# CURRENT AFFAIRS
## WEEKLY

**WEEK -3**
**OCTOBER, 2019**

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# — Disclaimer —

The current affairs articles are segregated from prelims and mains perspective, such separation is maintained in terms of structure of articles. Mains articles have more focus on analysis and prelims articles have more focus on facts.

However, this doesn't mean that Mains articles don't cover facts and PT articles can't have analysis. You are suggested to read all of them for all stages of examination.

# CURRENT AFFAIRS ANALYST

**WEEK-3 (OCTOBER, 2019)**

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## Section - B: Prelims Current Affairs

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# SECTION: A

## (MAINS)

## CURRENT AFFAIRS

# CREATION OF VIBRANT SMES FOR DEFENCE CORRIDORS

## CONTEXT

- **Defence Minister Rajnath Singh called for increased and active participation of the private sector in defence manufacturing to achieve the government's target of making the Indian defence industry worth $26 billion by 2025.**

## ⊙ BACKGROUND:

### What are Defence Industrial Production Corridors?

- A defence corridor refers to a route or a path along which domestic production of defence equipment by the public sector, private sector an MSMEs is lined up to enhance the operational capability of the defence forces.
- The budget for 2018-19 provided for development of two defence industrial production corridors: the locations of these corridors have been strategically decided, taking into account the natural ecosystem.
- **The first corridor** plans to **link Chennai and Bengaluru** and will pass through Coimbatore and several other industrial clusters. This southern corridor will extend from Chennai, Hosur, Coimbatore, Salem and Tiruchi.
- **The second corridor** will be in **Bundelkhand—a region divided between Uttar Pradesh and Madhya Pradesh.** This will be a Rs 20,000-crore defence industrial production corridor, which will generate 2,50,000 jobs.

## ⊙ ANALYSIS:

It is in the strategic interest of a nation aspiring to be a regional power to develop an indigenous and internationally competitive defence industry base. India has the potential to emerge as a global platform for defence research, manufacturing, supply chain sourcing, software development, and offsets, with the right kind of policy interventions. The Small and Medium Enterprises (SMEs) sector is critical for the success of these flagship initiatives.

### MSMEs in Defence sector:

The Ministry of Defence set up a **Committee of Experts under the chairmanship of Dhirendra Singh** in May 2015 to evolve a policy framework for 'Make in India' and to suggest the requisite amendments in Defence Procurement Policy 2013. The Committee stressed on the importance of SMEs for the Defence production.

- **Present status of MSME in defence:**
  - **90 percent of the industrial units in India belong to the Micro, Small and Medium Enterprises** (MSME) sector.
  - There are over 11 million MSME units in India that produce more than 8,000 products. They contribute nearly 45 percent to manufacturing and about 40 percent to the Indian export sector.
  - **Their contribution to the Indian Gross Domestic Product (GDP) is 8 percent.**
- Opportunities for start-ups in the defence sector include not only the manufacture of equipment but also the provision of technical support and integration services in information technology, maintenance, repair, and overhaul, communication and navigation, among other areas.
- Although exports are a nominal part of the earnings of the defence industry, as the SMEs develop the capacity to manufacture defence equipment, they can be part of the global supply chain.
- The SMEs are crucial for the Indian defence sector due to their flexibility, diversity, low cost inputs, etc.

### Issues and Concerns:

- **Reluctance to Technology sharing:** Make in India for defence has not made any substantial difference because of the primary dependence on the import route for acquisition of technology. There is a general reluctance among technology leaders to share critical technologies with Indian partners and there is relative inability of the Indian counterparts to absorb and upgrade the technology.
- **Stiff competition:** The MSMEs face stiff competition from two sources: the bigger and more established players in the market, and imports. These make it necessary for the MSMEs to innovate and either introduce a product or a service to fill the void created by the bigger players, or reduce the costs and streamline the processes to enable them to be on a more level playing field against the bigger players.

- **Infrastructural bottlenecks:** The MSMEs are located in decades-old industrial estates, are functioning within urban areas or have come up in an unorganized manner in rural areas. The state of infrastructure, including power, water, roads, etc. in such areas is poor and unreliable.
- **Lack of skilled manpower:** Although India has a large pool of human resources, the industry continues to lack formally skilled manpower required for manufacturing, marketing, servicing, etc.

### Recommendations to Create Vibrant SMEs in Defence Corridors:

- The important issues faced by the industries need to be researched and common issues like testing facility, Computer Aided Design (CAD) and Computer Aided Engineering (CAE) facility for R&D, Internet Protocol (IP) management services, co-location of the Quality Assurance Evaluator (QAE) establishments and defence PSUs, and talent upgradation specific for emerging technologies, need to be addressed.
- Considering the relative state of development of the two proposed corridors, the approach for each corridor needs to be different.
- From a generalistic SME policy to adopting specific policies for high-growth innovative SMEs, and from promoting entrepreneurship to improving the business environment for SMEs can be helpful in supporting the SMEs.
- As the MSMEs are bogged down in routine operations, reporting for regulatory compliance, an integrated IT system taking care of non-core functions will allow them to concentrate on core areas, improving employee productivity. Adoption of Information and Communication Technology (ICT) is a key enabler for migration to Industry 4.0.
- The government should play the role of a facilitator for delivery of cost-effective solutions such as Software as a Service (SaaS), Infrastructure as a Service (IaaS) and Platform as a Service (PaaS) through cloud computing.
- A special fund to provide up to 50 percent funding support for hiring external experts to improve management and operations can make the SMEs more efficient.
- As part of the intellectual property management support programme, the necessary support can be given for developing new products, processes, ideas and business models.
- Better linkage to the venture capital and angel investors would help the SMEs to learn and grow by tapping onto the expertise of these special categories of investors.
- Knowledge and technology transfer from the universities to the SMEs and innovative start-ups can be facilitated by the government under an appropriate scheme. A symbiotic relationship between the MSME clusters and technical institutions would help solve the technical and designrelated problems of the MSMEs.

## ⊙ CONCLUSION:

- The rise of India as a growing power would require not only a macroeconomic uplift but also a thorough realization of entrepreneurship and innovation by the MSMEs. Since firms, not countries, are the ones that have to compete internationally, it is therefore essential for India to foster innovation, especially at the firm level.

## Practice Question

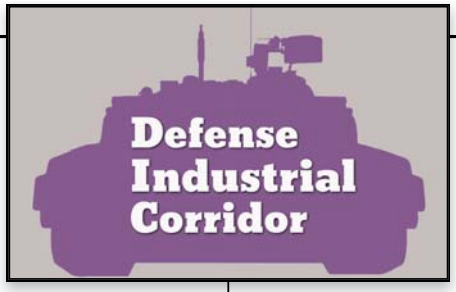
- **Analyse the role of Small and Medium Enterprises in the development of Defence Corridors in the country.**

## Creation of Vibrant SMEs for Defence Corridors

GS SCORE Learning Aid

**Context**

Defence Minister Rajnath Singh called for increased and active participation of the private sector in defence manufacturing to achieve the government's target of making the Indian defence industry worth $26 billion by 2025




plans to **link Chennai and Bengaluru** and will pass through Coimbatore and several other industrial clusters
⇩
This southern corridor will extend from Chennai, Hosur, Coimbatore, Salem and Tiruchi

will be located in **Bundelkhand region**
⇩
This will be a Rs 20,000-crore defence industrial production corridor, which will generate 2,50,000 jobs

**first corridor** — **second corridor**

refers to a route or a path along which domestic production of defence equipment by the public sector, private sector and MSMEs is lined up to enhance the operational capability of the defence forces → The budget for 2018-19 provided for development of two defence industrial production corridors

### MSMEs in Defence sector

The SMEs are crucial for the Indian defence sector due to their flexibility, diversity, low cost inputs, etc ⟷ Although exports are a nominal part of the earnings of the defence industry, as the SMEs develop the capacity to manufacture defence equipment, they can be part of the global supply chain

**Stiff competition**
⇩
The MSMEs face stiff competition from two sources: the bigger and more established players in the market, and imports. These make it necessary for the MSMEs to innovate

**Reluctance to Technology sharing**
⇩
There is a general reluctance among technology leaders to share critical technologies with Indian partners and there is relative inability of the Indian counterparts to absorb and upgrade the technology

**Issues and Concerns**

But the industry continues to lack formally skilled manpower required for manufacturing, marketing, servicing, etc.

The state of infrastructure, including power, water, roads, etc. in such areas is poor and unreliable

**HR and infrastructural issues**

India has a large pool of human resources

MSMEs are located in decades-old industrial estates, are functioning within urban areas or have come up in an unorganized manner in rural areas

### Recommendations to Create Vibrant SMEs in Defence Corridors

The government should play the role of a facilitator for delivery of cost-effective solutions such as Software as a Service (SaaS), Infrastructure as a Service (IaaS) and Platform as a Service (PaaS) through cloud computing

Better linkage to the venture capital and angel investors would help the SMEs to learn and grow

A special fund to provide up to 50% funding support for hiring external experts to improve management and operations can make the SMEs more efficient

The important issues faced by the industries need to be researched and common issues like testing facility, Computer Aided Design (CAD) and Computer Aided Engineering (CAE) facility for R&D, Internet Protocol (IP) management services, co-location of the Quality Assurance Evaluator (QAE) establishments and defence PSUs, and talent upgradation specific for emerging technologies, need to be addressed

# ALTERNATIVES TO SINGLE-USE PLASTICS

## CONTEXT

- **Alternatives such, as eco-friendly cutlery, recycled plastic, biodegradable lids and other ways to tackle plastic pollution have started gaining significance in the market with the government banning the consumption of single-use plastics.**

## ⊙ ABOUT

- About 32 per cent of 78 million tones of annual plastic packaging production is dumped in the oceans, according to a World Economic Forum (WEF) report.
- Around 43 per cent of plastic manufactured is used for packaging and most of it is single-use, estimated by the New Delhi-based Energy and Resource Institute.

### Different ways being applied worldwide to tackle the consumption of single-use plastics

- **Eco-friendly cutlery**
  - Westlife Development Ltd recently said it has replaced all single-use consumer-facing plastic with eco-friendly and biodegradable alternatives. Wooden cutlery has replaced plastic cutlery and paper cups have been taken over plastic cups. Westlife operate 300 McDonald's Corp store in south and west India.
  - Vistara is the first and only carrier to serve oxy-biodegradable cutlery and pouches to its economy class customers, claimed the airline. It also said it has replaced plastic casseroles with aluminum dishes in economy and china casseroles in premium economy. Also, disposable bowls have been replaced with reusable ones.
- **Waste collection, recycling**
  - Thirty-two companies, including Coca Cola Inc, PepsiCo, Diageo and Reliance Industries partnered to launch a packaging waste management venture and plan to mobilise more than Rs 1,000 crore for the project.
  - Parle Agro has joined hands with Indian Pollution Control Association and NEPRA Environmental Solutions Pvt Ltd to collect and recycle 100 per cent of its PET bottle waste, according to media reports.
  - Textile and other non-allied industries will use the plastic recycled by this company. The total amount of waste collection was pegged at 310 crore PET bottles, weighing nearly 50,000 metric tonnes of PET waste.
- **Innovation in packaging**
  - With a circular economy approach, Unilever plans to discard the take-make-dispose model and aims to make its packaging material 100 per cent reusable, recyclable or compostable by 2025.
  - Flipkart released a statement saying it had achieved a 25 per cent fall in single-use plastics through various initiatives across its packaging value chain. It also claimed to be working on long-term initiatives like the introduction of eco-friendly paper shreds, replacing bubble wraps and airbags with carton waste shredded material and two-ply roll, among others.
  - Amazon India announced that it was committed to eliminating single-use plastics from its packaging by June 2020. It plans to substitute plastic dunnage like air pillows and bubble wraos with paper cushions across all its fulfillment centres in India.
  - Zomato also said it was constantly working towards providing bio-degradable tamper-proof packaging.
- **Recycled inputs**
  - Evian, a leading mineral water manufacturer, said all its bottles will be made of recycled plastic by 2025. For this, it intends to develop "pioneering partnerships to redesign its packaging accelerate recycling initiatives and remove plastic waste from nature".
  - Nestle declared that it was committed to make 100 per cent of its packaging recyclable or reusable by 2025.
- **Eliminating bottles**
  - Vistara claimed it will remove all 200 ml water bottles from its flights.
  - Air India also said it will replace all 200 ml bottles with larger 1,500 ml water bottles in all its carriers.
- **Biodegradable replacement for plastic straws**
  - Since February 2019, paper straws are being increasingly used to replace plastic straws in Nestle products.
  - United Airlines also said it is in the process of eliminating non-recyclable plastic stirring sticks and cocktail picks on airplanes and replacing them with bamboo-made alternatives.

- **Directing employees**
  - Flipkart claimed that it has stopped using plastic cutlery in its corporate office in Bengaluru, which houses 8,500 employees.
  - Starbucks announced in July 2018 that it will phase out plastic straws from more than 30,000 stores worldwide by 2020.
- **Biodegradable lids**
  - Starbucks aims to replace plastic straws with lightweight, straw less cold drink lids. The Nitro lid is designed for optimal sips of liquid and foam simultaneously.
- **Refill stations**
  - Corporates like Costa, Chilly's and Robeco partnered with Refill UK to open water refill stations across the United Kingdom. This will help promote the usage of reusable bottles and impede the spread of single-use plastics.
  - With almost 200 refill stations, Refill UK estimated that 10 million bottles will be saved if all their refill stations are used just twice a day.
- **Recycle one bottle for every new one sold**
  - Coca Cola has decided to recycle a bottle or can for every one sold by 2030.

## WAY FORWARD:

- The growing consumption of single-use plastic and the increasing plastic pollution mandated the government to ban single-use plastics in India completely.
- The above examples show the changes made by various corporate companies to find sustainable alternatives to single-use plastics.
- Also, these changes must be accompanied with altitude change and creation of mass-awareness of the harmful affects of single-use plastics.
- Only by making changes in our lifestyle and attitude can we protect the earth from human-made a apocalyptic disasters.

## Practice Question

- **India recently banned the use of single use plastic. In the context of this statement, discuss some alternative ways to tackle the menace of growing plastic pollution.**

## Methods companies bet on to cut single-use plastic use in the era of Plastic Ban

**Context**

Several firms claim to have either started or plan to use eco-friendly cutlery, recycled plastic, biodegradable lids and other ways firms are using to tackle plastic pollution

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43 per cent of plastic manufactured is used for packaging and most of it is single-use

According to New Delhi-based Energy and Resource Institute

WAKE UP CALL

According to a World Economic Forum

32 per cent of 78 million tones of annual plastic packaging production is dumped in our oceans

## Different ways in which companies worldwide are tackling their usage of single-use plastics

**Replacing** of plastics used with eco-friendly biodegradable alternatives

**In serving food**

Use of Eco-friendly cutlery like wooden cutlery, paper cups, reusable bowls, paper straws, biodegradable lids

Various companies are also eliminating plastic usage in their office spaces

**In packaging**

Online stores like amazon and flipkart and food apps like zomato have taken initiatives to replace plastic used in packaging with eco friendly alternatives

**Recycling**

Besides minimisation of single plastic usage, various companies are also coming up with innovative recycling mechanisms

Coca Cola has decided to recycle a bottle or can for every one sold by 2030.

Corporates like Costa, Chilly's and Robeco partnered with Refill UK to open **water refill stations** across the United Kingdom

Evian, a leading mineral water manufacturer, said **all its bottles will be made of recycled plastic** by 2025.

Nestle declared that it was committed to make **100 per cent of its packaging recyclable** or reusable by 2025

Thirty-two companies, including Coca Cola Inc, PepsiCo, Diageo and Reliance Industries partnered to launch a **packaging waste management venture and plan to mobilise more than Rs 1,000 crore for the project**

Parle Agro has joined hands with Indian Pollution Control Association and NEPRA Environmental Solutions Pvt Ltd to collect and **recycle 100 per cent of its PET bottle waste**

# INDIA-BANGLADESH RELATIONS

## CONTEXT

- **Prime Minister Sheikh Hasina's four-day official visit to India will be underscored by serious concerns which will challenge Delhi-Dhaka ties.**

## ⊙ BACKGROUND:

- India was the first country to recognize Bangladesh as a separate and independent state and established diplomatic relations with the country immediately after its independence in December 1971.
- The relationship between India and Bangladesh is anchored in history, culture, language and shared values of secularism, democracy, and countless other commonalities between the two countries.
- It is based on sovereignty, equality, trust, understanding and win-win partnership that goes far beyond a strategic partnership.
- In the last couple of years, the relationship has been further strengthened including through cooperation in new and high-technology areas.

### Bilateral institutional mechanisms

- **Security & Border Management:** India and Bangladesh share 4096.7 km. of border, which is the longest land boundary that India shares with any of its neighbours. The India-Bangladesh Land Boundary Agreement (LBA) came into force following the exchange of instruments of ratification. A number of agreements related to security cooperation have been signed between both the countries. The Coordinated Border Management Plan (CBMP) signed aims to synergize the efforts of both the Border Guarding Forces for checking cross border illegal activities and crimes as well as for maintenance of peace and tranquility along the India-Bangladesh border.
- **Sharing of River Waters:** India and Bangladesh share 54 common rivers. A bilateral Joint Rivers Commission (JRC) is working since June 1972 to maintain liaison between the two countries to maximize benefits from common river systems. The Ganga Waters Treaty signed in 1996 for sharing of waters of river Ganga during lean season is working satisfactorily. Regular meetings of the Joint Committee on Sharing of Ganga Waters are held to take stock of the implementation of the provisions of the treaty.
- **Bilateral Trade and Investment:** The first Trade Agreement between India and Bangladesh was signed in 1972. Bilateral trade between India and Bangladesh has grown steadily over the last decade. In the five years, total trade between the two countries has grown by more than 17%. India has provided duty-free and quota-free access to Bangladesh on all tariff lines except tobacco and alcohol under South Asian Free Trade Area (SAFTA) since 2011. Four Border Haats, two each in Tripura and Meghalaya, have been established for the benefit of bordering communities. Additional Border Haats on the India-Bangladesh border are under consideration.
- **Power and Energy Sector Cooperation:** Cooperation in power sector has become one of the hallmarks of India Bangladesh relations. Bangladesh is currently importing about 660 MW of power from India. The 1320 MW coal-fired Maitree thermal power plant, a 50:50 JV between National Thermal Power Corporation (NTPC) of India and Bangladesh Power Development Board (BPDB), is being developed at Rampal. Many Indian public sector units such as Indian Oil Corporation, Numaligarh Refinery Limited, Petronet LNG Ltd are working with their Bangladeshi counterparts in the oil and gas sector of Bangladesh.
- **Training and Capacity-Building:** A number of training courses are being conducted for interested Bangladesh officials / nationals including personnel of administration, police, judiciary, fire-fighters, narcotic officials, nuclear scientists, teachers etc. Bangladesh is also an important ITEC partner country, and around 800 participants from Bangladesh avail of training courses under the ITEC programme annually.
- **Cultural Exchanges:** The Indira Gandhi Cultural Centre (IGCC), High Commission of India, is a Cultural Centre of the Indian Council for Cultural Relations of India in Bangladesh. The IGCC also holds regular training courses in Yoga, Hindi, Hindustani Classical Music, Manipuri Dance, Kathak and Painting. The courses are very popular with the Bangladeshi students. IGCC Hindi teacher also teaches Hindi at Institute of Modern Languages in University.
- **Indian community in Bangladesh:** About 10,000 strong Indian community is estimated to be living in Bangladesh. Indians in Bangladesh are well respected for their hard work and managerial skills and as a community are doing very well socially and economically. Most of the Indians are Page 7 of 7 engaged in Ready Made Garment (RMG) sector or as top professionals in MNCs.

### Recent Developments

- One of the projects jointly inaugurated by India and Bangladesh allows India to buy liquefied petroleum gas from Bangladesh for consumption in India's north-eastern state of Tripura.
- The second is the inauguration of a skill development centre that will provide basic as well as advanced training some 200-300 Bangladeshi youth on an annual basis for employment in the small and medium scale industry sectors.
- Terms for the use of the Chattogram and Mongla ports in Bangladesh for movement of goods to and from India.
- Pact signed for India to draw 1.82 cusecs (cubic seconds) of water from Bangladesh's Feni river for use by India in Tripura state.

### How Bangladesh Is Benefiting From the China-India Rivalry

- Bangladesh's pivotal geographical location on the contested Indian Ocean, it is one of the world's fastest-growing economies and, with 160 million people, the eighth most populous country in the world. The size of the population, which signifies the size of the market, helps overshadow the small territorial size of this country.
- Bangladesh has turned its neighbours' rivalry into billions of dollars in investment and military equipment.
- China's economic engagement with South Asian countries with the exception of long-time partner Pakistan only began to ramp up in the last two decades. In this short period of time, China has emerged as a top trade partner for Bangladesh.
- In 2015, China became Bangladesh's top trading partner, knocking India out of the position it had held for 40 years. Imports from China represent 34 percent of Bangladesh's total.
- As a member of China's Belt and Road Initiative, Bangladesh has seen an influx of Chinese investment in recent times.
- China has become Bangladesh's top source for arms imports; and Dhaka likewise is China's second-largest arms export destination in the world, behind Pakistan.
- Beijing has provided Dhaka with five maritime patrol vessels, two submarines, 16 fighter jets, and 44 tanks, as well as anti-ship and surface-to-air missiles.
- Beijing's support of Bangladesh was evident in the 27 agreements for investments and loans signed by the two countries worth some $24 billion
- As a rapidly developing economy Bangladesh is in dire need of investment, while China and India both see investment in Bangladesh as a way to extend their influence. Bangladesh is seizing the opportunity and using both China and India to fill its FDI deficit.

## CONCLUSION

One way of getting the most out of India-China competition is to remain elusive, without showing a preference between the two giants. Maintaining good working relations with both India and China is crucial for an economically and infrastructurally weak Bangladesh.

## Practice Question

- **Discuss how bilateral institutional mechanisms between India and Bangladesh has resulted in strengthening mutual cooperation. Also, explain how Bangladesh is benefiting from the China-India rivalry.**

GS SCORE Learning Aid

# India-Bangladesh Relations

Removal of non-tariff barriers, such as harmonising the standards for goods accepted by India, will further facilitate Bangladeshi exports in Indian markets

⇧

**Bilateral trade : $9 billion**

## Economic Cooperation

### Tourism

In 2018, Bangladeshi tourists accounted for 21.6% of the tourists visiting India

Bangladesh contributes 50% of India's health tourism revenue

Accordingly, a third train route (Agartala-Akhaura) is under construction besides the operational Dhaka-Kolkata and Khulna-Kolkata routes.

Five additional bus services were introduced in 2018

The first ever Dhaka-Kolkata cruise ship was launched in March this year

⇧

Majority of Bangaladeshis prefer the land route to travel to India

### Power

In 2018, the Indian export of electricity to Bangladesh reached 1160 MW

- 1,600 MW power station with a dedicated transmission system is being developed to boost power trade between the Sides
- India (in collaboration with Russia) will be involved in the development of Bangladesh's first Nuclear power plant in Rooppur

**Context**

Prime Minister Sheikh Hasina's recently was on a four-day official visit to India. India and Bangladesh today enjoy one of the best periods of their relationship, with positive development in the areas of diplomatic, political, economic and security relations

## Other vital cooperations

### Connectivity Cooperation

By signing of the Land Boundary Agreement in 2015 the two neighbours amicably resolved a long-outstanding issue

### Boundary Issue

Bangladesh government has uprooted security threats and acts of insurgency against India and today, the India-Bangladesh border is one of India's most secured

### Defence cooperation

2017 → two defence pacts signed

2018 → India extended a credit line of $500 million to purchase armaments and two naval cooperation MoUs were signed

## Issues that need to be addressed

**Teesta Water Sharing Agreement**

West Bengal governments's refusal to endorse water-sharing terms agreed upon by the central government in 2015 has resulted in an impasse.

**Border killings**

Although decreased in number, the issue of border killings still remains an unpleasant issue affecting harmony in bilateral relations

**NRC**

Bangladesh does not accept that migrants travelled to Assam illegally during 1971 war. This issue needs to be handled well or it could hurt relations

**Delay in Aid commitments**

Since 2010, India has approved three lines of credit to Bangladesh of $7.362 billion to finance development projects

⇩

However, only $442 million has been disbursed till December 2018

**Rohingyas**

Faced with the challenge of providing shelter to more than a million Rohingya refugees Bangladesh was upset with India's remarks over the issue during 2017

⇩

India has an opportunity to display its leadership role by devising a sustainable solution to the problem, thus preventing undue interference by an ambitious China in this regional matter

In a neighbourhood where distrust and cynicism prevail over friendship and hope, the relationship between the two countries has given hope for optimism

⇩

The shared colonial legacy, history and socio-cultural bonds demand that the political leadership of the two countries inject momentum into India-Bangladesh relations by addressing major irritants and expanding further cooperation

# FAKE NEWS MENACE IN INDIA: DANGERS AND HOW TO TACKLE IT?

## CONTEXT

- **I&B ministry said that fake news is more dangerous than paid news and there is need for government and media to combat it jointly.**

## ⊙ BACKGROUND:

- **Fake news are stories or hoaxes created to deliberately misinform or deceive readers.** Fake news, defined by the **New York Times** as "**a made-up story with an intention to deceive"**
- Usually, these stories are created to **influence people's views, push a political agenda or cause confusion** and can often be a **profitable business for online publishers**.
- Fake news stories can deceive people by looking like trusted websites or using similar names and web addresses to reputable news organizations.
- There are **three elements** to **fake news; Mistrust, misinformation and manipulation**.
- **Popular Fake Examples from India:**
  - Muzzafarnagar riots of 2013: fake video fuelled communal passions
  - UNESCO has declared 'Jana Gana Mana' best national anthem in the world (WhatsApp)
  - Dying Woman Molested, Video shows (The Hindu Newspaper)
  - Fatwa in Saudi Arabia; Men can eat wives when hungry (AajTak)
  - GPS tracking nanochip in 2000 Rupee notes (Nov 2016)
  - Child kidnapping rumours lead to lynchings by a mob in Jharkhand
  - Missing JNU student Najeeb Ahmed has joined the ISIS
- **Deep Fake**
  - It is even more dangerous than fake news. It is a technique for human image synthesis based on artificial intelligence.
  - It is used to combine and superimpose existing images and videos onto source images or videos using a machine learning technique known as generative adversarial network.
  - Because of these capabilities, deep fakes have been used to create fake celebrity pornographic videos or revenge porn. Deep fakes can also be used to create fake news and malicious hoaxes

## ⊙ ANALYSIS

### Causes for Rise in Fake News:

- **Internet and Social media:** Many people now get news from social media sites and networks and often it can be difficult to tell whether stories are credible or not. Social media sites can play a big part in increasing the reach of these types of stories.
- **Lack of Checking Authenticity:** Everyone is busy in sharing/liking/commenting on news items without checking the authenticity of news.
- **No codes of practice for Social Media:** Traditionally, we got our news from trusted sources, journalists and media outlets that are required to follow strict codes of practice. However, the internet has enabled a whole new way to publish, share and consume information and news with very little regulation or editorial standards.
- **Stratified Organization of Fake News:** Fake news is no longer being considered a rare or isolated phenomenon, but appears to be organized and shrewdly disseminated to a target population. It is believed that the high possibility of these organized bodies coming into existence with the help of political influence.
- **Vernacular Social Media Platforms:** The immense popularity of vernacular social media platforms in India is exploited for the spread of fake news.

### Dangers/Threats posed by Fake News

### Political

- Political parties try to gain political advantages by polarizing the voter's mind which further intensifies the tensions between different sections of society.
- Political campaigning has progressed from mere appeals in the name of identity or loyalty or tall promises to something akin to psychological warfare.

**Economic:** As communal tendencies emerge in politics due to the spread of fake news economic development has taken back seat. The problems faced by the problems are not solved by the government.

**Society:** It can disturb the social fabric of the society and tensions among communities persists for long times. It can lead to violence between two or more communities thereby creating enmity and hatred between them. It reduces the tendencies of cooperation between different communities.

**International:** Deep fakes are used by countries to target other countries and bring chaos or desired political changes. China and Russia are using deep fakes to target the hostile countries to gain political and trade benefits.

**Faith in Media:** People's faith in social, print and electronic media reduces which could affect the benefits of these Media as well the spirit of democracy as media being the fourth estate of democracy. In its purest form, fake news is completely made up, manipulated to resemble credible journalism and attract maximum attention and, with it, advertising revenue.

### Laws Governing Fake News

- There is no specific law against fake news in India. Free publication of news flows from **Article 19** of the Constitution guaranteeing freedom of speech.
- **Press Council of India**, a regulatory body, can warn, admonish or censure the newspaper, the news agency, the editor or the journalist or disapprove the conduct of the editor or the journalist if it finds that a newspaper or a news agency has violated journalistic ethics.
- **News Broadcasters Association (NBA)** represents the private television news and current affairs broadcasters. The self-regulatory body probes complaints against electronic media.
- **Indian Broadcast Foundation (IBF)** also looks into the complaints against contents aired by channels.
- **Broadcasting Content Complaint Council (BCCC)** admits complaints against TV broadcasters for objectionable TV content and fake news.
- **Indian Penal Code (IPC)** has certain sections which could curb fake news: **Section 153** (wantonly giving provocation with intent to cause riot) and **Section 295** (injuring or defiling place of worship with intent to insult the religion of any class) can be invoked to guard against fake news.
- **Civil or Criminal Case for Defamation** is another resort against fake news for individuals and groups hurt by the fake news. **IPC Section 499** (defamation) and **Section 500** (whoever defames another shall be punished with simple imprisonment for a term which may extend to two years, or with fine, or with both) provide for a defamation suit.

### How to tackle it?

- **Education and Awareness**
  - The **government must take the initiative to make all sections of the population aware** of the realities of this information war and evolve a consensus to fight this war. It must also take strict action against the fake news providers.
  - Government should take active measures for promoting awareness among people about fake news and their consequences.
  - Italy, for example, has experimentally added 'recognizing fake news' in school syllabus. India should also seriously emphasize cybersecurity, internet education, fake news education in the academic curriculum at all levels.
- **Strict Regulation**:
  - News being spread using chatbots and other automated pieces of software should automatically be selected **for special screening**.
  - Government should **have independent agency:** to verify the data being circulated in social and other media. The agency should be tasked with presenting real facts and figures.
- **An ombudsman Institution:** It deals with the credibility of news sources and ensures that the facts are reported.
- **Legislation to Curb Fake News:**
  - Any future legislation to curb fake news should take the whole picture into account and not blame the media and go for knee-jerk reactions; in this age of new media anyone can create and circulate new for undisclosed benefits.
  - Government should **have mechanism for immediately issuing of notice** against sites/ people/agencies involved in spreading fake news.
- **Accountability of Social Media:** Social media websites should be made **accountable** of such activities so that it becomes their responsibility to have better control over the spread of fake news.
- **Help From Individuals and Civil Society**:
  - Public should **not blindly trust** any sensitive news and should not forward it to others.
  - Public **should inform concerned department** about any fake post as soon as they come across.
  - They should act as active vigilant for maintaining peace and harmony in the society.
  - NGO's and other civil society groups can play important role in spreading awareness about the ill effects of fake news.
  - Ordinary consumers of news can play a big role by, first, waking up to the reality that all they read on WhatsApp and Twitter is not the gospel truth, and then, by refusing to pass on

what they cannot independently verify with other sources.

- **Using Artificial Intelligence:** The artificial intelligence technologies, particularly machine learning and natural language processing, might be leveraged to combat the fake news problem. AI technologies hold promise for significantly automating parts of the procedure human fact checkers use today to determine if a story is real or a hoax.

## CONCLUSION

Political campaigning has progressed from mere appeals in the name of identity or loyalty or tall promises to something akin to psychological warfare. Parties must desist from spreading fake news or giving patronage to such media organizations. At the same time mainstream as well social media must be accountable for spreading fake news. Both government and media have to combat the fake news menace collectively.

## Practice Question

- **Fake news menace has become a threat to media and democracy. In light of this statement, analyse how fake news can affect voting patterns in India?**

Fake news is news, stories or hoaxes created to deliberately misinform or deceive readers

Usually, these stories are created to influence people's views, push a political agenda or cause confusion and can often be a profitable business for online publishers


**Context**

I&B ministry said that fake news is more dangerous than paid news and there is need for government and media to combat it jointly

GS SCORE Learning Aid

Fake news can deceive people by looking like trusted websites or using similar names and web addresses to reputable news organizations. They generally have 3 elements

**mistrust** | **misinformation** | **manipulation**

## Threats posed by fake news

Political parties try to gain political advantage by trying to polarise voters' minds

As communal tendencies emerge in politics due to the spread of fake news economic development has taken back seat

It can disturb the social fabric of the society and tensions among communities may persist for a long time

People's faith in social, print and electronic media reduces which could affect the benefits of these Media as well the spirit of democracy

Deep fakes are used by countries to target other countries and bring chaos or desired political changes

## Tackling Fake News Menace

### Education and Awareness

Public **should inform concerned department** about any fake post as soon as they come across

Government should take active measures for promoting awareness among people about fake news and their consequences

Public should **not blindly trust** any sensitive news and should not forward it to others

### Use of Artificial Intelligence

The artificial intelligence technologies, particularly machine learning and natural language processing, might be leveraged to combat the fake news problem

### Accountability of Social Media

Social media websites should be made **accountable** of such activities so that it becomes their responsibility to have better control over the spread of fake news

### An ombudsman Institution

to deal with the credibility of news sources and ensure that the facts are reported

### Legislation to Curb Fake News

Any future legislation to curb fake news should take the whole picture into account and not blame the media and go for knee-jerk reactions

### Strict Regulation

News being spread using chatbots and other automated pieces of software should automatically be selected **for special screening**

Government should **have mechanism for immediately issuing of notice** against sites/people/agencies involved in spreading fake news

Government should **have independent agency** to verify the data being circulated in social and other media

Political campaigning has progressed from mere appeals in the name of identity or loyalty or tall promises to something akin to psychological warfare. Parties must desist from spreading fake news or giving patronage to such media organizations. At the same time mainstream as well social media must be accountable for spreading fake news. Both government and media have to combat the fake news menace collectively

# MAKING POLITICAL PARTIES ACCOUNTABLE

## CONTEXT

- **Recently, the Supreme Court held that non-governmental organisations which were substantially financed by the appropriate government fall within the ambit of 'public authority'. Owing to the reasoning given by the court, the judgment can potentially have wide ramifications in the discourse pertaining to the ambit of the RTI regime on national political parties.**

## ⊙ BACKGROUND:

- The Association for Democratic Reforms (ADR), a non-governmental organization, had asked for details of finances, donations and donors from several political parties using the RTI route.
- In 2013, a full bench of the Central Information Commission (CIC) ruled that six national political parties of India - Congress, the Bharatiya Janata Party, the Communist Party of India, the Communist Party of India (Marxist), the Nationalist Congress Party and the Bahujan Samaj Party will be deemed to be public authorities.
- This CIC verdict put these parties in the ambit of Right to Information (RTI) Act, 2005.
- In 2013, The Right to Information (Amendment) Bill was introduced in Parliament to keep political parties explicitly outside the purview of RTI that lapsed after the dissolution of the 15th Lok Sabha.

**Meaning of Public authority**

Under Section 2(h) of the RTI Act, public authority means any authority or body or institution of self-government which is substantially financed directly or indirectly by funds provided by the appropriate government.

## ⊙ ANALYSIS:

### Why is the RTI crucial for political accountability?

- Information is an antidote to corruption; it limits abuse of discretion, protects civil liberties, encourages people's participation and brings awareness of laws and policies. This is how RTI brings individual and institutional accountability to our administrative machinery.
- The RTI Act mandates timely response to a request for information from a public authority.
- Political parties represent citizens of the country at various levels of the government. They voice people's demands and needs in the administrative sphere and therefore serve as the link between citizens and the government. Thus, bringing political parties within RTI ambit will help make transparent system.
- Political parties funding patterns are unknown to the public and it necessitates bring them under RTI.
- It will promote internal democracy in the party.

### Why political parties need to be urgently brought under the RTI?

- **Tax exemptions for political parties:** Political parties are exempted from paying income tax under the law as long as they file their income tax return every assessment year. In such a case, they enjoy 100% tax exemption from all sources of income. These exemptions are leading towards enormous wealth creation of political parties.
- **Lack of proper scrutiny:** Political parties rely heavily on 'voluntary contributions/donations' for fighting elections and running their daily operations. They receive huge sums of money in the form of voluntary contributions and donations from corporate, trusts and individuals. Between FY 2004-05 and 2014-15, national political parties have received the highest amount worth Rs 4,453 crore from voluntary contributions/donations, which forms 48% of the total income of national political parties.
- **Unknown sources have surpassed known sources of funding:**
  - The unknown sources are the income that is declared in the IT returns but without giving a source of income for donations below Rs 20,000. For 11 years, between FY2004-05 and FY2014-15, national political parties have received 71% of their total income which is worth Rs 6612.42 crore from sources that cannot be traced and are therefore unknown.
  - Electoral Bonds are also not promoting transparency in political funding as donors remain anonymous to public.
- **There is no ceiling on expenditure incurred by the political parties at the time of elections**. There no information on election expenditure of the political parties is available in public.

- **Corporates donating to national parties:** Corporates have increased their control over the political arena by funding political parties and their election campaigns. This is how the corporations that are essentially unaccountable to the general public influence many of the major political-economic decisions in the country.

### Challenges and concerns:

- **Absence of law governing political parties:** Political parties, unlike any other public or private institutions, are integral to the functioning of our democracy. They enjoy unique privileges. Despite their obvious crucial role in the past almost seven decades, lawmakers have not framed any regulation or law governing the functioning of political parties. The Law Commission of India's report of 1999 also had detailed observations on the need for regulatory oversight on the functioning of parties.
- **Misuse of RTI:** The disclosure of information under RTI act may give advantage to the competitors of political parties.
- **Reluctance of political parties:** Political parties are reluctant to disclose their internal working as well as their decision making system.

## ⦿ WAY FORWARD:

- **Except for the political strategy, other matters relating to finance and administration need to be made available to public** because political parties are public institutions, receiving money from public.
- There should be a proper legislation for governing political parties in India.
- **A National Election Fund** should be created for conducting elections to reduce the misuse of funds received by political parties.
- **Scrutiny of manifestos**: There should be scrutiny of manifestos of party and these manifestos should be realised one/two months before elections so that people could easily understand the manifestos given by political parties.

## ⦿ CONCLUSION:

- The political parties should come up with self-declaration of their election expenditures and put that in public.
- The Supreme Court has declared NGos as public authorities under RTI and under same logic SC should declare political parties public authorities and bring them under RTI Act.

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# CREATING JOBS FOR YOUNG INDIA

## CONTEXT

- **The government's Periodic Labour Force Survey carried out in 2017-18 revealed that unemployment in the country reached an all-time high rate of 6.1%.**

## ⊙ ABOUT:

- Unemployment Rate (UR) is the ratio of number of unemployed persons/person-days to the number of persons/person-days in labour force.
- In 2018, there were 471.5 million persons employed and 30.9 million unemployed in India.
- For the rural areas, the unemployment rate was 5.3 per cent, while in the urban areas it was 7.8 per cent.
- According to the NSSO, in the rural male youth between age group of 15 to 28, the jobless rate was 17.4 percent and for females, it was 13.6 percent.
- For urban males, it was 18.7 per cent and for females, it was much higher at 27.2 per cent.
- Unemployment for young educated rural males was 10.5 percent and for females, 17.3 per cent.
- Estimates shows that the potential non-agricultural workforce in India grew at the rate of 14.2 million a year between 2005 and 2012, which rose further to 17.5 million a year between 2012 and 2018.

### Reasons for rising number of job seekers:

- **Expansion of working-age population:** The population of 15-59-year-olds increased at the rate of 14 million a year in the 2000s, which in turn has increased the labour supply.
- **Nature of Labour supply:** There has been an increasing enrolment of young adults for education and this has led to rising job aspiration. For example- 31% of 15-29-year-old females had been attending schools or colleges in 2018, up from 16.3% in 2005.
- **Workforce in Agriculture and Allied sectors:** The size of the workforce engaged in agriculture (and allied activities) has been declining in India: from 258.8 million in 2005 to 197.3 million in 2018 (which still accounted for 41.9% of the total workforce in the country). The decline has been partly due to the 'push' from low-productivity agriculture, which has suffered due to stagnant public investment from the 1990s onwards. The decline has also been driven by the 'pull' of new opportunities that emerge in the towns and cities.
- **Increase in the supply of potential workers for the non-agricultural sectors:** The potential non-agricultural workforce in India grew at the rate of 14.2 million a year between 2005 and 2012, which rose further to 17.5 million a year between 2012 and 2018.
- **Fall in construction sector:** New employment opportunities in construction created in rural India amounted to 18.9 million between 2005 and 2012, which fell sharply to 1.6 million between 2012 and 2018.
- **Manufacturing sector:** The size of the manufacturing workforce in India declined by one million between 2012 and 2018, with micro and small firms in the informal sector suffering severe setbacks.
- **Demand-supply mismatch:** From 2005 to 2012, job creation in industry, construction and services in India (at the rate of 6.3 million a year) was inadequate to absorb the increase in potential job seekers into these sectors (at the rate of 14.2 million a year). Between 2012 and 2018, while the supply of potential workers into the non-agricultural sectors accelerated (to 17.5 million a year), actual labour absorption into these sectors decelerated (to 4.5 million a year).
- **Public sector:** The public sector is a big employer of youth, but its share as a job provider has been shrinking despite the fact that government jobs are the preferred option for 80 per cent of the rural and urban youth.
- **Women workforce:** Faced with the inadequate number of new jobs generated in the economy, women withdrew altogether from the labour market. Of all 15-59-year-old women in India, only 23% were employed in 2018, down from 42.8% in 2005.
- **Young men:** Among 15-29-year-old men, there was an unprecedented increase in the number of the unemployed, from 6.7 million in 2012 to 21.1 million in 2018. This was indeed the main contributor to the sudden increase in overall unemployment in India.

### Suggestions to solve unemployment problem:

- Action will be needed on multiple fronts including investments in human capital, revival of the productive sectors, and programmes to stimulate small entrepreneurship.

- Production technique should suit the needs and means of the country. It is essential that labour intensive technology should be encouraged in place of capital intensive technology and emphasis should be given to mass consumer goods industries.
- Greater investment should be encouraged towards small enterprises. Also, during the period of rapid growth in the labour force, it would be advisable to adjust the choice of techniques consistent with the employment objective. Intermediate technology would be more suited to Indian conditions.
- Rate of capital formation in the country should be accelerated. Capital formation should be particularly encouraged in such activities which generate greater employment opportunities. Capital output ratio should be kept low.
- The pattern of subsides should be altered. Creation of more employment should be treated as the basis for the grant of subsides and incentives. This will shift the entire structure of government support from the large-scale producer to the small-scale producer as this is more consistent with the objective of employment generation and achieving equality and social justice.
- Creating more employment opportunities in the rural areas through intensive farming, greater irrigation facilities, extension of community projects, organization of co-operative farming, development of village industry and settlement of agricultural labourers on the reclaimed land.

## ⦿ WAY AHEAD:

India faces a tough challenge in creating decent jobs for its growing young population. If the country is unable to make effective use of the strengths of its young women and men now, it can perhaps never do so. The Government has to come out with a National Employment Policy to tackle all the problems concerning jobs for youth.

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# SECTION: B

# (PRELIMS)

## CURRENT AFFAIRS

# ELECTORAL BOND SCHEME

**⊙ CONTEXT**

- **Government Notifies Electoral Bonds again, although the SC is examining the validity of Scheme.**

**⊙ ABOUT**

- A bond is a debt security which borrowers issue to raise money from investors, who are willing to lend them a sum for a certain amount of time.
- **Electoral bonds** are bearer instrument in the **nature of a Promissory Note** that is payable to the bearer on demand.
- The Government of India notified the **Electoral Bond Scheme** in **January 2018.**
- Bond can be purchased by an Indian citizen or a company incorporated or established in India.
- Only political parties registered under **Section 29A of the Representation of the Peoples Act, 1951**, which have secured **no less than 1% votes** in the last Lok Sabha elections, are eligible to receive electoral bonds.
- These bonds can be bought from selected branches of **State Bank of India only.**
- Political parties are allotted a **verified account by the Election Commission** and all the electoral bond transactions are done through this account only.
- The donors can buy these electoral bonds and transfer them into the accounts of the political parties as a donation.
- The electoral bonds are available in denominations from **Rs 1,000 to Rs 1 crore.**
- Electoral bonds will be **valid for 15 days** from the date of purchase.
- **No interest** will be given by the banks on these bonds.
- Donations will be **tax deductible**, and the benefitting political party will get a **tax exemption** for the amount received.
- They can be bought by a donor with a **KYC-compliant** account. **Names of the donors** are kept **confidential.**
- Bonds can be purchased in **January, April, July and October months of each year.**

### Previous System of funding

- Before the budget of 2017, if a political party got a donation of **less than Rs. 20,000** from a donor, then it **was not mandatory to reveal the source of fund.**
- This rule was misused and near about all the political parties said that they received 90% of their political fund in the denomination of less than Rs. 20000.
- So a huge amount of black money was generated and used in the election campaigning.
- On the basis of the recommendation of the Election Commission, in Budget 2017 the government **reduced the limit of anonymous donation to Rs. 2000** only.
- The concept of Electoral bonds was introduced in the **Finance Bill 2017**, and was facilitated through multiple amendments in the Finance Act 2017.

### Examples from around the world:

- While there have been electoral trusts in India, the concept of electoral bonds is new for India and the world.
- **United States** has **Political Action Committees** which receives money from individual and corporate donors, and manages them. They do not have any scheme that allows a citizen to directly purchase a bond and donate the same to a political party.

### Criticism

- The Communist Party of India (Marxist) and the NGO Association for Democratic Reforms (ADR) had moved to the SC against the electoral bonds.
- They argued, ordinary citizens will not know who is donating how much to which political party, and it would add to the woes of the Indian democracy.
- It may also **tilt the balance** in favour of one political party. For example, in FY 2018, the ruling party received 95% of the total bonds issued.
- Private corporate interests may take precedence over the needs and rights of the people of the State in policy considerations.

### Supreme Court's stand

- According to SC, if the **identity of the buyers** of electoral bonds is not known, the efforts of the government to curtail black money in elections would be **"futile".**
- It has directed the Finance Ministry to reduce window of purchasing electoral bonds.
- It has directed all political parties **to furnish receipts of funding** received through electoral bonds and **details of identity of donors** in a sealed cover to the Election Commission.

### Central Governments stand

- Electoral Bond Scheme is an alternative to cash donations to ensure **transparency** in political funding, and **check the use of black money** for funding elections.
- Political party have to **file returns before the EC** as to how much money has come through electoral bonds, which will provide **accountability.**
- The right of the buyer to purchase bonds without having to disclose his preference of political party is in furtherance of his **right to privacy.**
- Keeping the identity of the donor anonymous is also an extension to his **right to vote** in secret ballot.
- Allegations that nobody would know about the donors is wrong, as the **Income Tax department will have access** to this information.

### Conclusion

- It can be said that the release of electoral bonds will restrict the generation of black money up to some extent. But the rule that identity of the donors will be kept confidential may make futile the exercise to eliminate black money, as it **may just end up converting Black money into White money.**

# NEW STRATEGIC DISINVESTMENT PROCESSES

**⊙ CONTEXT**

- **Cabinet approves new strategic disinvestment processes.**

**⊙ ABOUT**

- Disinvestment is **selling or liquidating an asset or subsidiary by government.** It is also referred to as 'divestment' or 'divestiture.'
- Disinvestment of an asset is either a strategic move for the company (or government), or used for raising resources to meet general/specific needs.
- The Cabinet has approved a new process of strategic disinvestment to expedite privatization of select PSUs.
- For this purpose**, Department of Investment and Public Asset Management**, DIPAM under the **Ministry of Finance** has been made the **nodal** department.

- **DIPAM and NITI Aayog** will now jointly identify PSUs for strategic disinvestment.
- **2019-20 Budget** announced increasing the divestment target.
- In the backdrop of corporate tax cuts, mobilizing revenues has become more critical for the government.
- Disinvestment proceeds will be critical for the government to stick to its fiscal deficit target for FY 2020 (3.3 per cent of the GDP).
- Recently, government agreed for sale of its stake in Bharat Petroleum Corp Ltd (BPCL), Shipping Corporation of India (SCI), NEEPCO, THDC and Concor.
- This, together, account for 85% of the disinvestment revenue target for this fiscal.

## Disinvestment vs. Strategic Disinvestment

If the government is selling minority shares in a PSE (less than 50%), it will continue to be the owner of the PSE. This is **normal disinvestment** procedure.

But if the government is selling majority shares (50% or more) of PSE to some other entity (mostly to a private sector entity), then this method is called **strategic disinvestment or strategic sale**). Unlike the simple disinvestment, strategic sale implies some sort of **privatization, along with transfer of management control.**

PSEs for strategic disinvestment are selected based on certain criteria.

- They may be incurring losses, or
- It may be operationally difficult for the government to continue with the PSE.

## Importance of Disinvestment

The importance of disinvestment by the government lies in utilisation of funds for:

- To improve public finances and fund increasing fiscal deficit.
- Financing large-scale infrastructure development.
- For investing in the economy to encourage spending and fund growth.
- For retiring Government debt- since a big part of Centre's revenue receipts go towards repaying public debt/interest.
- For expenditure on social programs like health and education.
- To encourage wider share of ownership in an enterprise, and reduce monopoly like enterprises.
- To introduce, competition, market discipline and efficiency.
- To depoliticize non-essential services and move out of non-core businesses, especially ones where private sector has now entered in a significant way.
- It also sends a positive single to the market and can boost economic activity.

## Criticism

- It is argued that government is selling profit-making enterprises and is weakening the public sector.
- It is diverting attention from the economic slowdown.
- It is skipping the normal channel of parliamentary procedures.

## Conclusion

- Disinvestment assumes significance due to prevalence of an increasingly competitive environment, which makes it difficult for many PSUs to operate profitably.
- But government should also concentrate on **increasing its own-revenue receipts** to meet the public finances.
- It should also take into account the **suggestions of the 14th FC** in this regard. For example, selling stake in those companies with less than 1% market share.

# WHY ONION PRICES OFTEN SHOOTS UP IN INDIA?

**⊙ CONTEXT**

- **Recently, onion prices have skyrocketed in the wholesale and retail markets.**

**⊙ ABOUT**

- **Onion price has been shooting in the wholesale and retail markets** and the central government has taken many efforts to control the increasing price.
- With elections nearing in Maharashtra and Haryana, the government **cannot upset onion growers in rural areas** (part of the voter base) and **urban consumers** who have to shell out more money for the bulb.
- Since May 2019, prices in **wholesale markets across the onion-growing districts of Maharashtra have been increasing.**
- The **ripple effect** can be seen in the **retail markets** where the price of onion has also increased.
- According to **Price Monitoring Cell (PMC)** of the Consumer Affairs department, the **retail price of onion has increased by Rs 20-25/kilo** across the country in the last six months (as of September 2019).
- **Maharashtra, Karnataka, Gujarat, Madhya Pradesh, Rajasthan, Bihar, Uttar Pradesh and West Bengal** account for almost **90%** of onion production in the country.
- **Maharashtra contributes nearly one third** of the country's production.
- Farmers across the country take three crops of onions which ensure uninterrupted supply across the year. Of these,
  - **Kharif and late kharif** are not amenable for storage (has higher moisture content)
  - **Rabi crop** can be stored for a long period.
- Farmers usually store their produce in moisture-proof and dust-proof structures to prevent the bulbs from sprouting green shoots.
- Depending on the price, farmers release their produce, enabling steady supply for retail markets.

## Why the price is rising?

- **Hoarding:** Hoarding of perishable items is illegal; however, many traders have hoarded onions and are now selling at much inflated prices than before. Therefore, traders and not farmers are benefited when onion prices hike.
- **Low Onion Consumption:** The price rise comes during months when onion consumption usually goes down. It goes with the law of demand and supply. For example, it happens during the nine days of Navratri in Maharashtra and the month of Shravan.
- **Delayed Monsoon leads to supply-side constraints:** The current increase in onion prices is a fall out of **2018's drought and the delayed monsoon in 2019.** Some onion-growing areas have reported excessive rain and delay in harvest period by a week or so.
- **A combination of factors** has led to the increase in prices now.
  - The **cultivation area under rabi crop has decreased in Maharashtra**. So, it reported a low cultivation in the rabi season of 2018-19.
  - **Karnataka received heavy rain during kharif crop's harvest period**, which delayed the arrival of kharif onions from Karnataka.
  - So, the stored rabi crop should have to be supplied to the markets.
  - As the **imported onions may not arrive soon, the price of the bulb is expected to stay high.**

### Steps Taken by Government to control Onion Prices

- In early September 2019, the state-run **Minerals and Metals Trading Corporation of India (MMTC) had floated contracts for importing onions** from Pakistan, Egypt, China, Afghanistan, etc. Following sharp criticism, MMTC dropped Pakistan from the list of countries.
- The Centre also tried to **restrict exports by sharply hiking the Minimum Export Price (MEP).**
- In June 2019, the government ended the **10% export subsidy for onion**.
- Anticipating a shortage, the central government had created a **buffer stock of 57,000 tonnes**, of which some have already been offloaded.

# ADVANCED AIR QUALITY EARLY WARNING SYSTEM

**⊙ CONTEXT**

- **The Union Ministry of Earth Sciences (MoES) has launched an advanced Air Quality Early Warning System, which can predict places neighbouring Delhi that are likely to burn crop residue on a given day.**

**⊙ BACKGROUND**

- The air quality in Delhi, the capital of India, according to a WHO survey of 1600 world cities, is the worst of any major city in the world. Agricultural stubble burning has been a major contributor for air pollution.

### Air Quality Early Warning System (AQEWS):

- The system has been developed by Indian Institute of Tropical Meteorology, Pune, under MoES.
- The AQEW system uses data of stubble burning incidents from the past 15 years to predict the date and place of the next burning.
- This is then correlated with wind speed to predict air pollution level for next 72 hours.
- It can also forecast the level of pollutants like particulate matter (PM) 2.5, PM10, and dust, coming from sources other than stubble burning.
- Presently the system monitors and forecasts two types of pollutants – PM2.5 and CO (Carbon Monoxide).

### Need for AQEWS:

- Air quality index of Delhi is generally Moderate (101-200) level between January to September, and then it drastically deteriorates to Very Poor (301-400), Severe (401-500) or Hazardous (500+) levels in three months between October to December, due to various factors including stubble burning, fire crackers burning during Diwali and cold weather.
- During the winter season (November to March) in North India, the prevailing atmospheric inversion limits the dispersal of pollutants as the upper level air is descending to ground level. The particulate emissions in other seasons are more or less same but comfortable convective upward atmospheric air circulation is able to disperse the pollutants. Hence in winter months the pollution is exacerbated in NCR region.
- The early warning of pollution will provide the authorities data and time to respond accordingly in a time bound manner.

# WATER MANAGEMENT

**⊙ CONTEXT**

- **With Chennai and Maharashtra water crisis, water management issues have again taken centre stage. NITI Aayog reiterated its strategy for water resources in "Strategy for new**

**India@75" document which included adopting an integrated river basin management approach, and setting up of river basin organisations (RBOs) for major basins.**

⊙ **ABOUT**

## What is Water Management?

- Water resource management is the activity of planning, developing, distributing and managing the optimum use of water resources. According to a recent NITI Aayog report, 21 Indian cities including Delhi, Chennai, and Hyderabad will run out of groundwater by 2020 if usage continues at the current rate. This entails immediate action plan for water resource management in India.

## Water situation in India:

- India has just 4% of the world's fresh water — but 18% of the global population.
- The single largest source of fresh water is monsoons with an annual precipitation of about 4000 BCM (billion cubic metres) which is equivalent to1170 mm of rainfall. This is distributed both temporally and spatially. 3000BCM is concentrated in 3-4 months of monsoons. Simultaneously, some northern states are water surplus whereas several states like Maharashtra, Tamil Nadu, and Rajasthan are water scarce.
- Out of the 4000 BCM, utilizable water is only 1120 BCM. Out of the utilizable water 690 BCM is available as surface water and 430 BCM as groundwater.
- In 1951, India's per capita water availability was 5177 cubic metres which decreased to 1545 cubic metres in 2011 and is predicted to further reduce to 1300 cubic metre by 2030

## Causes for the Water vulnerability:

- Excessive use of groundwater for irrigation in agriculture has also caused a strain in the resource. As India is one of the top agriculture producers in the world, the consumption of water for land and crops is also one of the highest.
- Water sources are contaminated with biological pollutants. Indian water bodies also have increased amount of solid wastes.
- Reduction in traditional water recharging areas and Sewage and wastewater drainage into traditional water bodies has exacerbated the water scarcity situation in the country.
- Increasing demand due to population growth, industrialisation, and rapid urbanisation have pushed the demand for water further.

## Major steps and water management strategies adopted by Government:

Ministry of Jal Shakti was formed by merging two ministries i.e., Ministry of Water Resources, River Development & Ganga Rejuvenation and Ministry of Drinking Water and Sanitation.

- **River Basin Planning**

  Central water Commission has divided the country into 20 rivers basins comprising 12 major and 8 composite river basins. To address the multi-faceted nature of water management, government has introduced an integrated approach to water resources management at the national and basin level. This includes improving institutional arrangements and working practices.

- **Indian Rivers Inter-link**

  The Indian Rivers Inter-link is a proposed large-scale civil engineering project that aims to effectively manage water resources in India by linking Indian rivers by a network of reservoirs and canals and so reduce persistent floods in some parts and water shortages in other parts of India

- **Watershed management programmes in India**
  - **Prime Minister Krishi Sinchayee Yojna**

    (Watershed Development Component) (WDC-PMKSY) - The main objectives of the WDC-PMKSY are to restore the ecological balance by harnessing, conserving and developing degraded natural resources such as soil, vegetative cover.

- **Neeranchal Watershed Program**

  Neeranchal is a World Bank assisted National Watershed Management Project. Neeranchal is designed to further strengthen and provide technical assistance to the Watershed Component of PMKSY, in particular and all components of PMKSY, in general, to enhance its delivery capacity.

- **State specific lead in water management programmes**
  - Mission Kakatiya, - launched by Telangana government aims to develop minor irrigation infrastructure, and strengthen community based irrigation management
  - Jalyukt-shivir – is a project of Maharashtra government which aims to make 5000 villages free of water scarcity every year.
  - Mukhya Mantri Jal Swavlamban Abhiyan' – has been launched by Rajasthan for effective implementation of water conservation and water harvesting in rural areas.

### The path ahead:

The most important crops of India — rice, wheat and sugarcane, are the most water consuming crops. Rice which is a major export crop consumes about 3,500 litres of water for a kilogram of grain produced. Further with constant population increase and depletion in water resources water management will increasingly become more difficult in future. The picture of the same is visible in precipitating crisis of water in southern states. Water management needs to be the central focus of efforts in the agriculture sector and the environment improvement.

# E-WASTE CLINIC IN MADHYA PRADESH

**⊙ CONTEXT**

- **The Bhopal Municipal Corporation (BMC) and the Central Pollution Control Board (CPCB) have signed a MOU to set up the country's first e-waste clinic in Bhopal.**

**⊙ ABOUT**

- Electronic waste will be collected door-to-door or could be deposited directly at the clinic in exchange for a fee.
- Door-to-door collection will happen in two ways. Either separate carts for the collection of e-waste will be designed, or separate bins will be attached to existing ones meant for solid and wet waste.
- The CPCB will provide technical support at the unit and the collected hazardous waste will then be sent to Bengaluru for recycling.
- The clinic is being conceived in compliance with the Solid Waste Management Rules, 2016.
- It would be a 3-month pilot project, which, if successful, will be replicated everywhere in India.

### E- waste:

- **Electronic waste** or **e-waste** describes discarded electrical or electronic devices. It is a term for electronic products that have become unwanted, obsolete, and have reached the end of their useful life.
- Electronic waste products have exhausted their utility value through redundancy, replacement, or breakage and include both "white goods" such as refrigerators, washing machines, and microwaves and "brown goods" such as televisions, radios, computers, and cell phones.

### E-Waste (Management) Rules, 2016:

- The rules extend to Producer, consumer, collection centre, dismantler and recycler manufacturer, dealer, refurbisher and Producer Responsibility Organization (PRO). However, micro and small industries are exempted.

- The applicability of the rules extends to components, consumables, spares and parts of EEE. Further, Compact Fluorescent Lamp (CFL) and other mercury containing lamp brought are under the purview of rules.
- Collection mechanism based approach has been adopted to include collection centre, collection point, take back system etc for collection of e - waste by Producers under Extended Producer Responsibility (EPR).

### Impact on Human health:

- The complex composition and improper handling of e-waste adversely affect human health. Researchers have linked e-waste to adverse effects on human health, such as inflammation and oxidative stress – precursors to cardiovascular disease, DNA damage and possibly cancer.
- Due to the crude recycling process, many pollutants, such as persistent organic pollutants and heavy metals, are released from e-waste, which can easily accumulate in the human body through the inhalation of contaminated air.
- The primitive methods used by unregulated backyard operators (e.g., the informal sector) to reclaim, reprocess, and recycle e-waste materials expose the workers to a number of toxic substances.

### Solid Waste Management Rules, 2016:

- The Rules are applicable beyond municipal areas and will extend to urban agglomerations, census towns, notified industrial townships, areas under the control of Indian Railways, airports, airbase, port and harbour, defence establishments, special economic zones, State and Central government organizations, places of pilgrims, religious & historical importance.
- The responsibility of generators is to segregate waste into three categories – Wet, Dry and Hazardous Waste. The generator will have to pay 'User Fee' to the waste collector and a 'Spot Fine' for littering and non-segregation, the quantum of which will be decided by the local bodies.

# MASS EXTINCTIONS

**⊙ CONTEXT**

- **In the last 500 million years, 75 to more than 90 percent of all species on Earth have disappeared in mass extinctions.**

**⊙ ABOUT**

### What is mass extinction?

Mass extinctions are defined as any substantial increase in the amount of extinction (lineage termination) suffered by more than one geographically wide-spread higher taxon during a relatively short interval of geologic time, resulting in an at least temporary decline in their standing diversity.

### Major mass extinction events in the geological history of Earth:

- **Ordovician-Silurian extinction 485 to 444 million years ago:**
  - During this period massive glaciation locked up huge amounts of water in an ice cap that covered parts of a large south polar landmass. This may have been triggered by the rise of North America's Appalachian Mountains.
  - The large-scale weathering of these freshly uplifted rocks sucked carbon dioxide out of the atmosphere and drastically cooled the planet.
  - As a result, sea levels plummeted by hundreds of feet. Creatures living in shallow waters would have seen their habitats cool and shrink dramatically, dealing a major blow.

- **Late Devonian extinction - 383-359 million years ago:**
  - Starting 383 million years ago, this extinction event eliminated about 75 percent of all species on Earth over a span of roughly 20 million years.
  - Volcanism could be a possible trigger for this extinction.
  - Within a couple million years of the Kellwasser event, a large igneous province called the Viluy Traps erupted 240,000 cubic miles of lava in what is now Siberia. The eruption would have spewed greenhouse gases and sulfur dioxide, which can cause acid rain.
  - Asteroids may also have contributed. Sweden's 32-mile-wide Siljan crater, one of Earth's biggest surviving impact craters, formed about 377 million years ago.
  - During the Devonian, plants hit on several winning adaptations, including the stem-strengthening compound lignin and a full-fledged vascular structure. These traits allowed plants to get bigger and for their roots to get deeper than ever before, which would have increased the rate of rock weathering.
  - The faster rocks weathered, the more excess nutrients flowed from land into the oceans. The influx would have triggered algae growth, and when these algae died, their decay removed oxygen from the oceans to form what are known as dead zones. In addition, the spread of trees would have sucked $CO_2$ out of the atmosphere, potentially ushering in global cooling.
- **Permian-Triassic extinction - 252 million years ago:**
  - Of the five mass extinctions, the Permian-Triassic is the only one that wiped out large numbers of insect species. Marine ecosystems took four to eight million years to recover.
  - The extinction's single biggest cause is the Siberian Traps, an immense volcanic complex that erupted more than 720,000 cubic miles of lava across what is now Siberia. The eruption triggered the release of at least 14.5 trillion tons of carbon.
  - Magma from the Siberian Traps infiltrated coal basins on its way toward the surface, probably releasing even more greenhouse gases such as methane.
  - In the million years after the event, seawater and soil temperatures rose between 25 to 34 degrees Fahrenheit.
  - As temperatures rose, rocks on land weathered more rapidly, hastened by acid rain that formed from volcanic sulfur. Just as in the late Devonian, increased weathering would have brought on anoxia that suffocated the oceans. Climate models suggest that at the time, the oceans lost an estimated 76 percent of their oxygen inventory. These models also suggest that the warming and oxygen loss account for most of the extinction's species losses.
- **Triassic-Jurassic extinction - 201 million years ago:**
  - This mass extinction caused the extinction of 80 percent of all land and marine species.
  - At the end of the Triassic, Earth warmed an average of between 5 and 11 degrees Fahrenheit, driven by a quadrupling of atmospheric $CO_2$ levels. This was probably triggered by huge amounts of greenhouse gases from the Central Atlantic Magmatic Province, a large igneous province in central Pangaea.
  - Remnants of those ancient lava flows are now split across eastern South America, eastern North America, and West Africa.
  - The Central Atlantic Magmatic Province was enormous. Its lava volume could cover the continental U.S. in a quarter-mile of rock.
  - The uptick in $CO_2$ acidified the Triassic oceans, making it more difficult for marine creatures to build their shells from calcium carbonate.

- On land, the dominant vertebrates had been the crocodilians, which were bigger and far more diverse than they are today. Many of them died out. In their wake, the earliest dinosaurs—small, nimble creatures on the ecological periphery—rapidly diversified.

- **Cretaceous-Paleogene extinction - 66 million years ago:**
  - The Cretaceous-Paleogene extinction event is the most recent mass extinction and the only one definitively connected to a major asteroid impact.
  - Some 76 percent of all species on the planet, including all nonavian dinosaurs, went extinct.
  - About 66 million years ago, an asteroid roughly 7.5 miles across slammed into the waters off of Mexico's Yucatán Peninsula at 45,000 miles an hour. The massive impact left a crater more than 120 miles wide flung huge volumes of dust, debris, and sulfur into the atmosphere, bringing on severe global cooling.
  - Wildfires ignited any land within 900 miles of the impact, and a huge tsunami rippled outward from the impact. Overnight, the ecosystems that supported nonavian dinosaurs began to collapse.
  - Global warming fueled by volcanic eruptions at the Deccan Flats in India may have aggravated the event. Some scientists even argue that some of the Deccan Flats eruptions could have been triggered by the impact.

- **Extinction today**
  - Earth is currently experiencing a biodiversity crisis. Recent estimates suggest that extinction threatens up to a million species of plants and animals, in large part because of human activities such as deforestation, hunting, and overfishing.
  - Other serious threats include the spread of invasive species and diseases from human trade, as well as pollution and human-caused climate change.
  - Today, extinctions are occurring hundreds of times faster than they would naturally. If all species currently designated as critically endangered, endangered, or vulnerable go extinct in the next century, and if that rate of extinction continues without slowing down, we could approach the level of a mass extinction in as soon as 240 to 540 years.

# PRAKASH PORTAL

**⊙ CONTEXT**

- **Government launches Prakash Portal to improve coal supply to power plants.**

**⊙ ABOUT**

- Prakash stands for 'Power Rail Koyla Availability through Supply Harmony'.
- The Portal aims at bringing better coordination for coal supplies among all stakeholders viz - Ministry of Power, Ministry of Coal, Coal India, Railways and power utilities.
- This is an important step in ensuring adequate availability and optimum utilization of coal at thermal power plants.

### The Portal is designed to help in mapping and monitoring entire coal supply chain for power plants

- Coal Stock at supply end (mines),
- Coal quantities/ rakes planned,
- Coal quantity in transit and
- Coal availability at power generating station.

### Benefits of Portal to the Stakeholders

- Coal company will be able to track stocks and the coal requirement at power stations for effective production planning
- Indian Railways will plan to place the rakes as per actual coal available at siding and stock available at power stations.
- Power stations can plan future schedule by knowing rakes in pipe line and expected time to reach.
- Stock at power generating station
- Ministry of Power /Ministry of Coal/ CEA/ POSOCO can review overall availability of coal at thermal power plants in different regions

# CHALUKYAS

**⊙ CONTEXT**

- **Graves of Chalukyan rulers have been found in a village near Huligemmanakolla in Pattadakal of Karnataka's district.**

**⊙ ABOUT**

- The discovery was made by explorer **Manjunath Sullolli** who says that the place has graves of the family members of Chalukyan rulers.
- There are **11 small temple-like structures** in Huligemmanakolla that are believed to be the final resting place of the royal family.
- **Chalukyan kings were famous for building gigantic temples** with intricate architecture in places such as **Aihole, Badami, and Pattadakal in Bagalkot** district.
- Built between the **sixth and eighth centuries**, these monuments are examples of the best of the architecture of that era in entire South India.
- Though the **Chalukyan kings built marvelous monuments and temples**, there are no clear details available of the places where they lived.
- Neither they have left behind documents nor evidence of their graves; therefore, explorers are still searching for their graves.

### Chaulakyas

- The Chalukya dynasty was established by **Pulakeshin I in 543 AD**. Pulakeshin I took Vatapi (modern Badami in Bagalkot district, Karnataka) under his control and made it his capital.
- Pulakeshin I and his descendants are referred to as "**Chalukyas of Badami**".
- **Pulakeshin II**, the most famous ruler, extended the Chalukya Empire up to the northern extents of the Pallava kingdom and halted the southward march of Harsha, belonging to Pushyabhuti dynasty by defeating him on the banks of the river Narmada.

### Architecture

Their style of architecture is called "Chalukyan architecture", "Karnata Dravida architecture" or the "Vesara Style" of architecture, which is the fusion between northern "Nagara" style and southern "Dravida" style.

### Badami Cave temples

- Badami cave temples have rock-cut halls with three basic features: pillared veranda, columned hall and a sanctum cut out deep into rock.

### Pattadkal temples

- Virupaksha temple
- Papanatha temple

- Mallikarjuna temple
- Sangameshwara temple

### Aihole temples

- Lad khan temple
- Durga temple
- Suryanarayan temple
- Ravana Phadi temple

### Contributions

- A Southern India-based kingdom took control and consolidated the entire region between the Kaveri and the Narmada rivers.
- The rise of this empire saw the birth of efficient administration, overseas trade and commerce.
- Kannada literature, which had enjoyed royal support in the 9th century Rashtrakuta court found eager patronage from the Western Chalukyas.
- The Chalukyas provided patronage to various religions and traditions such as Jainism, Veerashaiva, etc., and allowed them to prosper.

## GURU NANAK DEV

**⊙ CONTEXT**

- **Recently, 550th birth anniversary of Guru Nank Dev was celebrated.**

**⊙ ABOUT**

- Guru Nanak was born in **Talwandi** but he travelled for years before he founded the **Dera Baba Nanak in Kartarpur.**
- Irrespective of their creed or caste, his followers ate together in a common kitchen known as **langar**. And the sacred place/temple he created for worship and meditation was called **dharmasal** (now known as **Gurudwara**).
- Before he died in 1539, he appointed a follower called **Lena** (known later as **Guru Angad**) as his successor.
- Guru Angad compiled the work of Guru Nanak and added to it his own script known as **Gurmukhi**.
- The next three Gurus also wrote under Nanak's name, and their work was compiled by **Guru Arjan in 1604.**
- Works of Shaikh Farid, Sant Kabir, Bhagat Namdev, and Guru Tegh Bahadur were also added to these compilations.
- Finally, in **1706, Guru Gobind** Singh authenticated the compilation and created the **Guru Granth Sahib.**
- Guru Nanak's followers increased in the sixteenth century as people from all castes and occupations joined the community.
- By the seventeenth century, the town of Ramdaspur developed around a Gurudwara called the Harmandar Sahib and became a self-governing society.
- The Mughal Emperor **Jehangir** saw them as a potential threat, and in **1606 he ordered the execution of Guru Arjan.**
- By the seventeenth century, **Guru Gobind Singh organised the Khalsa Movement**, and the community of Sikhs became a political organisation called the **Khalsa Panth**.

### Guru Nanak's Teachings

- Guru Nanak emphasised the **worship of one God** and insisted that caste, creed, and gender were irrelevant to attaining salvation.

- According to him, pursuit of an active life would liberate humans, and he also used the terms **nam, dan**, and **isnan** to mean right worship, welfare, and purity of conduct.
- His ideas today are called **nam-japna, kirt-karna, and vand-chhakna**, which mean right belief and worship, honest living, and helping others.
- Thus, Guru Nanak's idea of equality had social and political implications.

### Kartarpur Corridor

- The corridor will connect Darbar Sahib in Kartarpur (Pakistan) with Dera Baba Nanak shrine in Gurdaspur district of Punjab and facilitate visa-free movement of Indian pilgrims, who will have to just obtain a permit to visit Kartarpur Sahib, which was established in 1522 by Sikh faith founder Guru Nanak Dev.
- The corridor will help India and Pakistan to go peaceful in their relations.

# SEMI-PRESIDENTIAL SYSTEM

**⊙ CONTEXT**

- **Political crisis in Sri Lanka and all about Semi-presidential system**

**⊙ ABOUT**

- A semi-presidential system is republican system of governance that combines elements of presidential democracy with parliamentary democracy.
- Typically, the head of state is the president, directly elected by the people with a large degree of power over the government, whilst the head of government is the prime minister nominated by the president but who can be dismissed by the legislature.
- An agreement is reached over which of the two heads (state and government) will have the lead in policy areas.
- For example, in France, a well-known example of semi presidential democracy, the president leads foreign policy and the prime minister leads domestic policy.
- Semi-presidential systems may sometimes experience periods in which the president and the prime minister are from differing political parties. This is called "cohabitation", a term which originated in France.
- Cohabitation can create an effective system of checks and balances or a period of bitter and tense stonewalling, depending on the attitudes of the two leaders, the ideologies of themselves or their parties, or the demands of their constituencies.

### Advantages

- Providing cover for the president, it can shield the president from criticism and the unpopular policies can be blamed on the prime minister as the latter runs the day-to-day operations of the government and carrying out the national policy set forth by the president, who is the head of state that is focusing on being the national leader of a state and in arbitrating the efficiency of government authorities, etc.
- Ability to remove an unpopular prime minister and maintain stability from the president's fixed term the parliament has power to remove an unpopular prime minister.
- Additional checks and balances, while the president can dismiss the prime minister in many semi-presidential systems, in most of the semi-presidential systems important segments of bureaucracy are taken away from the president.

### Disadvantages

- Confusion about accountability, parliamentary systems give voters a relatively clear sense of who is responsible for policy successes and failures; presidential systems make this more difficult, particularly when there is divided government. Semi-presidential systems add another layer of complexity for voters;
- Confusion and inefficiency in legislative process, the capacity of votes of confidence makes the prime minister responsible to the parliament.

# LITHIUM-ION BATTERIES

**⊙ CONTEXT**

- **Nobel Prize in Chemistry 2019 awarded for work on lithium-ion batteries**

**⊙ ABOUT**

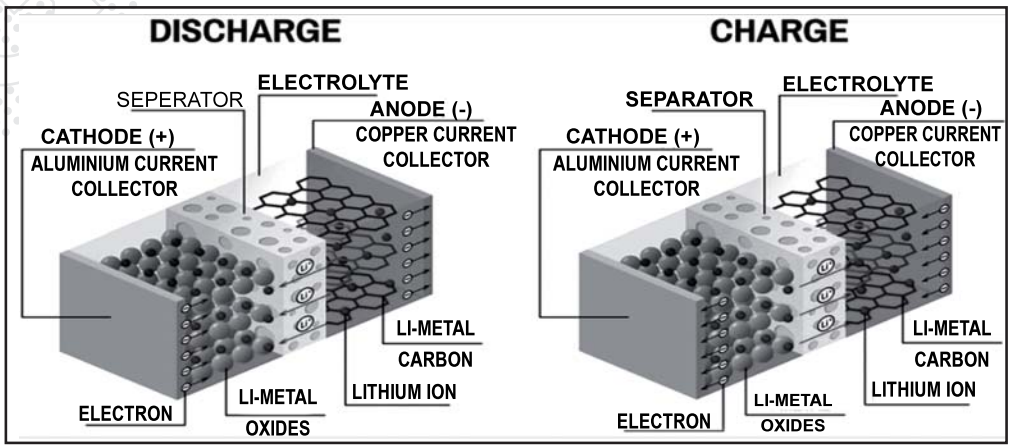
- The **first rechargeable battery came about in 1859.** These were made from lead-acid, and are still used to start gasoline- and diesel-powered vehicles today.
- **Dr. Stanley Whittingham** discovered an extremely energy-rich material, which he used to create an **innovative cathode in a lithium battery**. This battery was made from **titanium disulphide**.
- The battery's **anode was partially made from metallic lithium**, which has a strong drive to release electrons. It resulted in a battery that had great potential, just over **two volts**.
- The big **advantage** of this technology was that **lithium-ion stored about 10 times as much energy as lead-acid or 5 times as much as nickel-cadmium**
- Lithium-ion batteries were also extremely **lightweight** and required **little maintenance**.
- **Lithium ion batteries using cobalt oxide** can boost the lithium battery's potential to **four volts**.

### Benefits and uses:

- The advantage of lithium-ion batteries is that they are **not based upon chemical reactions** that break down the electrodes, but upon **lithium ions flowing back and forth between the anode and cathode.**
- They are **lightweight, rechargeable, powerful batteries**, now used in everything from mobile phones to laptops and long-range electric vehicles.
- Battery technology helps **replace carbon-emitting sources** because it allows power companies to **store excess solar and wind power** when the sun does not shine nor the wind blow, making possible a **fossil fuel-free society** and combating the effects of **climate change**.
- They are also capable of being **miniaturized** and used in devices like **implanted pacemakers.**
- They can be **scaled up** to power a car or a home.

### Mechanics of Lithium-ion battery:

- Lithium-ion batteries are powered by flows of lithium ions crossing from one material to another.




- When the battery is **in use**, positively-charged lithium ions pass from an **anode to a cathode**, releasing a stream of electrons along the way that form an electric current.

- When the battery is being **recharged**, lithium ions flow in the **opposite direction**, resetting the battery to do it all over again.

### Issues and concerns:

- The **demand for lithium** is spiking and will continue to increase as more battery-powered cars and storage units hit the market.
- Lithium mining requires millions of gallons of water and in places like **Tibet and dry regions of South America,** selling water became a dirty business.
- Poorly run mines can also **contaminate local water supplies.**
- **Cobalt** is also in short supply, and mining of that metal in places like the Congo Basin is driving **environmental destruction, child labour, and pollution**.
- More than half of lithium is gathered using **brine extraction** from deep inside the earth, and the rest is still mined traditionally from rock.
- Both methods have caused **environmental damage** to areas around lithium processing operations.
- And as the demand for lithium increases, companies may resort to using **energy-intensive heating** to speed up brine evaporation.
- Once lithium-ion batteries are used up in electronics, they are **often disposed of improperly** by consumers. Only a small percentage is collected and recycled. Most end up in landfills.
- **Recycling** the batteries and removing these increasingly precious metals is also **costly and sometimes dangerous**.
- There are a **limited number of times** that a lithium-ion battery can be **replenished** before it deteriorates and can no longer hold a charge.
- In addition, a **faultily designed lithium-ion battery can turn into a miniature bomb**.
- Technologists often point to lithium-ion as an **innovation roadblock**: there's not much that engineers can do beyond making the batteries bigger and implementing software algorithms to make hardware more power efficient.

# REINVENTING BORDER MANAGEMENT: DRONE THREAT IN BORDER AREAS

**⊙ CONTEXT**

- **Two Pakistani drones dropping weapons in Punjab has sent security forces into a tizzy and raised questions on drone threats to national security.**

**⊙ ABOUT**

- **Punjab government recovered two drones** used in **dropping weapons** from across the border. Later **one more drone** was seen flying over Indian border in Punjab.
- Enemy drones dropped **communication hardware, AK-47 rifles, counterfeit currency and narcotics in Punjab.**
- The Punjab Police exposed a **terrorist module** of the revived **Khalistan Zindabad Force (KZF), backed by a Pakistan and Germany based terror group** that was conspiring to **unleash a series of terror strikes in Punjab and other adjoining states.**
- The **recent flying of Pakistani drones and dropping weapons in Punjab have exposed the vulnerability of India to Saudi-Arabia like lethal drone attacks**. For this purpose the border **management reinvention is needed as drone threat has alerted Indian security and intelligence agencies.**
- There are over **6 lakh unregulated drones**, of various sizes and capacities present in the country and anyone of them can be used for launching a nefarious act by disruptive elements. They are "**potential threats" to vital installations, sensitive locations and specific events** and a "compatible solution" is required to counter them.

### Reinventing Border Management-Use of anti-drone techniques

- **Drone Gun:** A drone gun is capable of **jamming the radio, global positioning system (GPS) and mobile signal** between the drone and the pilot and forces the drone to ground in good time before it could wreak any damage
- **Sky Fence:** It uses a range of **signal disruptors to jam the flight path** and prevent them from entering their target, a sensitive installation or event venue.
- **ATHENA**: It is an acronym for **Advanced Test High Energy Asset**, is another weapon under analysis as it works by f**iring a high energy laser beam on a rogue drone resulting in its complete destruction** in the air. However, this is a very **costly technology** and is being currently tested by the US army.
- **Drone Catcher**: It swiftly **approaches an enemy drone and grabs it by throwing a net around**. Such a tool is required when a rogue drone is needed to be captured safely to extract incriminating evidence from it.
- **Skywall 100:** It is the **ground version of the 'drone catcher'** and it works by bringing down an UAV using a parachute that is hurled through a net from 100 meters distance.

### Steps Taken by the Government

- Two separate **Bureau of Police Research and Development (BPRD)** on anti-drone technology and **Ministry of Civil Aviation (MCA)** appointed task forces are now mulling on priority areas that need to be armed with counter-drone weapons and the cost estimation to procure suitable gadgets.

### Conclusion

While Israel and USA are leaders in UAV technology and operations, the Indian UAV programme is in its infancy. Going by the example of the Light Combat Aircraft (LCA), the production of an Indian combat mission capable UAV is at least a couple of decades away. To meet that challenge, it would be prudent to establish a joint venture for the production of UAVs in India under the Strategic Partnership programme.

## NATIONAL NUTRITION SURVEY

**⊙ CONTEXT**

- **India conducted its first ever comprehensive National Nutrition Survey through the Ministry of Health and Family Welfare in partnership with United Nations Children Fund (UNICEF) to measure the level of malnutrition in India.**

**⊙ ABOUT**

- CDSA – Clinical Development Services Agency was selected as the monitoring agency for the aforementioned survey.
- The survey covered more than 1,20,000 covering both children and adolescents in rural and urban area. The survey was conducted over a period of two years (2016-2018)
- It aimed to assess the following
  - Micro-nutrient deficiencies
  - Sub-clinical inflammation
  - Overweight or obesity
  - Cardio-metabolic risks

### Key findings of the Survey:

- The survey for the first time found existence of 'Burden of double malnutrition' i.e. coexistence of undernutrition along with overweight, obesity or diet-related Non Communicable Diseases (NCDs), within individuals, households and populations, and across the life-course.

- **Prevalence of stunting:** In the survey over 35% of Indian children aged 0-4 were found stunted. Rural areas had 37% of stunted children in comparison to 27% in urban areas.
- **Breastfeeding:** Breastfeeding is inversely proportional to household wealth. A higher proportion of children (12-15 months) residing in rural areas are breastfed (85%) compared to children in urban areas (76%).
- **Obesity:** 14.5% of children in the age group of 5 to 9 years in urban areas have higher Subscapular Skinfold Thickness (SSFT) than 5.3% in rural areas. Subscapular Skinfold Thickness (SSFT) is a non-invasive method of body fat estimation.
- **Deficiencies:** Zinc deficiency is more prevalent in rural children in comparison to their counter parts in urban areas. Alternatively, urban children are deficient in Iron and vitamin D in comparison to rural children, due to a better performance of the government's health programmes in rural areas.

- Overall, rural children and adolescents face a higher percentage of stunting and underweight compared to urban counterparts.

### Few Major steps taken by government to combat malnutrition:

- As per one of the targets under Globally Agreed Sustainable Development Goals (SDGs), by 2030, the government seeks to end all forms of malnutrition, including the internationally agreed targets on stunting and wasting in children under 5 years of age and address the nutritional needs of adolescent girls, pregnant and lactating women and older persons.
  - To address the components of the Target, the WCD Ministry is **implementing Integrated Child Development Services (ICDS) Scheme** and **Rajiv Gandhi Scheme for Adolescent Girls, i.e., SABLA**.
  - **Mid – day meal scheme**
  - **National Food Security Act, 2013:** The act made food a legal right of the citizens. It aims to ensure food and nutrition security to the vulnerable.
  - **Poshan Abhiyan** is Government of India's flagship programme to improve nutritional outcomes for children, pregnant women and lactating mothers. It was launched in 2017 to reduce anemia, stunting, and undernutrition.

# RAJASTHAN HAS ANNOUNCED THE CREATION OF A PNEUMOCONIOSIS FUND

**CONTEXT**

- **Rajasthan has announced the creation of a Pneumoconiosis Fund, which will be majorly financed by money from the District Mineral Foundation (DMF).**

**ABOUT**

### Pneumoconiosis Fund:

- The aim of the policy is to streamline the strategy to deal with pneumoconiosis.
- The Fund will be operating under Social Justice and Empowerment Department.
- It will include pension for patients and their families after the patient's death and their inclusion in the state's social security schemes, which will be over and above the compensation paid.
- Rajasthan is one of the leading mining states of India, with a distinction of having more than 33,000 mine leases, the highest in the country. Most of these are sandstone mines and quarries.
- It is also the state with a high prevalence of pneumoconiosis, including silicosis. According to data from the state silicosis portal, more than 55,000 cases of silicosis have been registered for medical verification across all of Rajasthan's districts from 2016 till date.

- According to a 2018 report by the Comptroller and Auditor General of India, the number of deaths due to silicosis had increased in Rajasthan from 1 in 2013-14 to 235 in 2016-17.

### Pneumoconiosis:

- It is a lung disease which mostly affects workers who work in the mining and construction sectors and deal with soil, silica, coal dust and asbestos.
- Many dusts can cause pneumoconiosis. The most common workplace mineral dusts that are known to cause pneumoconiosis are asbestos, silica (rock and sand dust), and coal dust.

### DMF Funds:

- Non-profit DMF trusts have been established in every mining district of India to "work for the interest and benefit of people and areas affected by mining related operations"
- DMF will be one of the biggest components of the Pneumoconiosis Fund. It will also bring in convergence of other available funds such as Building and Other Construction Workers (BOCW) Welfare Fund, the state budget, and Corporate Social Responsibility (CSR).
- The state level fund has been created so that pneumoconiosis patients can be helped even in districts where DMF funds are not substantial.

### Prevention and rehabilitation:

- The policy recognizes prevention as a major focus because pneumoconiosis, once contracted, is a terminal illness.
- For this, all mines and industries having dust hazards will be registered and notified as hazardous and brought under a tight regulatory framework to ensure protective equipment and dust suppression measures.
- The policy also looks at a comprehensive patient rehabilitation and pension for patients and their families. It introduces pension for patients and after their passing, to their families irrespective of income criteria. It also calls for creating livelihood opportunities for silicosis patients and their kin.

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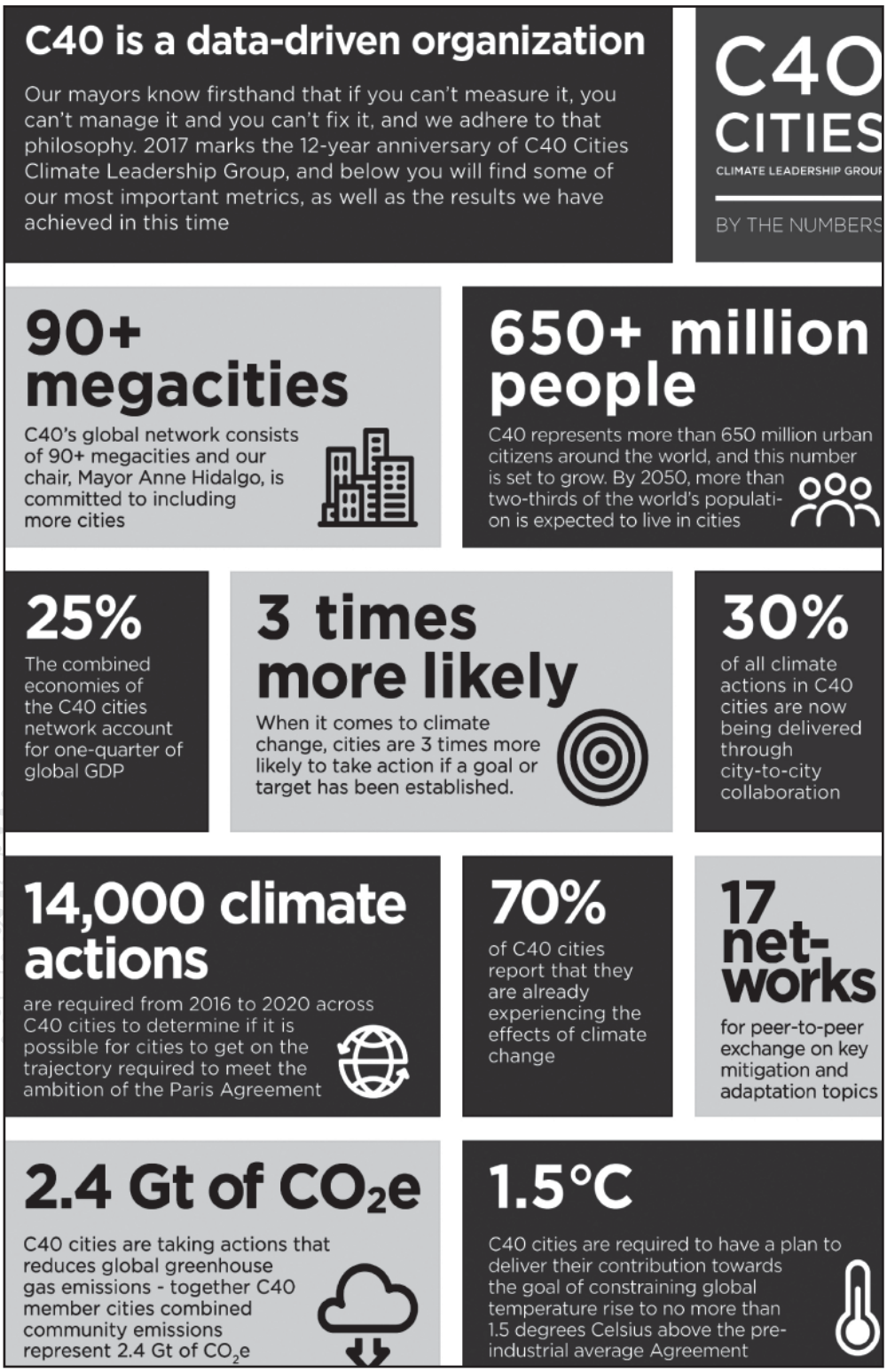
# MISCELLANEOUS

## CURRENT AFFAIRS

# C40 CITIES

**ABOUT:**

- C40 is a network of the world's megacities committed to addressing climate change. C40 supports cities to collaborate effectively, share knowledge and drive meaningful, measurable and sustainable action on climate change.
- Around the world, C40 Cities connects 94 of the world's greatest cities to take bold climate action, leading the way towards a healthier and more sustainable future.



# EXTINCTION REBELLION

**⊙ ABOUT:**

- Extinction Rebellion is an international movement that uses non-violent civil disobedience in an attempt to halt mass extinction and minimise the risk of social collapse.
- It is a movement made up of people from all walks of life. It started in response to the IPCC report that we only have 12 years to stop catastrophic climate change and our understanding that we have entered the 6th mass extinction event.
- It started small and was launched in the UK on October 31st 2018, it has grown very quickly and there are now about 130 Extinction Rebellion groups across the UK and across the world.
- The majority of people who work for Extinction Rebellion are volunteers; a small percentage is receiving living expenses.
- Decisions are made based on a model of organising called a "self-organising system" in which people do what they can according to the skills and time they can offer.

# INTERCONNECT USAGE CHARGE (IUC)

**⊙ ABOUT:**

- Interconnect Usage Charge or IUC is a cost paid by one mobile telecom operator to another, when its customers make outgoing mobile calls to the other operator's customers. These calls between two different networks are known as mobile off-net calls.
- IUC charges are fixed by Telecom Regulatory Authority of India (TRAI).
- IUC came into limelight when JIO started charging 6 paisa per minute charges to customers making off-net calls.

# KAMINI ROY

**⊙ ABOUT:**

- Born in 1864, Kamini Roy was a social worker and a feminist.
- Roy is the first woman to have graduated with honors in the history of India.
- At a time when a woman's role was restricted to taking care of household chores, Roy graduated with a degree in Sanskrit from Bethune College, Kolkata.
- After her graduation, she joined Bethune as a teacher and published "Alo o Chhaya" in 1889.
- In 1921, she was one of the leaders of "Bangiya Nari Samaj", an organisation which fought for women's suffrage.

# MILITARY EXERCISES

### Exercise Nomadic Elephant XIV

**⊙ ABOUT:**

- It is a joint military training, Exercise between India and Mongolia.
- 14th edition of Nomadic Elephant-XIV was conducted at Bakloh.
- Nomadic Elephant-XIV is aimed at training troops in counter insurgency and counter terrorism operations under United Nations mandate.

- The Joint Exercise will enhance defence co-operation and military relations between the two nations. It is an ideal platform for the armies of both the nations to share their experiences & best practices and gain mutually during the joint training.

### Exercise Ekuverin

**◉ ABOUT:**

- It is a Joint Military Exercise between the Indian Army and the Maldives National Defence.
- The Indian Army and the Maldives National Defence Forces have been conducting Exercise Ekuverin, meaning 'Friends' in the Dhivehi language, since 2009.
- This exercise focuses on enhancing interoperability between the two forces for carrying out counter insurgency and counter-terrorism operations in a semi-urban environment under the United Nations mandate.

### Exercise KAZIND-2018

**◉ ABOUT:**

- It is a joint military exercise between Indian and Kazakhstan Armies, commenced in Otar Military Area, Kazakhstan.
- The joint training aims to build & promote army to army relations and exchange skills & experiences between Indian Army and the Kazakhstan Army.

## RAMACHANDRAN PLOT

**◉ ABOUT:**

- A Ramachandran plot is a way to examine the backbone conformation of each residue in a protein.
- It was first used by noted Indian biophysicist G.N. Ramachandran in 1963 to describe stable arrangements of individual residues of a protein. Today, a Ramachandran plot is frequently used by crystallographers to identify protein models with an unrealistic backbone.
- Ramachandran plot is used to examine and assess any structure in peptides.
- Peptides are short chains of amino acids linked by peptide (amide) bonds.

## 51 PEGASI B

**◉ ABOUT:**

- It is an exoplanet and the first planet discovered around a Sun like star.
- This planet is about half the size of Jupiter and orbits its star in about 4 days.
- 51 Pegasi b is 50 light years away from earth.
- It is 47% less massive but 50% larger than the Jupiter.
- It is 11% more massive and 23% larger than our sun.
- Hot Jupiter's were not thought to be possible 20 years ago. But this discovery challenged existing theories of planet formation. Astronomers now believe that large planets may form far from their stars and migrate closer to their stars over millions of years.

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