases.

Trans fat limits globally
- In 2004, when **Denmark became the first country** to **limit industrially produced trans fat content in all foods to 2%** of fats and oils, it faced resistance from much of Europe, including the European Commission.
- However, many countries have since adopted similar restrictions themselves.
- In fact, in **April 2019, the European Union (EU)** adopted a new regulation — **from April 2021 — to limit the amount of industrially produced trans fat to 2% in all foods sold within the EU.**
- According to a **2020 report of WHO**, **32 countries already have some form of mandatory limits on trans fat.**

Case study of Denmark
- The benefits of reducing trans fat can become quickly apparent, as seen in Denmark; **three years after the cap** came into effect, it saw a **reduction of about 14 deaths attributable to cardiovascular diseases per 1,00,000 population.**
- It is now **well known that trans fat** can be **completely eliminated and replaced with healthier substitutes without any change in the food taste or cost.**

Way ahead
- According to WHO, a dozen large multinational food companies have already committed to eliminate industrially produced trans fat from all their products by 2023.
- With a year's notice, it should be possible for the multinational food companies to redouble their efforts to meet the FSSAI standard, while Indian companies that have earlier been able to cut the level of trans fat as in the FSSAI limit, should have no excuse not to meet the current capping.

Cryptocurrency
Context
- The government intends to bring in a law on cryptocurrencies to put an end to the existing ambiguity over the legality of these currencies in India.

- The government has, suggested that it does not consider them to be legal tender.

What is Bitcoin?

Bitcoin is a type of digital currency that enables instant payments to anyone.
Bitcoin was introduced in 2009.
Bitcoin is based on an open-source protocol and is not issued by any central authority.
Bitcoin is a peer-to-peer currency.
Bitcoin is the first decentralised digital currency.

Disadvantages
- Such currencies are:
  - highly volatile,
  - used for illicit Internet transactions, and
  - wholly outside the ambit of the state — into any sort of regulation.

RBIs direction
- In 2018, the RBI did send a circular to banks directing them not to provide services for those trading in cryptocurrencies.
- Regulatory bodies like RBI and Sebi etc also don't have a legal framework to directly regulate **cryptocurrencies as they are neither currencies nor assets or securities or commodities** issued by an identifiable user.

Supreme Court's judgement
- But this was eventually set aside by the Supreme Court, which found the **circular to be "disproportionate**," given that the central bank had consistently maintained that virtual currencies were not banned in India.
- Also, the RBI could not show that entities that it regulated were adversely impacted by exchanges dealing in virtual currencies.

So, what will the Bill seek to do?
- **Cryptocurrency exchanges**, which have sprung up, are reportedly lobbying with the government to make sure these currencies are regulated rather than banned outright.
- Smart regulation is preferable, as a ban on something that is based on a technology of distributed ledger cannot be implemented for all practical purposes.

Findings of India inter-ministerial committee
- Even in **China, where cryptocurrencies have been banned** and the Internet is controlled, trading in cryptocurrencies has been low but not non-existent, as an **India inter-ministerial committee** found out.
- Despite this and the fact that most countries it studied had opted for regulation, this committee still went ahead to recommend an outright ban.
- Of course, it encouragingly also batted for an **official digital currency** as well as for the promotion of the **underlying blockchain technology.**

Conclusion
- The government must resist the idea of a ban and push for smart regulation.

Order at the border (LAC issue between India and China)

Introduction
- **India and China** finally reaching an agreement on **disengagement at Pangong Lake,** which has been at the heart of the recent LAC tensions, is a promising start towards restoring peace in the border areas.
- Both sides will cease their forward deployments on the north and south banks of the lake in a phased, coordinated, and verified manner.
- China's Ministry of Defence announced an agreement **"to start synchronised and organised disengagement".**

Withdrawal of troops
- Both sides have agreed to a **temporary moratorium on patrolling** in the disputed areas north and south of the lake.
- All frontline personnel will subsequently be withdrawn over the next two to three weeks.
- North of the lake, **China's troops** will return to their **base at Sirijap, east of Finger 8**, while **India's troops** will similarly return to their permanent base at **Dhan Singh Thapa post**, at **Finger 3.**
- **India previously patrolled on foot up to Finger 8** — there **is no motorable road access from India's side to areas east of Finger 4** — while **China has dominated up to Finger 4**, having already built a road there and enjoying **superior logistics.**
- Starting last summer, Chinese troops had prevented India from reaching Finger 8, leading to the crisis.
- Now, the entire contested area, from **4 to 8, will become a buffer zone** and all temporary infrastructure built after April 2020 will be withdrawn.

- India will vacate the heights it occupied in an effective countermove in late August in the **Kailash range**, which gave India much needed leverage to negotiate as well as demonstrated its resolve to match China's actions.

Pending problems
- The only pending problems now are smaller, less concerning stand-offs involving fewer troops in **Patrolling Points 15 and 17A** in the **Gogra-Hot Springs area**, which will be taken up 48 hours after disengagement at Pangong Lake is completed over the next few weeks.
- In the **Depsang plains**, there is no stand-off situation or heavy deployment of troops, but a **long-running dispute over the LAC** and blocking of patrols that predates the current crisis and as yet remains unresolved.

Way ahead
- The events of last year have left enormous distrust, which remains a hurdle and China's actions on the ground have not always matched its commitments.
- The success of the new disengagement plan will finally depend on whether it is implemented on the ground in letter and in spirit.

World Unani Day
World Unani Day was celebrated on February 11, 2021 to spread awareness about health care delivery through Unani system of medicine through its **preventive** and **curative** philosophy.
- World Unani Day is celebrated every year to mark the birth anniversary of **Hakim Ajmal Khan**.

- He was an eminent Indian Unani physician who was a great scholar, a social reformer, a noted freedom fighter, a Unani medical educationist and founder of scientific research in Unani System of Medicine.

- He was one of the founders of the Jamia Millia Islamia in New Delhi

Principles of Unani System:
- The Unani system postulates the presence of four humours in the body: **dam** (blood), **balgham** (phlegm), **safra**

(yellow bile) and sauda (black bile), a parallel to **kapha, vata and pitta**, the three doshas in ayurveda.
- The quality and quantity of four humors affect the state of health and disease in the body.
- **Origin:** Unani system originated in **Greece**. The theoretical framework of Unani medicine is based on the work of **Hippocrates** (460-377 BC).
- **Role of Arabs:** The system owes its present form to the Arabs who not only saved much of the Greek literature by rendering it into Arabic but also enriched it with their own contributions.
- **Indian scenario:** In India, it was **introduced by Arabs** and Persians sometime around the eleventh century.
- **Revival by Hakim Ajmal Khan:** It saw the beginning of its revival during the freedom struggle due to the efforts of Hakim Ajmal Khan. He established **Ayurvedic and Unani Tibbia College and Hindustani Dawakhana** a pharmaceutical company for manufacturing of Ayurvedic and Unani medicine in Delhi in 1916.

Mission Organic Value Chain Development for North Eastern Region (MOVCDNER)
Prime Minister Modi initiated a scheme for development of **commercial organic farming** in the region during 2015 which later became to be known as "Mission Organic Value Chain Development for North Eastern Region" (MOVCDNER)
- Under MOVCDNER, the FPCs get access to **shared infrastructure** including collection centres, **custom hiring centres**, **processing infrastructure** and packhouses, allowing them to add value to their produce and market them well.
- The scheme provides **end to end support** to the farmers from farm to fork including quality **production**, effective **postharvest management**, value addition through processing and direct **market linkages** to national and international markets.
- The scheme besides growing and value adding the traditional crops is also aiming to bring in **high-value crops** under contract farming models.

Major Port Authorities Bill, 2020

- The Bill aims at **decentralizing decision making** and to infuse professionalism in governance of major ports.
- It will empower the Major Ports to **modernize** and expand **port infrastructure**, and facilitate trade and commerce.
- Tariff Authority for Major Ports (**TAMP**) can now **fix tariff**, which will act as a reference tariff for purposes of bidding for PPP projects.
- An **Adjudicatory Board** has been proposed to look into **disputes** between ports and PPP concessionaires, etc.
- A simplified composition of **Board of Port Authority** (BPA) with professional independent Members has been proposed.
- **BPA** has been delegated the power to **fix the scale of rates** for other port services and assets including land.
- **BPAs** have full powers to enter into **contracts, planning and development, fixing of tariff except in national interest, security and emergency arising out of inaction and default.**

Provisions of **CSR & development of infrastructure** by Port Authority have been introduced.

SAKSHAM (Shramik Shakti Manch)

- SAKSHAM (Shramik Shakti Manch) is an initiative of **Technology Information, Forecasting and Assessment Council** (TIFAC).
- It is a **dynamic job portal** for mapping the skills of Shramiks (Labourers).
- It will help in **identifying skill proficiency** level and development of **Skill Cards** for Shramiks.
- It will directly connect Shramiks with MSMEs **eliminating middlemen**/ labour contractor.
- It will facilitate placement of **10 lakh blue-collar jobs** (pan-India).

Seaweed Mission

Why was this mission launched?

- Out of the global seaweed production, **China** produces **57%**, Indonesia 28%. Whereas, **India** is having a mere share of **0.01-0.02%.**

Purpose:

- Under the mission, TIFAC will demonstrate a model for **commercial farming** of seaweeds, and it's processing for value addition. It will boost the national economy.

Benefits of Cultivating Seaweed:

-
  - It is estimated that if seaweed cultivation is done in 10 million hectares or 5% of the EEZ area of India, it can provide **employment** to 50 million people.
  - Additional benefits of Seaweed cultivation;
    - Improves national GDP;
    - improves ocean productivity;
    - Reduce algal blooms and sequester millions of tons of CO_2;
    - Create a healthier ocean and can also use to produce bioethanol.

About TIFAC:

It is an **autonomous** technology think tank under the Department of Science & Technology (DST), **Ministry of Science and Technology**. It was set up in **1988**.

- **Mandate:** TIFAC identifies the **technological priorities of the future** like **cyber-physical systems, quantum computing, green chemistry and water.**

National Atlas & Thematic Mapping Organisation

- National Atlas and Thematic Mapping Organization (NATMO) is a subordinate department under the **Department of Science & Technology**.
- With it's headquarter at **Kolkata**, it is a **sole national agency** with the responsibility to depict national framework data in the form of **thematic maps and atlases** to cater the various needs of different sectors.
- It has the largest repository of **spatial and non-spatial data** processed with greater accuracy for delivering good quality products.
- Main functions of this organization are :
1. Compilation of the National Atlas of India in **Hindi, English and other regional languages.**
2. Preparation of thematic maps based on **socio-economic, physical, cultural,**

environmental, demographic and other issues.

3. Preparation of maps/atlases for **visually impaired**.
4. Digital mapping and training using **remote sensing, GPS and GIS technology**.

Cartographic and **geographical researches** at national level.

Specialty Steel

- Specialty Steel (Alloy Steel) contain additional **alloyed materials** that deliver **special properties** under specific conditions.
- Government has approved inclusion of 'Specialty Steel' under the **Production Linked Incentive** (PLI) Scheme.
- This will promote the manufacturing of 'Specialty Steel' within the country to meet the **domestic demand** by attracting capital investment, generate employment etc.

Meri Saheli Initiative

- It was launched as a pilot project by the **Railway Protection Force** (RPF) across South Eastern Railway for **security of women passengers in trains** originating in that zone.
- This initiative has been rolled over to **all zonal railways** across Indian Railways' network from October, 2020.
- **Dedicated teams** of lady RPF personnel have been formed across all zonal railways for its implementation.
- Section 58 of the **Railways Act, 1989** provides for earmarking of accommodation for female passengers in trains.

History of Uttarakhand : From Borderland to Sacred Place

- **The Artefacts found in the Himalayan foothills** are datable to the period extending from 300 BCE and 600 CE include an **Ashokan rock edict** (at Kalsi), brick altars for conducting **ashvamedha yagnas**, coin hoards, and sculptures.
- These developments fostered the growth of **Haridwar and Kalsi as** cosmopolitan towns and as "gateways" into the Himalayas.
- The earliest shrines in this tradition were built

at **Palethi and Lakhamandal, just upstream from Haridwar and Kalsi,** by visiting sovereigns.

- The **Palethi and Lakhamandal** with royal patronage never became major tirthas. Instead, Jageshwar, situated well east of Lakhamandal and Palethi attained this stature.
- Between 7th and 10th centuries, **builders at Jageshwar** modified local geography to encourage comparisons between it and Devadarunavana, Shiva's legendary deodar forest.
- **The Char Dham Yatra** of a pilgrimage to Badrinath, Kedarnath, Gangotri, and Yamunotri.
- The **Badrinath and Kedarnath** have long been associated with gods and sages, like the Mahabharata, Badrinath are described as the site of **Narayana's discourse to Nara**.
- The **Kedarnath** is mentioned in the **Skanda Purana**.
- The both Badrinath and Kedarnath are associated with **Adi Shankara** who is said to have visited them in the **eighth century**. Possibly his followers played a role in constructing temples at **Pandukeshwar (Dravida and Nagara style)**.

NetWire

- NetWire, which first surfaced in 2012, is a well-known **malware**.
- It is a remote access **Trojan** which **gives control of the infected system to an attacker**.
- Such malware can log keystrokes and compromise passwords.

Viruses

- A computer virus is a type of malware that propagates by **inserting a copy** of itself into and becoming part of another program.
- It **spreads from one computer to another**, leaving infections as it travels.
- Viruses can range in severity from causing mildly annoying effects to damaging data or software and causing **denial-of-service** (DoS) conditions.
- Almost all viruses are attached to an **executable file**, which means the virus may exist on a system but will not be active or able to spread **until a user runs or opens the malicious host file** or program.

- When the host code (alternative word for a computer program) is executed, the viral code is executed as well.

Ransomware

- Ransomware is a type of malicious software that threatens to **publish the victim's data** or perpetually block access to it unless a ransom is paid.
- While some simple ransomware may lock the system in a way that is not difficult for a knowledgeable person to reverse, more advanced malware uses a technique called **cryptoviral extortion**.
- This encrypts the victim's files, making them inaccessible, and **demands a ransom** payment to decrypt them.

Worms

- Computer worms are **similar to viruses** in that they replicate functional copies of themselves and can cause the same type of damage.
- In contrast to viruses, which require the spreading of an infected host file, worms are **standalone software** and **do not require a host program** or human help to propagate.
- To spread, worms either exploit the vulnerability on the target system or use some kind of **social engineering** to trick users into executing them.
- A worm enters a computer through a **vulnerability in the system** and takes advantage of file-transport or information-transport features on the system, allowing it to travel unaided.
- More advanced worms leverage encryption, wipers, and ransomware technologies to harm their targets.

Trojans

- A Trojan is a harmful piece of software that **looks legitimate.**
- After it is activated, it can achieve any number of attacks on the host, from irritating the user (**popping up windows** or changing desktops) to damaging the host (**deleting files, stealing data, or activating and spreading other malware**, such as viruses).
- Trojans are also known to **create backdoors** to give malicious users access to the system.
- Unlike viruses and worms, Trojans **do not reproduce** by infecting other files nor do they self-replicate.
- Trojans must spread through user interaction such as opening an email attachment or downloading and running a file from the Internet.

Bots

- "Bot" is derived from the word "robot" and is an **automated process** that interacts with other network services.
- Bots often automate tasks and provide information or services that would otherwise be conducted by a human being.
- A typical use of bots is to **gather information**, such as web crawlers, or interact automatically with **Instant Messaging** (IM), Internet Relay Chat (IRC), or other web interfaces.
- They may also be used to **interact dynamically** with websites.

HEALTH CARE DATA

Annual health care expenditure

- 2000-2015 Annual health care expenditure of the country is 4% of GDP Of which, 0.9 – 1.07% is Govt Expenditure and 3.0-3.6% is Out of Pocket Expenditure

Lancent Report 2018

- 2.4M Indians die of treatable conditions every year

Hospital bed coverage ratio,Doctor Population ratio

- WHO recommended hospital bed coverage ratio 1:1000(Beds:Population) , Medical council of India(MCI) target 1:1600 while at present Beds Available are 1:2000
- Present Doctor Population ratio - 1:1613, MCI target - 1:1400.
- Nurse Population Ratio - 1:588, MCI target - 1:500

Preventive Care

- Preventive Care accounts for 6.7 % total expenditure on health according to Niti aayog report, 2018

ICMR on morbidity:

- Kerala,Goa - lowest morbidity while Assam, UP, Chattisgarh- highest morbidity

Constraints of primary health care centre(PHC) -

- Only 15% of morbidities are represented in PHCs for which people can seek care.

Gaps in Health Service Provision

- Urban areas have three times the doctor and four times the nurses compared to rural areas- MCI

Shortage of medical faculty-

- 6 AIIMS saw only 31% filling of faculty posts in 2018.

Out of pocket expenditure

- Out of pocket expenditure is 62% of total expenditure on health
- 71% of out of pocket expenditure is on medicines
- Paradox - India is largest supplier of generic drugs to the world

Economic Data

Digital Exclusion

- Digitally excluded Indian stand at greater than 50% among which 40% are phones with no internet connectivity like feature phones and around 10% are non mobile users.

Manual Scavenging

- Nearly 57% of manual scavengers as of Jan 2020 were from UP, followed by MH UK.
- High sewer deaths, were reported from UP, TN, DL followed by MH, GJ, HR.
- Significant number of Families of victims of sewer deaths didn't receive monetary compensation as per Supreme Court directive.eg. In 30 out of 32 deaths in Maharashtra, no compensation was received.
- Data by National commission for safai karamchari and MOSJ.

Freedom of Press

- India score 71 on Citizens political rights and civil liberties indicator, which is relatively higher than the Press Freedom Index score which is 45.33. Freedom of journalists seem to be more curtailed than the freedom of citizens- Study by Committee to Protect Journalists (CPJ) and Reporters without Borders

Dams

- If the national plan to construct dams in 28 river valleys in the hills is realised, in a few decades, the Indian Himalayas will have one dam for every 32 km, among the world's highest densities.

Road accidents

- India has, according to World Bank-commissioned report, Traffic Crash Injuries and Disabilities, 1% of the world's vehicles but 11% of all road accident deaths. Those who suffer the most are from low income households, especially in rural areas, and women bear the long-term financial and psychological impact of the losses more.

Diversion of forest area

- Among States whose forest area diverted for development and defense projects between 1991 and 2021, AR was highest(1.54 lakh ha) followed by MP>TL>UK.
- Maximum% of AR,MP,TL Lands were diverted for mining
- While max% of UK,UP lands were diverted for defense – MOEF.

Conviction rate in UAPA Cases

- Only 2.2 % of cases registered under the Unlawful Activities (Prevention) Act between the years 2016 and 2019 ended in convictions by court. Crime in India report, NCRB

Toolkit conspiracy case

Introduction

- The police in India is using arrests and filing questionable cases as a **tool of harassment.**
- The Delhi Police have outdone all of them by arresting a 22-year-old **climate activist (Disha Ravi)** in a case that makes the incredible allegation that a **social media toolkit** for organisers of protests against the farm laws amounted to sedition and incitement to riots.

Tool of harassment

- The manner in which a Delhi Police team travelled to Bengaluru and took Disha Ravi into custody, apparently without following the **guidelines laid down by the Delhi High Court** on **inter-State arrests**.
- Even though Ms. Ravi was produced before a duty magistrate in Delhi within the mandatory 24-hour period, there is no indication whether the Delhi Police informed the local police and if she was properly represented by counsel.
- It appears that the **main charge** against her is that **she edited a Google document** shared among activists, including global climate change icon Greta Thunberg.
- The toolkit, the prosecution alleges, was

prepared by a pro-Khalistani outfit, and based on this, it was concluded that Ms. Ravi was working with separatists to create disaffection against India.

What is a toolkit?

- Toolkits are common for those **organising protests online**, and they contain not much more than **calls for protests**, **texts to be tweeted**, **hashtags to be used,** and **names of authorities and public functionaries whose handles can be tagged**.

Conclusion

- Government of India is more likely to attract **international embarrassment** and opprobrium by the **indiscriminate use of police power against activists, protesters and the media**.
- The state is increasingly resorting to **heavy-handed responses** to issues that attract a **convergence of activism, opposition political activity** and adverse media scrutiny.

Way ahead

- A government truly worried about its global image would instead seek to address the deficit in tolerance and surfeit in repression that are becoming more obvious with each passing day.

Accidents at the fireworks unit in Virudhunagar

Context

- The latest accident at a fireworks unit in Virudhunagar, at last count, 20 lives have perished, while 28 workers are in hospital.

Major fireworks Industries in Tamil Nadu are at:

- Virudhunagar, Cuddalore ,Sivakasi and Madurai

Reasons of accidents at fireworks Industries

- **Gross violation** of norms governing the hazardous industry .
- **Human error** in handling explosive substances.
- **Unlicensed units** that have mushroomed in and outside Sivakasi mostly escape scrutiny till explosions occur.
- A greater concern is the **illegal sub-leasing of contracts** for manufacturing crackers by

licensed units.
- **Sub-leasing of works** to several persons.
  - o The very nature of work in a hazardous industry makes sub-leasing a byword for safety compromise.
  - o It leads to conversion of every shed in a manufacturing unit into a 'factory' in itself with inflammable chemicals stored all over.
  - o Consequently, the limit on workers to be deployed is violated resulting in crowding in each shed.
- **Untrained workers** and the **piece-rate system**, which induces people to race to produce more units per day, have also caused accidents.
- **Shortage of labour** has prompted the industry to hire new recruits with limited skills.

Steps taken by the government

- On the ground there is only **short-term action**:
  - o registration of cases, arrests, identification of causes, token inspections, issuance of warnings and safety advisories.
- While the **Petroleum and Explosives Safety Organisation (PESO)** offers **training for workers.**
- A decade ago Parliament was informed that **automation of the hazardous manufacturing process** would be undertaken.

Way forward

- Periodic inspections at factories, sustained crackdown and stringent penal action against violators are non-negotiable.
- For this, Central and State governments must provide the needed **manpower for enforcement agencies** as the industry has grown manifold.
- A sustained political push for **labour reforms** and **technological innovations within the industry** is also essential.

Tax on PF withdrawals

Introduction

- The income tax law proposed in the **Finance Bill, 2021**, has triggered anxieties for the salaried class: **withdrawing tax exemption** on **interest income** accrued into **Provident Fund** accounts arising out of employee contributions **exceeding ?2.5**

lakh 'in a previous year in that fund,' **on or after April 1, 2021**.

Issue
- The rationale — some employees are contributing huge amounts into their PF accounts and getting tax-free incomes.

Views of the Revenue Department
- The Revenue Department has pointed out the tax will only affect a small group of 'high net-worth individuals' (HNIs); the 100 largest employees' PF (EPF) accounts had a combined balance of over ?2,000 crore.
- It can be no one's case that a social security scheme for formal sector workers should become an investment haven for the well-heeled corporate top brass.

Is there a flaw in the definition of HNI?
- The threshold proposed to exclude the so-called HNIs appears low, as it would end up partially taxing PF income for even those putting away **?21,000 a month** towards their retirement — hardly a typical HNI given it may take the saver decades to attain a one crore rupee PF balance.
- The threshold also does not tie in with the ?7.5 lakh limit set in last year's Budget for employers' contributions into the EPF, National Pension System (NPS) or other superannuation funds (rules for which are yet to be notified).
- This is not the first time this government had tried to tax PF savings, citing its abuse by the rich.
- In the 2016-17 Budget, it proposed to tax 60% of EPF balances at the time of withdrawal, but backtracked after a backlash.
- Now, it has covered even government employees' contributions into the GPF, but left NPS investments over ?2.5 lakh a year untouched.
- Tax treatment inequity between India's limited retirement savings instruments aside, employees and employers have some serious doubts on the implementation.

Retro-active tax
- The words 'in a previous year', for one, suggest this will be a type of **retro-active tax — taxing future income even on past years' contributions of over ?2.5 lakh**.

Way ahead
- Finally, this may not be smart timing for a government looking to lean on huge borrowings to dent large inflows into EPF — most of its corpus is captively deployed in government bonds.

- While the goal of targeting HNIs using the PF savings to avoid taxation is laudable, the Centre should consider recalibrating the arithmetic and operational details of this tax.

Data on Health
Health and wellness Centers
- Only 55% OF HEALTH AND WELLNESS centers are operational as of 2020.

Public Health Spending
- Andhra Pradesh has among the highest public health insurance coverage scores (71.36%), but still has out-of-pocket spending share much above the national average (72.2% of total health expenditure). In contrast, Himachal Pradesh (H.P.) with a much lower public health insurance coverage (3.87%) has a lower out-of-pocket (46.4%). Among other factors, this could be attributable to the much higher per capita public health spending in H.P., more than twice than that of Andhra Pradesh.
- National Health Accounts 2017 - 66% of spending on health care in India is done by States.

Transfat
- Transfat-Unsaturated fats, naturally found in Meat & dairy pdts. Used to prolong shelf life of food pdts. Created during hydrogenation, and also in frozen and deep fried foods. WHO limits transfat in food to 2%, to be achieved by 2023. FSSAI limits Transfat to 2% in industrially produced foods. Is has to be achieved by 2022.

Unsafe abortions
- Unsafe abortions the third are largest cause of maternal deaths in India. Make up 13% of all maternal deaths-WHO

Provident Funds to be Taxed at withdrawal- Budget 2020-21
Introduction
- The income tax law proposed in **the Finance Bill, 2021**, has triggered anxieties for the salaried class: **withdrawing tax exemption on interest income** accrued into **Provident Fund accounts** arising out of employee **contributions exceeding ?2.5 lakh 'in a previous year in that fund,' on or after April 1, 2021**.

Reason
- Some employees are contributing huge amounts into their PF accounts and getting tax-

free incomes.

- Subsequently, **the Revenue Department** has pointed out the tax will **only affect** a small group of **'high net-worth individuals' (HNIs);** the *100 largest employees' PF (EPF) accounts had a combined balance of over ?2,000 crore*.
  - o A social security scheme for formal sector workers should become an investment haven for the well-heeled corporate top brass.

Issue

- **Low threshold:** However, the **threshold** proposed to exclude the so-called HNIs **appears low,** as it would end up partially taxing PF income for even those putting away **?21,000 a month** towards their retirement — hardly a typical HNI given it may take the saver decades to attain a one crore rupee PF balance.
  - o The threshold also does not tie in with the ?7.5 lakh limit set in last year's Budget for employers' contributions into the EPF, National Pension System (NPS) or other superannuation funds (rules for which are yet to be notified).
  - o In the 2016-17 Budget, it proposed to tax 60% of EPF balances at the time of withdrawal, but backtracked after a backlash.
- **Only NPS investments:** It has covered even government employees' contributions into the GPF, but left NPS investments over ?2.5 lakh a year untouched.
- **Unequal tax treatment:** Tax treatment inequity between India's limited retirement savings instruments.
- **Retro-active taxation:** The words 'in a previous year', for one, suggest this will be a type of retro-active tax — taxing future income even on past years' contributions of over ?2.5 lakh.

Conclusion

- This may not be smart timing for a government looking to lean on huge borrowings to dent large inflows into EPF — most of its corpus is captively deployed in government bonds.
- While the goal of targeting HNIs using the PF savings to avoid taxation is laudable, the Centre should consider recalibrating the arithmetic and operational details of this tax.

Inflation- Its impact on the macro economic stability

Introduction

- Consumer Price Index (CPI) rose by 4.06% in January, marking a deceleration for a second straight month to a 16-month low.

Reasons in decline of retail inflation

- **Bumper kharif crop:** The **Consumer Food Price Index** reflected a gain of a mere 1.89% last month as **vegetable prices saw a disinflation of 15.8%** and cereal prices eased considerably for a second month in the wake of **kharif crop arrivals.**
- **Good rabi harvest:** Rising prospects of a good rabi harvest
- **Vegetable production:** Larger winter arrivals of key vegetables
- **Avian flu fears:** Softer egg and poultry demand on **avian flu fears**.

Associated risks with low inflation

- While inflation in pulses and products was at 13.4%, that for oils and fats stood at 19.7%. Eggs and meat and fish — two other key sources of protein — both posted double-digit rates of 12.9% and 12.5%, respectively, with price gains in the former barely registering any telling impact from the avian flu outbreak.
- From automobile manufacturers to builders, rising raw material costs are beginning to force them **to pass on the impact to the end consumers.**
- The latest **IHS Markit India Manufacturing Purchasing Managers' Index (PMI)** points to the **sharpest increase in purchasing costs** for more than two years as **'a lingering supply-side squeeze'** fanned inflationary pressures and manufacturers raised their product prices at the fastest pace in over a year.
- Add to the mix the unrelenting and dizzying **climb in transportation fuel prices** to newer and newer record highs in recent days and the outlook for inflation becomes distinctly darker.
  - o Diesel, the main fuel for freight carriage, has now exceeded ?80 per litre and is bound to feed into prices of almost everything being transported across distances — from fresh produce to intermediate and finished industrial goods.

Conclusion

- With banks still flush with liquidity, policymakers need to maintain a strict vigil to keep inflation from resurging and posing a threat to macro-economic stability.

Perseverance - NASA's mission to Mars

The shadow of NASA's Perseverance rover is seen on the surface of Mars as it lands on the planet. With this, NASA is set to become the first space agency to fly a drone in the atmosphere of another planet.

Perseverance- NASA's mission to Mars

- NASA has been sending rovers on Mars since 1997 when the Mars Pathfinder Mission was initiated.
- As the mission turned out to be successful, NASA decided to continue going to Mars to find evidence.
- Second time, the space organization sent twin rovers, Spirit and Opportunity to Mars in 2003.
- The third attempt was by sending Curiosity in 2012.
- National Aeronautics and Space Administration (NASA) has launched its **Mars 2020 Perseverance** rover aboard a United Launch Alliance Atlas V.
- The launch took place from Cape Canaveral Air Force Station in Florida.
- This is the third launch to Mars this month, following the **UAE's Hope and China's Tianwen-1 spacecraft.**
- Landing site: **Jezero crater**.
- Perseverance is loaded with seven instruments chosen to help it achieve its mission objectives.

Why is this mission significant?

- Perseverance will carry a unique instrument, **MOXIE or Mars Oxygen ISRU Experiment**: which for the first time will manufacture molecular oxygen on Mars using carbon dioxide from the carbon-dioxide-rich atmosphere (ISRU means In Situ Resource Utilization: or the use of local resources to meet human needs or requirements of the spacecraft).
- It will carry **Ingenuity**, the first ever helicopter to fly on Mars.
- This is the first time NASA will fly a helicopter on another planet or satellite.
- It is the planned first step to bring back rock samples from Mars for analysis in sophisticated laboratories on Earth: with the goal of looking for biosignatures: or signatures of present or past life.

These are some of the **key mission objectives**:
- Look for signs of ancient microbial life.
- Collect Martian rock and dust samples for later return to Earth.
- Deliver an experimental helicopter.
- Study the climate and geology of Mars.
- Demonstrate technology for future Mars missions.

Other NASA Missions
NASA's Artemis Lunar Programme
- It will return astronauts to the Moon for the first time in half a century including the first woman astronaut to moon.
- Through Artemis, NASA aims to establish:
- Sustainable human presence on the Moon by 2028 to uncover new scientific discoveries.
- Demonstrate new technological advancements.
- Lay the foundation for private companies to build a lunar economy.

NASA's Parker Solar Probe
- To explore Sun's outer atmospere - Corona.
- To study Heliophysics = how Sun affects space and Environment of planets.
- Before PSP Helios 2 was the closest. It will use Venus' gravity.
- Uses: Help under what causes Solar wind/ flares. Increase our ability to predict space weather.

Helium Hydride ion (HeH+)
- Scientists have detected Helium hydride ion (HeH+), the first molecule to be formed in our

universe, for the first time ever.

- It was detected by NASA's Stratospheric Observatory for Infrared Astronomy (SOFIA).
- It was detected in a planetary nebula, NGC 7027.
- Stratospheric Observatory for Infrared Astronomy (SOFIA) is a Boeing 747SP aircraft modified to carry a 106-inch diameter telescope. It is a joint project of NASA and the German Aerospace Centre.
- Almost 14 billion years ago, after Big Bang when universe cooled down, ionised hydrogen and neutral helium atoms reacted to form HeH+. HeH+ reacted with neutral hydrogen and created molecular hydrogen, marking the beginning of star formation and modern universe. Scientists held that the chemistry of the universe began with HeH+.

NASA has selected a new mission Atmospheric Waves Experiment (AWE) to be launched in 2022

- It is attached to the exterior of the Earth-orbiting International Space Station.
- It will investigate how waves in the lower atmosphere, caused by variations in the densities of different packets of air, impact the upper atmosphere.
- The experiment will focus on colourful bands of light in Earth's atmosphere, called airglow, to determine what combination of forces drive space weather in the upper atmosphere.
- Earlier it was thought that only Sun's constant outflow of ultraviolet (UV) light and particles, solar wind, could affect airglow region. However, now researchers have learned that Earth's weather also have effect on it.

NASA's LCROSS

- LCROSS stands for Lunar CRator Observation and Sensing Satellite mission which was carried 10 years ago.
- It aimed to determine if water ice exists in Moon's South Pole. It found evidence of lunar soil in shadowy craters and it revealed moon has a water cycle and is chemically active.
- It crashed on the Moon's South Pole. Moon is important for minerals like Helium 6 and Water.

The new Public Sector Enterprises Policy

- The new public sector enterprises policy envisages that the **strategic sectors have limited number of players restricting it to maximum four public sector enterprises** of a holding nature.
- The remaining enterprises would be rationalised in terms of mergers, amalgamations and privatisation if feasible.
- As part of the 'Aatmanirbhar Bharat Abhiyan', Finance Minister Nirmala Sitharaman had announced that there would be a maximum of four public sector companies in strategic sectors, and state-owned firms in other segments would eventually be privatised.

Under the New Policy:

- **Strategic**: Atomic energy, space, defence, trans and telecom, power, petro, coal, other minerals, banking, insurance and financial services will be classified as strategic sectors.
- **Privatization**: The remaining companies in strategic sectors will be considered for privatization/merger/closure and non-strategic sectors will be considered for privatization, where feasible or for closure.
- In strategic sectors, the minimum presence of existing companies at the holding level will be retained under government control.
- The strategic sectors have limited number of players restricting it to **maximum four public sector enterprises** of the holding nature.

Issues Related to Privatisation of PSEs

- **No Buyers for Loss-making PSEs**: No one would buy PSEs with their huge debt and employee liabilities. If shares of public sector enterprises are offered for sale to the private sector, the latter will naturally be interested only in the shares of profit-making concerns. Therefore, the government may even have to pay the buyer, as it happened in the case of the Delhi Discom privatisation.
- **Privatisation not the first option**: In India, privatisation is not a default option; rather, it is resorted to only out of extreme necessity. This may explain the hesitation to privatise some of the largest loss-making PSEs like Air India, BSNL and MTNL.
- **Excessive Bureaucratisation**: Public sector industries in India are plagued with inefficiencies due to excessive bureaucratisation. Their chairman-cum-managing directors are bureaucrats who may not have domain knowledge or technical service people bereft of business acumen. Also, monopoly/oligopoly of certain PSEs leads to the administrative price mechanism. For example, oil PSEs have been allowed to

make a profit as they can dictate oil pricing, this allows them to have profits but there have been no innovations in the oil marketing sector.

- The valuation of the PSEs critically depends on the market structure post-privatisation.
- Since the government had to give fiscal support to loss making public firms, the fiscal deficit of the government kept on mounting year after year. One specific step that has been taken to reduce the deficit is privatisation, through an act of disinvestment.
- However, the entire way in which disinvestment has been undertaken gives the impression that it is an exercise to bridge the budgetary deficit rather than revamping of PSEs.

Way Forward

- Value subtracting enterprises, where restructuring or even ensuring an additional infusion of funds and other resources in PSEs have not produced results, should be disinvested or can follow the exit route through the new Insolvency and Bankruptcy Code.
- For example, some of the major loss-making PSUs like BSNL, MTNL and Air India should follow this route as their losses are greater than their revenue.
- Privatisation of profit-making PSEs will still bring in benefits of the efficient operation of the private sector through reduced costs.
- For example, Air India is marred with issues like poor punctuality, high staff-to-plane ratio, high operating costs and overall customer indifference. These issues can be rectified by the privatisation of PSEs.
- For PSEs of Strategic importance, the government should go for the de-bureaucratisation of the public sector, instead of privatisation.
- The government should disinvest its share of luxury hotels and restaurants, bakery, etc. By disinvesting shares of these luxury goods-producing public sector industries, it can raise a lot of financial resources.
- Privatisation must be accompanied by competition in the post-privatised scenario.

In order to improve the performance of inefficient units, the creation of a competitive market environment is absolutely essential.

Low-Emissions Technologies

- Widespread global deployment of technologies like hydrogen, carbon capture use and storage, soil carbon, energy storage to backup renewables and decarbonise transport, and low or zero emissions steel and aluminium will reduce emissions or eliminate them in sectors responsible for 90% of the world's emissions
- Dr. Alan Finkel, Australia's Special Adviser for Low-Emissions Technologies, spoke at the World Economic Forum in Davos on the enormous potential of these technologies to support the global transition to net zero emissions.

DATA ON COVID19 IMPACT ON HEALTH SERVICES.

DATA ON COVID19 IMPACT ON HEALTH SERVICES.

- The novel coronavirus pandemic, **health-care providers have been reassigned from other specialties to COVID-19**, restricting high quality care for other conditions.
- Lockdowns and fear of transmission have dampened demand for non-emergency care.
- A survey conducted by the World Health Organization (WHO) in 105 countries in July 2020 showed that **essential services were disrupted** in the majority of countries, with **immunisation, antenatal and childcare services among the most widely affected**.
- About **45% of low-income countries** incurred at least **partial disruption of over 75% of services,** relative to only **4% of high-income** countries.
- Almost **60% of services** were at least partially disrupted in **South East Asian** countries.
- In India, **detection of tuberculosis cases was down by 50% i**n April December of 2020, and **antenatal care visits were down by 56%** in the first half of 2020 relative to the same period in 2019.
- Cancer care has been badly affected in many countries, as well as diagnosis and treatment of other non-communicable diseases.

Data on petrol cess and other cesses.

- Cesses are **collected for a specific purpose**, and they **need not be shared** with the States, as they are **excluded from purview of divisible pool of taxes.**
- **Heavy taxation** on crude oil acombined with a significant **uptick in international crude prices** are responsible for 2021 price rise.
- In the FY22 Budget, an Agriculture Infrastructure and Development (AID) Cess was announced on select items, including petrol and diesel.
- It is important to note that **Not a single rupee of the cess collected on crude oil in the past 10 years was used for the intended purpose**, like transferring to an Oil Industry Development Body, it was meant to finance.
- **Road and infrastructure cess** forms the **biggest share of excise duty.**

National Urban Digital Mission

- National Urban Digital Mission (NUDM) was launched by **Ministry of Housing and Urban Affairs** (MoHUA) and **Ministry of Electronics and Information Technology** (MeitY).
- NUDM will create a **shared digital infrastructure for urban India** by working across the three pillars of **people, process, and platform** to provide holistic support to cities and towns.
- It will institutionalise a **citizen-centric, principles-based and ecosystem-driven** approach to **urban governance** and service delivery in 2022 cities by 2022, and across **all cities** and towns in India by **2024**.
- NUDM has articulated a set of governing principles, and inherits the technology design principles of the **National Urban Innovation Stack** (NUIS), whose strategy and approach was released by MoHUA in 2019.
- The principles give rise to **standards, specifications, and certifications**, across the three pillars of people, process, and platforms.

India Urban Data Exchange

- India Urban Data Exchange (IUDX) is an **open-source software** platform developed by the **Smart Cities Mission** and the **Indian Institute of Science** (IISc), Bengaluru.

- It facilitates **secure exchange** of Smart City data amongst data platforms, 3rd party authenticated and authorised applications, and other sources.
- This Smart City data could be **monetised** in the future, similar to the UPI for bank accounts and digital payments.
- It serves as an **interface** for data providers and data users to **share, request, and access datasets** related to cities, urban governance, and urban service delivery.
- As the number of cities on IUDX expands, this will scale up to uniform sharing between **data producers and data consumers** across urban India.

SmartCode Platform

- It enables all ecosystem stakeholders to contribute to a **repository of open-source code** for various solutions and applications for urban governance.
- It addresses the challenges that **Urban Local Bodies** (ULBs) face in the development and deployment of digital applications to address urban challenges.
- The source code available on the platform will be **free to use without any licensing or subscription fees**, thus limiting costs to those involved with customising the code and developing a locally-relevant solution.

Central Employment Guarantee Council

- The Council was constituted under Section 10 of the Mahatma Gandhi National Rural Employment Guarantee Act (**MGNREGA**), 2005.
- The Central Government has constituted this Council to discharge the functions and perform duties assigned to it by or under the provisions of the **National Rural Employment Guarantee Act, 2005**.
- **Chairperson** - **Minister of Rural Development, Agriculture and Farmers' Welfare.**
- It advises the Central Government on all matters concerning the **implementation** of this Act.
- It **reviews** the monitoring and **redressal mechanism** and recommends improvements required.

- It prepares **annual reports** to be laid before **Parliament** by the Central Government on the implementation of this Act.

Bio-Restoration

- A new technology for ecological restoration (Bio-restoration) was developed by Indian scientists.
- It is helping in **revival of mangroves** degraded due to rising sea levels, climate change and human intrusion in the **Sunderbans**, West Bengal.
- The Sundarbans is a protected wetland under the **Ramsar Convention** and is also a UNESCO **World Heritage site**.
- Ecological restoration means **reviving native ecosystem** in degraded areas while maintaining diversity of original flora and fauna through regeneration but bringing down the regeneration period to 4 to 5 years.
- Restoration process begins with stabilising entire site by planting native **salt tolerant grasses**. It involves the use of growth-promoting **bacteria**.
- The restoration project was initiated with help from the **Department of Biotechnology in 2013**.

Agriculture Infrastructure Development Cess

- The Budget 2021-22 has proposed a new levy, Agriculture Infrastructure Development Cess (AIDC) on 29 items.
- The purpose of the new AIDC is to **raise funds** to finance spending on developing **agriculture infrastructure**.
- The new cess will be levied on 29 products, such as **gold, silver**, as well as **imported alcohol** (excluding beer), **imported apple, pulses, palm oil, urea, and petrol/diesel** including branded ones.
- The new cess will only **offset the reduction in Basic Custom Duty** (BCD), **Basic Excise Duty** (BED) and **Special Additional Excise Duty** (SAED) on unbranded and branded petrol-diesel.
- Thus it will **not raise the tax** incidence for consumers.

Cess

- Cess is a **special-purpose** tax levied over and above basic tax rates.
- Drawing power from **Articles 270 and 271** of the Constitution, the **Centre collects cess** and deposits it in the **Consolidated Fund of India**.
- The money collected is then transferred to a segregated fund to be used for specific purpose.
- But, this cess and surcharge money is **not part of the divisible pool**, from which devolution of Central taxes takes place to the States.

Guidelines for online conferences-was a Bottleneck

Guidelines for online conferences-was a Bottleneck Introduction

- The Centre has withdrawn the Education Ministry's ill-thought-out guidelines for holding online conferences, seminars and training sessions.

Ill thought out plan

- **Barriers:** It created a **bottleneck for scientists** in public universities, colleges and organisations and **erected new bureaucratic barriers** in a pandemic-hit phase when virtual conferences are the only viable channel for researchers to collaborate with global peers.
- **No topic on Internal matters:** Academicians and others organising the events were, as per the January circular, required to **get prior official approval** and ensure that the **conference topics do not relate to security of the state, border, the northeast, Jammu and Kashmir, Ladakh, and broadly, any "internal matters".**
- **Mandatory use of specific technological tools:** Event organisers were also mandated to give preference to technological tools and channels not owned or controlled by hostile countries or agencies.

Negative Impacts due to vague restriction on online conferences:

- The effect of such a vague and abstruse set of instructions could only be to abandon efforts to organise conferences.
- Detrimental effect on development of science.
- Virtual conferences acted as a substitute for face-to-face interactions, trust-building and team formation during the pandemic times. Hence vague restrictions on the online conferences can act as a barrier for knowledge

dissemination and scientific research.

Benefits of online collaborations

- **Higher attendance:** Attendance at online events grew by 80% in 2020 over 2019 for the Plant Biology Worldwide Summit and over 300% for the American Physical Society meeting, as also for international meetings on cancer, lasers and electro-optics.
- **Stronger alliances:** Many scientists also think a combination of post-COVID-19 physical conferences and new possibilities enabled by virtual collaborations promise to forge even **stronger alliances.**
- **Greater participation:** An entirely new avenue has also opened up for national conferences with global experts taking part that researchers and students in the smallest towns can attend.

Conclusion

- The humanities, too, need to be **freed from paranoid restrictions** on research topics, curbs on scholars, and the growing pressure to sanctify cultural notions of science and history.
- Good sense has prevailed on the issue of online conferences, and it should lead to a more liberal approach to all research.

PT POINTERS

Aatmanirbharta named Oxford Hindi Word of the Year 2020

Aatmanirbharta has been named by Oxford Languages as its Hindi word of the year 2020. The Oxford Hindi word of the year is a word or expression that is chosen to reflect the ethos, mood, or preoccupations of the passing year, which have lasting potential as a term of cultural significance. Aatmanirbharta', which means **self-reliance,** came into the limelight when Indian Prime Minister Narendra Modi pledged to make India an Atmanirbhar Bharat or a self-reliant India last year. Out of the total number of entries received, 'aatmanirbharta' reportedly stood out because it validated the day-to-day achievements of the countless Indians who dealt with and survived the perils of a pandemic.

The Oxford Hindi World of the Year in 2019 was Samvidhaan, in 2018 it was Nari Shakti and in 2017 it was Aadhaar.

SpaceX to launch first all-civilian astronaut mission in late 2021

SpaceX recently announced on that it will be launching four private individuals on a Crew Dragon Capsule into orbit around Earth. The mission is dubbed '**the world's first all-civilian mission**'. The mission known as **Inspiration4** aims at raising the support for Children's Research Hospital. On the conclusion of Inspiration4 mission, Dragon, the spacecraft will be re-entering the Earth's atmosphere for soft water landing off the coast of **Florida**.
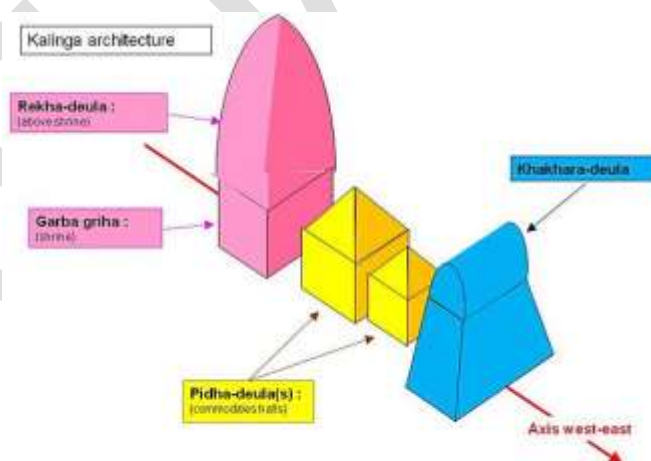
Lingaraj Temple destroyed?

About Lingaraj Temple

Lingaraja Temple is a Hindu temple dedicated to **Shiva** and is one of the oldest temples in Bhubaneswar, Odisha.

- The Lingaraja temple is the **largest temple in Bhubaneswar**.
- The central tower of the temple is 180 ft (55 m) tall. The temple represents the quintessence of the **Kalinga architecture** and culminating the medieval stages of the architectural tradition at Bhubaneswar.
- The temple is believed to be built by the kings from the **Somavamsi dynasty**, with later additions from the Ganga rulers.
- The temple is built in the **Deula style** that has four components namely, vimana (structure containing the sanctum), jagamohana (assembly hall), natamandira (festival hall) and bhoga-mandapa (hall of offerings), each increasing in the height to its predecessor.

- The temple complex has 50 other shrines and is enclosed by a large compound wall.
- The central deity of the temple, **Lingaraja, is worshipped both as Shiva and Vishnu**. The harmony between the two sects of Hinduism, Shaivism, and Vaishnavism, is seen in this temple where the deity is worshipped as Harihara, a combined form of Vishnu and Shiva.

Destruction of Lingaraj temple

- The controversy over the destruction of ancient monuments around the 11th century Lingaraj Temple in Odisha's capital Bhubaneswar amid a State-sponsored redevelopment drive, spiralled with the Indian National Trust for Art and Cultural Heritage (INTACH) stating that irreparable damage had

been done to the temple and ancient shrines around it.

- The Odisha government's **Ekamra Kshetra beautification project** is aimed at creating space adjoining the Lingaraj Temple to accommodate around two lakh devotees expected to visit the temple for the festival of Shivaratri in March.
- The space in front of the ancient temple can now barely accommodate 10,000 to 15,000 devotees.
- "We find that no standard guidelines have been followed by the project implementation authorities and excavating teams. Irreparable damage has been done to adjoining ancient shrines," INTACH's preliminary investigation says.

NH-66 to be redeveloped as an economic corridor

The center has proposed to develop NH-66 as an economic corridor in the recent budget announcement.

NH 66
- Runs roughly north–south along the western coast of India
- Connects Panvel (a city south of Mumbai) to Cape Comorin (Kanyakumari),
- Passing through the states of Maharashtra, Goa, Karnataka, Kerala and Tamil Nadu.
- Major cities include Panjim, Mangaluru, Kochi

Ekamra Kshetra Beautification Project

The Orissa government's Ekamra Kshetra beautification project is aimed at creating space around Lingaraj Temple in Bhubaneshwar for the eve of Shivratri in March, 2021.

It is a government led project which has recently been mired in controversy due to destruction of ancient monuments nearby.

Indian National Trust for Art and Cultural Heritage:
- It is a **non-profit charitable organisation** registered under **the Societies' Registration Act, 1860.**
- It was founded in **1984 in New Delhi** with the vision to spearhead heritage awareness and conservation in India.

- It has pioneered the conservation and preservation of not just our natural and built heritage but intangible heritage as well.
- In **2007,** the **UN** awarded INTACH a special consultative status with the **United Nations Economic and Social Council.**
- **(INTACH)** has almost stopped the stone-pelting ritual at **Bojjannakonda,** a famous Buddhist site at **Sankaram, near Visakhapatnam, Andhra Pradesh.**
  - **Bojjannakonda** and **Lingalametta** are the **twin Buddhist monasteries** dating back to the 3rd century BC.

Lingaraj Temple
- Lingaraj Temple, built in **11th century AD,** is dedicated to **Lord Shiva** and is considered as the largest temple of the city **Bhubaneswar.**
- It is **believed** to have been **built by the Somvanshi King Yayati I.**
- The main tower of this temple measures **180-feet in height.**
- It is built in **red stone** and is a classic example of Kalinga style architecture.

Interest Rate-Growth Differential

"If the interest rate paid by the government is less than the growth rate, then the intertemporal budget constraint facing the government no longer binds."- economist Olivier Blanchard.
- The **"intertemporal budget constraint"** means that any debt outstanding today must be offset by future primary surpluses.
- If the **Interest Rate-Growth Differential** (IRGD), the difference between the interest rate and growth rate, becomes negative, the governments need not worry about deficits since the growth would take care of the interest payment obligations. This would ensure the sustainability of public debts.
- The Economic Survey argues that in India, the growth rate is higher than the interest rate most of the time. So the conventional restraints on the fiscal policy may not be the right way ahead given the serious contraction of the Indian economy.
- **Washington Consensus** - It is a framework that advocates for **macroeconomic stability.**
  - Macroeconomic stability roughly means that the borrowing done to finance the deficit of a country must

be kept to a minimum.
- o This is a concept in peril as the economies of the world look to fight the after-effects of COVID-19 induced slowdown successfully.

Central Reserve Police Force

The Central Reserve Police Force (CRPF) is one of the premier Central Armed Police Forces of India (under the **Ministry of Home Affairs)** for internal security. The other Central Armed Police Forces are as follows:

- **Assam Rifles (AR):** The Assam Rifles came into being in **1835,** as a militia called the**'Cachar Levy'.**
- **Border Security Force (BSF):** Responsible for guarding India's land borders with **Pakistan and Bangladesh.**
- **Central Industrial Security Force (CISF):** Provides security cover to nuclear installations, space establishments, airports, seaports, power plants, sensitive Government buildings and ever heritage monuments.
- **Indo Tibetan Border Police (ITBP):** ITBP is a **specialized mountain force** and most of the officers and men are professionally trained mountaineers and skiers.
- **National Security Guard (NSG):** The National Security Guard (NSG) is a counter terrorism unit which was raised in **1984, following Operation Blue Star.**
- **Sashastra Seema Bal (SSB):** Earlier Special Service Bureau was raised in 1960s with the sole objective of achieving **'Total security preparedness'** in the remote border areas for performing a **'stay-behind'** role in the event of a war.

History: Originally constituted as the Crown Representative Police in 1939, it is one of the oldest Central paramilitary forces. After Independence, the force was renamed as Central Reserve Police Force **by an Act of Parliament** on December 28, 1949.

- **Duties performed by the CRPF include:**
  - o Crowd/ Riot control
  - o Counter Militancy/Insurgency operations
  - o Dealing with **Left Wing Extremism**
    - **CoBRA (Commando Battalion for Resolute Action) unit in Chattisgarh**
    - **Jaguar unit in Jharkhand**
    - **Greyhound unit in Andhra**

Pradesh
- o Protection of VIPs and vital installations
- o Checking environmental degradation and protection of local Flora and Fauna
- o Fighting aggression during War time
- o Participating in **UN Peacekeeping Missions**
- o Rescue and Relief operations at the time of Natural Calamities

East Container Terminal

Sri Lanka has withdrawn it's proposal to let India & Japan build her East Terminal Container near the capital city of Colombo.

What is the Project?

- The tripartite agreement, signed by India, Sri Lanka and Japan, proposes to develop the ECT, which is located at the newly expanded southern part of the Colombo Port.
- The ECT is located 3 km away from the China-backed international financial city, known as Port City, currently being built in Colombo.
- A Chinese company was behind the controversial 2018 Hambantota port project, signed its first contract in the Port City last month.
- It is also on the map of China's Belt and Road Initiative (BRI).

Jal Jeevan Mission (Urban) 2.0 to revive urban water bodies

The urban water supply mission under the Jal Jeevan Mission announced in the Budget would include rejuvenation of water bodies as well as 20% of supply from reused water.

Jal Jeevan Mission

- Jal Jeevan Mission, a central government initiative under the Ministry of Jal Shakti, aims to ensure access of piped water for every household in India.
- The mission's goal is to provide to all households in rural India safe and adequate water through individual household tap connections by 2024.
- The Har Ghar Nal Se Jal programme was announced by FM in Budget 2019-20 speech.
- This programme forms a crucial part of the Jal

Jeevan Mission.

- The programme aims to implement source sustainability measures as mandatory elements, such as recharge and reuse through greywater management, water conservation, and rainwater harvesting.

Urban component of the mission:
- The mission is meant to create a people's movement for water, making it everyone's priority.
- There are an estimated gap of 2.68 crore urban household tap connections that the Mission would seek to bridge in all 4,378 statutory towns.
- The Mission would also aim to bridge the gap of 2.64 crore sewer connections in the 500 cities under the existing AMRUT scheme.
- The mission would include rejuvenation of water bodies to boost the sustainable freshwater supply and the creation of green spaces.

Border Security: 'Smart walls' for Indian borders

- United States President Joe Biden stopped the construction of the much-publicised "border wall" between the U.S. and Mexico as part of a series of executive actions, in a development that was long-awaited.
- It was confirmed, however, that an alternative has been offered — **a 'smart' wall** that replaces the physical and armed patrolling with advanced surveillance tech is the proposed future of border security now.
- The '**smart wall' technology** could solve border security issues without the need for a physical barrier.
- The wall would use sensors, radars, and surveillance technology to detect and track border break-ins, and technology capable of performing the most difficult tasks dedicated to border security.

USA-Mexico border concept
- The concept is not new and the novelty of it cannot be directly associated with Mr. Biden. Interestingly, the U.S.-Mexico border wall proposed by Donald Trump envisaged this concept.
- A technology firm was sought to be hired by the Trump administration, and it was indicated that **artificial intelligence shall be used** at a novel scale to complement the steel barrier (border wall) project of Mr. Trump.
- It was stated that hundreds of **mobile surveillance towers** would be deployed, and along with them, the complete system of a virtual wall would consist of a **radar satellite, computer-equipped border-control vehicles, control sensors and underground sensors**.
- Along with surveillance towers and cameras, **thermal imaging** would be used, which would help in the detection of objects.
- The system would even be capable of distinguishing between animals, humans, and vehicles, and then sending updates to handheld mobile devices of the U.S. patrol agents.

Why should India use "smart walls" for Indian borders?
- India has been struggling with the problem of terrorists and smugglers infiltrating into the country and efforts are ongoing to secure our borders and curb cross-border infiltration.
- Therefore, it is proposed that it is high time we start envisaging the use of technology to help India secure its borders.
- A critical factor that must be considered to enable the usage of such a system along Indian borders is that the **terrain in the region is rugged,** and, furthermore, not even clearly defined.
- Hence, erecting fences, walls or any physical structures is extremely difficult.
- A "smart" wall, however, makes use of systems that would be designed in such a way that they can operate even in rugged areas.
- Imperatively, in the U.S., various other benefits, such as cost-effectiveness, less damage to the environment, fewer land seizures, and speedier deployment are being noted that give the "smart wall" concept an edge over traditional physical borders.
- Notably, such a system, even if not feasible for our long boundaries, may still be deployed **to enhance critical security establishments** of the country and complement the already-existing physical fencing and walls.
- The attack on the Pathankot Air Force base highlighted that often, it may become difficult to secure establishments due to their vast size.
- Further, it is imperative for Indian armed forces to be well-equipped and simultaneously have the latest technological advantage over its

enemies.

BOLD-QIT (Border Electronically Dominated QRT Interception Technique)

Ministry of Home Affairs has setup the project BOLD-QIT under CIBMS (Comprehensive Integrated Border Management system) on India-Bangladesh border. CIBMS is a robust and integrated system for border security by seamlessly integrating human resources, weapons, and high-tech surveillance equipment. It has 3 main components:

New high-tech surveillance devices such as sensors, detectors, cameras, etc. as well as existing equipment for round-the-clock surveillance of the international border.
An efficient and dedicated communication network including fiber optic cables and satellite communication for transmitting data gathered;
A command and control centre to which the data will be transmitted providing a composite picture of the international border.

Way Forward
- Experts must explore this idea to effectively counter the problem of cross-border infiltration.
- Is it unfathomable to deploy a security system that clubs technology with traditional set-ups due to terrain and other problematic factors?
- This is a question for Digital India to answer.

New Metro Rail Projects Proposed in the Budget

FM Nirmala Sitharaman in her budget announcement stated that **Metro Lite and Metro-Neo technologies** will be deployed to provide metro rail systems in **Tier-2 cities** and the peripheral areas of Tier-1 cities, at much lesser costs with the same experience, convenience and safety.

About Metro Neo
- Metro Neo is a **mass rapid transit system** providing low-cost, energy-efficient and eco-friendly urban transport solution for tier 2 and tier 3 cities.
- Drawing power from overhead wires, **Metro Neo will not run on track but on road**. It is suitable for places where traffic is huge during

peak time.
- The **Maharashtra government** has already given a green signal for this Mass Rapid Transit System (MRTS) for **Nashik**.

About Metrolite
- The 'Metrolite' system will have a **dedicated path separating the road traffic with it**. For segregation with road traffic, fencing can be provided on either side of the network.
- The **three-coach train will have a carrying capacity of 300 passengers**. Sources said the government would provide financial assistance to states to implement the light urban rail transit system.

Global Risks Report 2021 by World Economic Forum

The **World Economic Forum** (WEF) has released the 16th edition of the **Global Risk Report**, 2021 based on the **Global Risks Perception Survey** (GRPS). The Report states that environmental risks continue to threaten the global economy.
The top 5 risks it mentions are:
- extreme weather
- climate action failure
- human environmental damage
- infectious diseases
- Biodiversity loss

where infectious diseases top the list in terms of impact.

National Mission on Biodiversity and Human Well-being

- The Government of India has recently launched the National Mission on Biodiversity and Human Well-being.
- The mission aims to explore the neglected links between biodiversity science and human well-being across the sectors of **health, economic development, agricultural production** and **livelihood generation**, in combination with efforts to mitigate climate change and related disasters.
- One of the components of the mission explicitly links biodiversity to human health through the **OneHealth framework**.
- The OneHealth programme aims to encourage team science by having networks of

institutions collectively **bid for grants** to set up integrated OneHealth surveillance systems across India.

One Health concept is being recognized as an effective way to fight health issues at the human-animal-environment interface, including zoonotic diseases.

This concept is used by the **Food and Agriculture Organization** (FAO), the **World Health Organization** (WHO), and the **World Organisation for Animal Health** (OIE). In India, it is a component under the National Mission on Biodiversity and Human Well Being.

Section 69A of the Information Technology Act, 2000

The Government has issued notice to Twitter after it reinstated several handles that mentioned a controversial hashtag on its platform.

The Government issued these orders under **Section 69A** of the **Information Technology Act, 2000.**

This is done in the interest of -
   i.   sovereignty and integrity of India
   ii. defence of India, security of the State
   iii. friendly relations with foreign States
   iv. public order (or)
   v.   for preventing incitement to the commission of any cognizable offence relating to above

This is the same Section under which hundreds of **Chinese apps** have been banned in recent months.

The validity of the same section has been upheld by the SC in **Shreya Singhal v/s. Union of India** case in 2015.

Myanmar- Important Points for PT

- Biggest Ethnic Population- **Bamar** people
- Has been ravaged by Extremely Severe Cyclone **Nargis** in the past
- **Kyaukphyu** port in Myanmar is being developed by China as part of Belt & Road Initiative
- India & Myanmar are doing multimodal **Kaladan** project that connects India's North East border with Myanmar's **Sittwe** Port

Jamtara district, Jharkhand- the Phishing Capital of India

- The **Jamtara** district holds distinction of being the "**phishing capital of India**".
- Many drop-outs of 15-35 age group have been turning to cybercrime to earn a few quick bucks.
- The place has historical roots as **Pandit Ishwar Chandra Vidyasagar** had once worked through a **community library** movement here.

FSSAI's Amended Rules on Capping Trans Fats in Food Products

- FSSAI has amended rules to cap trans-fatty acids (TFAs) in food products to **2%** by **2022**
- TFA's are mainly found in **baked and fried foods**, **pre-packaged snacks & cooking oils**
- They increase the **shelf life** of food by lowering their **oxidation potential**
- They are less costly than animal fat like butter
- They increase the **bad cholesterol** (LDL) and reduce the good cholesterol (HDL)
- They increase the risk of **coronary diseases**
- Earlier in December, 2020 FSSAI capped TFAs in oils and fats to **3% by 2021, 2% by 2022** from present levels of 5 %
   o **WHO** recommends **0%** trans fats by **2023**

General Thimaiyya Museum inaugurated at Madikeri by the President

President Ram Nath Kovind inaugurated General Thimayya Museum at **Madikeri**. He regarded him as one of the India's greatest soldier.

- He had served as the **Chief of Millitary** staff between **1957-1961**

Additional Info about Madikeri:

- lies in **Western Ghats** and is known for its **coffee** plantations
- It is also the source for River **Cauvery** from **Baba Budan** Hills nearby.

Currency Swap Agreement between SL & India

The Central Bank of Sri Lanka (CBSL) settled a $400 million currency swap facility from the Reserve Bank (RBI) of India.

What is a Currency Swap Facility?
- The term swap means exchange.
- Under this agreement, two contracting countries loan each other a specified amount in local currencies.
- Currency swap agreements involve trade in local currencies, where countries pay for imports and exports at pre-determined rates of exchange without the involvement of a third country currency like the US dollar.

Benefits of Currency Swap facility:
- The swap operations carry no exchange rate or other market risks. The transaction terms are set in advance.
- It reduces the need of maintaining foreign exchange reserves for bilateral trade. Thus, it promotes bilateral trade.

What are Micro Biomes?
- Microbiome refers to micro-organisms **living inside** humans and animals.
- Eating too much fat and sugar as a child can alter one's microbiome **forever**.
- The balance of useful and harmful components, if disturbed, results in **ill-health.**

Magnetic fields in plants
- A recent study from Germany found that the **Venus flytrap** (a carnivore) plant is capable of generating small **magnetic fields**.
- When the plant sends electrical signals to trigger the closure of its traps, a **biomagnetism** phenomenon was observed.
- The trap gets electrically excited due to **touch**, **osmotic energy** & even **heat and cold**.

Budget Announcement for One Person Companies
Finance Minister Nirmala Sitharaman announced measures to ease norms on setting up one-person companies (OPCs).

What is a one-person company?
- A one-person company is a company that can be formed by just **one person** as a shareholder

How are they different from other companies?
- These companies are different to **private companies** which require a minimum of **two members** to establish.
- the person and the company are considered **separate legal entities**. In sole proprietorship, the owner and the business are considered the same.
- In a one-person company, the sole owner's **liability is limited** to that person's investment whereas in a sole proprietorship the owner has unlimited liability as they are not considered different legal entities.
- OPCs do not need to conduct an **annual general meeting**, which is a requirement for other companies.
- A one-person company also **does not require signatures** of both its company secretary and director on its annual returns. One is enough.

The concept was introduced in the Companies Act of 2013 based on the suggestions of the **J.J. Irani Committee** Report.

What has been proposed in the budget for OPCs?
- An earlier rule that a one-person company would cease to have that status once its **paid-up** share capital exceeds **₹50 lakh** or its average turnover for the preceding three years exceeds **₹2 crore**, has been lifted.
- Residency limit for an Indian citizen to set up an OPC has been reduced from **182 days to 120 days.**
- **Non-Resident Indians** (NRIs) are allowed to incorporate OPCs in India.

IT Act, 2000: Important Provisions vis-a-vis Social Media Regulation
Tackling harmful content such as hate speech, rumours, inflammatory and provocative messages and child pornography need cooperation between technology services companies and law enforcement agencies.

Information Technology Act, 2000, as amended from time to time, governs all activities related to the use of computer resources.

Information Technology (IT) Act, 2000
- It covers all 'intermediaries' who play a role in the use of computer resources and electronic records.
- It includes providers of **telecom service, network service, Internet service and web hosting, besides search engines, online payment and auction sites, online**

marketplaces and cyber cafes.
- It includes any person who, on behalf of another, "**receives, stores or transmits**" any electronic record.
- Social media platforms would fall under this definition.
- **Section 69** of the Act confers on the **Central and State governments** the power to issue directions "to intercept, monitor or decrypt any information generated, transmitted, received or stored in any computer resource.
- Grounds on which these powers may be exercised are: in the interest of the **sovereignty or integrity of India, defence of India, security of the state, friendly relations with foreign states, public order.**
- Intermediaries are required to preserve and retain specified information in a manner and format prescribed by the Centre for a specified duration.
- Contravention of this provision may attract a prison term that may go up to **3 years.**
- Intermediaries such as Internet and data service providers are **protected** from being made liable for content that users may post or generate.
- However, the exemption from liability **does not apply** if there is evidence that the intermediary **abetted or induced** the commission of the unlawful act involved.

Concept of Bad Bank as Proposed in the Budget

Finance Minister in her Budget speech revived the idea of a 'bad bank' by stating that the Centre proposes to set up an asset reconstruction company to acquire bad loans from banks.
What is a 'bad bank'?
- A bad bank is a **financial entity** set up to buy non-performing assets (NPAs), or bad loans, from banks.
- The aim of setting up a bad bank is to help **ease the burden on banks** by taking bad loans off their balance sheets and get them to **lend again** to customers without constraints.
- The idea of a bad bank has been tried out in countries such as the **United States, Germany, Japan** and others in the past.
- The total size of **bad loans decreased** to ?9 lakh crore as of March 31, 2020, down significantly from over ?10 lakh crore two years ago.

- But experts point out that it is mostly due to larger **write-offs** rather than due to improved recovery of bad loans.
- Due to the **lockdown** imposed last year, the proportion of banks' gross non-performing assets is expected to **rise** sharply.

Retail Direct Gilt Securities Account for Retail Customers by RBI

The RBI's proposal to provide direct access to retail investors to its government securities investment platform opens the door to this **risk-free** investment for retailers.
- Retail investors can now directly open their gilt accounts with the RBI through the **'Retail Direct'** facility to access both the **primary market** – where investors buy directly from the issuer — and **secondary markets** where trading takes place among investors.
- G-secs are debt instruments issued by the government and considered the **safest** form of investment.
- Stock exchanges till now aggregated the demand for gilts and placed it to the RBI in the (**Negotiated Dealing System-Order Matching**) NDS-OM
- Now, a retail investor can place a direct bid with the NDS-OM system and open a gilt account in the **e-Kuber** system, the **RBI** platform for gilt auctions.

Russia to launch around 40 satellites from 18 countries in 2021

Russia is set to put into orbit around 40 satellites from over a dozen different countries all over the world using the **Soyuz-2** carrier rocket in March 2021. Soyuz-2.1, a carrier rocket with the Fregat booster will blast off with the South Korean CAS500-1 (Compact Advanced Satellite 500) space vehicle from the **Baikonur** space centre in March, 2021.

Nanda Devi Glacial Burst in Uttarakhand: Important PT Points

The glacial burst at the Nanda Devi glacier caused flash floods in Dhauliganga & Rishiganga rivers.
- **Tapovan-Vishnugad** project located on Dhauliganga river was washed away.
- While Rishiganga hydel project was located on

Rishiganga River.

- Originating at **Vasudhara Tal**, a **glacial lake** in Uttarakhand, the Dhauliganga flows in a meandering course, which takes it through the **Nanda Devi National Park**.

Additional Info About these River Systems:

- **Dhauliganga** river meets River Alaknanda at **Vishnuprayag**.
- Dhauliganga is joined by **Rishiganga** river at **Raini**.
- **Pindari** River meets Alaknanda River at **Karnaprayag**.
- **Mandakini** River meets Alaknanda ar **Rudraprayag**.
- **Bhagirathi** River meets Alaknanda at **Devprayag** to form the holy river **Ganga**.

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Safe Internet Day

- It is organised by the **Insafe/INHOPE** network of awareness centres, that is spread across 30 countries and is funded by the Connecting Europe Facility program (CEF) of the EU.
- It aims to increase awareness about **emerging online issues**, such as cyberbullying, and

chooses a topic reflecting current concerns

Kurubas demanding "ST" category in Karnataka

The Kuruba community has been demanding the Schedule Tribe tag and held a massive rally in the outskirts of Bengaluru

- The Kurubas of Karnataka are a traditional **sheep rearing** community.
- They are known by different names in other states, such as **Kuruma** in Andhra Pradesh, Golla in southern Karnataka, **Dhangar** in Maharashtra, **Pal** in Rajasthan, and Maldhari/Gadariya in Gujarat.
- They subscribe to the teachings of **Kanakadasa** who was a renowned composer of Carnatic music, poet, philosopher, and saint.

Floods in Dhauliganga River Attributed to Climate Change

- **Glacier retreat, permafrost thaw** are being touted as possible reasons for the flooding of Dhauliganga river
- Environmental experts attributed the Nanda Devi glacial melt to **global warming.**
- Glacier retreat and permafrost thaw are projected to **decrease the stability of the mountain slopes** and increase the number and area of glacier lakes
- The number and area of glacier lakes will continue to increase and develop closer to steep and unstable mountain walls, where lake outbursts can be more easily triggered.

Clemency Power of the President & the Governor

TN Governor Banwarilal Purohit has decided that only the President can decide the issue of granting remission to the seven life convicts in the Rajiv Gandhi assassination case.

What the constitution says?

- Under the Constitution of India (**Article 72**), the President of India can grant a pardon or reduce the sentence of a convicted person, particularly in cases involving capital punishment.
- A similar and parallel power vests in the governors of each state under **Article 161**.

I. President

1. Article 72 says that the president shall have the power to grant **pardons, reprieves, respites or remissions** of punishment or to **suspend, remit or commute** the sentence of any person convicted of **any offence**.
2. There are five different types of pardoning which are mandated by law.

- **Pardon:** means **completely absolving** the person of the crime and letting him go free. The pardoned criminal will be like a normal citizen.
- **Commutation:** means **changing the type** of punishment given to the guilty into a less harsh one, for example, a death penalty commuted to a life sentence.
- **Reprieve:** means a **delay allowed in the execution** of a sentence, usually a death sentence, for a guilty person to allow him some time to apply for Presidential Pardon or some other legal remedy to prove his innocence or successful rehabilitation.
- **Respite:** means **reducing the quantum** or degree of the punishment to a criminal in view of some special circumstances, like pregnancy, mental condition etc.
- **Remission:** means **changing the quantum** of the punishment **without changing its nature**, for example reducing twenty year rigorous imprisonment to ten years.

Cases as specified by art. 72

- in all cases where the punishment or sentence is by a **court martial**;
- in all cases where the punishment or sentence is for an offence against any law relating to a matter to which the **executive power of the Union** extends;
- in all cases where the sentence is a **sentence of death**.

II. Governor

- Similarly, as per article 161 Governor of a State has the power to grant pardons, reprieves, respites or remissions of punishment or to suspend, remit or commute the sentence of any person convicted of any offence against any law.
- It must be relating to a matter to which the **executive power of the state** extends.
- Please note that President can grant pardon to a person awarded death sentence. But a **governor of a state does not enjoy** this power.

Some Conventions:

- It is important to note that India has a unitary legal system and there is no separate body of state law.
- **All crimes are crimes against the Union of India.**
- Therefore, a convention has developed that the governor's powers are exercised for only minor offenses.
- While requests for pardons and reprieves for major offenses and offenses committed in the UTs are deferred to the President.

Glacial Lake Outburst Flooding

- A glacial lake outburst flooding (GLOF) occurs when a breach in the glacial lake causes a **sudden surge** downstream.
- Such lakes are formed **when glaciers erode land, melt and over time become a large mass of water** in the depression formed, and these can be breached, causing floods downstream.
- In India the status of glacial lakes is checked by **Central Water Commission.**

Sri Lanka clears a Chinese energy project 50 kms from Rameshwaram

Sri Lanka govt. has recently cleared a Chinese energy project in 3 islands near to Jaffna peninsula.

- Sinosoar-Etechwin Joint Venture will be executing the project.
- These hybrid renewable energy systems projects will be based in **Nainativu, Delft and Analaitivu islands** located in the **Palk Bay**.
- The islands are connected to the **Jaffna peninsula** a ferry service & are about 50 kms away from **Rameshwaram**

Strategic Disinvestment Policy for Public Sector Enterprises

- The policy, promised as part of the Atma Nirbhar Bharat package, states the government will exit all businesses in **non-strategic** sectors, with only a 'bare minimum' presence in four broad sectors.
- These strategic sectors are — **atomic energy, space and defence; transport and telecom; power, petroleum, coal and other minerals; and banking and financial services**.
- It will help the exchequer stop throwing good

money after bad, and funnel it into more productive endeavours.

Capping on Transfats

- Trans fat is **naturally present** in red meat and dairy products.
- Focus is on restricting the **industrially produced** trans fat used solely to prolong the shelf life of products to **2% by mass** of the total oils/fats present in the product **2022**
- Repeated use at high temperature can increase the trans fat content.
- **Denmark** became the first country to limit industrially produced trans fat content to 2% in 2004.

New Variety of Marigold Developed by IIHR

- Indian Institute of Horticultural Research has developed new variety of Marigold named **Arka Shubha**
- This variety of marigold can be used for extraction of **crude carotene** upto 2.8%.
- Presently, India **imports** most of its carotene from **China**
- The Arka Shubha variety is of use in the **poultry** sector as well. Its petals could be used as feed to get quality yolk.

MoU for the construction of the Shahtoot dam in Afghanistan

MoU signed recently for construction of the Shahtoot dam to provide drinking water to Kabul.

- The proposed dam will be on **Kabul river** basin. It is one of the five river basins in Afghanistan.
- The dam will provide **drinking, irrigation, and Environmental water** for Kabul province.
- This is the second major dam being built by India in Afghanistan, after **Salma Dam** which was inaugurated in 2016.

PM Modi Invited to Participate in G-7 Dialogue

- India has been invited as a special guest

at **Cornwall, United Kingdom** to attend the **G-7** grouping meeting.
- PM Modi may also head over to **Brussels** to conclude the pending India-EU Bilateral **Trade and Investment Agreement** (BTIA) talks.
- The talks have been held over issues like market access for **automobiles, dairy products, wines and the movement of professionals.**

Turkey's space program

Turkish President Recep Tayyip Erdogan recently unveiled an ambitious 10-year space program that includes missions to the moon, developing internationally viable satellite systems, and sending Turkish astronauts into space.

President Erdogan also informed that Turkey plans on establishing its first contact with the moon in 2023 when the nation will mark the centennial of the founding of the Turkish Republic.

However, the critics have questioned the Turkish government's decision of spending huge money on this goal at a time when the country's economy is suffering.

Petition to Convert INS Viraat into a Museum

- The warship has been proposed to be dismantled at the ship-breaking yard at **Alang** in Gujarat.
- However, Bombay HC has stayed the order on petition of Envitech to convert **maritime museum** and a **multifunctional adventure centre**.

Concern Among People of Lahaul-Spiti After Glacial Outburst in Uttarakhand

- The concern is about Tandi project on the **Chandra-Bhaga** River Basin after Uttarakhand flooding debacle.
- Other Proposed projects in Lahul-Spiti are **Rashil** (102 MW), **Bardang** (126 MW), **Miyar** (90 MW) and **Jispa**.

Chenab River-

- **Source:** It rises in the upper Himalayas in the **Lahaul and Spiti district** of **Himachal**

Pradesh state.

- o The river is formed by the confluence of two rivers, **Chandra and Bhaga, at Tandi, 8 km southwest of Keylong,** in the **Lahaul and Spiti district.**
  - The **Bhaga river** originates from **Surya taal lake,** which is situated a few kilometers west of the **Bara-lacha la pass** in Himachal Pradesh.
  - The **Chandra river** originates from **glaciers east of the same pass** (near Chandra Taal).
- ▪ **Flows Through:** It flows through the **Jammu region of Jammu and Kashmir into the plains of Punjab, Pakistan, before flowing into the Indus River.**

Appe Midi Varieties of Mango

- The **Appe Midi** variety of Mango that nearly went extinct have been conserved by B.V. Subbarao in Shivmoga district of Karnataka.
- They are mainly found in **Western Ghats**.
- They are being presently conserved by **India Institute of Horticulture Sciences, Bengaluru**.

Digital Services Tax

Why in news?
United States Trade Representative (USTR) reported that India's DST is discriminatory & inconsistent with international tax principles.

What is Digital service tax (DST)?
- Digital companies are not adequately taxed because they don't have a **physical location** in the markets where they operate.
- DST aims to ensure that **non-resident, digital service providers** pay their fair share of tax on revenues generated in the Indian digital market.

How does India's DST evolved?
- In 2016, **Akhilesh Ranjan Committee** suggested to create a level-playing field between online businesses and brick-and-mortar businesses.
- Since digital businesses don't have **physical presence** but enjoy a sustainable economic

presence they need to be taxed.
- In 2016, India became the **first country** to implement the **equalisation levy**, on advertising services at **6%**.
- In 2018, India introduced the term significant economic presence in Income Tax Act.
- According to which, if a **company had users in India**, it sort of defined its economic connection with India and therefore gives India the right to tax.
- In 2020, the new equalisation levy expanded its scope even to **e-commerce.**

Spinal Muscular Atrophy

- ▪ Spinal muscular atrophy is a **rare genetic disease**. The person suffering from this disease cannot **control the movement** of their muscles.
- ▪ **Caused By:** It is caused by the **loss of nerve cells** that carry electrical signals from the brain to the muscles. The protein needed for this signaling is coded by a gene. Everyone has **two copies** of this gene- one from the **mother** and the other from the **father**. A child develops this disorder only if **both the copies are faulty.**
- ▪ **Gene Therapy Treatment:** There is also a gene therapy treatment named **Zolgensma** which replaces the faulty gene.
- ▪ Zolgensma works by supplying a **healthy copy** of the faulty gene. It allows nerve cells to then start producing the needed protein. This halts the deterioration of the nerve cells and allows the baby to grow more normally.

India-China Disengagement

- ▪ Recently, both India and China have announced the start of **disengagement** between the two armies in Ladakh.
- ▪ The current disengagement is limited to two places on the **Line of Actual Control** (LAC) in Ladakh:
  - o One, the north bank of **Pangong** lake
  - o Two, **Kailash** range to the south of Pangong.
- ▪ the disengagement in other regions is yet to be taken. The other three sites of contention on the Ladakh border are **Depsang, Gogra-Hot**

Springs, and Demchok.

Coalition for Disaster Resilient Infrastructure

- CDRI is to be seen as an **international knowledge platform.**
- Here, countries can collaborate to make their existing and new infrastructure strong enough to **withstand natural disasters**.
- It tries to bring countries together to share and learn from the one another's experiences to **protect their infrastructure** against disasters.
- The **National Disaster Management Authority** (NDMA) is operating as the interim secretariat of CDRI as of now.
- It is headquartered at **Gurugram**, India.

Coal Gasification

What is coal gasification?

• Coal gasification is the process of producing **syngas** [a mixture consisting primarily of **methane (CH4), carbon monoxide (CO), hydrogen (H2), carbon dioxide (CO2) and water vapor (H2O)**],from coal,water, air and/or oxygen.

What are its usages?

• Currently, this tech is primarily used for electricity generation, for production of **chemical feedstocks**, or for production of **synthetic natural gas**.

• The hydrogen obtained from coal gasification can be used for various purposes such as making **ammonia,** powering a **hydrogen economy,** or upgrading fossil fuels.

• Alternatively, coal-derived syngas & natural gas can be converted into **transportation fuels such as gasoline and diesel** or into methanol which itself can be used as transportation fuel or fuel additive.

Fly Ash

- o **Definition:** It is a **byproduct from burning of coal** in electric power generating plants.

  - It is **called fly ash because** it is transported from the combustion chamber by exhaust gases.
  - It is collected from the exhaust gases by **electrostatic precipitators** or bag

filters.

- o **Composition:** Fly ash includes substantial amounts of **silicon dioxide** (SiO_2), **aluminium oxide** (Al_2O_3), **ferric oxide** (Fe_2O_3) and calcium oxide (CaO).
- o **Properties:**

  - Exhibit **cement like** properties.

- o **Uses:** It is used in **concrete and cement products, road base, metal recovery, and mineral filler** among others.
- o **Harmful Effects:** Fly ash particles are toxic air pollutants. They can trigger **heart disease, cancer, respiratory diseases** and stroke.

  - When combined with water they cause **leaching of heavy metals in ground water.**
  - It also **pollutes the soil,** and affects the root development system of trees.

Kalaripayattu

- Kalaripayattu is a **martial art** based on the **ancient knowledge of the human** body.
- It originated in **Kerala** during **3nd century BC to the 2nd century AD.**
- It is now practised in **Kerala** and in some parts of **Tamil Nadu.**
- The place where this martial art is practised is called a **'Kalari'.** It is a Malayalam word that signifies a **kind of gymnasium.** Kalari literally means **'threshing floor' or 'battlefield'.**
- The word Kalari first appears in the **Tamil Sangam Literature** to describe both a battlefield and combat arena.
- It is considered to be one of the **oldest fighting systems** in existence.
- It is also considered as the **father of modern Kung - Fu.**

Humboldt Penguin

- Humboldt penguin is named after the **cold ocean current**, known as **Humboldt current** (discovered by German explorer **Alexander von Humboldt**), that is typical for the natural habitat of this species of penguin (west coast of **South America**).
- Its habitat is highly influenced by the **cold,**

nutrient-rich Humboldt Current flowing northward from Antarctica, which is vital to the productivity of **plankton and krill** and fosters fish abundance.

- Migration: When not raising chicks, these penguins have been known to **travel long distances** at sea to find food, especially in recent years as prey species become increasingly scarce.

Vembanad Lake

- Preliminary steps have been initiated to demolish the illegally constructed villas on **Nediyathuruthu island** in Vembanad Lake.
- Vembanad is the **longest lake** in India and the largest lake in the state of Kerala.
- Its a **salt-water** lake.
- It is the **second-largest Ramsar site** in India only after the **Sundarbans** in West Bengal.
- **Kochi Port** is built around **Willingdon and Vallarpadam Islands** on this lake.
- The Government of India has identified the Vembanad wetland under the **National Wetlands Conservation Programme**.

Ugandan Army Commander convicted by International Criminal Court

- Dominic Ongwen, nicknamed "**White Ant**", has been convicted by ICC for committing war crimes and crimes against humanity.
- He lead attacks on refugee camps & aimed to set up a state based on the Bible's Ten Commandments against **President Yoweri Museveni.**
- He was part of Lord's Resistance Army that as per UN killed more than 1,00,000 people in a campaign of violence that spread to three other African nations — **Sudan**, the **Democratic Republic of Congo** and the **Central African Republic**.

International Criminal Court
- CC is an intergovernmental organization and international tribunal that sits in **The Hague** in the Netherlands.
- The ICC has the jurisdiction to prosecute individuals for the crimes of genocide, crimes against humanity, and war crimes.
  - **India is not a party to ICC**. The major objections of India to the Rome Statute are :
  - Since ICC is subordinate to UNSC, permanent members are vested with unbridled powers.
  - Terrorism and nuclear weapons usage is not in the purview of ICC.

UAE's Hope Probe Enters Mars Orbit

- The probe took off from the **Tanegashima Space Centre** in Japan in July, 2020.
- UAE becomes the fifth entity to reach the Red Planet, joining **NASA, the Soviet Union, the European Space Agency and India**.
- Mission will collect data on **Martian climate dynamics** and help scientists understand why Mars' atmosphere is decaying into space.

Other Missions to Mars:
- Apart from the UAE's 'Hope Probe', two more unmanned spacecrafts from the **USA and China** are set to arrive at Mars over the next several days.
- All three missions were launched in July to take advantage of the **close alignment** of Earth and Mars.
- A combination orbiter and lander from **China (Tianwen-1)** is scheduled to reach Mars in order to look for signs of ancient life.
- A rover from the **USA** named **'Perseverance'** is also set to reach Mars to bring **Mars rocks** back to Earth to be examined for evidence the planet once harbored microscopic life.

Dickinsonia Fossils Found in Bhimbetka Caves

Researchers discovered three fossils in Madhya Pradesh. These fossils are possibly of the earliest known living animal named 'Dickinsonia' (550-million-year-old).

- The fossils are found on the roof of Auditorium Cave at **Bhimbetka Rock Shelters**.
- It is a **UNESCO World Heritage Site** in Madhya Pradesh.
- The fossil can be identified from the white **leaf-like patches** with a central vertebra (central midrib) and connecting veins.

▪ These are the only Dickinsonia fossils available in the country. They are similar to those seen in South Australia.

Dickinsonia :
▪ It is an extinct genus of basal animal. They lived during the late **Ediacaran** period in what is now **Australia, Russia, and Ukraine**. Ediacaran period is marked at 575 to 541 million years ago

Rock Shelters of Bhimbetka:
▪ It is a recognized **world heritage site** by UNESCO. It is located in the foothills of the **Vindhya Mountains** in the State of Madhya Pradesh.
▪ The site spans the prehistoric **Paleolithic and Mesolithic** periods as well as the historic period.
▪ Bhimbetka is also known as **Bhima's Lounge** (Bhima was the second of the five Pandava princes in the Hindu epic Mahabharata).
▪ Most of the **paintings** here are in red and white with occasional dashes of yellow and green. Their themes include events of **everyday life**, thousands of years ago.
▪ The scenes depicted are mainly of **dancing, playing music, hunting, horse and elephant riding, decorating bodies, and collecting honey**. Household scenes too, constitute an occasional theme.

Ashok Dalwai Committee
• The government announced to **double farm incomes by 2022** in its Union Budget 2016-17.
• In line with this it appointed an 8-member inter-ministerial committee headed by **Ashok Dalwai**, to consider major reforms in agriculture sector.
• It was tasked to prepare a blueprint for transition of farm policies from being **production oriented to based on incomes** or value addition.

New Guidelines for the Geo-Spatial Sector
What is the news?
• The **Ministry of Science and Technology** has released new guidelines for the Geo-spatial sector in India.
• It **deregulated** the existing protocol and liberalizes the sector to a more competitive field.

What is a Geo-Spatial Data?
• Geospatial data is data about objects, events, or phenomena that have a **location on the surface** of the earth.
• The location may be static in the short-term, like the location of a road, an earthquake event, malnutrition among children, or dynamic like a moving vehicle or pedestrian, the spread of an infectious disease.
• Geospatial data combines **location information**, attribute information, and often also **temporal information** or the time at which the location and attributes exist.
• Geo-spatial data usually involves **information of public interest** such as roads, localities, rail lines, water bodies, and public amenities.
• The past decade has seen an increase in the use of geospatial data in daily life with various apps such as food delivery apps like **Swiggy or Zomato, e-commerce like Amazon** or even weather apps.

What is the present policy on geospatial data?
• There are strict **restrictions** on the collection, storage, use, sale, dissemination of geo-spatial data and mapping under the current regime.
• The policy had not been renewed in decades and has been driven by internal as well as external security concerns.
• Private companies need to navigate a system of **permissions from different departments** of the government as well as the defence and Home Ministries, to be able to collect, create or disseminate geospatial data.

Why has the government deregulated geospatial data?
• This system of acquiring licenses or permission, and the **red tape** involved, can take months, delaying projects, especially those that are in mission mode – for both Indian companies as well as government agencies.
• The deregulation **eliminates the requirement** of permissions as well as scrutiny, even for security concerns.
• Indian companies now can **self-attest**, conforming to government guidelines without actually having to be monitored by a

government agency- these guidelines, therefore, place a great deal of trust in Indian entities.

- There is also a huge **lack of data** in the country which impedes planning for infrastructure, development and businesses which are data-based.
- The mapping of the entire country that too with high accuracy, by the Indian government alone could take decades.
- The government, therefore, felt an urgent need to **incentivise the geospatial sector** for Indian companies and increased investment from private players in the sector.
- Large amounts of geospatial data are also available on global platforms, which makes the regulation of data that is freely available in other countries, untenable.

What next?

- While for decades, geospatial data has been a priority for **strategic reasons** and for internal and external security concerns.
- This priority has seen a shift in the past 15 years – geospatial data has now become imperative for the government in planning for **infrastructure, development, social development** as well as the economy.
- More and more sectors such as **agriculture, environment protection, power, water, transportation, communication, health** (tracking of diseases, patients, hospitals etc) are relying heavily on this data.
- There has also been a global push for open access to geospatial as it affects the lives of ordinary citizens.

Expected impacts

- By liberalizing the system, the government will ensure more players in the field, the **competitiveness** of Indian companies in the global market, and **more accurate data available** to both the government to formulate plans and administer, but also for individual Indians.
- Startups and businesses can now also use this data in setting up their concerns, especially in the sector of **e-commerce** or geospatial based apps – which in turn will increase employment in these sectors.
- Indian companies will be able to develop **indigenous apps**, for example, an Indian version of Google maps.
- There is also likely to be an increase in **public-private partnerships** with the opening of this

sector with data collection companies working with the Indian government on various sectoral projects.

- The government also expects an **increase in investment** in the geospatial sector by companies, and also an increase in export of data to foreign companies and countries, which in turn will boost the economy.

Leatherback Sea Turtle

- It is the **largest** of the seven species of sea turtles.
- Other species are: **Olive Ridley turtle, Green turtle, Hawksbill turtle, Loggerhead turtle, Leatherback turtle**
- Except the Loggerhead, the remaining four species nest along the Indian coast.
- It is found in all oceans **except the Arctic and the Antarctic**.
- Within the Indian Ocean, they nest **only in Indonesia, Sri Lanka, and the Andaman and Nicobar Islands**.
- It is the only living species in the genus Dermochelys and family Dermochelyidae.
- It can easily be differentiated from other modern sea turtles by its **lack of a bony shell**.
- They are listed in **Schedule I** of India's Wildlife Protection Act, 1972.

STATUS OF TURTLES IN INDIA

- They are protected in Indian Wildlife Protection Act of 1972, under **Schedule I**.
- They are also protected under the Biodiversity Conservation and Ganga Rejuvenation programme
- Five species of Indian turtles along with their IUCN status are as follows:
- Olive Ridley – Vulnerable
- **Green turtle – Endangered**
- Loggerhead – Vulnerable
- **Hawksbill – Critically Endangered**
- Leather back – Vulnerable

NITI Aayog's Tourism Vision

- NITI Aayog's vision includes a proposal for a mega-**shipment port at Galathea Bay** on Great Nicobar Island.
- Also, the Little Andaman plan proposes phased growth of tourism on this untouched island, which may lead to the de-reservation of over 200 sq km of rainforests and also of about 140 sq km of the **Onge Tribal Reserve**.

National Marine Turtle Action Plan

- The **Ministry of Environment** has released National Marine Turtle Action Plan in which **A&N Islands** are given prominent importance.
- According to the plan, India has identified all its important sea turtle nesting habitats as '**Important Coastal and Marine Biodiversity Areas'.**
- These areas have been included in the Coastal Regulation Zone **(CRZ) – 1.**
- **South Bay and West Bay** on **Little Andaman** and **Galathea** on Great Nicobar, are mentioned as "**Important Marine Turtle Habitats in India"**