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## Dard Aryan Tribes of Ladakh

### In The News

Dard Aryan tribe of Ladakh has requested the central government intervention to protect their culture and legacy.

### About

- Dard Aryans are believed to be the original descendants of ‘pure Aryan race’. The tribe is known for its liberal customs and ornate costumes. Many researchers believe that the ‘Aryans of Ladakh’ or the ‘Brokpas’ were a part of Alexander’s army and had come to the region over 2,000 years ago.
- They live in the villages of Dha and Hanu (commonly called as Dhahanu), Darchik, and Gahanu - situated 163 kms southwest of Leh, the administrative capital of Ladakh.
- The rich heritage of the Dard Aryans is under threat due to rapid modernization, migration and religious conversion.
- The ‘Dard’ is derived from a Sanskrit word, ‘Daradas’, which refers to people who live on hillsides.
- According to the **Article 46** of the Constitution of India, the State shall promote with special care the educational and economic interests of the weaker sections of the people, and, in particular, of the Scheduled Castes and the Scheduled Tribes, and shall protect them from social injustice and all forms of exploitation.

## Bharat Parv

### In The News

- The 4th edition of the Bharat Parv is being organized by **Ministry of Tourism** in collaboration with other central Ministries and State Governments from January 26-31, 2019.
- The prime **objective** is to generate a patriotic mood, promote the rich cultural diversity of the country, to promote the idea of ‘**Ek Bharat Shreshtha Bharat**’.
- It includes highlights of the Republic Day Parade Tableaux, performances by the Armed Forces Bands (static and moving), a multi-cuisine food court, Crafts Mela, Cultural Performances from different regions of the country.

### Ek Bharat Shreshtha Bharat

Ek Bharat Shreshtha Bharat (EBSB), a central government’s initiative aims to foster national integration by a co-ordinated mutual engagement process between States, Union Territories, central ministries, educational institutions and general public through linguistic, literary, cultural, sports, tourism and other forms of people-to-people exchanges.

## Sangrai Dance

### About

Sangrai dance is performed by the **Mog tribal community** on the occasion of Sangrai festival during the month of Chaitra (in April) of the Bengali calendar year.

- The Mogs are one of the 19 tribes in **Tripura**.
- The Mogs are Arakanese descendants who migrated to Tripura through Chittagong Hill Tracts.

## Gandhi Peace Prize: 2015-18

### In The News

The government has announced the **Gandhi Peace Prize for the years 2015, 2016, 2017 and 2018**.

The following have been honored with the award:

- **Vivekananda Kendra, Kanyakumari** for the year **2015** for their contribution in Rural Development, Education, Development of natural resources.
- For 2016 jointly to **Akshaya Patra Foundation** for its contribution in providing **mid-day meals** to millions of children across India and **Sulabh International** for its contribution in **improving the condition of sanitation in India** and emancipation of manual scavengers.
- **Ekal Abhiyan Trust** for the year **2017** for their contribution in providing **Education for Rural and Tribal Children** in remote areas pan India, Rural Empowerment, Gender, and Social Equality.
- **Shri Yohei Sasakawa** for the year **2018** for his contribution in **Leprosy Eradication in India and across the world**.

item.

- Gandhi Peace Prize is not awarded posthumously.
- The award is open to all persons regardless of nationality, creed, race or sex.

### The Jury of Award

- The jury includes the **Prime Minister** as Chairman and comprises of the **Chief Justice of India, Leader of the single largest Opposition Party in Lok Sabha** and two other eminent personalities.

### Gandhi Peace Prize

- The annual award was instituted by the Government of India in 1995 during the commemoration of the 125th Birth anniversary of Mahatma Gandhi.
- The award carries an amount of ₹ 1 crore, a citation in a scroll, a plaque as well as an exquisite traditional handicraft/handloom

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## Lothal : City of Port

### In The News

The word Lothal, like Mohenjo-daro, means the mound of the dead. Lothal is located between the **Bhogavo** and **Sabarmati rivers** near the Gulf of Khambhat in **Gujarat**.

### Town Planning of Lothal

- The 4,500-year-old city was **mathematically planned**. It had a grid pattern with proper **streets crossing at right angles** and **drainage systems**.
- The **emphasis on cleanliness** can be judged from the **discovery of toilets and lota-like jars** which shows our fixation with washing up goes back all the way to the Harappan Civilisation.
- The city was divided into two parts: the upper town and the lower town. The remains of the brick walls there suggest wide streets, drains and bathing platforms.

### Lothal : City of Trade

- **Rectangular basin** bound on all sides by **baked bricks** has been found at Lothal that was said to be the **dockyard**.
- The discovery of Lothal seals in other ancient cities points to its importance in trade that was conducted with other ancient civilisations. The **dockyard proves the maritime activity of the Harappans**.
- Lothal was in the thick of Harappan maritime trade, and beads made from semi-precious stones, terracotta, gold, etc. were popular in areas as far as **Sumer (modern-day Iraq)**, Bahrain and Iran.
- The Lothal bead-makers were highly skilled as hundreds of carnelian beads in various stages of production and tools and raw materials were recovered.

of its sites to be excavated in the 1920s by British archaeologist **Sir Mortimer Wheeler**.

- Harappan civilisation emerged on the **banks of the river Indus in the second half of the third millennium BCE** and spread across large parts of western India.
- A marked feature of this ancient civilization was the vivid imagination and artistic sensibilities exuded by the numerous sculptures, seals, potteries, jewellery found at the excavation sites.
- **Harappa and Mohenjo-daro – the two major sites of this civilization** – are among the earliest and finest examples of urban civic planning. The planned network of roads, houses and drainage systems indicate the planning and engineering skills that developed during those times.
- The Harappan Civilisation was widespread as it covered parts of **India, Pakistan and Afghanistan**.
- It was a **trade based civilization** which had overseas trade links with Mesopotamia attested by the discovery of Harappan seals there and Mesopotamian carnelian beads here.

### Indus Valley Civilisation (IVC)

- The Indus Valley Civilisation, which is now more popularly referred to as the Harappan civilisation after Harappa, the first

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## Netaji Subhash Chandra Bose

### In The News

The Prime Minister inaugurated the **Subhash Chandra Bose** museum at Red Fort, Delhi to mark his **122nd birth anniversary on January 23**.

### Historical Background

- Subhash Chandra Bose (1897-1945) was **twice elected as President of the Indian National Congress, (1938-Haripur and 1939-Tripuri)**.
- Owing to political differences, he resigned from the Congress Presidentship in 1939 and organised the **All India Forward Bloc** a faction within the Congress in Bengal.
- In Calcutta, Bose organised mass protests and was arrested. He was later put under house arrest from where he escaped. He went to Germany via Afghanistan.
- However, in 1943 Bose lost hope that Germany could be of any help in gaining India's independence. He then turned to Asia where he set up the **Indian National Army (INA)**.
- INA found support among expatriate Indians and under its aegis Bose formed the **Azad Hind government** which came to **produce its own currency, postage stamps, court and civil code**. It was **recognised by Axis states**.
- During the final two years of the war, **Bose with considerable Japanese backing- led the forces of the Indian National Army into battle against the British**.

### Contribution to India's Freedom Struggle

- In July 1943, Bose reached Japanese-controlled Singapore from Germany and issued from there his famous call, '**Delhi Chalo**', and announced the formation of the Azad Hind Government and the Indian National Army.
- The INA was essentially non-communal, with Muslims quite prominent among its officers and ranks, and it also introduced the innovation of a **women's detachment**

**named after the Rani of Jhansi.**

- In November, 1945, a British move to put the **INA men on trial immediately sparked off massive protests all over the country**.
- **The INA experience and the wave of disaffection in the British Indian army, gave way to the Bombay naval strike of February 1946.**

## Kawtchhuah Ropui Heritage Site, Mizoram

### In The News

Archaeological Survey of India (ASI) has discovered traces of an ancient civilization in Vangchhia, a village in Mizoram's Champhai district bordering Myanmar.

- The site has been named as the **Kawtchhuah Ropui heritage site.**
  - Kawtchhuah Ropui means the Great Entranceway.
- Kawtchhuah Ropui the heritage site is Mizoram's first site which is under the protected monuments of Archaeological Survey of India's (ASI).
- **The site, measuring about 45 sq km has yielded pictographs etched on large stone slabs, menhirs (large standing stones), a necropolis (a large cemetery), a water pavilion among other artifacts.**
  - The ancient people of Vangchhia also carved terraces on rocks for their settlement – the main excavated site consists of 15 such terraces.

## Statue of Guru Padmasambhava

- A 19-foot-high statue of **Guru Padmasambhava, the founder of Tibetan Buddhism**, was unveiled at **Jirang in Gajapati district, Odisha.**
- This 29 tonne stone statue is placed in the middle of 'Padma Sarovar', a large tank near **Padmasambhava Mahavihara, the largest Buddhist monastery in eastern India.**
  - The Dalai Lama had inaugurated Padmasambhava Mahavihara monastery in 2010.
- Historians claim that Guru Padmasambhava, also known as second Buddha, was born and brought up in Odisha before he left for Tibet.

## Sangeet Natak Akademi Awards

### In The News

- The President of India confers the prestigious Sangeet Natak Akademi Awards at Rashtrapati Bhawan, New Delhi.
- **The General Council of the Sangeet Natak Akademi, the National Academy of Music, Dance and Drama, an autonomous body of the Ministry of Culture** had selected forty-two (42) artists from the field of Music, Dance, Theatre, Traditional/Folk/Tribal Music/Dance/Theatre, Puppetry and Overall contribution/scholarship in the Performing Arts for the Sangeet Natak Akademi Awards (Akademi Puraskar) for the year 2017.
- **The honour of Akademi Award has been conferred since 1952.**
  - These honours not only symbolize the highest standard of excellence and achievements, but also recognize sustained individual work and contribution.
- The honour of Akademi Award carries with it ₹1,00,000/- (Rupees one lakh), besides a Tamrapatra and shawl.

## Promotion and Protection of Maithili

### In The News

The Ministry of Human Resource Development has decided to apply some of the recommendations of a committee constituted in 2018 for the promotion and protection of Maithili language and its scripts.

- The accepted recommendations include:
  - **Establishment of a script and manuscript centre in Darbhanga** either at Kameshwar Singh Sanskrit University or Lalit Narayan Mithila University.
  - **Early completion of work pertaining to Unicode scripts of Mithilakshar by the Technology Development of Indian Languages.**
  - Preparation of audio-visual materials for teaching the Mithilakshar scripts.
- It was the literary language of all of eastern India during the medieval period.
- This language was popularised in fourteenth century by poet **Vidyapati** and solidified the importance of the language in literature.
- Maithili language has been accorded Constitutional status in 2003 and it became one of the 22 languages mentioned in the 8th Schedule.

### Mithilakshar Script of Maithili Language

- **Mithilakshar or Tirhuta is the script of broader cultural Mithila.**
- **Mithilakshar, Bangla, Assamese, Nebari, Odia and Tibetan are a part of the same family of scripts.**
- **It is an ancient script and is one of the scripts of the broader North Eastern India.**
- Mithilakshar script emerged during 10th Century AD as its oldest form was found in Sahodara stone inscriptions of 950 AD.
- The script has been used throughout Mithila from Champaran to Deoghar.
- The use of this script has been declining since the last 100 years, which is the primary reason for the cultural decline.

### Maithili Language

- Maithili is a language spoken in Bihar belonging to the eastern sub-group of the Indo-Aryan branch.
  - **Bhojpuri and Magadhi are closely related to the language.**
- ☎ The language is claimed to have developed from **Magadhan Prakrit**.

## State Emblem



### Detail

- The State Emblem of India is an adaptation from the Sarnath Lion Capital of Ashoka.
- In the original, there are four lions, standing back to back, mounted on an abacus with a frieze carrying sculptures in high relief of an elephant, a galloping horse, a bull and a lion separated by intervening wheels over a bell-shaped lotus.
  - Carved out of a single block of polished sandstone, the Capital is crowned by the Wheel of the Law (Dharma Chakra).
- **In the State Emblem, adopted by the Government of India on 26 January 1950**, only three lions are visible, the fourth being hidden from view.
  - The wheel appears in relief in the centre of the abacus with a bull on right and a horse on left and the outlines of other wheels on extreme right and left.
  - The bell-shaped lotus has been omitted.
  - The words Satyameva Jayate from Mundaka Upanishad, meaning ‘Truth Alone Triumphs’, are inscribed below the abacus in Devanagari script.

## Invasions and Restorations

- **Dharmarajika stupa is the one said to have been built by Ashoka to commemorate Buddha’s first sermon.**
  - After Ashoka, the other rulers who added to Sarnath’s glory were the Kushans, the Guptas and Harshavardhana.
  - **Under the Guptas, the Dhamekh stupa (synonymous with Sarnath) was encased with stone-carved floral designs.**
- Sarnath suffered from the Huna invasions, but Harshavardhana later restored some of the earlier buildings.
  - The Chinese pilgrim Hiuen-Tsang (602-664) left detailed accounts of the Dharmarajika stupa and Ashoka’s lion pillar.
  - **Sarnath also suffered when it was attacked by Mahmud of Ghazni in the 11th century.**
  - After that, Mahipala, the Pala king, restored the monuments.
- The last great monument of Sarnath, a monastery named Dharmachakra Jina Vihara was built in the 11th century by Kumaradevi, wife of Govindachanda of the Gahadavala dynasty.

## Sarnath

Sarnath, Varanasi is known for two things: **Buddha's first sermon** and for the **Ashoka Pillar**.

- **In ancient times, this place was known by many names – Rishipatana, Mrigadava and Mrigadaya.**
  - The word Sarnath comes from a corruption of the name Saranganatha (lord of deer).
- The ashes of the Buddha were buried in stupas built at locations associated with important events in the Buddha's life including:
  - **Lumbini** (where he was born), **Bodh Gaya** (where he achieved Enlightenment), **Deer Park at Sarnath** (where he preached his first sermon sharing the Four Noble Truths also called the dharma or the law), and **Kushinagara** (where he died).
  - Two hundred years after Buddha, the Mauryan emperor, Ashoka, fought the battle of Kalinga and, disgusted by the bloodshed, became a Buddhist.
  - Ashoka built many beautiful stupas and monasteries at Sarnath.
  - Sir Alexander Cunningham (First Director-General of Archaeological Survey of India), excavated the Dhamekh, Dharmarajika, and Chaukhandi stupas along with a monastery and temple between 1834 and 1836.
  - Many excavations followed these, the most famous among them being the 1904-05 excavation by Friedrich Oscar Oertel of the Ashoka Pillar, including the Lion Capital.
- **According to an inscription at Chaukhandi stupa, Humayun sought**

**refuge in Sarnath when he was escaping from the battle of Chausa.**

- **Note:** The battle of Chausa was fought between the Mughal emperor, Humayun, and the Afghan, Sher Shah Suri in 1539 at Chausa (modern-day Bihar, India).

## World Cancer Day

### In The News

World Cancer Day is organized by the Union for International Cancer Control (UICC) and celebrated each year on 4 February.

- The theme for 2019-2021 is “I am and I will” – all about individual stories and commitments to beat cancer.
- The objective of World Cancer Day is aligned with Sustainable Development Goal (SDG-3.4), i.e. to reduce by one third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being by 2030.
- The World Cancer Day aims to save millions of preventable deaths each year through education, raising awareness and by pressing governments and individuals across the world to take action.

### Cancer

- Cancer is a generic term for a large group of diseases characterized by the growth of abnormal cells beyond their usual boundaries that can then invade adjoining parts of the body and/or spread to other organs.
  - Other common terms used for cancer are malignant tumours and neoplasms.
- Cancer is the second leading cause of death globally and is estimated to account for 9.6 million death in 2018.

### Union for International Cancer Control (UICC)

- The Union for International Cancer Control (UICC) is a membership organisation to help the global health community accelerate the fight against cancer.
- It was founded in 1933 and is based in Geneva.

### Non-Communicable Diseases Burden in India

- According to recently released data by the World Health Organisation (WHO), nearly 61% of deaths in India are now attributed to non-communicable diseases (NCDs).
  - Cardiovascular diseases (coronary heart disease, stroke, and hypertension) contribute to 45% of all NCD deaths, followed by chronic respiratory disease (22 %), cancer (12 %) and diabetes (3%).
- NCDs are also a major cause and consequence of poverty.
- Although, the percentage of deaths from NCDs is still lower in India compared to many other countries across the world but the burden is rapidly increasing because of changing lifestyle and factors like pollution.
  - Four risk factors responsible are tobacco, unhealthy diet, physical inactivity and harmful use of alcohol.
  - Major metabolic risk factors are obesity, and raised blood pressure, blood glucose and blood cholesterol levels.

## Endosulfan in Kerala

### In The News

In news because the representatives of the victims of **endosulfan poisoning in Kasaragod district of Kerala** called off the sit-in in front of the state Secretariat in Thiruvananthapuram.

### What is EndoSulfan?

Endosulfan is an organochlorine insecticide which was first introduced in the 1950s and is commonly known by its trade name Thiodan.

### Use of Endosulfan

Sprayed on crops like cotton, cashew, fruits, tea, paddy, tobacco etc. for control of pests such as whiteflies, aphids, beetles, worms etc.

### Impact of Endosulfan

#### Environment

- Endosulfan in the environment gets accumulated in food chains leading to higher doses causing problems.
- **If Endosulfan is released to water, it may bioconcentrate in aquatic organisms.**

#### Humans And Animals

- **Endosulfan ingestion results in diseases ranging from physical deformities, cancer, birth disorders and damage to the brain and nervous system.**

### Ban on Endosulfan

- **The Supreme Court in India has banned the manufacture, sale, use, and export of Endosulfan throughout the country, citing its harmful health effects in 2015.**
- Endosulfan is listed under both Rotterdam Convention on the Prior Informed Consent and the Stockholm Convention on Persistent Organic Pollutants.

dealing with trade in hazardous chemicals and pesticides.

- **PIC, i.e Prior Informed Consent is the main feature of the convention and is legally binding on the party members.**
- The Convention creates obligations for the implementation of the Prior Informed Consent (PIC) procedure.
- PIC facilitates information exchange about nature and trade-related information amongst the party members.

### Stockholm Convention 2001

- **The convention aims to reduce the concentration of persistent organic pollutants (POPs) which are chemical substances that not only remain in the atmosphere for longer periods but also possess the ability to bioaccumulate.**
  - The convention had listed 12 POPs as ‘dirty dozen’.

### Rotterdam Convention 1998

- **The convention aims to promote cooperation and responsibility sharing measures amongst different countries**

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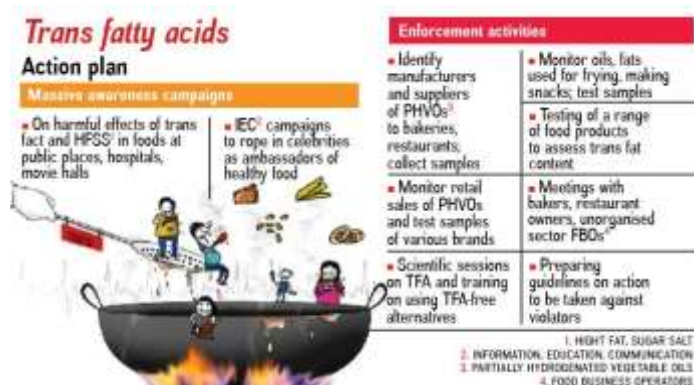
   



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## Awareness Campaign on Trans Fatty Acids

- The Kerala Health Department has drawn up an action plan to generate public awareness on the **harmful effects of trans fatty acids (TFA)** in commercially available food items and to encourage the local food industry to meet the current statutory limits set for TFA.
- This initiative is being supported by the World Bank, World Health Organisation (WHO), the Food Safety and Standards Authority of India (FSSAI), and the State Food Safety wing.



## e-AUSHADHI Portal

- Recently, the Government launched the **e-AUSHADHI portal**, for **online licensing of Ayurveda, Siddha, Unani and Homoeopathy drugs and related matters**.
- The portal is intended for increased transparency, improved information management facility, improved data usability and increased accountability.
- This new e-portal is an **acronym for Ayurveda, Unani, Siddha and Homeopathy Automated Drug Help Initiative**.
- It will provide **real time information** of the licensed manufactures and their products, cancelled and spurious drugs, contact details of the concerned authority for specific grievances, and thereby **aid the licensing authority, manufactures and consumers**.
- It can be noted that recently the Cabinet also approved the **draft** National Commission for Indian of Medicine (NCIM) 2018 which seeks to enhance transparency.

## Kerala's Village Millet Scheme

### In The News

- Kerala government has decided to expand its Millet Village Scheme to other districts in the state.
- The Millet Village scheme was first launched in Attappady in Palakkad district of **Kerala**.
- Under the Millet Village scheme, the government promoted the harvest of ragi (finger millet), thina (foxtail millet), cholam (sorghum) and kuthiravaali (barnyard millet).
- The project aimed at protecting seeds of traditional varieties of millets and ensures food security and livelihood for tribals.
- The scheme also provides financial assistance to farmers for cultivation of millets crops.

security and act as a shield against **nutritional deficiency**, especially among children and women. Its **high iron content** can fight high prevalence of anaemia in India women of reproductive age and infants.

- Millets have low carbon and water footprint and can withstand high temperature.

### Millets Production in India

- Millets are cultivated in low-fertile land, mountainous, tribal and rain-fed areas. These areas include Andhra Pradesh, Chhattisgarh, Gujarat, Haryana, Madhya Pradesh, Rajasthan, Maharashtra, Karnataka, Uttar Pradesh, Tamil Nadu, and Telangana.
- India celebrated 2018 as the national year of millets.
- Also, India's proposal to observe an International Year of Millets in 2023 has been approved by the Food and Agriculture Organisation (FAO).

### Advantages of Millets

- **Millets also are known as 'nutri-cereals'** and have a high protein content, short growing season, are climate change resilience and have low water requirement.
- Millets are less expensive and nutritionally superior to wheat & rice owing to their high protein, fibre, vitamins and minerals like iron content. Millets are also rich in **antioxidants**.
- Millets can provide nutritional

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## National Deworming Day

### In The News

- Recently, the Ministry of Health and Family Welfare conducted its eighth round of National Deworming Day. It was conducted in several rounds, from February 10-14, 2019.
- NDD (first round) is conducted on February 10 each year. It was **launched in 2015 with aim to reduce the prevalence of Soil-Transmitted Helminths and parasitic intestinal worms.**
- Helminths (worms) which are transmitted **through soil contaminated with faecal matter** are called soil-transmitted helminths (Intestinal parasitic worms). **Roundworm** (*Ascaris lumbricoides*), **whipworm** (*Trichuris trichiura*) and **hookworms** (*Necator americanus* and *Ancylostoma duodenale*) are worms that infect people.
- According to World Health Organization 241 million children between the ages of 1 and 14 years are at risk of parasitic intestinal worms in India, also known as Soil-Transmitted Helminths (STH).
- The objective of National Deworming Day is to deworm all preschool and school-age children (enrolled and non-enrolled) **between the ages of 1-19 years** through the platform of schools and Anganwadi Centers in order to improve their overall health, nutritional status, access to education and quality of life.
- The program is implemented with the **coordination of Ministries of Women and Child Development and Human Resource Development.**
- It falls under the purview of the **Extended Gram Swaraj Abhiyan** and is committed to improve the nutritional uptake in all children and adolescents.

## National Girl Child Day

### About

- The Ministry of Women & Child Development celebrated National Girl Child Day (NGCD) on 24th January 2019 in Delhi.
- The theme of NGCD 2019 was **“Empowering Girls for a Brighter Tomorrow”** and was celebrated with objectives of generating awareness on the issue of declining **Child Sex Ratio (CSR)** and create a positive **environment around valuing the girl child**.
- The celebrations also marked the **4th anniversary of Beti Bachao Beti Padhao (BBBP)** Scheme which was launched in 2015.

### Beti Bachao Beti Padhao (BBBP) Scheme

- The trend of decline in the Child Sex Ratio (CSR), defined as the number of girls per 1000 of boys between 0-6 years of age, has been unabated since 1961.
- The decline from 945 in 1991 to 927 in 2001 and further to 919 in 2011 is alarming.
- The decline in the CSR is a major indicator of women disempowerment.
- CSR reflects both, pre-birth discrimination manifested through gender-biased sex selection, and post-birth discrimination against girls.
- Two most prominent reasons for the decline in child sex ratio are:
  - Social construct discriminating against girls
  - Easy availability, affordability and subsequent misuse of diagnostic tools
- The government has announced the **Beti Bachao Beti Padhao initiative to ensure survival, protection, and empowerment of the girl child**.
- This is a joint initiative of the **Ministry of Women and Child Development, Ministry of Health and Family Welfare and Ministry of Human Resource Development**.

## Oxfam Report on Inequality

### In The News

The international rights group, Oxfam released its annual study before the start of the five-day World Economic Forum (WEF) Annual Meeting in Davos, Switzerland.

### Key Points

#### GLOBAL

- Only **26 people on the earth** now own the same amount of resources as the 3.8 billion people own. This highlights the **intensity of the concentration of wealth**.
- The governments are exacerbating inequality by **underfunding** public services, such as healthcare and education, on the one hand, while **under-taxing corporations and the wealthy**, and failing to clamp down on tax avoidance, on the other.
  - When public services are neglected, **poor women and girls suffer most**. **E.g:** Girls are pulled out of school first when the money is not available to pay fees, and women clock up hours of unpaid work looking after sick relatives when healthcare systems fail.
  - Also, cutting taxes on wealth **predominantly benefits men** who own 50% more wealth than women globally, and control over 86% of corporations.
- **Unpaid work done by women** across the globe amounts to a **staggering \$10 trillion a year**, which is 43 times the annual turnover of the world's biggest company Apple.
  - The **top 1% of India's wealthiest got richer by 39%** compared to 3% growth in the incomes of the bottom 50%.
  - The **poorest 10% (13.6 crores)** Indians have been living under the burden of debt since 2004.
- **Even in India women and girls are hardest hit** by rising economic inequality.
- In India, the **unpaid work done** by women looking after their homes and children is **worth 3.1% of the country's GDP**.
- The Oxfam study also referred to **India's poor 108th ranking on the WEF's Global Gender Gap Index of 2018**, stating that households that rely primarily on female earners tend to be poorer **because of gender pay gap**.
- The various intersections of caste, class, religion, age and sexual orientation have further implications on women inequality as a process. Although, India has many laws that deal with violence against women, but their implementation remains a challenge, mostly because of a **deeply patriarchal society**.
- Women's ability to undertake paid work is not merely determined by **economic considerations but also by social norms**. **E.g.:**
  - It is understood that a woman's primary role is to **take care of the house** and her family and any income generating work is secondary to this role.

#### INDIA

- India's **top 10% of population holds 77.4%** of the total national wealth. The top 1% hold 51.53% of the national wealth, while the remaining 99% make do with almost 48%.

### Recommendations

- All governments should set concrete, timebound targets and action plans to reduce inequality as part of their commitments under **Sustainable Development Goal (SDG-10: Reduce Inequalities)**. These plans should include

action in the following three areas:

- **Universal free** health care, education, pensions, child benefits and other public services that also work for women and girls should be delivered.
- **Freeing up of women’s time** should be a key objective of government spending. Investment must be made in public services including water, electricity and childcare that reduces the time needed to do this unpaid work.
- **End the under-taxation** of rich individuals and corporations. Tax avoidance and evasion by corporates and the super-rich should be eliminated. Tax system should be redesigned to make it fair, with developing countries having an equal seat at the table.

## Shortcomings

- Oxfam determines global inequality on the basis of one’s net wealth—assets minus liabilities and excludes income altogether, ignoring purchasing power parity, standard of living, pension funds and future claims of investments which are **major parameters for measuring inequality**.
- E.g.: A large section of Indian population **invests in the education and career building** of their children. That may be a liability today but is also an investment for tomorrow. Liabilities with income is not the same as liabilities without income.

## Ten Threats to Global Health in 2019: WHO

### In The News

The World Health Organisation (WHO) has released a list of “Ten threats to global health in 2019”.

### Ten Threats and India

#### Air pollution, climate change

- Nine out of 10 people are breathing polluted air across the world.
- India, with 18% of the world’s population, sees 26% of the global premature deaths and disease burden due to air pollution.

#### Noncommunicable diseases

- Noncommunicable diseases, such as diabetes, cancer, and heart disease, are collectively responsible for over 70% of all deaths worldwide.
- India has been named as the “diabetes capital of the world”. India’s current estimated cancer burden — over 1.5 million new cases — is predicted to nearly double in coming 20 years.

#### Global influenza pandemic

- WHO has said that the world may face another influenza pandemic. But, the only thing we don’t know is when it will hit and how severe it will be.

#### Fragile, vulnerable settings

- More than 1.6 billion people (22% of the global population) live in places where challenges such as drought, famine, conflict, and population displacement and weak health services have left them without access to basic care.
- The massive distress in India’s farm sector has engendered waves of internal migration for work. This migrant population often live in unhygienic conditions with very little access to basic care.

- The ability of bacteria, parasites, viruses, and fungi to resist antibiotics threatens our ability to fight with them.
- Drug resistance is driven by the overuse of antimicrobials in people and in animals, especially those used for food production, as well as in the environment.
- AMR is also a result of the rampant over-the-counter sale of medications without the prescription of a registered medical practitioner.
- India, China, and the Russian Federation accounted for 47% of the global incidence of MDR-TB (Multidrug-Resistant-Tuberculosis) in 2016. India has an AMR policy but the implementation is poor.

#### Weak primary healthcare

- Primary health care is usually the first point of contact for people having any health concerns. Ideally it should provide comprehensive, affordable, community-based care throughout life.
- Many countries do not have adequate primary health care facilities. This neglect may be due to a lack of resources in low- or middle-income countries and possibly also due to focus on single disease programmes in the past few decades.
- In India, the primary care arm of Ayushman Bharat, with a proposed 1,53,000 health and wellness centers, has received less attention than Pradhan Mantri Jan Arogya Yojana (i.e. The insurance aspect of Ayushman Bharat).
- Rural health statistics for 2017, in India, shows around 8,000 posts of doctors in primary health centers are vacant (against a requirement of almost 27,000), and almost 2000 of the total 25,000 Primary Health Centres have no doctors at all.

### Antimicrobial Resistance (AMR)

### Vaccine hesitancy

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- Vaccine hesitancy – the reluctance or refusal to vaccinate despite the availability of vaccines – threatens to reverse progress made in tackling vaccine-preventable diseases.
- Vaccination prevents 2-3 million deaths a year, and a further 1.5 million could be avoided if global coverage of vaccinations is improved.

## Dengue

- Dengue, a mosquito-borne disease that causes flu-like symptoms is lethal and kills up to 20% of those with severe dengue.
- WHO estimates 40% of the world is at risk of dengue, with around 390 million infections annually.
- Dengue's season is lengthening significantly in India. Until November 25, 2018, India saw 89,974 dengue cases and 144 deaths.

## HIV

- According to the WHO, nearly a million people every year die due to HIV/AIDS. Since the beginning of the epidemic, more than 70 million people have acquired the infection, and about 35 million people have died. Today, around 37 million people worldwide live with HIV.
- India has launched a “Test and Treat Policy”, made HIV treatment the right of every individual. India has also enacted the HIV/AIDS Act, 2018 which makes anti-retroviral therapy a legal right for Indians with HIV/AIDS.

## Ebola, other high threat pathogens

- WHO identifies diseases and pathogens that have the potential to cause a public health emergency but lack effective treatments and vaccines.
- This list includes Ebola, Zika, Nipah, Middle East respiratory syndrome coronavirus (MERS-CoV) and Severe Acute

Respiratory Syndrome (SARS) and disease X, which represents the need to prepare for an unknown pathogen that could cause a serious epidemic.

- While India saw no case of Ebola, but several Indian states battled Zika in October-November 2018, and at least 17 people died of Nipah infection in Kerala during April and May, 2018.

## Regional Conference on Deendayal Disabled Rehabilitation Scheme

### In The News

Recently the Department of Empowerment of persons with Disabilities, Ministry of Social Justice and Empowerment organised Regional Conference on “**Deendayal Disabled Rehabilitation Scheme (DDRS)**” in Mumbai.

- It was the second of a series of Regional Conferences to be held across the country wherein Programme Implementing Agencies (PIAs) from the western region namely, Maharashtra, Madhya Pradesh, Gujarat and Goa participated.
- Since this scheme was **revised in 2018**, the Regional Conference was organized in order to **disseminate the provisions of the revised scheme and bring the Department closer to implementing agencies.**

with mental illness

- rehabilitation of leprosy-cured persons, etc.
- The "Scheme to Promote Voluntary Action for Persons with Disabilities" was **revised and renamed** as the Deendayal Disabled Rehabilitation Scheme (DDRS) from **April 2003**.

### Deendayal Disabled Rehabilitation Scheme

- **DDRS is a Central Sector Scheme** of Government of India which is being implemented **since 1999** for providing **financial assistance to NGOs working for education and rehabilitation of persons with disabilities.**
- The objectives of the scheme are:
  - To create an **enabling environment** to ensure equal opportunities, equity, social justice and empowerment of persons with disabilities.
  - To encourage voluntary action for ensuring effective implementation of the **Right of Person With Disabilities Act 2016**
- NGOs are being **given assistance under DDRS** for providing a wide range of services to children/persons with disability, e.g.
  - programmes for pre-school and early intervention
  - special education
  - vocational training and placement
  - community based rehabilitation
  - manpower development
  - psycho-social rehabilitation of persons

## Global Risk Report 2019: World Economic Forum

### In The News

**World Economic Forum** has recently released the Global Risk Report 2019.

- It **enlists the threats which the world will face in future** ranging from geopolitical and geo-economic tensions to environmental degradation and disruptions of the Fourth Industrial Revolution.
- The report presents the results of the Global Risks Perception Survey conducted by the World Economic Forum.

### Findings of the Report

- The report has predicted the following major risks under five categories:

#### Economic

- Asset bubbles in a major economy

#### Environmental

- Extreme weather events
- Failure of climate change mitigation and adaptation
- Natural disasters
- Man-made environmental disasters
- Biodiversity loss and ecosystem collapse
- Failure of climate change mitigation and adaptation

#### Geo-Political

- Weapons of mass destruction

#### Societal

- Large-scale involuntary migration
- Water crises
- A spread of infectious diseases

#### Technological

- Data fraud or theft
- Cyber-attacks
- Critical information infrastructure breakdown

## Corruption Perceptions Index 2018: Transparency International

### In The News

India has been ranked at **78th place out of 180 countries** in ‘**Corruption Perceptions Index**’ (CPI) released by **Transparency International** in 2018 against 2017’s 81st, where it had come down from 79th in 2016.

- The index ranks the countries by their **perceived levels of public sector corruption** according to experts and business people.
- It uses a scale of 0 to 100, where 0 is highly corrupt and 100 is very clean.

### Key Findings

- Continued failure of most countries to significantly control corruption is contributing to a **crisis of democracy** around the world.
- A **general lack of political will, weak institutions** and few political rights create an environment where corruption flourishes with little opposition.
- More than **two-thirds of countries score below 50**, with an average score of only **43**.
- **Denmark and New Zealand** top the Index with 88 and 87 points, respectively. **Somalia, South Sudan, and Syria** are at the bottom of the index, with 10, 13 and 13 points, respectively.
- The **highest scoring region is Western Europe** and the European Union, with an average score of 66, while the lowest scoring regions are Sub-Saharan Africa (average score: 32) and Eastern Europe and Central Asia (average score: 35).
- With score of 71, the **United States** lost four points since last year, **dropping out of the top 20 countries** on the CPI for the first time since 2011. The low score comes at a time when the US is experiencing threats to its system of checks and balances as well as an erosion of ethical norms at the highest levels of power.

(from 40 in 2017).

- Massive public mobilisation against corruption and voter turnout resulted in new governments and anti-corruption reforms in India, Malaysia, the Maldives, and Pakistan.
- Despite these encouraging developments, these are yet to translate into solid action against corruption.

### Way Forward

- To make real progress against corruption and strengthen democracy around the world, **Transparency International calls on all governments to:**
  - **strengthen the institutions** responsible for maintaining checks and balances over political power, and ensure their ability to operate without intimidation;
  - **close the implementation gap** between anti-corruption legislation, practice and enforcement;
  - **support civil society organisations** which enhance political engagement and public oversight over government spending, particularly at the local level;
  - **upport a free and independent media**, and ensure the safety of journalists and their ability to work without intimidation or harassment.

### Indian Scenario

- India marginally **improved its score** to 41

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## ASER Report 2018

### In The News

- The NGO **Pratham** has released its **13th Annual Status of Education Report (ASER) – 2018**.
- ASER 2018 is a nation-wide household survey that provides a snapshot of children's schooling and learning for a representative sample of children across rural India.
- The survey covered almost 5.5 lakh children between the ages of 3 and 16 in 596 rural districts across the country.
- Children in the age group **3 to 16 are surveyed** to find out their enrollment status in school or pre-school. Children in the age group **5 to 16 are assessed one-on-one** to understand their basic reading and arithmetic abilities.
- ASER continues to be the only national source of information about children's foundational skills across the country.

### Key Findings

- The enrollment of children for the age group 6 to 14 has been above 95%, since 2017.
- In 2018, the overall proportion of girls in the 11 to 14 age group out of school has significantly fallen from the percentage in 2006. The number of out-of-school girls in India has gone down from 10.3% in 2006 to 4.1% in 2019.
  - The gender gap is shrinking, even within the older cohort of 15- and 16-year-olds. Only 13.6% of girls of that age are out of school — the first time the figure has dropped below the 15% mark.
- While 53.1% of students in Class V in rural government schools could read a text meant for Class II in 2008, the corresponding figure for 2018 stood at 44.2%; for comparison, private schools scored 67.9% and 65.1% for the same test in those years.
- More than half of Class VIII students cannot correctly solve a numerical

division problem and more than a quarter of them cannot read a primary-level text.

- There has been a gradual improvement at the Class III level, since 2014. However, even in 2018, only less than 30% of students in Class III are able to read a Class II text and do double-digit subtraction.
- A significant percentage of students were not even able to recognise letters appropriate for their class, highlighting a severe barrier to learning.
- Nationally, substantial improvements are visible in 2018 in the availability of many school **facilities** mandated by **Right To Education (RTE)**.
- ASER also introduced a series of questions on the availability of **sports infrastructure in schools**. In 2018, **about 8 out of 10 schools** had a playground available for students, either within the school premises or close by.

### Way Forward

- The Centre should institute a review mechanism involving all States for both government and private institutions, covering elementary education and middle school.
- A public consultation on activity-based learning outcomes, deficits in early childhood education, and innovations in better performing States can help.
- At present, children start learning in a variety of environments: from poorly equipped anganwadi centres to private nurseries. The enactment of the Right to Education Act was followed by a welcome rise in enrolment, which now touches 96%.
  - Empowering as it is, the law needs a supportive framework to cater to learners from different backgrounds who often cannot rely on parental support or coaching.
- It is worth looking at innovation in schools

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# Easy to PICK – “UPSC Monthly Magazine” January - 2019

and incentivising good outcomes; one study in Andhra Pradesh indicated that bonus pay offered to teachers led to better student scores in independently administered tests in mathematics and language

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## Mohan Reddy Committee Recommendations Accepted

### In The News

All India Council for Technical Education (AICTE) has accepted the recommendations of the committee headed by **BVR Mohan Reddy**.

- The Committee was set up to provide **Short And Medium Term Perspective For Engineering Education**

### Key Recommendations

- No **new engineering institutes** should be allowed to set up from **2020**.
- Concessions should be made for applications already in the pipeline.
- Only requests from existing engineering institutes to either **start programmes in new technologies or convert current capacity in traditional engineering disciplines to emerging new technologies like artificial intelligence or robotics** should be entertained.
- Creation of **new capacity in colleges should be reviewed** every two years.
- **Committee found that the current capacity utilization in traditional disciplines is just 40% as opposed to 60% seat occupancy in branches such as computer science and engineering, aerospace engineering and mechatronics.**
  - The committee had urged the AICTE to **introduce undergraduate engineering programmes** in emerging technologies like **artificial intelligence, the blockchain, robotics, quantum computing, data sciences, cybersecurity, 3D printing and design.**
- The committee found that the **innovation, incubation, and start-up ecosystem is lacking in educational Institutions.** Thus, every education institution should be mandated for the following:
  - **Entrepreneurship should be a minor elective for Undergraduates.**
  - **Tinkering Laboratories similar to Atal Innovation**

**Laboratories** to be set up in every educational institution.

- Educational Institutions need to set up **incubation centers, mentoring clubs** and accelerator programs.
- For approving additional seats in existing institutions, the committee has suggested that the AICTE should only give **approvals based on the capacity utilization of concerned institute.**

### Background

- Over the last couple of decades primarily in the post- liberalization phase, **India faced the challenge of meeting the fast-growing demand of skilled workforce** emanating from various key sectors of the economy.
- Since the requirement could have been met only through **widening the infrastructural base of the education sector by increasing the number of specialized technical institutions**, the country went into institution overdrive.
- **The government took the lead by setting up several technical institutions.** The policy continued unabated for about two decades, without any meaningful appraisal or evaluation of institutions being established, **resulting in mushrooming of engineering institutions.**
- In 2003, the **UR Rao committee** had warned of the rise in the number of engineering colleges and **suggested that a five-year moratorium on approving undergraduate technical institutions** be put in force in states where the annual student intake exceeded the national average of 150 per million population.
- **A 2017 study by Aspiring Minds found that 95% of engineering graduates were unemployable for the software industry, which accounts for the bulk of engineering jobs.**

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- In December 2017, an **investigation** by **The Indian Express** has found there were **no takers for 51% of the 15.5 lakh B.E/B.Tech seats in almost 3,200 engineering colleges** in 2016-17.
- The investigation found glaring **gaps in regulation**, including alleged **corruption**; a vicious circle of **poor infrastructure**, labs, and faculty; **non-existent linkages with industry** and the **absence of a technology ecosystem** to nurture the classroom. All this led to **low employability of graduates**.

## World Leprosy Day

### In The News

World Leprosy Day is observed on the **last Sunday of January**. It seeks to increase public awareness about leprosy and focuses on the target of zero cases of leprosy- related disabilities in children.

- The theme for 2019 World Leprosy Day is ‘**ending discrimination, stigma, and prejudice**’.
- In **India, it is celebrated on the 30th January each year** to commemorate the **death of Mahatma Gandhi**. This day was chosen as a tribute to the life of Gandhi who had a lifelong compassion for people affected by leprosy.
- Recently, **Shri Yohei Sasakawa** has been awarded **Gandhi Peace Prize** for the year 2018 for his contribution in Leprosy Eradication in India and across the world.
- Even though India **achieved leprosy elimination** (<1 new leprosy case per 10,000 population) in 2005, 60% of the world’s leprosy patients are still living in the country.
- Further, a sample survey for leprosy conducted by the Indian Council of Medical Research (ICMR) in 2008-2011 estimated that there may be 2,50,000 new cases every year.

known as **Mycobacterium indicus pranii (MIP)**, has been developed by **National Institute of Immunology**. This vaccine will be administered as a preventive measure to those staying in close contact with leprosy patients.

- Indian research contributed to the development of **Multi-Drug Therapy or MDT**, now recommended by WHO, which led to the shortening of treatment and higher cure rates.
- **Removal of social stigma:** More than laws, people’s attitude to leprosy has to change, doing away with discrimination.

### Steps Taken to Eliminate Leprosy

- In 2017, government launched nationwide **Sparsh Leprosy Awareness Campaign (SLAC)** which aims at communicating the importance of early detection and treatment of leprosy.
- **National Leprosy Eradication Programme (NLEP):** It focuses on both prevention and cure, especially in endemic regions. A Leprosy Case Detection Campaign was launched in March 2016, involving house-to-house screening and referral of patients for diagnosis.
- Introduction of an **indigenously developed vaccine** for leprosy into the **National Leprosy Elimination Programme (NLEP)**. The vaccine,

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## Reservation For Economically Weaker Sections

### In The News

President gave assent to **The Constitution (103rd Amendment) Act, 2019** (124<sup>th</sup> Constitution Amendment Bill) to provide **10% reservation** in government jobs and educational institutions to the **economically weaker sections (EWS)** among those who are not covered under any reservation plan.

### Key features of the amendment

- The Act **amends Article 15** to enable the government to take special measures (not limited to reservations) for the advancement of “economically weaker sections” (EWS).
  - o Up to 10% of seats may be reserved for such sections for admission in educational institutions. Such reservation **will not apply** to minority educational institutions.
- The **amendment adds Article 16(6)** which permits the government to reserve up to 10% of all posts for the “economically weaker sections” of citizens.
- The reservation of up to 10% for the EWS will be in addition to the existing reservation cap of 50% reservation for SC, ST and OBCs.
- The central government will notify the “**economically weaker sections**” of citizens on the basis of family income and other indicators of economic disadvantage.
- **Constitutional recognition to Economically Weaker Section (EWS):** For the very first time, economic class is constitutionally recognized as vulnerable section & would form the basis of affirmative action programme. It is a departure from traditional centrality of caste in deciding affirmative action.

### Arguments in favour of reservation based on economic status

- **Need for new deprivation assessment criteria:** Caste, while prominent cause of injustice in India, should not be the sole determinant of the backwardness of a class. This is because of the weakening links

between the caste and class in changing circumstances.

- o In **Ram Singh v. Union of India (2015)**, SC asserted that social deficiencies may exist beyond the concept of caste (e.g. economic status / gender identity as in transgenders). Hence, there is a need to evolve new yardsticks to move away from caste-centric definition of backwardness, so that the list remains dynamic and most distressed can get benefit of affirmative action.
- **Increasing dissatisfaction among various sections:** Politically, the class issues have been **overpowered by caste issues**. This has created a sense of dissatisfaction amongst communities with similar or poorer economic status but excluded from caste-based reservation.

### Arguments against extending reservations on economic basis:

- **Against equality norm:** To balance the equality of opportunity of backward classes ‘against’ the right to equality of everyone else, a cap of 50% was put on the reserved seats. When the quota exceeds 50% limit, it breaches the equality norm.
  - ✓ In **M. Nagaraj v. Union of India (2006)**, a Constitution Bench ruled that equality is part of the basic structure of the Constitution. The 50% ceiling is a constitutional requirement without which the structure of equality of opportunity would collapse.
- **No under-representation:** The upper caste is adequately represented in public employment. It is not clear if the government has quantifiable data to show that people from lower income groups are under-represented in its service.
- **Problem with the ceiling:** By fixing income ceiling for eligibility at ₹8 lakh a year — same as the ‘creamy layer’ limit above which OBC candidates become ineligible

for reservations — a parity has been created between socially & economically backward classes with limited means.

- **Definition of EWS and allotment of quota:** The issue with current definition of EWS is that it is too broad and would include large sections of population. Further, it also puts families below poverty line and the ones with income of 8 lakh/annum in the same category.
  - o Reservation for SCs/STs and non-creamy layer amongst OBCs has correlation with their respective populations. While there is no such clarity on arriving at the 10% EWS quota.
- **Challenges in the identification of beneficiaries:** In a country where taxable population is still very low due to misrepresentation of income, implementing economic eligibility criteria would be a bureaucratic nightmare.
- **‘Pandora’s box’ of demands:** There may be demand from sections of the SCs/STs and OBCs to introduce similar sub-categorization, based on economic criteria, within their respective quotas. It might also fuel demands for new caste-based censuses to expand quota limits based on SC/ST or OBC proportions in the population, or to extend the reservations to private sector jobs. Quota in promotions may also gain widespread acceptability, both among the public and the judiciary.
- **Shrinking public sector:** With steadily shrinking jobs pool in the Central Government, Central Public Sector Enterprises (CPSEs) and even banks, 10% reservation will not fulfill expectations.
- **Anti-Merit:** In common perception, reservation has also become synonymous with anti-merit. With extension of reservation, this opinion might get further ingrained in public psyche.
- **Tool of populism:** Offering reservations has increasingly become tool for political gains in politics. This affects their credibility as a tool for social justice.
- **Passage of the Bill:** The Bill was not

circulated ahead of being introduced, it was not examined by a parliamentary committee & there was hardly any time between its introduction and final discussion.

- Also, the **Sinho Commission report of 2010**, which the Centre has been citing as the basis for its legislation to grant 10 % reservation to the EWS, never explicitly recommended a reservation for EWS but was only emphatic about ensuring that the EWS get access to all welfare schemes.

## Way Forward

A 9-judge bench of Supreme Court in **Indira Sawhney case (1992)** had struck down a provision that earmarked 10% for the economically backward on the grounds that Constitution only provides for addressing social backwardness. However, any such step should carefully be preceded by following considerations-

- 50% ceiling was put in place to **check populism in granting quotas** by the political class. There must be an **institutional mechanism that recommends classes for reservation**.
- Based on the affidavits furnished by the candidates, **independent, transparent and non-intrusive verification methods** have to be devised so that reservation provisions cannot be misused easily.
- The logic of providing reservation to economically backward people can further be carefully extended to **exclude the creamy layers among SC/ST groups**.
- The demand for reservation must be seen in light of the quality of private sector jobs and wages available to aspirational India. The only way out of the quota quagmire is to **create an enabling environment for the formalization and creation of more and better jobs in the private sector**.
- For a long-term solution, it is important to address the major issues like caste divisions majorly in rural areas, job creation in private sector, skill creation and education.

## EVM Controversy

### In The News

Recently, there have been controversies surrounding EVMs regarding their safety feature.

### Safety Features within EVMs

- **Non-reprogrammable:** It consists of an integrated circuit (IC) chip that is one time programmable (software burnt at the time of manufacturing) and cannot be reprogrammed.
- **No external communication:** EVMs are not networked by any wired or wireless system, nor do they have any frequency receiver and data decoder, so there cannot be any external communication. Control Unit (CU) accepts only specially encrypted & dynamically coded data from Ballot Unit (BU).
  - o Other countries like Netherlands and Germany (which discontinued the use of EVMs) use computer based EVMs which are prone to hacking, while Indian EVMs are standalone machines.
- **Secure Source Code:** Software and source code developed in-house by selected group of engineers in BEL and ECIL.
- It allows a voter to **cast the vote only once**. The next vote can be recorded only after Presiding Officer enables the ballot on CU.
- **Time stamping of votes:** EVMs are installed with real time clock, full display system and time-stamping of every key pressing so there is no possibility of system generated/latent votes.
- **Secure against post-manufacturing tampering:** The machines with **self diagnostics** shut down automatically in case of tampering.
- There are also various **procedural checks and balances** (Standard Operating Procedure) like functional checks, trial run, random allocation, multi-stage testing, dry run and safe & secure storage post voting, included for ensuring free and fair elections.

### About Electronic Voting Machine (EVM)

- An EVM consists of a "control unit" and a "balloting unit". The **control unit** is with the Election Commission-appointed polling officer; the **balloting unit** is in the voting compartment into where voter casts her vote in secret
- It runs on a **single alkaline battery** fitted in the control unit, and can even be used in areas that have no electricity.
- They are manufactured by **Electronics Corporation of India Limited (ECIL) and Bharat Electronics Limited (BEL)**.

### History of EVMs in Indian Elections

- EVMs were **1<sup>st</sup> used in 1982 Kerala Assembly elections** (by-election).
- However, SC struck down the election since Representation of People Act, 1951, and Conduct of Elections Rules, 1961, did not allow use of EVMs.
- **RP Act 1951 was amended in 1988** to allow usage of EVMs.
- In **1999**, they were used for the **1<sup>st</sup> time in the entire state for Goa Legislative Assembly elections**.
- In **2004**, EVMs were used for the **1<sup>st</sup> time in Lok Sabha elections**.

### Arguments for going back to ballot system

- In terms of the three pillars of free and fair elections (**transparency, verifiability and secrecy**) the EVMs face following issues-
  - o **Not transparent:** An electronic display of the voter's selection may not be the same as the vote stored electronically in the machine's memory. To bridge this gap, VVPATs were introduced.
    - ✓ However, EC's VVPAT auditing is restricted to one randomly chosen polling booth per constituency, which will fail to detect faulty EVMs 98%-99% of the time.
  - o **Not verifiable:** Only the vote number can be verified and not the voting choice.
  - o **Not secret:** With the paper ballot, the EC could mix ballot papers from different booths before counting, so that voting preferences could not be connected to a locality. Counting in EVMs is equivalent

to booth-wise counting, which allows one to discern voting patterns & renders marginalized communities vulnerable to pressure.

- **Possibility of hacking:** Accusations of EVMs getting hacked or even the possibility of them being hacked creates a mistrust about electoral processes in the minds of the public.
- **Malfunctioning EVMs:** Though provided with specific training for correct usage of EVMs, officers sometimes don't pay attention & connect machines in wrong order.

## Arguments in favor of continuing with EVMs

- **Ease of use and accessible:** EVMs are found to be easy to use, even by illiterate voters who just need to recognize the symbols of the parties. It's also vitally important that everyone who is eligible to participate in elections can do so. And electronic voting is very good at making voting more accessible, meaning it's easier for disable people to vote independently.
- **Safe and secure:** The instances of booth capturing, rigging and stuffing ballot boxes with ink have been checked by the use of EVMs.
  - o Further, the EVMs in itself is a secure machine which is highly improbable to be hacked.
- **Faster results and build trust:** For other countries, particularly large ones like Brazil, India and the Philippines, electronic voting and electronic counting means that people can get official election results within hours, instead of weeks.
- **Completely auditable:** One of the reasons our electronic voting system has been praised so highly is that it's designed around the idea that all parties, citizens and election commissions are able to audit the electoral process at every stage, including before an election has even begun.
- **Other** benefits include elimination of the possibility of invalid and doubtful votes which, in many cases, are the root causes of controversies and election petitions. Also, it

reduces the use of paper during the elections.

## Way Forward

While there have been cases of “malfunction” (which suggests a technical defect), there has not been any case of proven “tampering” (manipulation aimed at fraud). In 2017, EC even held an ‘EVM Challenge’, where it invited political parties to demonstrate/proof any allegations of tampering.

However, cost and efficiency considerations are secondary to the integrity of the election. EC must ensure that any unjustified suspicion in the minds of public is removed through:

- **100% deployment of VVPAT** in all elections and by-polls and on **detection of any faulty EVM** in a constituency must entail the VVPAT hand-counting of all the EVMs in that constituency.
- EC must introduce **Totalizer Machines** for counting of votes. It increases the secrecy of voting by counting votes polled at 14 polling booths together, as against the current practice of announcing booth-wise results.
- **Regular demonstrations** must be organized by EC in all the poll-going States to reduce information gap on EVMs.
- EC should provide training to officers in small batches and focus on hands-on-learning. As a long term structural reform, EC must be provided with **an independent secretariat** so that it can have a dedicated cadre of officers.

## Feminisation Of Indian Politics

### In The News

Recently, a study by United Nations revealed **strong positive socio- economic and political impacts of feminisation of politics in India.**

### Need for women in politics

- **Constitutional and International Mandate:** The Constitution of India promises in **the Preamble** to secure to all its citizens ‘**JUSTICE**, social, economic and political’, as well as ‘**EQUALITY** of status and of opportunity’.
  - o Women’s active participation in electoral competitions is a **valid indicator of the efficacious growth of democracy** in any country.
  - o Also, **India has ratified** the International Convention on the Elimination of All Forms of Discrimination against Women (**CEDAW**) adopted in 1979 by the UN General Assembly which **specifies the right for the political participation of women.**
- **Controlling Corrupt Practices in Politics:**
  - o **Criminal Background:** Male legislators are about three times as likely as female legislators to have criminal charges pending against them when they stand for election. This factor can explain about one fourth of the difference in growth between male and female-led constituencies.
  - o **Corruption tendency:** In terms of corruption, the rate at which women accumulate assets while in office is 10 percentage points lower per year than among men.
- **Economic Aspect:** Raising the share of women is not only likely to lead to better representation of women’s and **children’s concerns in policymaking**, it is also likely to lead to **higher economic growth.**
- o **Infrastructure Development** based on the MLAs’ performance in implementation of the Pradhan Mantri Gram Sadak Yojana, the study concludes

that women show higher level of efficacy in terms of ensuring completion of developmental projects in their constituency.

- o Recognizing the significance of roles of women in decision making process in the society is **critical to strengthen women’s agencies** for building a progressive society with equality of opportunities among all citizens.

### Strategies for Enhancing Participation of Women in Politics:

- **Women’s Reservation in Politics:** There have been proposals for introducing reservation of seats (33%) in legislative bodies for women. Such steps have already been taken at local level governance (PRIs).
- **Improve capacity building, gender training and awareness raising** is also crucial. For example, a new scheme called ‘Nai Roshni’ to empower and grow confidence among minority women, including their neighbours from other communities living in the same village/locality.
- **Further it is important to improve their access to education** and work on gender sensitization of both girls and boys at the educational level.

However, women’s lack of access to education and to economic and political engagements is often deeply rooted in and hampered by cultural, religious or traditional norms and values. That is to say that mere increasing their participation or representation in the political processes might not be a panacea to all the women related issues as the major chunk of the problems emanate from a bound mindset. Hence, women’s empowerment not only requires socio-political reforms and technical capacity development, but also often requires men and women to change their mindset.

## North-East Autonomous Councils

### In The News

Recently, Constitution (125th Amendment) Bill, 2019 was introduced in Rajya Sabha to increase the financial and executive powers of the 10 Autonomous Councils in the Sixth Schedule areas.

### About autonomous councils and 6th schedule

- **6<sup>th</sup> schedule** deals with the **administration of the tribal areas** in four north-eastern states of **Assam, Meghalaya, Tripura and Mizoram**.
  - o They are treated differently by the constitution because the tribes in these states have **not assimilated much** the life and ways of the other people in these states.
- The tribal areas in these states have been constituted as **autonomous districts**, each of which has an **autonomous district council** consisting of 30 members. Currently, there are **10 such councils**.
- Some of the **powers and functions** of autonomous councils include:
  - o They can make **laws on certain specified matters** like land, forest, canal water, shifting cultivation, inheritance of property, marriage, divorce etc. These require assent of the governor.
  - o They can constitute **village councils or courts** within their jurisdiction, for trials of suits and cases between the tribes.
  - o They can **establish, construct or manage** primary schools, dispensaries, markets, ferries, fisheries, roads and so on in the district.
  - o They can make **regulations for the control of money lending and trading by non-tribals**, but these require the assent of the governor.
  - o They are empowered to **assess and collect land revenue** and to **impose certain specified taxes**. Issues with **autonomous councils and proposed amendments in the bill**
- **Lack of financial self-sufficiency:** The councils are dependent on their respective state governments for funds which denies

them the flexibility required to emerge as a vibrant institution for local development.

- o The bill proposes that Finance Commission will now recommend the financial devolution to the council.
- **Non-Representation of some tribes:** It is observed that some councils are not able to represent the numerous major and minor tribes within their jurisdiction in 30 members of the council.
  - o The bill increases the number of members in some council considering demands for the same.
- **Inadequate representation of women:** There is very less participation of women in tribal administration.
  - o The bill reserves at least one-third of the seats will be reserved for women in the village and municipal councils.
- **Need for village level bodies:** The provision for village councils indicate that these councils established by ADCs are envisaged to be institutions for the dispensation of justice. However, there is a need of a 'village community body' to harmonise with the traditional village body.
- The bill provides for elected village municipal councils which will be empowered to prepare plans for economic development and social justice.

### Other issues with autonomous councils in 6th schedule areas

- **Overlapping functional responsibilities between the States and the District councils:** Despite the fact that Sixth Schedule has declared that certain matters stand fully transferred to District and Regional Councils, some matters are not fully transferred to the Councils.
- **Lack of skilled professionals:** Almost all Councils do not have access to planning professionals which results in ad-hoc conceiving of development projects without proper technical and financial consideration.
- **Lack of clarity in the role of Governor:** certain special provisions have been inserted

into the Sixth Schedule which highlights matters where discretionary powers of Governor is applicable. However, there is conflicting opinion on whether the Governor should exercise his role on the basis of individual discretion or on the advice by the Council of Ministers of the State concerned.

- **Lack of codification of customary law:** Customary laws need to be codified and brought into practical use to ensure protection of tribal cultural identity.
- **Misuse of funds:** Some ADCs misuse government funds since there is no expert inspecting officers and proper auditing of the initiatives undertaken by ADCs.
- **Lack of efficient usage of existing powers:** Although the ADCs have power to make laws for land development and land revenue, hardly any significant steps have been taken to initiate land reforms which hold the key to prosperity in tribal society.

## Bill For Trade Union Recognition

### In The News

Recently the government approved the **amendment to Trade Unions Act, 1926** to make provisions regarding recognition of trade unions at the Central and state level.

### Background

- The Present Act provides for **only registration** of trade unions. Currently there is no provision for recognition of unions in the Act.
- Presently, a tripartite national body determines the membership criteria for designating trade union organisations as central trade union organisations (CTUOs). On the basis of this process, certain unions are deemed ‘recognised’.
- As per this process, the office of **Chief Labour Commissioner** has recognized **13 CTUOs** after a verification process.

### Key Amendments proposed

- Insertion of Section 10(A) in the principle Act, which would **empower center and state governments to recognize trade unions** and federation of trade union at central government level. The statutory recognition is necessary because recognized trade union of an industry or establishment get **bargaining or negotiating rights** with the employer.
- The central or state government **may make rules** further for the authority to decide disputes arising out of such recognition, and the manner of deciding such disputes.

### Criticism of the Bill

- There are concerns among unions that it gives **discretionary powers to the government** to recognize trade Unions departing from the existing practice based on tripartite consensus.
  - o It goes against India’s commitment of social dialogue under Tripartite Consultation (International Labour Standards) Convention, 1976.
- The issue of mandatory recognition of trade

unions at the enterprise/establishment level still remains which is one of the major issues undermining the collective bargaining power of workers.

- **Contractual workers** can’t be part of the Trade Unions as per the current Trade Unions Act, 1926. In the present era of rising Gig Economy in which most jobs are contractual, there is a need to address **issue of rights** of contract workers through amendment.

### Trade Unionism in India

- **The first organized labour movement** in India was in **1884** by **N. M. Lokhande**, who was a factory worker in Bombay who organized an agitation and convened a conference of workers to make representations to the Factory Commission appointed by the then British Government to study the conditions of the working class in factories.
- In 1920, the leaders of Indian National Congress, due to the necessity brought by the growth of Trade Unionism, founded the **All India Trade Union Congress (AITUC)**.
- **N.M. Joshi** is considered as the **father of modern trade unionism in India**, and he introduced the Trade Union Bill in the Assembly in 1921.
- **Article 19(1)(c)** of the Constitution of India guarantees freedom of association as a fundamental right.

### Importance of Trade Unions for a nation

- **Collective bargaining and Worker’s Welfare:** Trade Unions are workers’ tool for collective bargaining. Industries with trade unions always have higher wage structures. Trade Unions negotiate with employers for better terms and conditions of employment and for healthy workplace standards.
- **Harmonious Employee-Employer relations:** Trade Unions by being the voice of the workers in front of management prevent industrial unrest, violence, strikes

etc. which is good for the overall productivity and economy of the country.

- **Social responsibility:** Trade Unions often provide educational support and training for skill up-gradation.
- **Improved Legislation:** Trade Unions strengthen workers' demand for better labour and industrial legislation. The ability of unions to represent workers and their families stand as an asset, for which political parties try to woo them by offering better deals in terms of pro labour legislation.

## Problem faced by Trade Unions in India

- **Uneven Growth:** Trade union activities are concentrated in large scale industries.
- **Low Membership:** Even though, the number of trade unions has increased considerably in India, this has been followed by the declining membership per union.
- **Multiplicity of Unions:** There may exist many trade unions in the same establishment as The Trade Unions Act, 1926 permits any association of seven workers to be registered as a union.
- **Inter Union Rivalry:** Unions try to play down each other in a bid to gain greater influence among workers, thus, harming the cause of unionism as a whole.
- **Lack of Public Support** as the trade unions frequently resort to strike and protest in order to make their demands meet which causes inconvenience to public.

## Venezuela Crisis

### In The News

Venezuela is reeling under **political turmoil fuelled by an economic crisis** due to falling oil prices, and President Nicolas Maduro's attempts to restrain the Opposition.

### About Venezuela crisis

- **Hyperinflation** (extremely fast or out of control inflation) is the biggest problem faced by Venezuela. The economic crisis has also led to food shortage and hit the public health system, making medicine, equipment inaccessible to its people.
- The current crisis is often blamed on previous regimes' **subsidies**, large-scale **nationalisation** of companies and **mismanagement of finances**, compounded by Maduro's own follies.
- Due to this a **political crisis** has also emerged as **two factions have emerged**. One supporting the opposition leader led by the **U.S.** and others supporting the current regime led by **Russia, China**.
- **India has taken no sides till now.**

### Impact of Crisis

- **Increased Oil Prices:** Venezuela being home to the world's largest oil reserves is expected to complicate the global oil supply mix and perhaps even push up oil prices.
  - o India being the world's third largest oil importer, may get affected by **inflation as well as trade deficit**.
  - o However, the new sanctions by US may **force Venezuela to send more crude to China, India or other Asian countries**. This may benefit Indian refineries **in the short-term** as **more competitive pricing** would be available to them.
- **Mass Migration:** According to the UN, more than 1.6 million have fled the country since the crisis began in 2015, increasing the pressure on the neighboring countries.
- **Increasing crime rate in Venezuela:** As the country slips into poverty, many are

turning towards crime to make money.



## Space Diplomacy

### In The News

As part of its space diplomacy, India will set up five ground stations and more than 500 terminals in five neighboring countries – Bhutan, Nepal, Maldives, Bangladesh and Sri Lanka.

### More About News

- The infrastructure is being created as an extension of the **South Asia Satellite** launched in 2017.
- It will help put in place **applications** ranging from television broadcasting to telephony and internet, disaster management and tele-medicine.
- This move also helps India in putting our **strategic assets** in the neighborhood.

### What is Space Diplomacy?

- **Space Diplomacy** is the art and practice of using space to conduct International Relations and furthering National Interest.
- Space has emerged as **new arena for competition and cooperation** for global powers to compete and establish supremacy. Space technology being highly complex gives any nation international recognition, status and projects its soft-power.

### Space as a tool in Indian foreign policy

- **Furthering Neighborhood First Policy:** The South Asian satellite is in line with India's neighborhood first policy.
- **Enhancing Soft-Power of India:** it will also enhance and project India's soft-power and goodwill among foreign countries as we share the fruits of advancements in space technology with neighbors. India's ISRO provides a cheaper alternative to developing nations to launch satellites compared to the American or European counterparts, thus bringing them closer to India.
- **Countering China:** China has advanced satellite tracking center in Tibet which can not only track Indian satellites but also blind them. Ground Stations in the neighborhood will help India counter growing Chinese influence.

- **New Area of Cooperation:** Space opens up new area of cooperation between India and other states which would further enhance bilateral relations with those countries.

### Concerns associated with space diplomacy

- **Lack of legal agreements:** Space is one of the areas where few or no International treaties exist for its peaceful use. United Nations Office for Outer Space Affairs works to promote peaceful use of outer space but there are no binding agreements like NPT or CTBT to prevent weaponization of space.
- **Perpetuates Global inequality between Nations:** Because only a few nations have space technology, it makes other underdeveloped and developing nations dependent on developed nations to make use of space.
- **Misuse of resources:** There is also a concern that developing countries might overspend on space programs rather than addressing basic needs of its citizens. For example – North Korean has a space program too while its citizen suffers from famine and starvation.
- **Lack of uniform definition of Space boundary:** There is no international agreement on the vertical extent of sovereign airspace.
- **Space-weaponization:** Weaponization of space may become a new tool in the hands of nations in the future as a part of their space diplomacy. The space-weapons could be hundred times more lethal than current weapons and have a potential to wipe-out humanity.

### Related Bodies

**The United Nations Committee on the Peaceful Uses of Outer Space (COPUOS)** is the forum for the development of international space law. The Committee has concluded five international treaties:

- **The "Outer Space Treaty"** which regulates activities of States in the Exploration and Use

of Outer Space.

- **The "Rescue Agreement":** on the Rescue of Astronauts, the Return of Astronauts and the Return of Objects Launched into Outer Space.
- **The "Liability Convention":** Convention on International Liability for Damage Caused by Space Objects.
- **The "Registration Convention":** Convention on Registration of Objects Launched into Outer Space.
- **The "Moon Agreement":** which governs the Activities of States on the Moon and Other Celestial Bodies.

## United Nations Office for Outer Space Affairs (UNOOSA)

- It serves as the secretariat for Committee on the Peaceful Uses of Outer Space (COPUOS).
- It is also responsible for implementing the Secretary-General's responsibilities under international space law and maintaining the United Nations Register of Objects Launched into Outer Space.

## Asia-Pacific Space Cooperation Organization (APSCO)

- It is an inter-governmental organization operated as a non-profit independent body with full international legal status.
- It is headquartered in Beijing, **China**.
- Members include space agencies from: **Bangladesh, China, Iran, Mongolia, Pakistan, Peru and Thailand, and Turkey.**
- **Indonesia is a signatory state and Mexico as observer state**
- It includes sharing data, establishing a space communication network, and tracking space objects.
- India should consider forming an organization like this.

## Draft Emigration Bill

### In The News

The Ministry of External Affairs has proposed for introduction of the Emigration Bill, 2019 in Parliament that will replace the existing Emigration Act, 1983.

### Background

- The extant legislative framework for all matters related to emigration of Indian nationals is **prescribed by the Emigration Act 1983**.
- It was enacted in a specific context of **large scale emigration of Indian workers to the Gulf region**. It has its intrinsic limitations while addressing the contemporary migration trends.

### Need of the new Act

- The **limitations of Emigration Act, 1983** are at times manifested in sub-optimal utilization of existing resources, delays in prosecution of illegal agents, lack of legislative provisions in working out effective framework for various programmes aimed at welfare and protection of migrant workers.
- Further, over the years, the **nature, pattern, directions and volume of migration have undergone a paradigm shift**. The large scale migration of our skilled professionals to developed countries, students pursuing higher studies abroad etc. are some of the salient developments.

### Salient features of the bill

- **Emigration Management Authority (EMA):** The Bill proposes to constitute a **multi ministry EMA** to ensure the **overall welfare and protection of emigrants**. It will be the overarching authority to provide policy guidance, undertaking comprehensive review and stocktaking on emigration management related matters.
- **Bureau of Emigration Policy and Planning & Bureau of Emigration Administration:** These Bureaus will take

care of **day to day operational matters** and will be responsible for all emigration related issues as well as welfare and protection of Indian nationals abroad.

- **Registration/Intimation:** The Bill makes **mandatory registration/intimation of all categories of Indian nationals** proceeding for overseas employment as well as students pursuing higher studies abroad. The ministry envisages a digital platform for doing this to keep the emigration process hassle-free.

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## Gilgit-Baltistan

### In The News

**India** summoned a Pakistani diplomat and **protested against a recent order of the Supreme Court of Pakistan.**

### The Order is About.

- The order of the Pakistan Supreme Court was that its **jurisdiction and power extend to Gilgit-Baltistan.**
- The Court has also asked the federal government in Pakistan to promulgate a new law within a fortnight to **grant more rights**, including fundamental human rights, to the people of Gilgit-Baltistan in Pakistan-occupied Kashmir.
- **India's stand:** The region was, and would remain, an **integral part of India.** Such order by Supreme Court of Pakistan on Gilgit-Baltistan is an interference in **India's internal affairs.**

### About Gilgit Baltistan (GB) region

- The region was a part of the erstwhile princely state of Jammu and Kashmir, but has been **under Pakistan's control since November 4, 1947**, following the invasion of Kashmir by tribal militias and the Pakistan army.
- The region was renamed '**The Northern Areas of Pakistan**' and put under the direct control of Islamabad. The Northern Areas were **distinct from Pakistan-occupied Kashmir (PoK)**, the part of J&K that Pakistan calls "Azad Kashmir". The Northern Areas are, however, more than six times the size of PoK.
- After the Pakistani government enacted the **Gilgit-Baltistan Empowerment and Self-Governance Order in August 2009**, the 'Northern Areas' came to be known as **Gilgit- Baltistan.**
- Pakistan Government in 2018 had also passed orders towards incorporating the disputed region as its fifth province. Balochistan, Khyber-Pakhtunkhwa, Punjab and Sindh being the other four.

### Current Status

- It has an **elected Assembly** and a **Council** headed by the Prime Minister of Pakistan. This Council wields all powers, and controls the resources and revenues from the region.
- **GB do not find any mention in the Pakistani constitution:** it is neither independent, nor does it have provincial status. It was treated as a **separate geographical entity by Pakistan till now.**

### Why is this region important?

- **Strategic Location:** GB lies at the intersection of the Indian Subcontinent, Central Asia and China.
- **Large Territory:** The territory of GB is more than five times larger than Azad Kashmir. It consists of two ethno-geographically distinct territories: Baltistan, which was part of Ladakh, and Gilgit.
- **Water and energy Security:** GB is also significant due to its water and energy resources. Before entering Pakistan, the Indus River passes through GB. Important glaciers, including the bitterly-contested Siachen Glacier are also located in GB. The Hydro-electric potential of the Indus river makes it vital for energy security as well.



## India & South Africa

### In The News

India and South Africa recently sealed a three-year **strategic programme** (2019-21).

### More About news

- The deal was finalized after talks between Prime Minister and South African President Cyril Ramaphosa, who was the **Chief Guest for the Republic day function**.
- The **strategic programme** will cover cooperation in a range of areas including **defence and security, trade and investment, the blue economy, tourism, IT and agriculture**. South Africa agreed to simplify and reform South African **business visa regime**. Both the leaders also reiterated their commitment to working together on strengthening cooperation to address **fugitive economic offenders**.

### Background

- India's relations with South Africa date back several centuries. India was at the forefront of the international community in its support to the **antiapartheid movement**; it was the first country to sever trade relations with the apartheid Government (in 1946).
- India's relations with South Africa were **restored** after a gap of over four decades with the opening of a **Cultural Centre** in Johannesburg in May 1993. **Diplomatic and consular relations** with South Africa were restored in November 1993.
- After the **Red Fort Declaration for Strategic Partnership, 1997**, the year 2017 marked the 20 years of the declaration, which helped in consolidation of this partnership over the years.
- Further the **Tshwane Declaration, 2006** strengthened the cooperation in various fields such as Education, Railways, science and technology, visa regime, etc.

### Mutual Areas of Cooperation

- **Trade and investments**: The bilateral trade between both the nations is more than \$10 billion already. With a view to encourage

**investments**, the two countries signed a **Double Taxation Avoidance Agreement (DTAA)** in 1998.

- **International forums**: Both the countries are members of groupings such as **BRICS, IBSA, IORA, G-20**, etc. Both nations are committed to securing representation in an expanded **UN Security Council** to achieve a more representative UN Security Council Membership. Both are **former British colonies** and full member states of the **Commonwealth of Nations** as Commonwealth republics.
  - **Global terrorism**: both the countries support early agreement and adoption of the **UN Comprehensive Convention on International Terrorism**.
  - **Other areas of cooperation** include training skill development efforts (India's Technical and Economic Cooperation), pharmaceutical welfare mitigated through investments by Indian firms, collaboration in Defence sector, naval engagement in Indian Ocean Region, etc.
- ### Concerns
- **Trade**: Total trade reached a peak of US\$15 billion (Rs 1 trillion) in 2012 – before the global economic slowdown and domestic political factors put a brake on the rapid expansion. While both sides have been promoting a Free Trade Agreement (FTA) but it has not been finalized.
  - **Chinese angle**: China is already making deeper inroads into the African continent. India cannot compete in monetary terms with the **Chinese Chequebook diplomacy**.
  - **Multilateral engagement over bilateral attention**: India presently engages mostly on multilateral level, such as with the African Union, thus the downstream delivery of its development projects occurs through these channels, thereby taking away the credit it deserves. Thus, bilateral engagement should be increased to highlight India's efforts.

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- **Racial Discrimination:** The South African nationals do not feel safe and accepted in India due to episodes of racial discrimination and even violence and crimes against them. Such trend is detrimental to people-people engagement between the two countries.

discrimination, violent crimes, etc. should be eliminated from the root.

## Further Scope of Cooperation

- **Investments:** Complementary areas should be explored; for instance, in South Africa, foreign investors should look at mature sectors such as automotive components, textiles, clothing, and footwear. Key **untapped sectors include** health, nutrition, and wellness. In India, South Africa should get involved in biotechnology (a key strength of South African manufacturers) as the sector now permits 100 percent FDI through the automatic route.
- **Skill development** should continue to receive high attention, as there is immense scope in South Africa considering the huge youth population.

## Way Forward

- The countries should hold at least **one summit meeting every year** in order to review progress and address key issues pertaining to their bilateral, regional and global agenda. India's efforts to encourage interaction with African nations through forums such as **India-Africa Strategic Dialogue, India Africa Forum summit** are desirable, and they should be maintained.
- The present route of multilateral involvement is not yielding expected output for India. More emphasis should be given to **bilateral engagement** as it will tilt the optics on India's favour. With the same amount of efforts, India will get enhanced recognition and goodwill.
- There is significant presence of **Indian diaspora** in South Africa, which could be harnessed for various levels of engagement such as social as well as economic infrastructure. Similarly, the interests of the South African Diaspora in India need to be safeguarded and any issue such as

## 1st India-Central Asia Dialogue

### In The News

1<sup>st</sup> India-Central Asia Dialogue was held in Samarkand, Uzbekistan and was co-chaired by the Minister of External Affairs of India.

### The Highlights

- The ministerial level summit saw the participation of External Affairs Ministers of Afghanistan, Kyrgyz Republic, Tajikistan, Turkmenistan and Kazakhstan.
- India also invited Central Asia Republics (CAR) to **participate in the Chabahar Port** project jointly undertaken by India and Iran to move Indian goods to landlocked Afghanistan.
- India also proposed the **creation of a Regional Development Group** for better coordination on economic and policy issues.
- India also proposed a **dialogue on air corridors** with the countries of landlocked Central Asia. India already has opened air corridors for the transport of goods and perishables between India and several Afghan cities mainly to circumvent Pakistan that controls the overland trade.

### India & Central Asia

- India was among the first countries to recognize the five Central Asian states. It established diplomatic relations with them after they gained independence in 1990s. India now considers the Central Asian countries as part of its '**extended and strategic neighbourhood**'.
- At present the five Central Asian republics **account for trade of only about \$2 billion** with India. It is less as compared to about
- \$50 billion with China that has made them a key to its Silk Road Economic Belt (SREB) initiative.

### Importance of central Asia

- **Strategic Location:** Geographically, the **location** of these countries makes them a bridge between different regions of Asia and between Europe and Asia. With the Chabahar Agreement with Iran in place,

**new trade routes** have been opened between India & Central Asia, bypassing Pakistan.

- o India's only foreign military airbase is in Farkhor (Tajikistan), which is operated by IAF and Tajik Air Force. CARs share borders with China, Afghanistan, Russia and Iran. Tajikistan is located in proximity to the Pakistan-occupied Kashmir (PoK).
- **Energy security:** The countries of Central Asia are endowed with significant hydrocarbon and mineral resources and are close to India geographically. For example-
  - o **Kazakhstan** is the largest producer of **Uranium** and has huge gas and oil reserves as well.
  - o **Uzbekistan** is an important regional producer of **gold** along with **Kyrgyzstan**.
  - o **Tajikistan** has vast **hydropower potential** besides oil deposits, and Turkmenistan has the fourth **largest gas reserves** of the world.
  - o **Kazakhstan and Turkmenistan** — are also in the Caspian littoral, thereby promising to **open the door to other energy-rich Caspian states**.
- **Security:** The withdrawal of US forces from Afghanistan will have severe regional security implications. CARs face serious threat from illegal drug trade emanating from '**Golden Crescent**' of opium production (Iran-Pak- Afghan) and are also victims of illegal arms trade. Instability in Central Asia can spill over to PoK.
  - o Further, religious extremism, fundamentalism and terrorism continue to pose challenges to Central Asian societies as well as regional stability.
- **Trade and Investment potential:** The economic development of Central Asia, especially in Kazakhstan, Turkmenistan and Uzbekistan, has sparked a construction boom and development of sectors like IT, pharmaceuticals and tourism. India has

expertise in these sectors and deeper cooperation will give a fresh impetus to trade relations with these countries. There is also a great demand for Indian pharmaceutical products in the region.

## Challenges faced by India in terms of CAR

- **Land locked region:** It is land locked, which has hampered India's relation with central Asia. Poor connectivity has also contributed to the below-par trade between India and Central Asia.
  - o Further India **does not share physical borders** with any of the Central Asian states. This is a huge bottleneck in promoting and expanding economic, commercial, energy, tourist links etc with them. The old Silk Route was one option, but the security situation in Xinjiang, unresolved border conflicts with China and prolonged negotiations have compelled India to explore alternative routes to reach CARs.
  - o The **unstable situation in Afghanistan and Pakistan's** geo-strategic importance in the region has deprived India from the benefit of relations with Central Asia.
- **Chinese presence:** Central Asia is part of Silk Road Economic Belt (SREB) initiative. Moreover, the threat fostered by Islamic radicalization spilling over to Uighurs in Xinjiang province has led to China getting well entrenched in Central Asian security affairs, thereby impinging on India's interests indirectly.
- **Radicalism and Extremism:** Central Asia finds itself exposed and vulnerable to influences like Al Qaeda, Islamic State, Taliban, IUM, Hizb-ut-Tahrir etc.
- **Further region itself has its own domestic challenges** such as “youth bulge” combined with limited economic opportunities; serious and worsening corruption; Drug trafficking; Managing succession in autocratic states without strong government or party institutions etc.
- **Connect Central Asia Policy:** Launched in 2012 it includes
  - o Strong political relations through the exchange of high-level visits and multilateral engagements
  - o Strategic and security cooperation through military training, regular intelligence sharing, counter- terrorism coordination and close consultations on Afghanistan.
  - o Long term partnership in energy and natural resources.
  - o Helping to provide a viable banking infrastructure in the region.
  - o Increase presence of Indian firms in CARs in construction and power sector.
  - o Improve connectivity through INSTC, air services, people to people and cultural exchanges.
- **Shanghai Cooperation Organization:** With full membership of SCO, there will be more frequent summit level contacts between the top leaderships of India & CARs.
- **International North-South Transport Corridor (INSTC):** India is a founding member of the International North- South Transport Corridor (INSTC), a project to link India and Iran via the sea route and then through Iran to the Caspian Sea onwards to Central Asia.
- **Development of Chabahar port in Iran:** It will allow access to landlocked Afghanistan and energy-rich Central Asia through the Jawaharlal Nehru and Kandla ports on India's west coast.
- **Ashgabat Agreement:** India has acceded to the Ashgabat Agreement, an international transport and transit corridor facilitating transportation of goods between Central Asia and the Persian Gulf.
- **Turkmenistan-Afghanistan-Pakistan-India (TAPI):** It is the proposed natural gas pipeline that runs from Galkynysh field (Turkmenistan) – Herat – Kandahar – Multan - Fazilika (Pak-India Border). Not only it will provide a reliable source of natural gas at competitive prices, but it will play a strategically crucial role for the **peace and**

## India's efforts to connect with the region

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security of the region.

- **Eurasian Economic Union (EEU):** India is negotiating a comprehensive economic partnership agreement with the Eurasian Economic Union, which include Belarus, Kazakhstan, Russia, Armenia and Kyrgyzstan.
- **Indian Technical and Economic Cooperation (ITEC) Programme** is also an effective instrument under which young professionals of these countries undergo training and human capacity development.

## Conclusion

- Both the regions have not made the optimum utilization of the available opportunities in diverse sectors. Strengthening of relations between India and Central Asia is to **mutual benefit of all countries involved**.
- Good relations with India will also **provide an assured market to these countries** for their energy, raw materials, oil and gas, uranium, minerals, hydro-electric power etc.
- The current political, strategic and economic scenario, both regionally and internationally, **presents immense challenges** but also potential for India and Central Asia to qualitatively enhance their engagement.
- Stronger relations between them will contribute to **increased security and prosperity** of these countries and the world. The existing India-Central Asia Dialogue should be upgraded qualitatively so that constant communication with important stakeholders in the region is maintained.

# GS - III

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## Women In Combat Role

### In The News

Recently Government has taken a decision to induct women for the **first time ever in Personnel Below Officer Rank (PBOR) in corps of Military Police** in a graded manner to eventually comprise 20 per cent of total Corps.

### Women Representation in Armed Forces

- Currently the Army has **3.80 per cent of its workforce as women, the Air Force has 13.09 per cent and the Navy 6 per cent.**
- The **Indian Air Force** is the **only armed force in India to put women in combat roles.** It has inducted about five women fighter jet pilots, all of whom are presently at various levels of training.
- Recently, the Ministry of Defence has decided to **induct women as sailors** in the Indian Navy.

### Arguments in favor of Women in Combat role

- **Increasing gender Representation:** It would be a radical move to gender parity in one of the world's most-male dominated professions. This is the trend globally as well.
- **Military Readiness:** Allowing a mixed gender force keeps the military strong. The all-volunteer forces are severely troubled by falling retention and recruitment rates. Widening the applicant pool for all jobs guarantees more willing recruits.
- **Effectiveness:** The blanket restriction for women limits the ability of commanders in theater to pick the most capable person for the job.
- **Tradition:** Training will be required to facilitate the integration of women into combat units. Cultures change over time and the masculine subculture can evolve too. Many previously masculine professions have been successfully opened to women over the past century.
- **Cultural Differences & Demographics:** Allowing women to serve doubles the talent pool for delicate and sensitive jobs that require interpersonal skills not every soldier

has. Having a wider personnel base allows militaries to have the best and most diplomatic soldiers working to end conflict quickly.

- **Career advancement:** As combat duty is usually regarded as necessary for promotion to senior officer positions, denying female personnel this experience ensures that very few will ever reach the highest reaches of the military.
- **Technology advancement:** Landscape of modern warfare has changed with more sophisticated weapons, greater focus on intelligence gathering and emergence of cyberspace as arena of combat. Brute force, often a reason for non-inclusion of women, is less necessary today.

### Corps of Military Police

- It is a military police of **Indian Army.**
- The main role of the military police includes:
  - Policing cantonments and Army establishments
  - Preventing breach of rules and regulations by soldiers
  - Maintaining movement of soldiers as well as logistics during peace and war
  - Handling prisoners of war
  - Extending aid to civil police whenever required.
- Currently, women are allowed in select areas such as medical, legal, educational, signals and engineering wings of the Army.

### Arguments against Women in Combat Role

- **Condition in Army:** The field conditions in the Army are much more rugged and proximity to comrades and adversary poses greater challenges.
- **Physical Ability:** Traditionally women are seen physically not suited for certain jobs. The standards of physical fitness have been set to suit men, and women attempting to reach them will over-stretch themselves.
- **Military readiness:** Certain situations such as pregnancy can affect the deployability of a unit when the unit has a disproportionate number of women or is understaffed.
- **Tradition:** Men, especially those likely to

enlist, maintain traditional gender roles. Harassment and resentment of the presence of women in a hyper masculine military subculture can likely become a problem.

- **Abuse by Enemy:** Both male and female prisoners are at risk of torture and rape, which raises question regarding **safety and dignity** of women.

All matters concerning the security of the country have to be considered in a **dispassionate manner**. The whole concept of women's induction in the services, therefore, has to be viewed in a **holistic and objective manner** and not as a question of conquering the so-called 'last male bastion'. Therefore, there should be a **gradual integration of women in the services** along with continuous and **periodical performance auditing** of both male and female soldiers. The army of the future could be all the stronger for being all inclusive.

## Climate Change Is a New Security Issue ?

### In The News

Recently India questioned the rush at the UN to declare climate change an international security issue.

### Background

- Many Scholars declared Climate Change as **Warming War** which requires intervention of United Nation Security Council as per its mandate under **article 39 of UN charter**.
- **The Warming War is a metaphor** (like Cold War) which conveys how climate change acts as a driver of such conflict, as its impacts accumulate and multiply to threaten the security of human life on earth.

### Why Climate Change is a security issue?

- **Earth's limited resources** are under pressure as demand for food, water, and energy is increasing. Widespread unemployment, rapid urbanization, and environmental degradation can cause persistent inequality, political marginalization, and unresponsive governments leading to instability and conflict.
- In above context **United Nation Environment Program has identified seven factors** where climate change acts as threat multiplier to security and peace of states and society.
  - o **Local resource competition:** As pressure on local resources is increasing, competition can lead to instability and even violent conflict in absence for proper dispute resolution.
  - o **Livelihood insecurity and Migration**
    - ✓ Climate change will **increase the insecurity of farmers** who depend on natural resources for livelihood. It could push them to migrate and turn to informal and illegal source of income.
    - ✓ **As per World Bank estimates by 2050**, about 140 million people will be forced to leave their place of origin in South Asia, Africa and

Latin America.

- o **Extreme weather events and disasters:** Disasters will exacerbate fragile situation and can increase people vulnerabilities and grievances especially in countries affected by conflict.
- o **Volatile food price**
  - ✓ Climate change is likely to disrupt food production in many regions, increase prices, market volatility and heightening risk of protest, rioting and civil conflicts.
  - ✓ As per IPCC assessment by 2080 there will be 770 million undernourished people by 2080 due to climate change.
- o **Transboundary water management**
  - ✓ It is a frequent source of tension. As demand grows and climate impact affects availability and quality, competition over water use will likely exert pressure at local, regional and global level.
  - ✓ According to recently released Hindukush-Himalayan Assessment report with current emission level two-third of glaciers in the region will be lost by 2100 and cause water crisis for 2 billion people.
- o **Sea level rise and coastal degradation**
  - ✓ Rising sea level will threaten the viability of low lying areas even before they are submerged, leading to social disruption, displacement and migration. Also, disagreement over maritime boundaries and ocean resources may increase.
  - ✓ As per IPCC 5<sup>th</sup> assessment report sea level rise can be 52-98 cm by 2100.
- o **Unintended effects of climate change:** As the climate adaptation and mitigation policies are more broadly implemented, the risks of unintended negative effects-particularly in fragile regions will also increase. In countries with poor institutional capacity and governance,

this may lead to **immense political pressure and ultimately civil war.**

## Reason for support of UNSC intervention

- If the UNSC declares the impacts of climate change an international threat then **military and non-military sanctions** could be invoked.
- The sanctions would be available to the council in the event of states not meeting their Paris Agreement obligations. **Economic sanctions** could also be placed upon corporations that currently operate with relatively little international scrutiny.
- Supporters of such declaration cites slow and ineffective progress of climate negotiations (under UNFCCC) and demand a rapid response to decreasing GHG emissions **to stop temperature rise below 2°C**. It'll bring element of **coercion** in climate agreements.
- These measures could include the **deployment of peacekeeping forces and increased humanitarian assistance** surrounding direct and indirect climate induced crises.

decisions. Climate justice which demand a fair and bipartisanship approach (e.g. Principle of Common But Differentiated Responsibility) can be jeopardized under the ambit of UNSC.

- It also **undermines the sovereignty of countries** and right to self-determination.

## Why India is opposing?

- **Expansion of Jurisdiction:** India opposes the redefining of Charter by Security Council and expansion of its jurisdiction when it has **failed to fulfill even its original mandate**.
- **Exclusive nature of UNSC:** Climate Justice can be ensured by an **inclusive institution like UNFCCC**, which is missing in an exclusionary and opaque body of UNSC.
- **Complex nature of problem:** Climate Change is a multidimensional issue involving not just political but social, economic, demographic and humanitarian factors. UNSC has mainly a political mandate and narrow view of looking at a problem.
- **Past record of UNSC:** Historically the conduct of UNSC has remained biased towards the member countries own geo-political interests. It has adopted a selective approach and lack uniformity in its

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## Uranium Requirements In India

### In The News

A parliamentary panel has recommended that necessary steps must be taken to open new uranium mines to ensure sufficient amount of uranium in India.

### Current Scenario in India

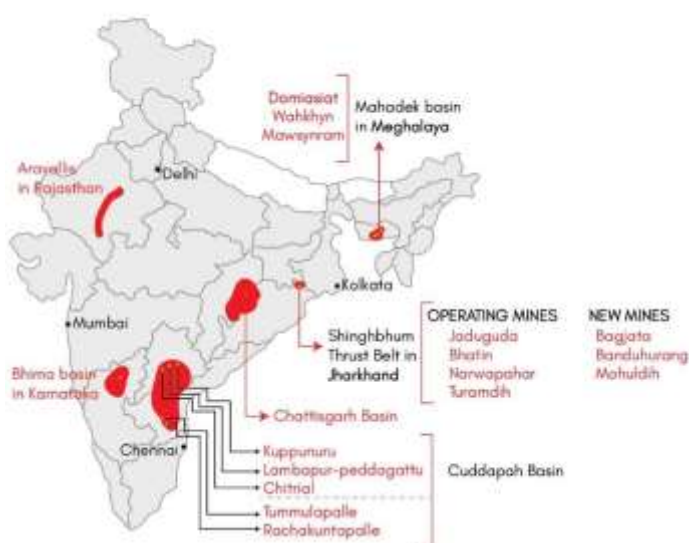
- Presently, a major portion of uranium for domestic production comes from the **Jaduguda mines in Jharkhand**.
- India currently imports uranium from Kazakhstan, Canada, France and Russia. Recently India also signed deal with Uzbekistan to get Uranium supply.
- In India, **Uranium Corporation of India Ltd. (UCIL)** under the Department of Atomic Energy, is the only organisation responsible for mining and processing of uranium ore for commercial purposes.
  - o Uranium mined by the UCIL is used for weapons and civil nuclear programmes both. The imported uranium is used for civil nuclear energy purposes only.
- Atomic Minerals Directorate (AMD) is responsible for survey and exploration of atomic mineral reserves in India—particularly, to harness uranium resources required for the development of the nuclear programme.

### Need

- **Fuel for current Nuclear Plants:** The scarcity of uranium has often made the nuclear power plants to run below their capacities. A **stockpile of 15,000 tonnes of uranium is required** to achieve supply security of fuel for nuclear plants in the country.
- **Need Domestic Uranium for Non-IAEA plants:** Domestic uranium is used in nuclear plants which are not under the international nuclear energy watchdog, International Atomic Energy Agency (IAEA).
- **Fuel for Future capacity addition:** The government has planned 22,480 MW nuclear power capacity addition target by the year 2031-32.



### MAJOR URANIUM PROVINCES OF INDIA



### Challenges

- **Uranium contamination of ground water due to Mining:** Recently, a study has found uranium contamination in groundwater from aquifers in 16 Indian states. For example most of the wells tested in Rajasthan and Gujarat had more uranium than the WHO's recommended limit of 30 µg/L.
- **Purity of Uranium:** In comparison to world

occurrences, uranium deposits established in India are mostly of low-grade (less than 0.15 per cent U).

- **Shift towards Renewable energy:** This has often been cited as a factor that calls for a shift away from nuclear fuel. The plants, with a shorter processing route, need to incorporate measures to maximize the re-use of water, high recovery of the product and minimum discharge of effluents.
- **Anti-nuclear protests:** Following the 2011 Fukushima nuclear disaster in Japan, populations around proposed Indian Nuclear power plant sites have launched protests. **E.g. Protests in Jaitapur protests and Mithi Viridi.**
- **Other Issues:** Factors such as problems on land acquisition, rehabilitation/resettlement of affected persons, reserve forest/tiger sanctuary locations, socio-political issues, public consensus, etc. also influence the decisions on mining and exploitation of established uranium and thorium resources in the country.

## Steps taken by the government

- Apart from signing deals with countries for importing uranium, domestic production is expected to achieve to record **ten-fold increase by 2031-32** as per the vision plan prepared by the government.
- The Government has taken measures to augment domestic uranium supply by state-of-the-art, integrated, multi-disciplinary exploration in several prospective and potential geological domains in various parts of the country and opening of new mines and processing facilities.

## National Agricultural Higher Education Project (NAHEP)

### In The News

ICAR has recently launched Rs 1100 crore ambitious NAHEP to **attract talent and strengthen higher agricultural education** in the country.

### Need of Agricultural Education

- **Increases Agricultural Productivity:** Effective agricultural education (both for farmers as well as researchers) leads to better economic and technical decision making in agricultural processes, which is further reflected in increase in agricultural productivity.
- **Understanding Value Chain of Agriculture:** The entire value chain of agriculture i.e. from farm input to market linkages, suffers from various bottlenecks which can well be addressed by agricultural education.
- **Creates Employment:** Agricultural education is needed in order to absorb the emerging labour force, especially with the emerging arenas of biotechnology, GM food, precision agriculture etc. which require detailed knowledge.
- **Increases Labour value:** Market value of individual in agricultural field in India is lower than many developing countries and agricultural education adds to an individual's productivity and therefore increases the market value of his labour.

### Challenges face by Agricultural Education

- **Inadequate Finance:** Agriculture is a state subject and the statutory responsibility for it vests with the state governments which lack in funds. Moreover, the establishment cost of agricultural universities has risen substantially while the operational budget has reduced which constrains institution for innovation.
- **Faculty:** State Agricultural Universities (SAUs) are facing non-replacement of retired faculty and high inbreeding of faculty (nearly 51% of faculty members have their degrees from the same university in which

they are teaching), which hampers the quality of academic and research programmes.

- **Lack of Networking and quality:** It has been noticed that most of the universities are lacking in association and integration with different national and international universities for academic activities.
- **Low quality:** The quality provided in these universities is low which further affects their global ranking.
- **Not a first option:** Negative attitude towards agricultural education due to low returns and limited career opportunities makes agricultural education not a preferred choice amongst students.

### About NAHEP

- **Funding:** It will be funded by the World Bank and the Indian Government on a 50:50 basis.
- **Objective:** To support Participating Agricultural Universities (AUs) and ICAR in providing more relevant and higher quality education to Agricultural University students.
- **Advantage:** It addresses quality by supporting interested AUs to propose and implement technically sound and verifiable investments that increase faculty performance, attract better students to these AUs, improve student learning outcomes and raise their prospects for future employability, particularly in the private sector.

### Components

- **Institutional Development Plans (IDPs):** NAHEP would provide **Institutional Development Grants** to selected participating AUs, which seek to improve learning outcomes and future employment for AU students and faculty teaching performance and research effectiveness.
- **Centre of Advanced Agricultural science & Technology (CAAST):** CAAST Grants will be provided to selected participating

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AUs to establish multidisciplinary centers for teaching, research and extension on critical and emerging agricultural topics.

- **Innovation Grants to selected participating AUs** to make AUs reform ready (i.e., attain accreditation); and promote mentoring of non-accredited AUs by existing reform-ready AUs and other interstate and international academic partnerships.
- **Results Monitoring and Evaluation:** The Education Division/ ICAR would establish a **Monitoring and Evaluation (M&E) Cell** to oversee the progress of activities across all NAHEP components.

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## Minimum Basic Income

### In The News

Recently, there have been calls for introduction of Minimum Basic Income (MBI) in the country.

### Concept of Minimum Basic Income (MBI)

The Minimum Basic Income is a **social welfare system** that guarantees a basic income to households, provided they meet certain conditions. This is **different from Universal Basic Income (UBI)** scheme, which is a periodic, unconditional cash transfer to all citizens on individual basis, without means-test or work requirement. To that extent, the Minimum Basic Income is a **conditional UBI or a quasi UBI (targeted)**.

### What are merits of the idea?

- **Social Justice & Equity:** There is a need for such ways to ensure a just society that needs to provide every individual a minimum income to provide for basic necessities.
- **Freedom of choice:** The poor in India are treated as subjects of Government's welfare policies, rather than economic decision makers. MBI treats them as agents and entrusts them with the responsibility of using welfare spending as they see best.
- **Poverty alleviation:** According to Economic Survey (2016-17), income transfers can reduce poverty to 0.5% at a cost of about 4% to 5% of the GDP, if those in the top 25% income bracket are not included. Moreover, minimum income guarantee also covers urban poor.
- **MBI has potential to reduce rural distress** for e.g. it can decrease long term rural indebtedness, as propensity to save increases.
- **Better social development:** Pilot studies in Madhya Pradesh have shown that the income supplements can improve nutrient intake, school enrolment and attendance of female students, toilet building etc.
- **Financial Inclusion:** by augmenting rural income & promoting usage of bank accounts, which further expands banking

services.

- **Other advantages** include administrative efficiency, gender equity (by taking individuals and not household as beneficiaries), insurance against shocks and flexibility in labor market.







### Challenges

- **Definition of basic income:** It is difficult to reach on a consensus-based definition of 'Basic Income', which will be sufficient to meet basic needs. Tendulkar Committee poverty line of 33/- a day works out basic income of 12,000/- a year. It will cost 11-12% of GDP, in comparison to the existing subsidy burden of 4-4.5% of GDP.
- **Fiscal challenges:** Total fiscal cost will depend on 2 factors: (i) Coverage of the scheme (ii) Extent of substitution with existing subsidies/schemes. Further there are various challenges like difficulty in exiting subsidies, hostility in extracting more tax revenue from wealthy, medium term fiscal risk, and rising consumption may stroke inflationary pressure.
- **Cash vs Kind Dilemma:** While giving income support, it is assumed that the beneficiaries would be wise in their discretion. However, it suffers from challenges like misuse of cash (on demerit or sin goods), **increasing vulnerability of women and child** as finances of families are controlled by men, direct monetary benefits **not being inflation proof**, etc.
- **Targeted vs universal:** Universalisation is the key to efficient delivery of services against targeting proposed by these cash transfer schemes. Strict targeting may have its own problems like issues related to identification of beneficiaries. This needs an easily identifiable objective criterion. Otherwise, it cannot be claimed to be superior in terms of the leakages.
- **Basic income is no substitute for state capacity:** In developed countries, the cash transfers supplement existing social security

provisions and are a top-up over and above universal provision of health & education. In the Indian context, most arguments in favour of MBI are premised on the inefficiencies of existing social security interventions and seek to replace them with direct cash transfers.

- o Cash transfers seek to create demand for services without supplying the services, which leaves the poor to depend on private service providers. The privatisation of basic services such as health and education may lead to the problem of accessibility (e.g. in remote areas) and large scale exclusion of the poor and marginalised.
- **Reduce worker productivity** and reduce incentive for skill development and increasing employability through constant effort.
- **Implementation Challenges:** The success of cash transfers depend upon the outreach of banking system & last mile connectivity.

## Various Cost Estimates Of Direct Cash Transfer Schemes

Scheme 	GDP 	Detail 
Universal Basic Income (Economic Survey 16-17) 	4.2-4.5	As per Economic Survey 2016-2017, based on annual transfer of ₹7,620, with 75% coverage
Universal Basic Income (UNICEF-SEWA) 	5.1	UNICEF and SEWA conducted a pilot study in some villages in Madhya Pradesh wherein each adult was provided with ₹300 per month in 2011, equivalent to ₹450 in 2015-16 prices for all-india
Quasi-Universal Basic Rural Income (Felman et al) 	~1.3	Annual transfer of ₹18,000 per household, for 75% of rural population

## Technical Textiles

### In The News

National Conclave on Technical Textiles was held recently in Mumbai.

### What are technical textiles?

- These are **textile material and products manufactured primarily for technical performance and functional properties** rather than aesthetic and decorative characteristics.
- They can be **woven or non-woven** and combinations of both. They can be made up as a single or multiple- layer and can be produced as a composite or a coated material.
- They can be made from **any fibre yarn or filament of purely natural or synthetic origin or combination of the two types**.
- They find application not only in clothing but also in areas like agriculture, medical, infrastructure, automotive, aerospace, sports, defence and packaging.

### Technical textiles in India

- It is a **sunshine sector** for the textile industry and it is one of the fastest growing segments of the Indian Economy. They are driven by demand, development and industrialisation in a country.
- India has **4-5% share in the global technical textiles** market size across twelve segments.
- Technical textiles constitute 12-15% of the total textile value chain in India, whereas in some of the European countries technical textiles constitute 50% of the total textiles value chain.
- There are around 2100 units manufacturing technical textiles in India, **most are concentrated in Gujarat** followed by Maharashtra and Tamil Nadu.
- Per capita consumption of technical textiles in India is 1.7 per kg vis- a-vis 10-12 kg in developed countries.
- This industry is import-intensive. In the last few years, the industry has witnessed a rise in imports - it stood at USD 1.4 Billion in

2014- 15.

### Government initiatives for this sector

- Government launched **Scheme for growth and development of technical textiles (SGDTT)**. Its 3 components were:
  - o Baseline survey to build technical textile industry database.
  - o Setup centres of excellence for infrastructural support like BTRA for Geotextiles, SASMIRA for Agrotextiles, NITRA for Protective Textiles and SITRA for Medical Textiles.
  - o Awareness generation among entrepreneurs.
- Subsequently, government launched **Technology Mission on Technical Textiles (2010-2014)** to overcome the issue of technical textile industry. It has 2 mini-missions –
  - o Mini Mission-I – For standardization, creating common testing facilities, indigenous development of prototypes and IT based resource centres.
  - o Mini Mission-II – It focuses on support for domestic and export market development through assistance for business start-ups, contract research and participation in international exhibitions.
- All technical textiles-based machinery is covered under **Technology Upgradation Fund Scheme**, which facilitates new and appropriate technology for making the textile industry globally competitive.
- Government has allowed up to **100% FDI under automatic route** for the technical textiles segment.
- Under **Scheme for Integrated Textile Parks (SITP)**, the Government provides assistance for creation of infrastructure in the parks to the extent of 40%.

## Export-Import Bank Of India

### In The News

Recently, cabinet approves **recapitalisation** of **Export-Import Bank of India (Exim Bank)**.

### More About News

- Recapitalisation will be done by issuance of **Recapitalization Bonds** by Government and will not impact the fiscal deficit.
- Advantage:** It will enable bank to augment capital adequacy and support Indian exports with enhanced ability.
  - Impetus to anticipate new initiatives like supporting Indian textile industries, **Concessional Finance Scheme (CFS)** and new Line of Credits in future in view of India's active foreign policy and strategic intent.
- Further, cabinet also approved an increase in the bank's authorised capital from ₹ 10,000 crore to ₹ 20,000 crore.

Bank of India in 2018, entered into a MoU on general cooperation with the New Development Bank (NDB), aimed at establishing a cooperation framework in accordance with the national laws and regulations, besides skills transfer and knowledge sharing amongst the signatories.

- Exim Bank of India is the nominated member** development bank under the BRICS Interbank Cooperation Mechanism.

### Role of Exim in Foreign Policy and Trade

- Improve Foreign Trade:** Bank provides assistance in various financial, marketing and technical aspects to accelerate growth of Indian economy by engaging into various programs and services in the interests of Indian exporters, commercial banks, financial institutions to promote foreign trade in the country.
- Increasing India's Sphere of Influence:** Exim Bank has 233 Line of Credit (LOCs) in place at present, covering 62 countries in Africa, Asia, Latin America and the CIS, with credit commitments of around \$22.86 billion, available for financing exports from India.
- Role in Neighborhood Policy:** Government of India provides Interest subvention for project exports through EXIM Bank of India for SAARC countries.
- Integrating ASEAN in India's Act East Policy** by setting up Project Development Fund under EXIM bank to catalyse Indian economic presence in Cambodia, Laos, Myanmar and Vietnam.
- Cooperation with BRICS Bank:** Exim

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## Integrating The Islands

### In The News

The Indian Navy has commissioned a new airbase, **INS Kohasa**, 100 miles north of Port Blair in the strategically located Andaman and Nicobar islands.

### About News

- This will be India's **fourth** air base and the **third naval air facility** in the archipelago. The Navy currently operates air strips at Port Blair and *INS Baaz* at Campbell Bay, while the Air Force has a base in Car Nicobar. The islands also house **India's only tri-service command**.
- With increased contestation in the region and in an effort to keep an eye on movements, India has considerably **upgraded military infrastructure in the islands**.

### Importance of Andaman Islands

- **Emerging Sino-Indian competition:** It can be seen through the routine deployment of submarines by China, development of underwater surveillance networks and expansion of Chinese naval bases with the establishment of a military base in Djibouti.
  - Further, China is **challenging India's hegemony in the Indian Ocean Region (IOR)** by extending the reach of the Belt & Road Initiative (BRI) as Maritime Silk Route, even as India has joined hands with Japan and US in the Malabar Naval Exercises.
- **Strategic Importance:**
  - **India's Look East Policy (LEP) and Indo-Pacific Strategy** is critically hinged on the role that Andaman & Nicobar could play in the developing security scenario of the region.
  - These Islands have a unique location for India for they extend India's land surface and maritime border right up to the mouth of Strait of Malacca. **Leveraging these islands can enhance India's relationship with ASEAN countries.**
- **Economic Importance:** Nearly 30% of

India's EEZ is derived from the existence of these islands, which could be a **potential source of underwater wealth**.

- **Fisheries**, mainstay of populace of these regions, can be given a thrust to develop **modernized and sustainable inland fisheries and aquaculture ecosystem** integrated with the **'Blue Economy'** vision.
- Large scale **hydrocarbon exploration** including deep sea oil drilling & development of methane gas hydrates etc. is possible.
- The **varied ecosystem** can be explored for its medicinal plants and exotic plant species and sustainable agriculture and horticulture practices conducive to the agro-climatic conditions of the regions can be propagated.
- Due to its rich flora & fauna and attractive geographical locations & topography **the tourism can be promoted** to further help boost the economy of the region to a large extent.

### Importance of Lakshadweep Islands

- The spread of these islands has bestowed upon India 20,000 sq. km. of territorial waters and approximately 400,000 sq. km. of **Exclusive Economic Zone (EEZ)**.
- The lagoons and EEZ around Lakshadweep Islands have **significant fishery and mineral resources** which are of immense economic importance.
- The Nine Degree Channel, located near Lakshadweep Islands, is the most **direct route for ships sailing from the Persian Gulf** bound for East Asia. Proximity to the Indian western coast as well as to other island nations such as Sri Lanka and Maldives, nearness to busy shipping lanes, and wide geographical spread makes these islands extremely important for ensuring security of Sea Lanes of Communications (SLoCs) and also for maritime security of India.
- Post Mumbai attacks of 2008 the islands

have gained **significance in terms of national security**.

## India's efforts for Island Development:

- The Ministry of Defence (MoD) **created a unified tri-service (land, sea & air) theatre command** to leverage the strategic advantage offered by these islands in 2001.
- Security agencies have been conducting **regular coastal security exercises** off the coasts of Andaman (E.g. Tat Rakshak) & Lakshadweep (E.g. Neptune II).
- To attract private investors, Govt. recently held **pre-bid meeting with potential investors** for a wide-ranging social and infrastructure development programme of the Islands. NITI Aayog has been mandated to steer the process of "Holistic Development of Islands".
- In 2017, the **Island Development Agency (IDA)** was established for the holistic development of the islands, focusing on community-based tourism. Key Infrastructure projects are being undertaken under its aegis on priority basis like upgradation of Diglipur Airport near Port Blair & construction of Minicoy Airport, augmentation of satellite bandwidth, etc.
- To **boost tourism**, Ministry of Home Affairs has also lifted restrictions on foreigners like requirement Restricted Areas Permit (RAP) to visit 29 inhabited islands.

## Challenges

- **Environmental:** Over 90% of the islands are forests and are environmentally fragile and many islands are short of drinking water, the idea of any new settlement cannot be considered.
  - o Even mass tourism will impact the fragile eco-system and therefore the only possible method is to allow **high value-low volume tourism** in various islands, which also has the approval of the Supreme Court of India.
- **Geographical:** Any development plan must account for challenges like regular earthquake (2004 tsunami caused by an earthquake close to Nicobar Islands).

- **Infrastructural:** Due to bureaucratic hurdles, even after several years, an **undersea cable link** between India's mainland and the islands remains incomplete. Internet connectivity, even at the naval base in the capital Port Blair, is reported to be erratic.
  - o **Road building, airstrip construction**, and even the building of jetties is slow, as heavy rainfall restricts building activity and the distance from mainland adds to the cost of construction.
  - o **Surveillance in the southern group of islands** is a major challenge. The destruction of the road by the tsunami has meant that the two groups of islands are linked only by air and sea.
- **Social: Andaman and Nicobar (Protection of Aboriginal Tribes) Regulation (ANPATR)**, promulgated in 1956, protects indigenous communities and has declared areas inhabited by them as reserves. **No visitor is allowed** to venture close to these reserves without permission. Further, many tribes such as Sentinelese **resist any contact with the outsiders**, as evident from the recent death of American adventurer John Chau at the hands of local inhabitants.

## Way Forward

- **Improve engagement:** Encourage migration from the mainland and carefully open up some of the strategically located uninhabited islands to tourism. Other ways include-
  - o **Open up these islands for commercial operations** to complement the Strait of Malacca, as a matter of soft strategy
- **Strengthen military infrastructure:** Construction of necessary infrastructure on the islands will allow creation of an anti-access and area-denial maritime exclusion zone in the event of a conflict.
  - o Improve implementation of the Coastal Security Scheme, where special focus has been put on setting up Coastal Police Stations,
  - o equipped with adequate manpower & interceptor boats.
  - o Enhance vigilance of the uninhabited

islands by maintaining watch at entry and exit points. Station air assets in the island region and put in place watchtowers and radar sensors.

- o Resolve the issues of turf wars, funding, and slow decision making at the unified command at Andaman.
- o Position permanent naval fleet in the Islands to complement the Eastern Fleet stationed at Vishakhapatnam.
- o Deploy electronic sensors to enable the automatic identification of vessels and long range identification and tracking systems.
- **Enhance economic activities** in the region through various ways like:
  - o **Develop deep sea fishing** off the coast of Andaman as fishing is highly sustainable in these islands.
  - o Expedite the **plan of developing a transshipment terminal at Campbell Bay** at Great Nicobar, only 90 km from Malacca Strait (principal sea route between the South China Sea and the Indian Ocean).
  - o **Attract private sector and international collaborations** to meet the huge financial requirements and operational and managerial expertise to optimally deliver on these projects.
- **Tourism as soft power:** In the past, India has promoted mountaineering/adventure expeditions along international borders in the Himalayas as well as opened Tawang for foreign tourists to convey that it has an effective jurisdiction and control in these areas.
  - o Open up uninhabited islands, where access is restricted currently, by allowing Indian and foreign tourists
  - o (similar to China's approach in South China Sea, where it has developed Hainan Island as a tourist hub).
  - o Create attractive tourism enclaves within national parks of these islands (as done in Kruger National Park in South Africa).
  - o Put in place a well-defined policy for sea based activities like scuba diving,

sailing, deep sea fishing, live- on-board diving, etc. incorporating adequate safety. Such activities can keep a check on security issues like poaching etc. and environment issues like degradation of marine life etc.

- **Seek stronger international collaboration:**

- o The Quad Alliance (India, USA, Japan & Australia) can install sonar surveillance systems in the islands to track Chinese submarines in the Indian Ocean.
- o Deeper engagement with Indonesia for import of materials required for infrastructure development, which would be far cheaper.



## Paris Call

### In The New

At UNESCO Internet Governance Forum (IGF) meeting convened in Paris, “**The Paris Call for Trust and Security in Cyberspace**” was commenced, aimed at developing common principles for securing cyberspace.

### Principles articulated in the Paris Call

The goals mentioned in the Paris Call and the principles adopted represent a consensus of priorities between states, corporations and civil society.

- **Inclusive regulatory process:**
  - o Gather existing sector-specific initiatives (Tech Accord, UN’s Group of Government Experts, For The Web) in a single document and widen their scope, to set out a framework for further negotiations.
  - o Recognize the responsibilities of private sector actors in improving trust, security and stability in cyberspace.
  - o Adopt a **strong multi-stakeholder approach to improve collaboration** among government, private sector and civil society to tackle the threat of cyber criminality. Budapest Convention on Cybercrime is a key tool in this regard.
- **International Law:**
  - o Encourage better coordinated regulation of cyberspace and use of information & communication technologies (ICT) in the spirit of principles of U.N. Charter & international humanitarian law, notably the maintenance of international peace and security.
- **State sovereignty:**
  - o Promote the exclusive role of sovereign states in hostile acts in cyberspace. It condemns corporate hack-back and other offensive operations from non-state actors.
  - o It also appeals for measures preventing interference with elections.

### Protection of citizens

- o Protect individuals and critical infrastructure from harm & safeguard the “public core of the Internet” from hostile actors
- o Engage industries and civil society in promoting everyday good practices (“cyber hygiene”) and the implementation of “security by design” in products and services. Cyber hygiene refers to data protection and safety at an individual level.

### Who joined?

- More than 190 signatures were obtained on the Paris Call, including 130 from private sector and more than 50 member nations. Prominent countries like **India, US, China, Russia didn’t sign the agreement.**
- **Several major American technologies** like Facebook, Microsoft, Google, IBM, HP etc. have **endorsed the agreement.** Influential non-governmental groups like World Leadership Alliance, Chatham House, Carnegie Endowment for International Peace, the World Wide Web Foundation and the Internet Society have supported too.

### Significance of Paris Call

- Paris call gives a fresh momentum to the issue of **creating globally acceptable cyber security norms** by mounting support from multiple stakeholders.
- It could also be seen as a positive step towards finding a **middle path between Western democracies and authoritarian regimes** so as to build some form of consensus on issues pertaining to cyberspace.
- However, there are **some issues** that are yet to be ironed out. This includes:
  - o Putting in place legally binding compliance mechanism
  - o Dealing with espionage and state-lead offensive operations, particularly through non-state proxies doing state’s bidding.

While the US, China and Russia are unlikely to join, the call will depend on support from states like India in order to gain traction within international institutions, primarily the United Nations.

summits. India should begin with initiating domestic multi-stakeholder engagement (India Internet Governance Forum) to engage civil society and technical experts adequately in pursuit of multi-stakeholderism.

## Models of Internet Governance

### Multi-stakeholder Model (supported by western nations like US)

- Decentralized governance institutions where non-state actors like corporates, NGOs & civil society have a say in making globally acceptable norms regulating cyberspace.
- Gives recognition to technical expertise of corporates.

### Multilateral Model (supported by Russia and China)

- Governance model based on agreements between multiple governments with limited involvement of non-state actors.
- Holds sovereignty of nation state in managing cyberspace and provides the scope for the exercise of inherent right of self-defense and the law of state responsibility, including countermeasures in the cyberspace.

### India's Stand

- India stance has gradually shifted to multi-stakeholderism from long supported multilateralism.
- However, India envisages a **pivotal role for governments as the custodian of cyberspace** in the areas of international security and public policy. This is evident from its stand on data localization (wants storing of data within the country) and server management.
- India also supports greater cooperation from corporates in terms of data sharing to tackle cyber crimes. Currently, the engagement – at both government & private level - with the global policymaking apparatus has been low, including participation at Internet Corporation for Assigned Names and Numbers (ICANN)

## Space Technology In Border Management

### In The News

Union Home Minister has approved report of Task Force created by Ministry of Home Affairs to **identify areas for use of Space Technology** in improving Border Management.

### Highlights of the Report

- Following areas have been identified for use of space technology: **island development, border security, communication and navigation, GIS and operations planning system, and border infrastructure development.**
- Major recommendations of the report are to build capacity of **border guarding forces (BGFs)**, to use space resources for security, operational planning and border infrastructure development.
- With the assistance of the **Department of Space**, the Home Ministry would implement the project, which will **strengthen islands and border security** and facilitate the development of infrastructure in border and island areas.
- To execute the project in a time-bound manner, short, medium and long-term plans have been proposed for implementation in five years in close coordination with ISRO and MoD.
  - o In **short term**, immediate needs of BGFs will be met through procurement of high-resolution imagery and hiring of bandwidth for communications.
  - o In **mid-term**, one satellite is being launched by ISRO for the exclusive use of the Home Ministry.
  - o Over **long term**, the Ministry will develop ground segment and network infrastructure to share satellite resources by user agencies, develop a Central Archival Facility for storing various imagery resources and dissemination of the same to user agencies. The **BSF** has been designated as **lead agency for its implementation.**
- **Deployment of Central Armed Police Forces (CAPFs)** in remote areas will be also

coordinated through satellite communications.

- **Indian Regional Navigation Satellite System (IRNSS)-based GPS** will provide navigation facilities for operational parties in high altitude, remote and difficult borders, and Maoist-affected areas.

### Role of Space Technology in Border Management

Sealing the entire border is a significant challenge mainly **due to variations in the terrain and topography** like mountain ranges, sea, tropical forest or climate factors, including desert or thinly populated regions. Space technology provides one of the more effective means to overcome it.

- **Timely Information:** The information received through various satellites are used by various agencies including the security establishment. For instance, weather satellites can provide timely information about topographic features and weather conditions, which are critical to military and para-military operations.
- **Intelligence inputs and Surveillance:** through Remote sensing satellites, radar satellites and satellites with synthetic aperture radar (SAR) sensors which are capable of providing day and night all-terrain and all-weather inputs.
- **Checking infiltration:** by using low earth orbit surveillance satellites, which would in turn enable the blocking of infiltrators through suitable force deployment. In this regard, the active deployment of Medium Altitude Long Endurance (MALE) Unmanned Aerial Vehicles (UAVs) and High Altitude Long Endurance (HALE) UAVs will improve India's surveillance and reconnaissance capabilities.
- **Defending the invisible:** Earth observation satellites provide detailed images of hot spots where border crossings peak. India uses the RISAT and Cartosat spacecraft to capture still images as well as high-resolution video of the nation's disputed borders.

- **Coordination between agencies:** While defence forces already use space technology, border forces depend on intelligence shared by central agencies like IB, RAW and National Technical Research Organisation. They also face poor communication issues in areas like Ladakh, Sikkim, Arunachal Pradesh and Kashmir Valley. With satellite technology border security authorities can exchange information or access critical data from headquarters, border checkpoints or on the-move border patrol units.

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## Central Armed Police Forces

### In The News

Recently, Standing Committee on Home Affairs (Chairperson: Mr. P. Chidambaram) submitted its report on Working Conditions in Central Armed Police Forces.

Central Armed Police Forces under Administrative Control of Ministry of Home Affairs	
Border Guarding Forces	Non-Border Guarding
<b>Assam Rifles:</b> Guards the Indo-Myanmar border.	<b>Central Industrial Security Force (CISF):</b> Provides security for key installations.
<b>Border Security Force (BSF):</b> Guards the Indo-Pakistan and Indo-Bangladesh borders.	<b>Central Reserve Police Force (CRPF):</b> Deployed for maintaining internal security.
<b>Indo-Tibetan Border Police (ITBP):</b> Guards the Indo-China border.	<b>National Security Guard (NSG):</b> Deployed for anti-terrorist activities.
<b>Sashastra Seema Bal (SSB):</b> Guards the Indo-Bhutan and Indo-Nepal borders.	

### Issues identified by the Report

- **Bureaucratisation of Armed Forces:** Majority of the higher posts of the top hierarchy are filled by deputations (IPS officers), who most of the times failed to take adequate steps for the welfare of the cadre officers.
- **Higher Vacancies and lack of promotional prospects:** There is an acute stagnation in the all cadre of CAPFs, which in turn is affecting the morale and efficiency of forces and reflect lack of foresight, planning, and proactive estimation of future vacancies.
- **Absence of a robust in-house grievance redressal mechanism,** which prompted a Soldier from BSF in 2017 to use Social Media to raised his concerns.
- **Ineffective Coordination Between State Police and The CAPF Leadership:** States are over-dependent on the CRPF for maintaining various law and order situations. The continuous deployment of training companies affects the operational efficiency of the CRPF, as well as denies them training and rest.
- **Poor Infrastructure: Lack of electricity** at several installations of **Border Out Posts (BOPs)**, seriously affects the working conditions of the personnel as well as

operations of the CAPFs.

- o An inquiry by a former director general of police E.N. Rammohan into the April 2010 incident in Dantewada where 76 CRPF soldiers lost their lives in a Maoist attack, found the force's camp lacked basic facilities, had minimal security and deplorable living conditions.
- **Road connectivity and mobility:** There is a delay in execution of road projects which affect mobility of personnel. This happens due to delay in obtaining forest/wildlife clearances, hard rock stretches, limited working season, difficulties in availability of construction materials, etc.
- **Shortages of Arms and Ammunition:** There are inordinate delays in procurement of combat-ready equipment and inadequate medical facilities, especially when personnel are deployed in hostile environment.

### Recommendations

- **Ending IPS hegemony:** The nature of duty of CAPF is more similar to that of the Armed Forces and it would make more sense to bring more officers from the Armed Forces on deputation.
  - o However, MHA has contested the same by justifying that the presence of IPS

officers in every CAPF increases inter-departmental coordination between various CAPFs and State and therefore IPS officers are best suited to lead and provide supervisory directions to any CAPFs in an effective, efficient and impartial manner.

- **Modernization of the Force** must be given utmost priority as this Force not only has to face any enemy from across the border but also vagaries of nature.
- **Issue specific Counter Plan rather than One-Size Fits All Approach:**
  - o **For J&K:** MHA should adopt a multi-pronged strategy that prevents youth from joining militancy, curbs their financing, and simultaneously launch counter-insurgency operations.
  - o **For Left Wing Area:** MHA should make efforts to procure mine-resistant vehicles. This could be done through import or domestic manufacturing under the ‘Make in India’ programme.
- **Expedite Cadre Review** of these forces as it's is essential to maintain their organizational structure and ensures completion of project in a time-bound manner.
- **Setting up Dedicated Research And Development (R&D) Wing:** It recommended that due to the unique issues faced by the CRPF, such as large size and areas of deployment, creation of a dedicated R&D unit of its own should be explored, to deal with issues peculiar to the CRPF such as Improvised Explosive Devices (IEDs), and bullet proofing of vehicles.

## Rare Diseases

### In The News

After **withdrawing the National Policy for Treatment of Rare Diseases (NPTRD)**, the Minister of Health and Family Welfare has approved a proposal for **adding a sub-component under the umbrella scheme of Rashtriya Arogya Nidhi (RAN)** for provision of **one-time financial assistance to those below threshold poverty line** for specified rare diseases which require one-time treatment.

### What is Rare Diseases?

- There is no universally accepted definition of rare diseases and the definitions usually vary across different countries. However, generally rare diseases are defined as a **health condition of low prevalence** that affects a small number of people compared with other prevalent diseases in the general population.
- **WHO defines rare disease** as often debilitating lifelong disease or disorder condition with a prevalence of 1 or less, per 1000 population.
- 80% of rare **diseases are genetic in origin** and hence disproportionately impact children.
- These are **also called ‘orphan diseases’** because drug companies are not interested in adopting them to develop treatments due to low profitability.
- The most **common rare diseases** include Haemophilia, Thalassaemia, Sickle-cell Anaemia, auto-immune diseases, etc.
- They affect 6%- 8% of the total population in the country. So far about 450 rare diseases have been recorded in India.
- **Karnataka** is the first state to release a Rare Diseases and Orphan Drugs Policy.
- The Union Health Ministry termed the current policy “untenable” as the policy was to be implemented under the National Health Mission. (The ambit of the NHM is restricted to primary and secondary health care but **rare diseases come under tertiary care**).
- **One-time financial assistance** is being

provided as an interim measure till a new policy is framed. A committee has been set up to frame a new policy.

### Criticism of the move: Why India Needs a policy on rare disease?

- **Need for Continuous Treatment:** Most of the rare diseases for which treatment is available are progressive. They require continuous support and not just one-time assistance as an interim arrangement can never be a substitute for a policy.
  - The withdrawn Policy highlighted the measures and steps, both in the short as well as in the long term, that need to be taken to deal comprehensively with rare diseases. The policy sought to strike a balance between access to treatment with health system sustainability.
- **Pushes Families in Poverty:** Its impact on families is often catastrophic in terms of emotional as well as financial burden. The exorbitant cost of treatment per patient, which ranges anywhere from ₹25 lakh and ₹4 crore per year, is out of reach even for middle-class families.
- **Significant Population Impacted:** While there is no registry of rare diseases patients in India (the policy provided for one), according to government’s own estimates there are between 70-90 million patients.
- **Difficulty in R&D:** Rare diseases are difficult to research upon as the patient pool is very small and it often results in inadequate clinical experience. The policy envisaged a R&D framework which cannot be attained through one time financial support.
- **Not covered under Health Insurance:** Private insurance companies treat genetic disorders as pre-existing conditions and, on that ground, exclude them from coverage. Since most rare diseases are genetic, patients are routinely denied insurance cover.

## Gas Hydrates

### In The News

Researchers at Indian Institute of Technology (IIT) Madras have experimentally shown that **methane and carbon dioxide (CO<sub>2</sub>)** can exist as gas hydrates.

### What are gas hydrates?

- They are formed when a gas such as methane gets trapped in well-defined cages of water molecules forming crystalline solids. It is a **solid ice-like form of water that contains gas molecules in its molecular cavities**.
- Natural gas hydrates **occur on continental margins and shelves** worldwide from Polar Regions to the tropics.
- Gas hydrate reservoirs are generally **associated with biologically rich cold seep ecosystems at the seafloor**. Cold seeps are locations where hydrocarbon-rich fluid seeps up from below the sea floor, often as methane or hydrogen sulfide.
- It is estimated that total amount of carbon in the form of methane hydrates, far **exceeds the carbon content in all the fossil fuel reserves** put together and hence these are supposed to be the future potential energy resource.
- Combustion of methane, is more CO<sub>2</sub> efficient than that of any other hydrocarbon. Hence, using methane from gas hydrate compared to other hydrocarbons is **relatively climate friendly**.
- According to the latest estimates of the US Geological Survey, India has the **second largest gas hydrate reserves after America**.
- The Krishna- Godavari (KG), Cauvery and Kerala basins alone have 100- 130 trillion cubic feet of estimated reserves. The carbon dioxide hydrate produced in the lab by the IIT team raises the possibility of **sequestering or storing carbon dioxide as hydrates** under the sea bed.

**Extraction of gas hydrates:** The natural gas from gas hydrate can be produced via:

- **Depressurization:** Drilling of hole into the layer of hydrate and reducing the pressure beneath. This technique is implemented for hydrates only in polar regions beneath the permafrost.
- **Thermal stimulation:** via steam injection, hot brine solution etc. that raises the temperature of the local reservoir outside the hydrate region to cause the dissociation of the hydrate, thus releasing free gas which can be collected.

However, no country in the world has so far developed the technology to produce gas hydrates commercially and economically.

**Issues with extraction:** Gas hydrates are also important for **seafloor stability studies**, because "melting" gas hydrate may cause seafloor "land" slides. Methane released from gas hydrate may therefore play a significant role in climate change.

### Indian Initiative

- **The National Gas Hydrate Programme (NGHP)** is of national importance considering India's phenomenal growing energy demand. The programme was **initiated in 1997**. It first conducted studies in 2006.
- India has entered into an **agreement with Canada** to develop technology in this regard.
- IIT Madras, in collaboration with GAIL, is working to recover methane from methane hydrate from the **Krishna-Godavari Basin** and sequester CO<sub>2</sub> simultaneously.

## Eat Right India Movement

### In The News

The Food Safety and Standards Authority of India (FSSAI) recently organised the Swasth Bharat Yatra, a key element of the ‘Eat Right India Movement’.

### Eat Right India movement

- It is multi-sectoral effort with primary focus on daily intake of salt, sugar, fat, phasing-out trans-fats from diets and promoting healthier food options.
- It is built on two broad pillars of Eat Healthy and Eat Safe.
- It brings together three ongoing initiatives of FSSAI that target citizens:
  - o **The Safe and Nutritious Food (SNF) Initiative**, focused on social and behavioral change around food safety and nutrition at home, school, workplace and on-the-go.
  - o **The Eat Healthy Campaign** focused on daily intake of salt, sugar, fat, phasing-out trans-fats.
  - o **Food fortification**, focused on promoting five staple foods- wheat flour, rice, oil, milk and salt, with key vitamins and minerals added to improve their nutritional content.
- It has seven broad areas of action—
  - o to increase demand for healthier food by influencing each other as role models, caregivers and peers,
  - o set standards in schools, promote healthy eating habits and use food as a pedagogical tool,
  - o have appropriate consumer friendly nutrition labelling and restriction on marketing to children through a suitable regulation,
  - o have higher taxation for unhealthy food through differential GST rates,
  - o ensure availability of healthier food options and guide consumers through appropriate menu labelling,
  - o redesign choices available at points of sale with increased availability and prominent display of healthier options,
  - o encourage food processing industry to formulate their food products by reducing unhealthy ingredients.
- Under the movement, “Aaj se thoda kam campaign” was launched to encourage citizens to adopt healthy food habits through social media and mass media.

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## Young Scientist Programme

### In The News

Indian Space Research Organization (ISRO) has recently launched Young Scientist Programme for school students.

### About the Young Scientist Programme

- It aims to inculcate and nurture space research fervor in young minds
- Under this 1-month program, 3 students from each of the 29 States and 7 UTs will be selected.
- Students mostly from class VIII will be given lectures and access to R&D labs and practical experience of building a small satellite.
- It is conceptualized after the similar Programme run by the American Space Agency NASA.
- All the expenses of travelling and boarding will be **funded entirely by ISRO.**
- Under this, **six incubation centres** will be established in various parts of the country - North, South, East, West, Centre and North-East, and the **first such centre has been established in Agartala in Tripura.**

**and atmospheric satellite** mission with the participation of students. to investigate the relationship between solar variability and thermosphere-Ionosphere changes.

- **SRMSat: A nanosatellite** weighing 10.9 kg, developed by SRM University, which attempts to address the problem of Global warming and pollution levels in the atmosphere by monitoring **CO<sub>2</sub> and water vapour.**

**Jugnu: A nanosatellite** weighing 3 kg, developed by IIT Kanpur under the guidance of ISRO. The satellite is intended to prove the indigenously developed camera system for imaging the Earth in the near infrared region and test image processing algorithms.

### Samvad with Students

- ISRO recently launched a student outreach programme called Samvad with Students where ISRO chairman meets the students during his outstation visits and address their queries and quench the scientific thrust.

### ISRO-Student Collaborations

- **ANUSAT:** ANUSAT (Anna University Satellite) is the **first satellite built by an Indian University** under the overall guidance of ISRO and will demonstrate the technologies related to message store and forward operations.
- **STUDSAT:** Student Satellite (STUDSAT) is the **first pico-satellite** developed in the country by a consortium of seven engineering colleges from Karnataka and Andhra Pradesh.
- **YOUTHSAT:** A joint **Indo-Russian stellar**

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## Unispace Nanosatellite Assembly & Training Programme (UNNATI)

### In The News

Recently ISRO launched a **capacity building programme on Nanosatellite development** named UNNATI.

### More about UNNATI

- It is an initiative to **commemorate the 50th anniversary** of the first United Nations conference on the exploration and peaceful uses of outer space (**UNISPACE+50**).
- It would provide **opportunities to the participating developing countries** to strengthen in **assembling, integrating and testing** of Nanosatellite.

Satellite Classification	Mass (kg)
Large satellite	>1000
Medium satellite	500 to 1000
Mini satellite	100 to 500
Micro satellite	10 to 100
<b>Nano satellite</b>	<b>1 to 10</b>
Pico satellite	0.1 to 1
Femto satellite	<0.1

### About Nanosatellite

- In **mass classification** a Nanosatellite is any satellite with mass from 1kg to 10kg.
- These satellites can **reduce the cost of launching** because weight is the most important (and most expensive) aspect of launching an object into space.
- **Many Nanosatellites are deployed together** in network of satellites (satellite constellation) that operates as a single entity which can capture minute details.
- This system can provide people in poor, rural or low population density areas around the world with affordable, high-speed internet access which is currently underserved due to high cost of traditional satellites.

## International Year Of The Periodic Table Of Chemical Elements

### In The News

The United Nations General Assembly has proclaimed 2019 as **the International Year of the Periodic Table of Chemical Elements** to celebrate its **150 years**.

educational initiative celebrating **2019 International Year of the Periodic Table of Chemical Elements (IYPT2019)** – a yearlong initiative to raise awareness of chemistry and its applications for sustainable development.

### About the Periodic Table of Chemical Elements

- Russian scientist **Dmitry Mendeleev** published the first periodic table in 1869. He organized all chemical elements by the **atomic mass** (number of protons & neutrons) and other chemical properties.
  - o **Mendeleev’s Periodic Law:** The Properties of elements are periodic functions of their atomic masses.
- However, the shortcomings of Mendeleev’s Periodic Table were **uncertain position of Hydrogen** and **no place for isotopes** (similar chemical properties but different atomic masses) which were discovered later.
- Thus, **Modern periodic table**, managed by the **International Union for Pure and Applied Chemistry (IUPAC)** is arranged on the basis of **atomic number** rather than atomic mass.
  - o It is a tabular arrangement of the chemical elements, arranged by atomic number, electron configuration, and **recurring chemical properties**, whose structure shows periodic trends.
  - o The **Seven rows** of the table, called **periods**, generally have metals on the left and non-metals on the right.
  - o The columns, called **groups**, contain elements with similar chemical behaviours.
  - o The elements from atomic numbers 1 (hydrogen) through 118 (oganesson) have been discovered or synthesized, completing seven full rows of the periodic table.
  - o It is an exceptional tool for scientists to understand, and even **predict**, the properties of all the elements and elements that are yet to be discovered.
- **UNESCO and the 1001 Inventions organization** will launch a new

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## National Clean Air Programme

### In The News

National Clean Air Programme (NCAP) was recently launched by Ministry of Environment, Forest and Climate Change (MoEFCC).

### About NCAP

- It is a pollution control initiative to cut the concentration of particles (PM10 & PM2.5) by 20-30% by 2024. It will have 2017 as the base year for comparison and 2019 as the first year.
- It is to be implemented in 102 **non-attainment cities**. These cities are chosen on the basis of **Ambient Air Quality India (2011-2015) and WHO report 2014/2018**.
- Its **objectives** include-
  - o Stringent implementation of mitigation measures for prevention, control and abatement of air pollution;
  - o Augment and strengthen air quality monitoring network across the country;
  - o Augment public awareness and capacity building measures.

### Significance of NCAP

- **First such effort** - Framing a **national framework** for air quality management with a **time-bound** reduction target. The biggest advantage of such targets is that it helps decide the level of severity of local and regional action needed for the plans to be effective enough to meet the reduction targets.
- **Multisectoral Collaboration and Participatory approach** - covering all sources of pollution and coordination between relevant Central ministries, state governments, local bodies and other stakeholders.
- **All-inclusive approach** – It has tried to incorporate measures for **urban as well as rural areas**. Further, NCAP identifies the trans-boundary nature of air pollution and thus specifically assigns **transboundary strategies** in managing the air pollution in the country.
- **Linking Health and Pollution:** NCAP has

now taken on board the National Health Environmental Profile of 20 cities that the MoEF&CC initiated along with the Indian Council of Medical Research with special focus on air pollution and health. It has asked the Ministry of Health and Family Welfare to maintain health database and integrate that with decision making.

### Implementation of NCAP

- The **Central Pollution Control Board (CPCB)** shall execute the nation-wide programme for the prevention, control, and abatement of air pollution within the framework of the NCAP.
- The **NCAP will be institutionalized by respective ministries** and will be organized through inter-sectoral groups, which include, Ministry of Road Transport and Highway, Ministry of Petroleum and Natural Gas, Ministry of New and Renewable Energy, Ministry of Heavy industry, Ministry of Housing and Urban Affairs, Ministry of Agriculture, Ministry of Health, NITI Aayog, CPCB, experts from the industry, academia, and civil society.
- The program will **partner with multilateral and bilateral international organizations**, philanthropic foundations and leading technical institutions to achieve its outcomes.
- The **Apex Committee in the MoEFCC** will periodically review the progress. Annual performance will be periodically reported upon. Appropriate indicators will be evolved for assessing the emission reduction benefits of the actions.

### Components of NCAP: It has 3 components

**Mitigation Actions:** NCAP details seven mitigation actions.

- **Web-based, three-tier mechanism** - to review, monitor, assess and inspect to avoid any form of non-compliance. The system will work independently under the supervision of a single authority, which will ensure accreditation of three independently

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operating entities.

- **Extensive Planation Drive:** Plantation initiatives under NCAP at pollution hot spots in the cities/towns will be undertaken under the National Mission for Green India (GIM) with Compensatory Afforestation Fund (CAF) being managed by National Compensatory Afforestation Management and Planning Authority (CAMPA).
- **Technology Support:** Clean Technologies with potential for air pollution prevention and mitigation will be supported for R&D, pilot scale demonstration and field scale implementation.
- **Regional and Transboundary Plan:** These have major role for effective control of pollution more specifically with reference to the Indo-Gangetic plain. Air quality management at South-Asia regional level by activating the initiatives under ‘**Male Declaration on Control and Prevention of Air Pollution and its Likely Transboundary Effects for South Asia**’ and South Asia Cooperative Environment Programme (SACEP) to be explored.
- **Sectoral Interventions:** This includes sectors such as e-mobility, power sector emissions, indoor air pollution, waste management, industrial and agricultural emissions and dust management.
- **City Specific Air Quality Management Plan for 102 Non-Attainment Cities:** based on comprehensive science- based approach, involving meteorological conditions and source apportionment studies.
  - A separate emergency action plan in line with Graded Response Action Plan for Delhi will be formulated for each city for addressing the severe and emergency AQIs.
  - Further, the state capitals and cities with a population more than a million may be taken up on priority for implementation.
- State Government’s participation is not limited for evolving an effective implementation strategy but also in exploring detailed funding mechanism.

## Knowledge and Database Augmentation

- **Air Quality Monitoring Network** which also includes setting rural monitoring network, 10 city super network (overall air quality dynamics of the nation, impact of interventions, trends, investigative measurements, etc)
- **Extending Source apportionment studies to all Non-Attainment cities:** This will help in prioritising the sources of pollution and formulation and implementation of most appropriate action plans. A **unified guideline** for source apportionment study will be formulated and updated by the Centre.
- **Air Pollution Health and Economic Impact Studies:** Under NCAP studies on health and economic impact of air pollution to be supported. Framework for monthly analysis of data w.r.t health to be created.
- **International Cooperation** including Sharing of International Best Practices on Air Pollution.
- **Review of Ambient Air Quality Standards and Emission Standards:** The existing standards need to be strengthened periodically and new standards need to be formulated for the sources where standards are not available.
- **National Emission Inventory:** This will be formalized under the NCAP. Its significance is in tracking progress towards emission reduction targets and as inputs to air quality model.

## Institutional Strengthening

- **Institutional Framework:** It involves a **National Apex Committee** at the MoEF&CC and State-level Apex Committee under the chief secretaries in various states. There are various other institutions being envisaged such as Technical Expert Committee and National-level Project Monitoring Unit (PMU) at the MoEF&CC and National-level Project Implementation Unit (PIU) at the CPCB.
- **Public Awareness and Education:** through national portals, media engagement, civil society involvement, etc.

- **Training and Capacity Building:** NCAP identifies lack of capacity on air quality issues due to limited manpower and infrastructure in the CPCB and SPCBs, lack of formal training for various associated stakeholders etc. as one of the major hurdle in an effective implementation of air pollution management plans.
- **Setting up Air Information Centre:** which will be responsible for creating a dash board, data analysis, interpretation, dissemination. This may be set up with the assistance of the IITs, IIMs.
- **Operationalize the NPL-India Certification Scheme (NPL- ICS)** for certification of monitoring instrument. It will help to cater to the country's needs with respect to the online monitoring of air pollution. The proposed certification scheme will have three major components i.e. NPL-India
- certification body (NICB), certification committee, and testing and calibration facility.
- **Air-Quality Forecasting System (AQFS):** as a state-of-the-art modelling system, it will forecast the following day's air quality. The satellite data available through ISRO to be integrated for monitoring and forecasting under the NCAP.
- **Network of Technical Institutions-Knowledge Partners: Dedicated air pollution units** will be supported in the universities, organizations, and institutions and a network of highly qualified and experienced academicians, academic administrators, and technical institutions will be created.
- **Technology Assessment Cell (TAC):** It will evaluate significant technologies with reference to prevention, control, and abatement of pollution. Technology induction/ transfer would be facilitated, where necessary, with time bound goals for indigenization and local manufacturing.
  - The TAC will be created involving the IITs, IIMs, the major universities, industries, and using the existing mechanisms and programme of the

Department of Science & Technology,  
India Innovation Hub, etc.

## WASTE-TO-ENERGY (WTE) PLANTS

### In The News

Recently, residents of Okhla and surrounding areas in Delhi have been protesting against WtE plant in their vicinity.

### About

1. According to **Ministry of New and Renewable Energy** estimates, the solid waste generated from cities/towns in India has a potential to generate power of approximately 500 MW, which can be enhanced to 1,075 MW by 2031 and further to 2,780 MW by 2050.
2. **Current Capacity:** There are five municipal Waste to Energy plants operational in India, with a total capacity to produce 66.4 MW electricity per day, of which 52 MW per day is generated in Delhi.

### Need of Waste to Energy Plants

- **Problems of unscientific Municipal Solid Waste (MSW) disposal:** Only about 75-80% of the municipal waste gets collected and out of this only 22-28 % is processed and treated and remaining is disposed of indiscriminately at dump yards. It is projected that by the year 2031 the MSW generation shall increase to 165 million tonnes and to 436 million tons by 2050.
- **Harmful emission from Landfills:** Organic decomposition of food waste mixed with municipal solid waste at landfill sites leads to high amounts of emissions which is also a public health issue.

### Advantages of Waste to Energy (WtE) Plants

- **Net Greenhouse Gas Reducer:** Methane is a greenhouse gas which is mostly emitted from decomposing waste in landfills. WtE facilities avoid the production of methane while producing almost ten times more electricity from each ton of waste compared to landfills.
- **Resource savings and recovery greatly expanded:** Metals left in the municipal solid waste stream can be extracted from the ash resulting from incineration and the metals

can be recycled.

- **24\*7 Electricity:** WtE facilities, unlike wind and solar, are capable of providing 24\*7 renewable electrical power.
- **Landfill usage and expansion greatly reduced:** Waste to energy facilities typically reduce waste volumes by 90%. Fewer and smaller landfills are needed to process.
- **Transportation of waste long distances** can be greatly reduced with a waste to energy facility in a community, resulting in less air pollution.

### Challenges

- **Low Calorific Waste:** Municipal waste in India is often not segregated properly. It has a very high biodegradable (wet) waste content ranging anywhere between 60 and 70 per cent of the total, compared with 30 per cent in the West. This gives our waste a high moisture content and low calorific value. In Delhi, for example, only 12 per cent of the waste can be thermally treated through incineration technologies.
  - o Also, Indian households have traditionally been recycling their waste such as paper, plastic, cardboard, cloth, rubber, etc. to kabadiwalas. This further lowers the calorific value of the waste.
- **High Toxic Waste:** Incinerators develop toxic ash or slag, containing heavy metals and gas pollutants which are toxic (corrosive impact) and pollute underground water.
- **Expensive power:** Compared to Rs 3-4 per kWh from coal and solar plants, WtE plants sell electricity at about Rs 7/kWh.
- **Lack of Finance for Urban Local Bodies (ULBs)** affects institutional capacity necessary for integrated management of municipal solid waste, which requires investments for WtE projects.
- **Other Challenges include** irregular and inadequate quantity of supply; non-payment of agreed fee and non- marketability of waste processed projects, including power.

### Way Forward

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- **Improved MSW collection system:** Separate collection and transportation of domestic waste (including trade & institutional waste), inert wastes such as street sweepings, silt from surface drains and Construction & Demolition wastes should be ensured by the municipal authorities.
- **Encourage Private Partnership** in building WtE plants as recommended by Task force on WtE (2014) headed by K Kasturirangan.
- **Amendment to Electricity Act-2003** to include a provision for State Electricity Discoms to mandatorily purchase all power generated from municipal solid waste at a tariff decided through competitive bidding.
- **Strict enforcement** to ensure the waste is not mixed at the source of generation and then that the handling of waste is in unmixed streams.
- **Alternative to WtE Plants:** Since WtE technologies are being phased out in the West, they should not be allowed unless the waste offered meets the criterion specified by the Solid Waste Management Rules 2016. Other option could be explored like composting and bio-methanation.
- **Role of urban local bodies (ULBs): Standing Committee on Energy report on Power Generation** from Municipal Solid Waste suggested for increased grants to states and ULBs to maximise waste collection efficiency and also recommended to **integrate ragpickers and kabadiwalas** within the formal system.
  - **Setting up of Monitoring Committee**, consisting of representatives from all the central ministries along with the representatives of the state governments and ULBs, to coordinate efforts at each level, and suggest methods and technologies to be adopted to make the waste-to-energy plants successful.
- **Participation of civil society:** Municipal Authorities should make concerted efforts to involve civil society in managing their waste and motivate Resident Welfare Associations (RWA), Community-Based

Organisations/ NGO's to take up work of **community awareness** and door to door collection to facilitate resource recovery and **waste minimization** by implementing the '**5R**' **Concept:** reduce, reuse, recover, recycle and remanufacture.

## Government Initiative

- NITI Aayog in its **Three Year Action Agenda 2017-18 to 2019-20** has suggested that municipal solid waste be burnt to produce energy. **Some proposals are:**
  - **Composting and biogas are not sustainable** since they generate by-products or residues in large quantities. Only incineration, thermal pyrolysis and plasma gasification technologies offer sustainable disposal solutions.
  - **Incineration is preferable to pyrolysis** (which is unsuited for our municipal solid waste) and plasma technology (which is too costly).
  - Setting up **Waste to Energy Corporation of India**, under the Ministry of Urban Development, to speed up the process of cleaning municipal solid waste.
- **Program on Energy from Urban, Industrial and Agricultural Waste/Residue** for creating conducive conditions and environment with fiscal and financial regime to develop, demonstrate, and disseminate utilization of wastes and residues for recovery of energy.
  - **Central financial assistance (CFA)** in the form of capital subsidy and grants-in-aid will be provided for biogas production from industrial waste, sewage treatment plants, etc.
- **Swachh Bharat Mission (SBM)**, 100% scientific processing and disposal of municipal solid waste is envisaged by 2019. WTE plants are key to Mission since they lead to the most scientific disposal of waste.
- **India's Solid Waste Management policy** requires that wet and dry wastes should not be mixed so that only non- compostable and non-recyclable wastes with at least 1500 Kcal/kg should reach WtE plants.

## Access And Benefit Sharing

### In The News

Recently, Uttarakhand High Court has directed Divya Pharmacy, to share its profits with local and indigenous communities, as part of the **Fair and Equitable Benefit Sharing (FEBS)** objectives of the **Biodiversity Act, 2002**.

### What is access and benefit-sharing (ABS)?

- It refers to the way in which genetic resources may be accessed, and how the benefits that result from their use are shared between the people or countries using the resources (users) and the people or countries that provide them (providers).
- **Importance:** ABS are designed to ensure that the physical access to genetic resources is facilitated and that the benefits obtained from their use are **shared equitably** with the providers. In some cases this also includes valuable traditional knowledge associated with genetic resources that comes from indigenous people and Local Communities (ILCs).
  - ✓ The benefits to be shared can be **monetary, or non-monetary**, such as the development of research skills and knowledge.
- **Working Procedure:** Access and benefit-sharing is based on **prior informed consent (PIC)** being granted by a provider to a user and negotiations between both parties to develop **mutually agreed terms (MAT)** to ensure the fair and equitable sharing of genetic resources and associated benefits.
- **Nagoya Protocol on Access and Benefit Sharing under Convention on Biological Diversity (CBD):** It aims at sharing the benefits arising from the utilization of genetic resources in a fair and equitable way, including by appropriate access to genetic resources and by appropriate transfer of relevant technologies.

### Biodiversity Act (BDA), 2002.

- India being a signatory to CBD, enacted the **Biodiversity Act** in 2002, with three main objectives:
  - Conservation of biological diversity.

- Sustainable use of its components.
- Equitable sharing of benefits arising out of the use of biological resources.

**Institutional Structure: Three-tier system was established with National Biodiversity Authority (NBA) at the Centre, State Biodiversity Boards (SBBs) in each of the Indian states and local-level Biodiversity Management Committees (BMCs) functioning with both municipalities and panchayats.**

- Act recognises the role and participation needs of **ILCs** in conserving the biological resources. Under it, a company is required to **share 0.5 per cent of its sales post taxes** if its annual turnover is above Rs 3 crore.
- It also provides for the involvement of ILCs through biodiversity management committee (BMCs) in preparation of **people's biodiversity registers (PBRs)** and issuance of **mutually agreed terms (MAT)**.

### More on news

- Company was seeking exemption under **Section 7 of BDA** of prior approval or intimation for local people and communities, including growers and cultivators of biodiversity, and vaidas and hakims, practicing indigenous medicines.
- **However,** Judgement has said that **both Indian and foreign companies are liable** to pay indigenous and local communities for using the biological resources under the **BDA 2002**, as the latter kept the traditional knowledge of biological resources alive over the years.
- **Current Status:** India is losing a minimum Rs30,000 crores annually due to **non-implementation access and benefit sharing provisions of Biodiversity Act**.

### Challenges in Implementation of ABS

- Less than 16% of local bodies had constituted BMC till 2016.
- Less than 3% of local bodies spread in 15 states have prepared the **people's biodiversity registers (PBRs)**. The PBRs are records of a region's biological

resources— plants, animals and the traditional knowledge of the locals.

- o Absence of PBRs puts several endangered species at the risk of extinction, denies benefits to locals from the commercial use of biological resources and lets industrial projects getaway by not disclosing their destructivity on environment.
- o Lack of PBR's also lead to bogus environment impact assessment reports.
- **Lack of Local Representation:** Neither NBA nor state biodiversity boards have any representation from indigenous communities, forest dwelling communities or even from traditional knowledge practitioners.
- **Corporate Collusion:** Big players in this industry are yet not registered with respective state biodiversity boards (SBBs) thereby bypassing the requirement for Indian companies to seek permission prior to accessing biological resources and the subsequent need to share royalties with the biodiversity boards.
- o Many times industries appear to have accessed the resources or knowledge not directly but through various intermediaries including local markets.

## Way forward

- Provisions should be included to make the PIC of ILCs mandatory before any access to and utilisation of biological (genetic) resources and associated indigenous traditional knowledge (ITK).
- Domestic companies and research establishments accessing/utilising the genetic resources should also be brought under the ambit of prior approval of National Biodiversity Authority (NBA).
- ILCs need to be necessarily involved in monitoring the users' access to biological resources and associated ITK.

## Land Degradation Neutrality

### In The News

Recently a session was held at United Nations Convention to Combat Desertification (UNCCD) to review the first global assessment of land degradation which seeks to achieve Land Degradation Neutrality (LDN) by 2030.

### About LDN

- As per the UNCCD definition, LDN is a state whereby **the amount and quality of land resources**, necessary to support ecosystem functions and services and enhance food security, **remains stable or increases** within specified temporal and spatial scales.
- It is a unique approach that counterbalances the expected loss of productive land with the recovery of degraded areas.
- The **overarching principle for LDN** includes:
  - Avoid:** Land degradation can be avoided by addressing drivers of degradation and through proactive measures to prevent adverse change in land quality and confer resilience, via appropriate regulation, planning and management practices.
  - Reduce:** Land degradation can be reduced or mitigated on agricultural and forest land through application of sustainable management practices.
  - Reverse:** Where feasible, some of the productive potential and ecological services of degraded land can be restored or rehabilitated through actively assisting the recovery of ecosystem functions.
- LDN can prevent Soil erosion, desertification, water scarcity, migration insecurity and income inequalities caused by land degradation. Thus, it helps in **combating the impacts of climate change**.

### Steps taken to achieve LDN

- Achieving land degradation neutrality by 2030 is one of the targets within **Sustainable**

**Development Goals** adopted in 2015.

- LDN Target Setting Programme:** Under this, UNCCD is supporting interested countries in the national land degradation neutrality (LDN) target setting process, including the definition of national baselines, targets and associated measures to achieve LDN.
- Creation of an LDN fund** to invest in bankable projects on land rehabilitation and sustainable land management worldwide including sustainable agriculture, sustainable livestock management, agro-forestry, sustainable forestry, renewable energy, infrastructure development, and ecotourism. It is promoted by UNCCD and managed by Mirova (a private Investment management firm).
- UNCCD releases **the Global Land Outlook** which demonstrates the central importance of land quality to human wellbeing, assesses current trends in land conversion, degradation and loss, identifies the driving factors and analyzes the impacts etc.
- The Land for Life Programme** was launched at UNCCD Conference of the Parties (COP) 10 in 2011 to confront the challenges of land degradation and desertification.
- In India, **National Action Plan (NAP)** to combat desertification was launched in 2001 for 20 years.
- Desertification and Land Degradation Atlas (2016)** of entire country was prepared by ISRO and 19 other partners using Indian remote sensing satellites data in GIS environment.
- Schemes like Integrated Watershed Development Program, Per Drop More Crop, National Afforestation Program, National Green Mission, etc. have components to tackle Land degradation.

### Way forward

To reduce land degradation, the increasing pressures on land resources should also be reduced. In this context, Global Land outlook by

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UNCCD outlines certain pathways that producers, consumers, governments and corporations can follow to stabilize and reduce pressure on land resources:

- **Multifunctional landscape approach:** Prioritizing and balancing different stakeholder needs at a landscape scale while identifying those land uses in Land-use planning that best meet the demands of people towards safeguarding biodiversity.
- **Farming for multiple benefits:** The agricultural practices should be shifted in a way to support a wider array of social, environmental, and economic benefits and optimize the most desirable suite of ecosystem services from food production activities.
- **Managing the rural-urban interface:** Cities designed for sustainability in the wider landscape can reduce environmental costs of transport, food, water, and energy, and offer new opportunities for resource efficiency.
- **No net loss of healthy and productive land** by providing incentives for the sustainable consumption and production of natural resources. For eg: incentivizing reduction in the current levels of food waste and loss.
- **Creating an enabling environment** to scale local successes into large-scale through stakeholder engagement, land tenure, gender equality, and the availability of sustained investment and infrastructure.

## Obesity, Undernutrition And Climate Change Linkage

### In The News

“The Global Syndemic of Obesity, Undernutrition, and Climate Change: The Lancet Commission report” says that in the near future the health effects of climate change will considerably compound the challenges of under nutrition and obesity which are leading cause of poor health globally.

### What is a Syndemic?

The three pandemics— obesity, undernutrition, and climate change- affect most people in every country and region worldwide. They are said to constitute a “Syndemic” i.e a synergy of epidemics because:

- they co-occur in time and place
- interact with each other to produce complex pathological conditions
- share common societal drivers.

Interactions between climate change and undernutrition	Interactions between climate change and Obesity	Interactions between Undernutrition and Obesity
<b>Lower yield:</b> Global warming will lead to lower yields especially in tropical regions. Furthermore, climate change might reduce the protein and micronutrient content of plant foods.	<b>Poor quality of eating patterns:</b> The effect of climate change on fruit and vegetable production will make these products more expensive, and might prompt shifts in the eating patterns of populations towards processed food and beverage products that are high in fats, sugars, and sodium. <b>Reductions in physical activity</b> due to Increasing extreme weather and climate events.	<b>Dual Burden Scenario:</b> Many countries are facing a double burden of undernutrition and overweight or obesity. Undernutrition in early life is a predictor for later obesity. Biological and social mechanisms that explain this relationship include the contribution of fetal and infant undernutrition, food insecurity, and poor diet quality characterised by a low variety of healthy foods

## ‘Cultural Model’ Of Conservation

### In The News

**Idu Mishmi tribe of Arunachal Pradesh** is protesting against the declaration of Dibang Wildlife Sanctuary (DWS) as Tiger Reserve.

### More About news

- In recent times **road connectivity** to higher elevations of Mishmi Hills has been improved. It is expected to increase number of tourists in higher reaches and illegal poaching. **National Tiger Conservation Authority is thus considering declaring the area as tiger reserve.**
- However, Declaration of an area as tiger reserve **prohibits many types of work** like cutting trees, collecting wood for fuel and agricultural and tourism activities for the indigenous Idu Mishmi people.
- The Idu Mishmi people traditionally follow an animist and shamanistic faith and believe that tigers are their elder siblings. Tigers are never hunted by Idu Mishmi and even If a tiger is killed in self-defense, it will receive the same burial as a human being.
- Thus, Idu Mishmi are protesting against the creation of Tiger Reserve and instead asking for a **Cultural Model of Conservation.**

### Colonial versus Cultural model of conservations

- **Colonial Model of Conservation:** In this model, human presence is taken as threat to nature.
  - This model **denies indigenous peoples’ rights** and provoked long-term social conflict.
  - This model is **not suitable for India** as many indigenous communities are believed to be in co-existence with nature.
- **Cultural model of Conservation**
  - This is based on a **respect for the rights of indigenous peoples** and other bearers of “traditional knowledge” and prevents social conflicts.
  - It involves forest dwellers in forest management and governance and

acknowledges traditional rights of tribal over minor forest produce and provisions for making conservation more effective and more transparent.

- The **Kinshasa Resolution of 1975** (under IUCN) provides international recognition to cultural model of conservation. It acknowledges the importance of traditional ways of life and land ownership, and called on governments to maintain and encourage customary ways of living.

### Application by Cultural model of conservation in different tribes of India

- **Bishnoi Tribe of Rajasthan:** Bishnois consider **trees** as sacred and protect the **entire ecosystem** including animals and birds that exists in their villages. Tribe has organized their own **Tiger Force** which is a brigade of youth actively pursue wildlife protection.
- **Chenchu Tribe of Andhra Pradesh:** They are involved in tiger conservation at Nagarjunasagar Srisailem Tiger Reserve (NSTR). Tribe has been coexisting with **tigers and wild animals** for long without disturbing the ecological balance, which ensures enough water and fodder for the herbivores.
- **Maldhari Tribe in Junagadh(Gujarat):** The success of lion conservation in Gir forest area is due to **peaceful coexistence** of tribe with lions.
- **Bugun Tribe of Arunachal Pradesh:** The tribe using Community-led conservation initiatives and **traditional knowledge helped to protect the critically endangered bird Bugun Liocichla.** For its efforts Singchung Bugun Community Reserve won the India Biodiversity Award 2018.
- **Nyishi tribe of Arunachal Pradesh** in conserving hornbills in the **Pakke/Pakhui Tiger Reserve.** Recently, government of Arunachal Pradesh declared the Pakke Paga Hornbill Festival (PPHF)—the **state’s only conservation festival**, as a ‘state festival’.

## Sarus Crane

### In The News

As per the State Forest and Wildlife department's latest 2018 census (summer), there has been **5.2% increase in population of Sarus Crane** in **Uttar Pradesh** which has 73% of Indian population of Sarus.

### About Sarus Crane

- The **sarus crane** (Antigone Antigone) is a large **non-migratory crane found in parts of the Indian Subcontinent, Southeast Asia and Australia.**
- The **International Union for Conservation of Nature (IUCN)** has marked it as '**vulnerable**' in its list of threatened species.
- It generally **inhabits natural wetlands** with low water depth, marshy and fallow areas and agricultural fields.
- It is a **social creature**, found mostly in pairs or small groups of three or four.
- It is the **tallest (average 5 feet) flying bird in the world** and also India's **only resident breeding crane**, as per the Wildlife Trust of India (WTI)
- Sarus is **omnivorous**, feeding on fish and insects, as well as roots and plants.
- **Threats:** Loss of degradation of wetlands, ingestion of pesticides, hunting of adults and collection of eggs and chicks for trade, food, medicinal purposes, habitat lying outside protected areas.

### Sarus Crane Conservation Project

- It has been running across 10 districts of Eastern Uttar Pradesh by Wildlife Trust of India in collaboration with Tata Trusts and the U.P. Forest Department.
- It involves local volunteers (called **Sarus Mitra or Friends of the Sarus**), Tata Trust partner NGOs and Sarus Protection Committees.

## North Indian Rosewood

### In The News

India has proposed to remove rosewood (*Dalbergia sissoo*) from Appendix II of CITES.

### More About News

- The entire genus of *Dalbergia* was put in the appendix based on the “**lookalike**” **criterion**. This criterion is not based on the level of threat the species face, but the difficulty of distinguishing the species from other threatened species of the genus.
  - The regulation of trade in the species is not necessary to avoid it becoming eligible for inclusion in Appendix I in the near future and the **harvest of its specimens from the wild is not reducing the wild population** to a level at which its survival might be threatened by continued harvesting or other influences.
  - India has also proposed to transfer **small clawed otters** (*Aonyx cinereus*), **smooth coated otters** (*Lutrogale perspicillata*), **Indian Star Tortoise** (*Geochelone elegans*) from Appendix II to Appendix I, and inclusion of **Gekko gekko** and **Wedge fish** (*Rhinidae*) in Appendix II of CITES. *Gekko gekko* is traded highly for Chinese traditional medicine.
- o **atmosphere** through bacteria nodules on its root system.
  - o It also has **insecticidal and larvicidal properties**, as well as resistance to some wood boring insects.
  - o The wood of Indian rosewood is highly durable with excellent finishing colour and smoothness; used for veneer, furniture, cabinets, panelling, carving, small timber, plywood and musical instruments.
  - The **species grows at a very fast rate** and has the capacity to become naturalised outside its native range and is **invasive** in some parts of the world.

### About North Indian Rosewood/Shisham (*Dalbergia sissoo*)

- It is a **deciduous tree** found in tropical to subtropical climates and is economically important for its value in forestry, agroforestry, and horticulture.
- **Uses:**
  - o **Medicinal properties:** It has been used for a variety of ailments including: skin diseases, blood diseases, syphilis, stomach problems, dysentery, nausea etc.
  - o **Erosion control:** Its extensive root system makes it ideally suited for stabilizing and controlling erosion.
  - o **Soil fertility:** Native to the Indian sub-continent it is a member of the **legume family** and can fix nitrogen from the

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## Mugger Crocodile

### In The News

Recently, government of Gujarat relocated the **Mugger crocodile** (*Crocodylus palustris*) from Sardar Sarovar dam to facilitate a seaplane service at the Statue of Unity.

### About the Mugger Crocodile

- It is a reptilian species also called **marsh crocodile** or **broad-snouted crocodile** and is one of the three- crocodile species (**Saltwater Crocodile** and **Gharial**) found in India.
- It is **extinct in Myanmar and Bhutan**, and **possibly extinct in Bangladesh**.
- Its habitat includes wetlands (inland), marine neritic (shallow part of ocean), artificial/aquatic & marine.
- It is a **hole-nesting species**, with egg-laying taking place during the annual dry season.
- Vadodara is the **only city in India** where crocodiles live in their natural habitat amidst human population.
- **Threat:** Water pollution, food for human consumption, illegal use and trade such as for medicinal purpose, apparel/accessories etc.
- **Conservation Status:** It has been listed under **Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) Appendix I**, categorized as ‘**vulnerable**’ in the **IUCN Red List** and protected under **Schedule I of the Wildlife Protection Act, 1972**.
  - Project Crocodile was started in 1975 with the aid of the United Nations Development Programme and Food and Agricultural Organization. This includes the **captive breeding programme** and also involvement of local **community in conservation efforts**.

## Humpback Dolphins

### In The News

Recently, Humpback dolphins were spotted near the Mumbai coast.

### About Humpback Dolphins

- **Range:** Indian Ocean Humpback Dolphin is known to occur within the Indian Ocean from South Africa to India.
- **Habitat:** Species are among the **most adaptive ones** due to their habitat preference for shallow waters places them in some of the world's most intensively utilised, fished, shipped, modified and polluted waters.
- **IUCN status:** Endangered.
- **WPA Protection:** **Schedule I** of the Wildlife Protection Act, 1972.

## Status Paper On Government Debt

### In The News

According to the Status Paper on Government Debt for 2017-18, the Centre's total debt as a percentage of GDP **reduced to 46.5% in 2017-18** from 47.5% as of March 31, 2014.

### Why government debt needs to be controlled?

- **Affects investor confidence:** In the absence of fiscal consolidation, there is an increased risk of default & hence, downgrading of sovereign credit ratings by the credit rating agencies. Loss of investor confidence will not only reduce FDI/FII in India but will also make future borrowing expensive.
- **Affects credit growth:** As more money is lent to government rather than invested in the market, corporate sector is crowded out leading to slower industrial and capital asset growth and potential loss of employment.
- **Fiscal repression of commercial banks:** When the government borrows more, it forces Public Sector Banks to purchase more of Government Securities (GSecs). When a commercial bank invests more in GSecs (where it earns lesser interest than commercial loans), it reduces the capital availability to private sector and affects profitability of the banks.
- **Inflation:** Too much of government debt can lead to inflation and reduction in real interest rates. It might prompt people to invest more in gold and real estate, thereby accentuating the problem of poor economic liquidity and black money.
- **Exchange rate risk:** The reduced demand of domestic securities relative to foreign securities (due to poor credit rating) might push the exchange rate down and weaken the domestic currency with respect to dollar. It will make imports more expensive and further fuel inflation.
- **Committee Recommendations:** N.K. Singh-headed FRBM (Fiscal Responsibility and Budget Management) Review Committee had recommended ratio to be 40% for the Centre & 20% for the States,

respectively, by 2023, which is consistent with international best practices.

- **Intergenerational parity:** It will be hurt as future generations will have to pay increased taxes to settle the government debt.

While Government borrowing is necessary to stimulate growth and aggregate demand by spending in welfare measures and capital asset development, high debt-to-GDP ratio isn't good for long term macroeconomic stability of the country.

### Has fiscal consolidation worked for the central government?

- **Gross fiscal deficit (GFD) as a % of GDP** has declined from 5.9% in 2011-12 to 3.5% in 2017-18.
- **Borrowing more from market:** Government has reduced its dependence on RBI (borrowing from RBI is inflationary as it increases currency in circulation) to cover up temporary deficits in receipts and expenditures. This is evident from greater share of marketable debt.
- **Moving towards market interest rates:** The Government has also progressively moved towards alignment of administered interest rates with the market rates to remove disparity between public and private sector in market borrowing and prevent crowding out of private sector.
- **Lowering interest rate volatility:** ~98% of the public debt in India is contracted at fixed interest rates insulating debt portfolio from interest rate volatility and providing certainty and stability to budget in terms of interest payments.
- **Increasing debt sustainability:** IP-RR ratio (interest payments to revenue receipts) of Centre has decreased to 35.3% in 2017-18 from about 52% in 2000s. In India, long-term sustainability of debt is because of being largely funded through domestic savings, using largely fixed interest rate instruments, and being supported by a large domestic institutional investor base.

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## Strategy of central government for debt sustainability

The main objective of the Government debt management policy is to raise funds for the Government at low cost while ensuring that debt levels remain sustainable, debt structure remains stable and broader objective of financial stability is met.

- **Dedicated Body** - Institutionally, the Government has decided to setup a statutory **Public Debt Management Agency (PDMA)** to bring both, India's external (managed by Ministry of Finance) and domestic debt (managed by RBI) under one roof. The first step towards this direction was the establishment of a Public Debt Management Cell (PDMC) within Budget Division, Ministry of Finance in 2016.
- **Medium-Term Debt Management Strategy (MTDS)** - to be implemented over next 3 years (2018-19 to 2020- 21) is based on three broad pillars:
  - o **Low cost of borrowing:** Issuing longer tenor bonds, better investor relations and advance notifications of borrowing calendar.
  - o **Risk mitigation:**
    - ✓ **Currency Risk** - Appropriate mix of domestic and foreign currency debt portfolio by improving access to foreign investors in domestic G-Sec market.
    - ✓ **Roll-over risk** - A conscious strategy of elongating maturity, from 10-year maturity bucket to 10-14 year maturity bucket, has been adopted to reduce **roll-over risk**
    - ✓ **Commodity price risks** - Launched the Sovereign Gold Bonds Scheme (SGB) to reduce demand for physical gold by providing an alternative investment instrument linked to gold prices.
    - ✓ **Interest rate risk** - Though instruments such as, floating rate bonds (FRBs), inflation indexed bonds (IIBs) and sovereign gold bonds have been issued to cater to the preferences of

different investors, their contribution has remained small to limit the risk.

**Market development:** It would price debt efficiently.

## Debt situation of states

The total debt of the States has been rising to 24% in 2017-18, and is estimated to be 24.3% in 2018-19.

## Outstanding liabilities of states have increased

- **Increasing Expenditure:** due to issuance of UDAY bonds, introduction of 7<sup>th</sup> Central Pay Commission (CPC), increase in interest payments, populist measures like loan waivers etc.
- **Increasing Debts:** Post 12<sup>th</sup> Finance Commission (FC), the market borrowings of states are on the rise. Moreover, there is no institutional mechanism to incentivize higher investments in fiscally prudent states.
- **Reducing Receipts:** Centre has been levying multiple cesses, surcharges etc instead of taxes, as the proceeds need not be shared with states. It has affected the revenue collection of the states.

## Steps to improve the fiscal situation

- **Improve quality of states' Public Expenditure** (ratio of capital expenditure to revenue expenditure).
  - o Share of state's revenue expenditure is 80% of the total expenditure.
  - o Even after the increase in quantum of "untied funds" from Centre to States (post 14th FC), expenditure of states on physical and social infrastructure has remained stagnant.
- **Re-include "Fiscal Discipline"** as a criteria in tax devolution from centre to states (not used by 14th FC)
- **More stringent, apolitical and transparent criteria** for approval of states' market borrowings under Article 293
- **Better coordination** b/w State Division Plan (approval to state borrowings) and Budget Division (monitor implementation of FRBM Act)

Introduce **transparent accounting practices** so that there is no underestimation of State's public debt (e.g. off-budget expenses through SPSUs/guarantees issued).

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## Insolvency And Bankruptcy Code

### In The News

The Supreme Court recently upheld the constitutionality of the Insolvency and Bankruptcy Code (IBC).

### More on the judgement

- The petitioners against IBC had argued that in the event of liquidation of the company or its sale, the **dues of operational creditors rank below those of financial creditors**, which was violative of the Article 14 of the constitution.
- However, SC said that if an intelligible differentiation can be established between two classes of creditors, **then legislation is not violative of Article 14**. The repayment of financial debts infuses capital into the economy and banks & financial institutions are able to further lend money to other entrepreneurs. Thus, relative importance of financial creditors is more vis-a-vis operational creditors.
- Further, SC said that deciding the threshold to allow withdrawal of insolvency case pertains to the domain of legislature. Moreover, the Act already contains provisions to set aside arbitrary decisions of CoC through NCLT/NCLAT.

### Successes of Insolvency and Bankruptcy Code

- **Promising start:** 1322 cases have been admitted by National Company Law Tribunal (NCLT). 4452 cases have been disposed at pre-admission stage.
- **Resolution at pre-admission stage:** Once a petition of the creditor is filed before the NCLT, many debtors have started paying at the pre-admission stage so that the declaration of insolvency does not take place. This indicates that IBC has pushed successful resolution outside the courts through negotiation, arbitration & reconciliation, which will lessen the burden of judiciary system.
- **Resolution of large accounts:** In June 2017, RBI had recommended 12 large accounts (having more than Rs 5000 cr of outstanding loans and accounting for 25% of total NPAs of banks) for immediate resolution under IBC.
  - o Successful resolution of Bhushan Steel helped the banks successfully recover almost 75% of the total debt through 36400 cr transparent bid by Tata Steel.
  - o Bhushan Power and Steel Ltd. & Essar Steel India Ltd. are in advanced stages of resolution. Lenders are expecting to recover almost 86% of Rs 49000 cr loan in case of Essar Steel.

Insolvency & Bankruptcy Code 2016: Salient Features

<b>Clear &amp; Speedy Process for early Identification &amp; Resolution of Financial Distress</b> for corporates & Limited Liability Partnerships (LLP)	<b>2 distinct resolution processes:</b> <ul style="list-style-type: none"> <li>▪ Fresh Start</li> <li>▪ Insolvency Resolution</li> </ul>	<b>Adjudication Authorities:</b> National Company Law Tribunal (for companies and LLP) & Debt Recovery Tribunal (for individuals and unlimited partnership firms)	<b>Information Utilities:</b> To process financial information to be used in insolvency & bankruptcy proceedings	<b>Insolvency Professionals (IPs):</b> To handle commercial aspects of Insolvency Resolution Process (IRP)	<b>Insolvency Professional Agencies:</b> To develop professional standards & code of ethics for IPs	<b>Regulator:</b> Insolvency & Bankruptcy Board of India for IPs, IPAs & Information Utilities
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- **Reduced time for resolution:** According to Insolvency and Bankruptcy Board of India (IBBI) data, the average time for resolution and liquidation outcomes is within the 270-day outer timeline. This is a significant improvement over World Bank's estimate in 2015, which stated that average time period for resolution is 4.3 years.
- **Reduced loss in recovery:** According to IBBI data, the recovery rates for financial creditors have improved on an absolute basis.
  - o World Bank's Ease of Doing Business Report 2015 had observed that the debt recovery rate in India hovered around 27 cents to the dollar, and OECD countries had a recovery rate of 70 to the dollar.
- **Impact of the law on credit markets:** Operational creditors find the Code an effective tool for realising their claims. Earlier, operational creditors, comprising largely vendors and employees had no effective remedy for recovering their dues, except civil suits and the initiation of winding up proceedings before the court against the debtor.
- **Impact of Section 29(A):** After the introduction of Section 29(A), companies are paying up in anticipation of not crossing red line and being referred to NCLT. This has created a deterrent effect on potential defaulters, as they fear loss of their position in company's management if the IBC proceedings are initiated.
- **Uniform and universal application:** Generic framework of IBC has been universally adopted, as RBI has withdrawn other resolution schemes such as Strategic Debt Restructuring (SDR) Scheme, Scheme for Sustainable Structuring of Stressed Assets (S4A) etc. This has provided consistency in the insolvency process across the country.
- **Transparency in real estate:** The amendment in 2017 allows home buyers to be treated at par with financial creditors. It will protect the interests of home buyers, who contribute more capital to builders than financial institutions, but so far had no say

in the resolution plan.

- **Focus on Outcome Neutrality:** IBC views both revival and liquidation as means of resolving firm stress & leaves the decision to the commercial judgment of the creditors of the company. It marks fundamental shift from the thinking that prevailed in the pre-IBC world. Laws like Sick Industrial Companies Act, or Companies Act had a general aversion to liquidation as an outcome, thereby, increasing delays and pendency.

## Challenges

- **Infrastructural constraints:** With the existing infrastructure & capacity of IBC, it would be difficult to deal with the volume of case flow, and the quantum of litigation being generated in the timelines that the law prescribes.
- **Substantive issues:** IBC is a nascent law with evolving jurisprudence, and the initial cases are taking more time as substantive issues are being settled by courts like validity of Section 29(A).
- **Perceived Bias against liquidation:** It is based on the belief that the objective of the IBC is to resolve stressed companies by reviving them, and liquidation represents a failure of the IBC process. The IBC amendment lowering the vote threshold (from 75% to 66%) required to approve a resolution plan also suggests this bias. In many of the ongoing cases, the process of submission of resolution plan and their evaluation is continued beyond stipulated 270 days. This is against the spirit of IBC, which puts liquidation as an outcome for stressed companies on equal footing, as revival or restructuring.
- **Challenges in liquidation process:**
  - o Liquidators under IBC require lenders to relinquish control (right to sell the asset if borrower fails to repay the loan) over the company's assets, pledged as collateral for loans. Ensuring compliance in this regard has faced many legal hurdles.

- o The attachment of assets by the probe agencies like enforcement directorate (ED), income tax agency etc. for past investigations contributes to the delays. An asset entangled with Law Enforcement agencies doesn't attract many buyers.
- o Complicated land ownership patterns of the corporate debtor further poses challenges to liquidation. In many cases, liquidation cost is higher than the available assets.
- **Sanctification of the small:** Promoters of small companies are exempted from disqualification criteria under Section 29A; otherwise these companies would go directly into liquidation in absence of any bidders. However, small companies also dominate the list of insolvent companies, despite the public focus on large cases. The special status given to small companies could be another disincentive against gaining size.
- **Lack of clarity on cross-border insolvency law:** India has not yet adopted UNCITRAL (United Nations Commission on International Trade Law) Model Law on Cross-Border Insolvency and therefore, requires bilateral agreements with individual countries to administer cross-border insolvency proceedings.
  - o In June 2018, the Government of India released the suggested draft chapter on cross-border insolvency as an addition to the IBC.

company is economically distressed. Such a company can be profitably liquidated.

- o In contrast, if a company is not economically distressed but is merely unable to service its debts, it is financially distressed. The assets of such a firm are more valuable if kept together as a functioning unit. Hence, such a unit must be restructured.

With the passing of 2 years, even as it continues to evolve, the IBC has largely emerged as successful and remains

key to solving India's bad loans problem.

## Conclusion

- There is a need to urgently develop a policy framework for distressed asset investors to attract foreign investors in this space. In absence of competing bidders, valuation of assets will be impacted, causing further losses to banks and other creditors.
- A well-designed insolvency & bankruptcy law should differentiate between “financially distressed” firms & “economically distressed” firms.
  - o When the present value of the expected profits of a company is less than the total value of the assets of the company, the

## GST REGIME

### In The News

In recent months, major decisions have been taken for changes in GST regime by GST Council.

### Recent Changes in GST Regime

- **Setting up of Goods and Services Tax Appellate Tribunal:** It is a quasi-judicial body that will mediate in indirect tax disputes between states and centre.
  - o The National Bench of the appellate Tribunal situated in New Delhi, consists of one technical member from both state and centre and a president.
  - o Goods and Services Tax Appellate Tribunal is the forum of second appeal in GST laws against the orders in first appeals issued by the Appellate Authorities under the Central and State GST Acts.
  - o It is the first common forum of dispute resolution between Centre and States.
- **Relief to MSME sector**
  - o **Higher Exemption Threshold Limit:** The Council raised the annual turnover limit under which companies would be exempt from GST to **Rs. 40 lakh for most States and Rs. 20 lakh for the North Eastern and hill states**, from the earlier limit of Rs. 20 lakh and Rs. 10 lakh, respectively.
  - o **Increase in Turnover Limit for the existing Composition Scheme:** The limit for composition scheme would be raised to an annual turnover of Rs. 1.5 crore (earlier Rs. 1 crore) and companies would be allowed to **file annual returns and pay taxes quarterly** from April 1, 2019.
  - o **Composition Scheme for small services provider:** It decided to extend this Scheme to small service providers with an annual turnover of up to Rs. 50 lakh in preceding year, at a tax rate of 6% (3% central GST and 3% state GST).

decided to cut tax rates on 23 goods and services, including parts and accessories for the carriages for disabled persons, renewable energy devices etc. and exempted frozen and preserved vegetables from the levy. Now, the 28 per cent slab is restricted to only luxury and sin goods.

- Taxpayers who have not filed the returns for two consecutive tax periods shall be restricted from generating **e-way bills**.

### GST Composition Scheme

- Taxpayers registered under this scheme pay a small tax (1%, 5% or 6%) on their turnover.
- It reduces administrative burden of taxpayers but makes it difficult for them to sell to larger firms as they are not eligible for input tax credits.

### About E-way Bill

- It is a **document** required to be carried by a person in charge of the conveyance carrying any consignment of goods of value exceeding Rs. 50,000 from **one state to another**.
- It will **eliminate the need for separate transit pass** in each state for movement of goods, thus, enabling hassle-free movement.
- **Validity** of the e-way bill or consolidated e-way bill depends upon the **distance** the goods have to be transported.

- **Changes in GST Rates:** GST council

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## Insider Trading

### In The News

SEBI has laid down mechanism to prevent insider trading on the recommendations of **TK Viswanathan committee. Background**

- **What is Insider Trading?** It is the buying or selling of a security by someone who has access to material non- public information about the security.
- **Why is it illegal?** As disclosures are often price sensitive, insiders are always in a better position to make bigger trading gains. But since this will be unfair to other investors, and in order to maintain trust and confidence in the market, trading on the basis of unpublished price-sensitive information is illegal.
- **Prohibition of Insider Trading:** In India, **SEBI (Insider Trading) Regulation, 1992** framed under **SEBI Act, 1992** intends to curb and prevent the menace of insider trading in securities. **Companies Act 2013** also prohibits insider trading.
- **Cases of Insider Trading:** The number of insider trading investigations taken up by the market regulator in 2016-17 went up to 34 compared with 12 cases in the previous year.

regulations.

- **Digital Database:** The board of directors shall ensure that a structured digital database is maintained containing the names of such persons or entities, as the case may be, with whom the information is shared.

### Why tackling Insider Trading is a challenging Task?

- **Lack of Manpower:** The Kotak committee report on corporate governance highlighted, SEBI has just one employee for six listed companies, while the US securities market regulator, Securities and Exchange Commission, has about one employee for every listed company.
- **Evolving Technology:** The other problem is that evolving technology and modern means of communication are difficult to track. This only raises the level of complexity for the regulator in tracking insider trading cases.
- **Lax Implementation:** There is difference between rules on paper and reality on the ground which may affect investor confidence.

### SEBI's Mechanism to counter Insider Trading

- **Responsibility of Promoters:** It has decided to hold company promoters, irrespective of their shareholding status, responsible for violation of insider trading norms if they possess unpublished price-sensitive information (UPSI) regarding the company without any 'legitimate' purpose.
- **Defining an Insider:** It comprises three elements - The person should be a natural person or legal entity; The person should be connected or deemed to be connected to the company; Acquisition of UPSI by virtue of such connection.
- **Legitimate Purpose:** It has specified that the term “legitimate purpose” will include sharing of the UPSI in the ordinary course of business by an insider, provided that such sharing has not been carried out to evade or circumvent the prohibitions of these

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## Sensitizing Youth Towards Gender Issues

### In The News

Recently, two renowned young cricketers were criticized for misogynistic comments on a TV show.

### What is Gender Sensitivity?

It pertains to one's effort to show how gender shapes the role of women and men in society including their role in development and how it affects relations between them.

### Why is it important?

- Sensitization is by far the **most effective and non-confrontationist approach** of reforming the society. Gender sensitization is the process of changing the stereotype mind set of men and women- a mindset that strongly believes that men and women are 'unequal entities' and hence have to function in different socio- economic space.
- Gender sensitization **increases the sensitivity of people** at large towards women and their problems. In the process it creates a class of responsive functionaries at different level, from policy making to grass root level. These functionaries are convinced that any form of gender bias is an obstacle on the way of attaining an equitable social and economic order and therefore consider addressing gender related issues in their situation as a matter of priority.
- Changing gender stereotypes not only benefits women and girls **but also men and boys**. Men and boys can take on jobs and opportunities that are often considered feminine such as in the nursing and care professions. Equal sharing of domestic and care responsibilities between men and women enables men to have the opportunity to better enjoy family life and improve their relationship with their spouses and children.

### Process of gender sensitization

- **Change in Perception** – At this stage people realize the ill effects of prevailing biases on family and society.
- **Recognition** - At this stage the people begin

to recognize the virtues of women and their importance to the family and society.

- **Accommodation**- People tend to rationalize behavior by shedding their egos as far as gender relations are concerned.
- **Action**- Gender sensitized person become instrument of change as far as status of women in the society is concerned.

### Why involving youth is important?

- As attitudes and perceptions are shaped at an early age, there is a significant impact of **early socialization of children** and the importance of parents and families fostering gender sensitivity from an early age. Gender sensitizing efforts challenge traditional gender roles and suggest alternative ways of thinking and behaviour that youth can associate with. For instance, whereas the traditional social definition of masculinity pressures young men and boys to appear physically strong, dominant and even violent at times, the development of alternative masculinities can instill characteristics within boys and men that promote respect and care for others.
- The engagement of youth is especially important as their population comprises a sizeable share of the total population in many parts of the world. The current generation of youth is better positioned and has more opportunities than previous ones to help shape development, with greater access to technology, education and training. However, they remain **underutilized as agents of change**.
- Engaging youth is vital to the **prevention of violence against women and girls**. Young people can contribute to reducing violence against women and girls by forming pressure groups and organizations to lobby for justice for survivors of violence, sensitizing their peers, and monitoring violence at the community level for timely reporting to authorities. Involving young men and boys is particularly important and effective because it can help them accept

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alternative models of behaviour and refrain from being pressured into roles of strength and dominance, which can lead to acts of violence.

## How to sensitize youth?

- **Role of parents**
  - o Parents can nudge their children to exercise empathy, show respect for others, and embody other aspects of moral thinking.
  - o Parents should lead by example in day-to-day life to cultivate ethical agency among children.
- **Rectify improprieties in education system**
  - o **Create gender-sensitive classrooms and textbooks:** E.g. In 2005, NCERT made an attempt to rectify the chronic depiction of stereotypical gender roles in school textbooks (i.e. women mostly portrayed in traditional roles such as housewives, mothers, and as representatives of stereotypical characteristics like ‘kind’ and ‘loving’)
  - o **Actively discourage certain classroom discourses** such as ‘boys understand and fare better in science, technology, engineering and mathematics (STEM), whereas girls perform better in reading, writing and handicraft’ so as to prevent prejudices among youth.
  - o **Teacher-training** must be made mandatory to equip them to address discrimination with regard to class, caste, socio-economic background & gender in the classroom.
- **Initiatives by government:**
  - o **Push towards ethical conduct and humane perspective** through schemes and policies such as National Service Scheme (NSS), National Youth Policy 2014 as well as through participation as volunteers in following schemes:
    - ✓ **Ahimsa Messenger** launched by Ministry of Women & Child Development to promote the sense of respect for womenfolk and eliminating violence against women.
    - ✓ **Bharat Nirman Volunteers** in rural areas to generate awareness among the people about their rights and entitlements.
    - o **Promoting sports culture amongst the youth** may also inculcate better team spirit and form an attitude against misconduct and malpractices.
  - **Role of civil society:** Civil society can also play a critical role in sensitizing the youth about India's contemporary issues. For e.g.: **Udaan Utsav** organized by NGO Udaan.

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## INSTITUTES OF EMINENCE

- An Empowered Expert Committee (EEC) for selecting Institutions of Eminence (IoEs), has recommended to increase the number of such institutes to 30.
- The aim of the scheme is to **bring higher educational institutions selected as IoEs in top 500 of world ranking** in the next 10 years and in top 100 eventually overtime.
- The scheme has been launched with an objective to **provide world class teaching and research facilities to Indian students** within the country and enhance general level of education of the country.
- The selected institutions have greater autonomy-
  - o to **admit foreign students** up to 30% of admitted students;
  - o to **recruit foreign faculty** up to 25% of faculty strength;
  - o to **offer online courses** up to 20% of its programmes;
  - o to **enter into academic collaboration** with top 500 in the world ranking Institutions **without permission of UGC**;
  - o **free to fix and charge fees from foreign students** without restriction;
  - o **Flexibility of course structure** in terms of number of credit hours and years to take a degree; complete flexibility in fixing of curriculum and syllabus, etc. has been provided to IoEs.
- **Each Public Institution** selected as IoE will be provided **financial assistance up to Rs. 1000 Cr over a period of five years.**
- The Centre had bestowed the **IoE tag on six institutions**, three public — IIT Delhi, IIT Bombay and IISc Bangalore – and three private — BITS Pilani, Manipal University, and the yet-to-open Jio University.

## PRAVASI BHARTIYA DIVAS

- It is organized every two years and provides platform for overseas Indian Community to engage with the government.
- The day commemorates the return of Mahatma Gandhi from South Africa to Mumbai on 9 January 1915. However, this year the dates have been shifted to January 21 to 23 to accommodate Republic Day, Kumbh Mela celebrations.
- During PBD overseas Indians are also honored with the prestigious Pravasi Bharatiya Samman for their contributions to various fields both in India and abroad.
- **Theme of PBD 2019** – role of Indian Diaspora in building new India.
- **Pravasi Teerth Darshan Yojna:** was launched at PBD 2019 and under this, Overseas Indians in the **age group 45-60** will be taken on nationwide tour of **religious places**.
  - o This will be sponsored by Center and the State Government.
  - o **First preference** to people from **Girmitiya countries**.
  - o Girmityas or Jahajis are descendants of indentured Indian labourers brought to Fiji, Mauritius, South Africa, East Africa, the Malay Peninsula, Caribbean and South America (Trinidad and Tobago, Guyana and Suriname) to work on sugarcane plantations by European colonizers.

## BEIRUT DECLARATION

- At the conclusion of the **Arab Economic and Social Development Summit**, countries taking part in the summit issued a joint statement called the Beirut Declaration.
- It called for **establishment of an Arab free trade zone** and the international community to **support countries hosting refugees and displaced people**.

## RAISINA DIALOGUE 2019

- The fourth edition of the Raisina Dialogue, India's flagship annual conference on geopolitics and geo- economics, themed ‘**A World Reorder: New Geometries; Fluid Partnerships; Uncertain Outcomes**’ was recently held in New Delhi.
- The conference is hosted by the **Observer Research Foundation** (independent think tank) in collaboration with the Government of India, **Ministry of External Affairs**.
- The **United States Chamber of Commerce's Global Innovation Policy Center (GIPC)** launched a new innovation initiative titled “**Fair Value for Innovation**” at the Raisina Dialogue. It will examine economic underpinnings that would enable breakthrough innovation, and explore how policymakers can harness innovation capital in India and around the globe through research, advocacy, partnerships, and programs.
- In a diplomatic initiative to address the lingering conflicts and mistrust in the Gulf region, **Iran** proposed a new platform “**Persian Gulf Regional Dialogue Forum**” for regional peace building.

## ASIA REASSURANCE INITIATIVE ACT (ARIA)

- US President has signed ARIA act to counter the threat from China and to reinvigorate US leadership in the Indo-Pacific region.
- It aims to establish a multifaceted U.S. strategy to **increase U.S. security, economic interests**, and values in the Indo-Pacific region.
- The new law mandates actions **countering China's illegal construction and militarization** of artificial features in the South China Sea and coercive economic practices.
- ARIA recognizes the vital role of the **strategic partnership between the U.S. and India** in promoting peace and security in the Indo-Pacific region and it

calls for strengthening diplomatic, economic, and security ties between both the countries.

- For strengthening of diplomatic, economic, and security ties with India, it **allocates a budget of \$1.5 billion** over a five-year period to enhance cooperation with America's strategic regional allies in the region.

## NATIONAL COMMISSION

## STATISTICAL

- Recently Chairman and member of National Statistical Commission (NSC) resigned due to difference with Government over various issues with respect to GDP back series data, new economic census and delay in publishing the employment-unemployment report for 2016-17 despite its approval.
- NSC was set up by the Government of India as an autonomous institution in 2005 on recommendation of Dr. C. Rangarajan committee.
- It serves as a nodal organization for all core statistical activities of the country including evolving, monitoring and enforcing statistical standards and ensuring statistical co-ordination among the different agencies involved.
- The Commission has a part-time Chairperson, four part-time Members and Chief Executive Officer of the NITI Aayog as ex-officio member. The Chief Statistician of India serves as the Secretary of the Commission. He is also the Secretary to the Government of India in the Ministry of Statistics and Programme Implementation.

## INDUSTRIAL OUTLOOK SURVEY, AND SERVICES AND INFRASTRUCTURE OUTLOOK SURVEY

- The Reserve Bank of India (RBI) has

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initiated two quarterly surveys namely **Industrial Outlook Survey (IOS)** and **Services and Infrastructure Outlook Survey (SIOS)**.

- The surveys examine the current situation including the job scenario in India's manufacturing, services and infrastructure sectors.
- **Industrial Outlook Survey (IOS)** which provides useful insight into the **performance of the manufacturing sector** will be conducted by **Hansa Research Group Pvt Ltd**.
- **Services and Infrastructure Outlook Survey (SIOS)** seeks an assessment of the business situation **the services and infrastructure sectors** will be carried out by **Spectrum Planning India Ltd**

## SHARE-PLEDGING

- Recently there was a drastic fall in share prices of **Zee group** due to selling by lenders who had given money to the promoters of Zee entities against shares pledged by the promoters. This has brought to notice the issue of ‘**share-pledging**’ or ‘**Loan against shares**’ system.
- Share-pledging is done to secure loans from bank and non-bank financial institutions. For the financial institutions, these pledged shares are collateral.
- Banks can sell the pledged shares if the price of the stock falls closer to the value agreed in the contract between them and the company. Typically, the amount that is lent by banks or NBFCs to promoters is less than the market value of the shares.
- High pledging levels are typically not considered a good sign by investors, as a downturn in the market price can lead to selling of shares by lenders & change in management. The fear of lenders selling the collateral makes the investor feel vulnerable which could further trigger distress sales.

## UK SINHA COMMITTEE

- Reserve Bank of India (RBI) has set up an expert committee under former SEBI chairman U.K. Sinha to suggest long-term solutions for the economic and financial sustainability of the MSME sector.
- The committee will also examine the factors affecting the timely and adequate availability of finance to the sector along with certain other issues.

## GAFA TAX

Recently France has implemented tax on large technology companies with large annual global revenue called GAFA (Google Apple Facebook Amazon) Tax from 1<sup>st</sup> Jan 2019.

## RE-WEAVE.IN

- Microsoft India recently launched a new e-commerce platform **re-weave.in**, under its **Project ReWeave**.
- The e-commerce platform **hosts signature collections created by the weaver communities, showcase traditional designs and products** created from natural dyes.
- **Project ReWeave** was launched in 2016 in partnership with Chaitanya Bharati, a Vishakhapatnam-based non-profit organization to ensure the **revival of the traditional handloom art forms in the state**.
- Under the project, Microsoft India helps weavers **with working capital support through non-profit organizations**.

## INDIA'S LARGEST STARTUP ECOSYSTEM IN KERALA

- It is a facility at the Technology Innovation Zone (TIZ) housing incubation set-ups across a string of segments in modern technology.
- The Integrated Startup Complex under the

**Kerala Startup Mission (KSUM)** includes the ultra-modern facilities of

- o Maker Village that promotes hardware startups,
- o BioNest that promotes medical technologies,
- o BRINC which is the country's first international accelerator for hardware startups;
- o BRIC which aids developing solutions for cancer diagnosis and care, and
- o Centre of Excellence set up by industry majors such as UNITY.

## JAN SHIKSHAN SANTHANS (JSS)

- Government has unveiled new guidelines for Jan Shikshan Sansthan (JSS) aligning them to the National Skills Qualification Framework.
- Jan Shikshan Sansthan (JSSs) are established to provide **vocational training to non-literate, neo-literate, as well as school drop outs** by identifying skills as would have a market in the region of their establishment.
- The scope of work of Jan Shikshan Sansthan (JSSs) includes the following:
  - o **Develop/Source appropriate curriculum and training modules** covering vocational elements, general awareness and life enrichment components.
  - o JSSs are **encouraged to undertake training** equivalent to courses designed by the Directorate of Adult Education, National Institute of Open Schooling and Director General, Employment & Training.
  - o **Network with employers and industries** for trainees to get suitable placements.
- It was under the Ministry of Human Resources Development, but **transferred to the Ministry of Skill Development & Entrepreneurship in 2018.**

## BHARATIYA SHIKSHA BOARD

- Ministry Human Resource Development has given its approval for the setting up of country's **first national school board for Vedic education- Bhartiya Shiksha Board (BSB).**
- Its **objective** is to **standardise Vedic education** through drafting syllabus, conducting examinations and issuing certificates.
- BSB will also be assigned the responsibility of **evolving new kinds of schools** that offer a blend of Vedic and modern education **apart from affiliating traditional pathshalas.**
- It will address the problem of **recognising traditional learning.**
- The board will be setup as per the model bye laws framed by **Maharshi Sandipani Rashtriya Veda Vidya Pratishthan**, an autonomous body under the Ministry of Human Resource Development.
  - o MSRVP was set to **develop and propagate oral studies of the Vedas.**
  - o It currently affiliates 450 institutions of traditional learning like **pathshalas and guru-shishya parampara yojana** across the country.
  - o Although this organisation has been conducting Class X and XII examinations, its certificates are not considered equivalent to mainstream levels of education by several institutions.

## CONSORTIUM FOR ACADEMIC AND RESEARCH ETHICS

- University Grants Commission (UGC) has decided to set up Consortium for Academic and Research Ethics (CARE) to refine and strengthen research publication.
- The good quality Research Journals in disciplines under Social Sciences, Humanities, Languages, Arts, Culture, Indian Knowledge Systems etc., will be maintained by CARE and referred to as **‘CARE Reference List of Quality**

## Journals’.

- This will be used for all academic purposes. The ‘CARE Reference List of Quality Journals’ will be regularly updated and published by the UGC and the Members of the Consortium at their respective websites.

## GLOBAL SOLAR COUNCIL

- Chairman of National Solar Energy Federation - Pranav R. Mehta recently became the **first Indian** to be appointed chief of Global Solar Council.
- Global Solar Council is **international non-profit association** of the national, regional and international associations in solar energy and the world ‘s leading corporations.
- It was founded at the 2015 Paris Climate Conference.
- National Solar Energy Federation is a **founding member** of the **Global Solar Council (GSC)**.
  - o It is an umbrella organization of all solar energy stakeholders of India such as international and national companies.
  - o It works in a complimentary manner with the Central and State Governments for achieving India’s national solar target of 100 GW by 2022.

## ALLIANCE TO END PLASTIC WASTE

- **Alliance to End Plastic Waste** was recently founded.
- It is a **nonprofit organization** which includes companies from across the globe. From India, **Reliance Industries** is a part of the alliance.
- It has committed over \$1.0 billion with the goal of investing \$1.5 billion over the next five years to help end plastic waste in the environment.

## RENUKA MULTIPURPOSE DAM PROJECT

- The Centre has recently signed an agreement with five States including Uttar Pradesh, Rajasthan, Uttarakhand, Delhi, **Himachal Pradesh**, to restart construction of the **Renuka multipurpose dam project in the Upper Yamuna Basin**.
- The Renuka dam project has been conceived as a **storage project on the Giri river** (a tributary of the Yamuna) in Sirmaur district of Himachal Pradesh.

## DIFFO BRIDGE IN ARUNACHAL

- Defence Minister recently inaugurated girder bridge over **Diffo river in Arunachal Pradesh**. It is a pre Stressed Concrete Box Girder type bridge.
- It will be undertaken by the **Border Roads Organisation** (a body under Ministry of Defence which develops and maintains road networks in India’s border areas and friendly neighbouring countries such as Sri Lanka, Afghanistan, Bhutan, Myanmar).

## ATAL SETU

- Union Transport Minister and Goa Chief Minister recently inaugurated “**Atal Setu**” on **Mandovi River** in Goa.
- Atal Setu is 5.1-km long **cable-stayed** four-lane bridge weighing 2.5 lakh tones.

## ASIAN WATERBIRD CENSUS, 2019

- The Asian Waterbird Census, 2019 was held recently in various parts of India.
- It is part of the global **International Waterbird Census (IWC)** carried out each January as a voluntary activity.
- In India, the AWC is jointly coordinated by the **Bombay Natural History Society** and **Wetlands International**.
- Wetlands International is a non-profit organization established in 1937 as ‘**International Wildfowl Inquiry**’ and HQ

in Netherlands.

- **Bombay Natural History Society (BNHS):** Non- governmental organization in India engaged in conservation research.

## LAKE URMIA

- Iran has planned to revive its endangered salt water **lake Urmia**.
- It is the largest lake in Iran, **second largest lake in the Middle East** and the **sixth largest saltwater lake** on earth.
- Before shrinking, it **was considered as the second largest** saltwater lake in the world.
- It has been **shrinking since 1995**, due to a combination of prolonged drought, over-farming, dam constrictions and climate changing phenomenon.
- It has been designated as a **site of international importance** under the **Ramsar Convention on wetland 1971**.
- In 1976, UNESCO (the United Nations Educational, Scientific and Cultural Organisation) designated **Lake Urmia, a biosphere reserve**.

## 106<sup>TH</sup> INDIAN SCIENCE SCIENCE

- The 106<sup>th</sup> session of the Indian Science Congress was held recently at Jalandhar.
- It is conducted annually by the **Indian Science Congress Association (ISCA)**, under Department of Science and Technology.
- Its first session was held in Kolkata under the General Presidentship of Ashutosh Mukherjee in 1914. In 1947, Jawaharlal Nehru, the first Prime Minister, was the General President. The tradition has been carried on by successive PMs for the last 70 years.
- The theme this year was **“Future India: Science and Technology”**. PM emphasized on **connecting science, technology and innovation with the people**, in his address.

## SALSA

- Recently, an international team of scientists began a research named **SALSA (SUBGLACIAL ANTARCTIC LAKES SCIENTIFIC ACCESS)** for study of **microbes and living specimens** in a **Subglacial Lake Mercer of Antarctica**.
- This project could add to understanding of the **evolution of life** in these extreme environments on earth and other celestial bodies such as **habitats deep inside Mars** or on the **ice-covered moons** of Jupiter and Saturn.
- A subglacial lake is a body of liquid water located in between an ice sheet and the continental land mass. The water remains liquid because the ice sheet above the water acts as an insulator and traps geothermal heat from the Earth's crust.

## X-CALIBUR

- Recently, Washington University launched **telescope named X-Calibur, from Antarctica**.
- It intends to measure the **polarization of X-rays** arriving from distant neutron stars, black holes and other exotic celestial bodies.
- The observations will also test two of the most important theories in modern physics under extreme conditions: **quantum electrodynamics and general relativity**.
- **Quantum electrodynamics** - commonly referred to as QED, it is a quantum field theory of the electromagnetic force. Taking the example of the force between two electrons, the classical theory of electromagnetism would describe it as arising from the electric field produced by each electron at the position of the other. The force can be calculated from Coulomb's law.
  - The quantum field theory approach visualizes the force between the electrons as an exchange force arising from the exchange of virtual photons.

**General Relativity** - it explains that what we perceive as the force of gravity in fact arises from the curvature of space and time.

## PSLV-C44

- Recently, **India's Polar Satellite Launch Vehicle (PSLV- C44)** successfully injected Microsat-R and Kalamsat- V2 satellites into their designated orbits.
- **PS4 in PSLVC-44:** Normally, the last stage of a PSLV rocket after releasing the primary satellite in space becomes dead and categorised as **debris**. However, in PSLV-C44, the fourth stage (PS4) of the vehicle would be moved to higher circular orbit so as to establish an **orbital platform for carrying out experiments**.
- **Payload: Kalamsat (Nano-satellite)**, a student payload will be the first to use PS4 as orbital platform and **Microsat-R**, a military imaging satellite
- PSLV is a four stage launch vehicle with alternating solid and liquid stages.

remained unchanged for billions of years, and could provide clues to the history of the Solar System, and possibly the conditions that led to the evolution of a habitable world like Earth.

- Pluto also lies in the Kuiper belt.

## SHIFTING NORTH MAGNETIC POLE

- It has been reported that the **earth's magnetic north pole is moving from its current position in Canada to Siberia at a much faster rate than earlier expected**.
- It is moving at about 50 km a year. It didn't move much between 1900 and 1980 but it has really accelerated in the past 40 years.
- Scientists periodically update the World Magnetic Model to map this process, and the most recent version - produced in 2015 - was intended to last until 2020.
- However, the magnetic field has been changing so quickly and erratically that while conducting a routine check, researchers realised that the shift was on the verge of exceeding the acceptable limit for navigation errors.
- This has forced researchers to make an unprecedented early update to the **magnetic model that helps ships, planes and submarines in the Arctic navigate**.
- The wandering pole is **driven by unpredictable changes in liquid iron deep inside the Earth**.

## ULTIMA THULE

- Recently NASA's New Horizons spacecraft carried out a historic flyby of a distant object called **Ultima Thule** and sent back its images.
- Ultima Thule, is a **contact binary**. That means it is a single object, with two lobes, but the lobes are gently in contact.
- The scenario to form such a body is that probably numerous small planetesimals came together in the outer solar system in a small region early on, the two of them more or less nudged together, gently fused by gravity. This created a **snowman-shaped, two-lobed binary object**.
- NASA dubbed the **larger lobe Ultima**, and the other, which is about three times **smaller, Thule**.
- It is the **most distant object ever visited**.
- It is located in the Kuiper Belt- a donut-shaped region of icy bodies beyond the orbit of Neptune.
  - New Horizons is the first mission to explore the Kuiper Belt.
  - The icy objects of the Kuiper Belt are remnants left over from the formation of the solar system.
  - Many Kuiper Belt objects have

## INDUS FOOD 2019

- Recently INDUS FOOD-II with the theme of 'World Food Supermarket' was held at India Expo Mart.
- Indus Food is a global platform where top exporters from Food and Beverage Industry of India will be participating and buyers from across the world have been invited.
- It is organised by **Trade Promotion Council of India (TCPI)** with the support of Dept. of Commerce, Govt. of India.
  - TCPI is an apex trade and investment

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promotion organization **notified in the Foreign Trade Policy.**

- The council **provides strategies for expanding business internationally**, by organizing specialized business events and simultaneously working with the Government by providing policy suggestions which are essentially based on inputs collated from research and industry stakeholders.

Commission of Indian Medicine and Homoeopathy and Central Drugs Standard Control Organization (CDSCO).

## CELIAC DISEASE

- Celiac disease also called sprue or coeliac, is an immune reaction to eating gluten, a protein found in wheat, barley and rye. It is a kind of an **autoimmune disorder** occurring in people who are **genetically predisposed**.
- In celiac patient, eating gluten triggers an immune response in small intestine. Over time, this reaction damages small intestine's lining and prevents absorption of some nutrients (malabsorption). The **intestinal damage** often causes diarrhea, fatigue, weight loss, bloating and anemia, and can lead to serious complications.
- There's no cure for celiac disease.
- According to experts at the AIIMS, celiac disease affects close to six to eight million people in India.
- India has many Gluten free grains grown locally- Jowar, Bajra, Makki, Ragi, Kuttu. Pulses, rice and vegetables are also indispensable part of Indian diet.

## WEB- WONDER WOMEN”

- The Ministry of Women and Child Development, has launched an online campaign, ‘#www: Web- Wonder Women’.
- The Campaign aims to discover and celebrate the exceptional achievements of women, who have been driving positive agenda of social change via social media. It will recognize and acknowledge the efforts of these meritorious women.
- Indian-origin women, working or settled anywhere in the world, are eligible for nomination. The shortlisted entries will be open for public voting on Twitter and the finalists will be selected by a specialized panel of judges.

## 2ND WORLD INTEGRATED MEDICINE FORUM 2019

- Recently the 2<sup>nd</sup> World Integrated Medicine Forum 2019 on the ‘**Regulation of Homeopathic Medical Products; Advancing global collaboration**’ was organized in Goa.
- The mission of the World Integrated Medicine Forum is to further develop evidence based Traditional and Integrated Systems of Medicine by promoting public-private co-operation.
- It was organised by Central Council for Research in Homoeopathy (CCRH), Ministry of AYUSH, Homoeopathic Pharmacopoeia Convention of the United States (HPCUS), Pharmacopoeia

## HOWITZER PLANT

- Recently, government inaugurated India’s **first private sector small arms manufacturing plant** - Armoured Systems Complex (ASC), developed by Larsen & Toubro (L&T) at Hazira (Gujrat).
- This ASC will manufacture K9 Vajra self-propelled Howitzer guns under Make in India initiatives.

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