

Monthly

prepp

Current Affairs

Notes

November 2022



Equal pay for Men and Women by BCCI



COP 27



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VIKRAM-S: india's First Private Rocket

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GENERAL STUDIES 1

Indian culture

KASHI-TAMIL SANGAMAM IN VARANASI

Priority: Low



Primary Source: The Hindu

Prepp Prelims Booster: Kashi-Tamil Sangamam

Prepp Mains Booster: Indian culture will cover the salient aspects of Art Forms, literature and Architecture from ancient to modern times.

Context:

- On 19th November, Prime Minister Narendra Modi will formally inaugurate the month-long Kashi-Tamil Samagam in Varanasi.
- 'Kashi-Tamil Samagam' in the holy city of Varanasi will give a glimpse of the Dravidian culture as well as the culture, cuisine and music of Tamil Nadu to the people of Uttar Pradesh.

Significance

- The sangamam is being organized by the Government of India as a part of "Azadi ka Amrit Mahotsav" and to uphold the Spirit of "Ek Bharat Shreshtha Bharat".
- Organized by:** Ministry of Education in collaboration with other Ministries like Culture, Textiles, Railways, Tourism, Food Processing, Information and Broadcasting, and the Government of Uttar Pradesh in Varanasi.
- Implementing Agency:** IIT Madras and Banaras Hindu University (BHU).
- The event will pave the way for rediscovering centuries-old bonds of knowledge and ancient civilizational linkage between the North and the South.
- It will serve as a bridge between South India and North India through agriculture, culture, literature, music, food, handicrafts, and folk art.
- Products from Tamil Nadu's GI and OPOP brands are also included in this group. There will also be some Kashi artists' goods on display.
- The initiative intends to give academics, students, philosophers, businesspeople, craftspeople, artists, and individuals from other walks of life a chance to interact, exchange knowledge, best practises, and cultural insights between the two regions.



- The project is in line with NEP 2020's emphasis on fusing the richness of Indian Knowledge Systems with contemporary knowledge systems.
- More than 2500 delegates from Tamil Nadu will go to Varanasi for eight days in 12 different categories, including teachers, students, writers, artists, spiritual seekers, businesspeople, entrepreneurs, and professionals.
- The 30-day Kashi Tamil Samagam would have up to 51 cultural events. **Bharatanatyam** performance by Meenakshi Chittaranjan, performances of Tamil Nadu folk music, **Irula** and other tribal dances, and **Villupattu**—an ancient form of musical storytelling—are just a few of the programs exhibiting the state's culture.

BALIYATRA: CELEBRATING ODISHA'S ANCIENT SE ASIA LINKS

Priority: Medium



Primary Source: The Hindu

Prepp Prelims Booster: Baliyatra

Prepp Mains Booster: Indian Culture - Salient aspects of Art Forms, Literature and Architecture from ancient to modern times.

Context:

Recently, Prime Minister Narendra Modi mentioned the annual Baliyatra on the banks of the Mahanadi in Cuttack, which honors the long-standing trade links between India and Indonesia, in his speech to the Indian diaspora in Bali on the eve of the G20 summit.



Baliyatra:

- Its literal meaning is "trip to Bali."
- One of the largest open-air festivals in the nation, it honors the 2,000-year-old nautical and cultural ties between ancient Kalinga (modern-day Odisha) and Bali as well as other South and Southeast Asian nations like Java, Sumatra, Borneo, Burma (Myanmar), and Ceylon (Sri Lanka).
- This year's Baliyatra, which just ended, earned a spot in the Guinness World Records for pulling off an amazing origami accomplishment by making lovely paper masterpieces.
- The Cuttack Municipal Corporation and Cuttack District Administration, together with a number of other governmental organizations, jointly organizes the festival.

Origins of the Baliyatra:

- The event, which begins on Kartik Purnima (the full moon night in the month of Kartik), has a history dating back more than a thousand years.
- There were various ports in the Bay of Bengal region, and sadhavas (traders) customarily started their journey across the sea on this

fortunate day when the winds were good for the boats, known as boita, to sail.

- According to historians, Kalinga and Southeast Asia frequently traded goods like gold, jewelry, silk, camphor, pepper, cinnamon, and cardamom.
- To celebrate boita bandana, or the worshipping of the boats, thousands of people still sail ornamental small boats fashioned of banana stems, paper, or thermocol throughout Odisha.

What are the ancient maritime links between Indonesia and Orissa?

- The Kalinga Empire, which is now in Odisha, is renowned for its illustrious maritime past.
- Kalinga's geographic location led to the development of ports in this region as early as the 4th and 5th centuries BC. Famous ports like Tamralipti, Manikpatna, Chelitalo, Palur, and Pithunda made it possible for India to establish maritime connections with other nations.
- Large boats known as "Boitas" were built by the Kalingas to trade with the Indonesian islands.
- Spices including pepper, cinnamon, cardamom, silk, camphor, gold, and jewelry were common exports from Kalinga to Southeast Asia.
- The exchange of ideas and opinions was facilitated by the exchange of goods. Odia traders established towns in Bali and shaped its ethos and culture.
- The Hindu festivals of Shivaratri, Durga Pooja, and Saraswati Pooja are also observed by the Balinese as a result of these influences.
- It's interesting to note that Bali's "Masakapan ke Tukad" festival and Odisha's Bali Yatra festival are both annual celebrations. Both celebrations are held in honor of the people who came from the sea.

Other Cultural Heritage Artworks highlighted during 2022 G20 Bali Summit:

Patola Patan Scarf from Gujarat:

- PM Narendra Modi gifted 'Patan Patola Dupatta' (scarf) to Italian PM Giorgia Meloni during the G20 summit.
- The history of double ikat or patola weaving in pure silk begins in the eleventh century. Both sides of the Patola fabrics have the same intensity of color and pattern.
- This unusual quality is a result of the "bandhani" technique, an elaborate and challenging method of dyeing or knot dyeing the warp and weft independently before weaving.
- The Salvi family from North Gujarat is one of the most prominent exponents of the dying craft.
- The weaving procedure: Rosewood and bamboo strips are used to construct crude hand-driven harness looms for weaving patola. The loom is angled. The Rajkot Patola, made on a flat loom, is another patola that is frequently worn.

Pithora Paintings from Chhota Udaipur:

- PM Narendra Modi gifted Pithora Paintings from Chhota Udaipur to Australian PM Anthony Albanese during the G20 summit.
- The Rathwa artists from Gujarat's Chhota Udaipur made these paintings.
- These paintings are representations of the cave art that native peoples created in the past, which reflects their social, cultural, and mythical life and beliefs.
- These artworks are strikingly similar to Australian aboriginal dot paintings created by local indigenous groups.

Kangra miniature paintings from Himachal Pradesh:

- PM Narendra Modi gifted **Kangra miniature paintings from Himachal Pradesh** to US President Joe Biden during the 2022 G20 Bali summit.
- In the first part of the 18th century, a family of Kashmiri artists trained in the Mughal Style of painting found refuge at the court of Raja Dalip Singh of Guler. This is where the art first emerged.
- During the reign of Maharaja Sansar Chand Katoch, a renowned patron of Kangra art, this style achieved its pinnacle.
- The intense love story of Radha and Krishna is frequently the inspiration behind Kangra paintings.
- With the use of naturalistic colors, contemporary Kangra art is a calm celebration of life and its simplicity.

Kinnauri Shawls from Himachal Pradesh:

- PM Narendra Modi gifted Kinnauri Shawls from Himachal Pradesh to Indonesian PM Joko Widodo in the G20 summit.
- These shawls were woven using the extra-weft method.
- Every part of the pattern is woven using the knotting technique, in which the weft is manually placed and locked to produce the pattern's lift.

BUDDHIST NYINGMA SECT FINDS 'REINCARNATION' OF FAMOUS RINPOCHE

Priority:Low

Primary Source:The Hindu

Prepp Prelims Booster: Buddhism

Prepp Mains Booster: Indian Culture - Salient aspects of Art Forms, Literature and Architecture from ancient to modern times.

Context:

In an important breakthrough for Tibetan Buddhism, the Nyingma sect has determined that a kid from Spiti in Himachal Pradesh is the reincarnation of the late Taklung Tsetrunga Rinpoche, a scholar renowned for his expertise in the Tibetan Tantric school.

What is the issue?

- A child was identified in the Nyingma sect as the reincarnation of Taklung Tsetrunga Rinpoche, which is held as an important event in Tibetan Buddhism.
- The Nyingma sect is the first branch of Buddhism, and Taklung Tsetrunga Rinpoche was a profound thinker well known for his mastery of Tibetan Tantric philosophy.
- In certain cases, the Dalai Lama even sought his advice.
- As a result, the incarnation is a significant development since it marks the continuance of an important teacher.

Significance of the event:

- The "finding of reincarnation of Rinpoche" coming from Spiti, which has ties to Tibet culturally, was significant because it revealed a rivalry for enduring Buddhist icons in the Himalayan mountains.
- In most cases, the procedure was drawn out and often involved contests, but in this case, the reincarnation was recognized without any controversy.
- One of the oldest monasteries associated with the Nyingma sect is the Takthok monastery in Ladakh, where the Rinpoche once resided.
- The group has adherents dispersed throughout Tibet, Bhutan, Ladakh, Sikkim, and other Himalayan Buddhist regions.

- The faith's adherents frequently consulted the Rinpoche.

Strategic Significance:

- There has been contest going on in between India and China to gain the supremacy of the leadership of the Tibetan Buddhism.
- In this contest for control over Buddhist matters, the "reincarnation" of a well-known Rinpoche is significant development.
- Many of the historic monasteries in the Himalayas are home to senior monks from different schools of Tibetan Buddhism, including the Dalai Lama, who enjoy widespread respect among the Buddhist population in Tibet, India, and other areas of the world.

Taklung Tsetrul Rinpoche:

- He was a Tibetan monk and the head of the Nyingma School of Tibetan Buddhism, lived from 1926 until 23 December 2015.
- He learned the most profound Dzogchen teachings from Khenpo Ngakchung's direct disciple, Polu Khenpo Dorje.
- Taklung Tsetrul Rinpoche was acknowledged as an incarnation of the great master Ngok Chöku Dorje and was born in central Tibet in 1926 not far from the well-known Yamdrok Lake.
- He was formerly the head of the well-known Taklung Tse monastic center in the Taklung region, which is linked with the Dorje Drak.
- Simla, Himachal Pradesh, and Ladakh, Jammu and Kashmir, were his exiled residences.
- In the morning of December 23, 2015, he entered Nirvana.



Tibetan buddhism:

- Tibetan Buddhism incorporates the core principles of Mahayana Buddhism along with Tantric, Shamanic, and Bon elements from a pre-Buddhist religion in Tibet.
- Vajrayana is taught in Tibetan Buddhism alongside the other vehicles, despite the fact that it is frequently believed that Tibetan Buddhism and Vajrayana Buddhism are the same.
- Around the middle of the eighth century CE, Buddhism started to spread throughout Tibet.

Special Features of Tibetan Buddhism:

- the stature of the teacher, or "Lama,"
- the preoccupation with the relationship between life and death,
- the significance of ceremonies and initiations,
- the rich visual symbolism,
- the recitation of mantras, and the practice of meditation.

Sects within Tibetan Buddhism include:

- **Nyingmapa:** the oldest sect and one known in the West for its teachings from the Tibetan Book of the Dead. It was founded by Padmasambhava.
- **Kagyupa:** Led by the Karmapa Lama, the Kagyupa tradition was established by Tilopa (988–1069). Naropa, Marpa, and Milarepa were influential Kagyupa teachers.
- **Sakyapa:** Gonchok Gyelpo invented this sect. (1034-1102).
- **Gelugpa:** (The Virtuous School) This tradition, which was started by Tsong Khapa Lobsang Drakpa (also known as Je Rinpoche) (1357–1419), is led by the Dalai Lama.
- **New Kadampa Tradition:** Geshe Kelsang Gyatso, a Tibetan-born founder of this important Buddhist school in the UK, established it. The NKT is viewed as being outside of the mainstream tradition by certain Buddhists and non-Buddhists.

Nyingma Sect:

- It is the oldest of the four major sects or schools of Tibetan Buddhism.
- It is also often referred to as Ngangyur - "order of the ancient translations".
- The Nyingma sect is founded on the first lineages and translations of Buddhist scriptures from Sanskrit into Tibetan in the eighth century, during the reign of King Trisong Detsen (r. 710–755).

Salient Features of Indian Society, Role of Women and Womens Organization, Social Empowerment, Communalism Regionalism & Secularism, Effects of Globalization on Indian Society

BCCI BATS FOR PAY PARITY, SAME MATCH FEES FOR WOMEN & MEN: 'NEW ERA OF EQUALITY'

Priority: Low

Primary Source: Indian Express

Prepp Mains Booster: Social Empowerment

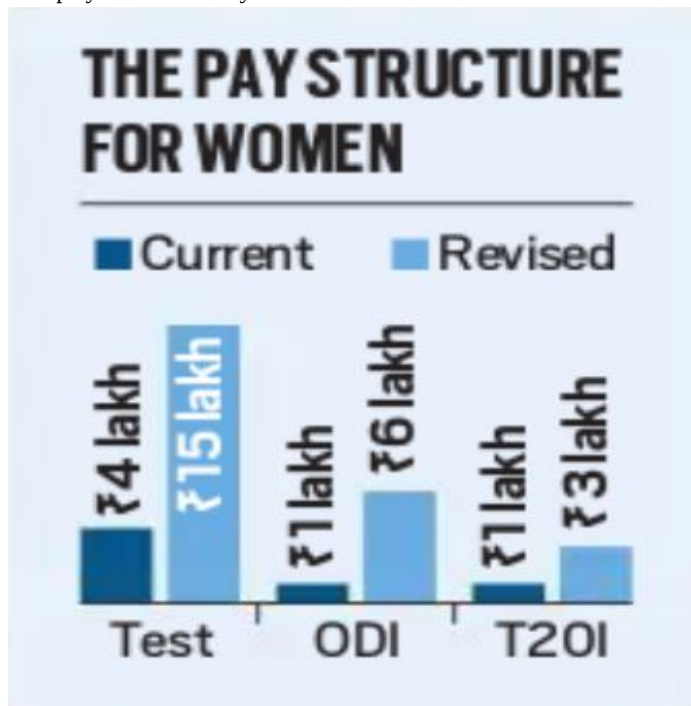
Context:

- The Board of Control for Cricket in India (BCCI) recently announced a "pay equity policy," stating that its centrally-contracted men and women players will be paid the same match fees.

News Summary

- The decision of Equal pay was taken during the BCCI Apex Council meeting.
- As we enter a new age of gender equality in cricket, match fees for both men and women cricketers will be the same.
- This implies that women's cricketers will now be paid Rs 15 lakh each Test match, Rs 6 lakh for an ODI, and Rs 3 lakh for a T20 International.
- They were previously given Rs 1 lakh for towns hosting a white-ball match and Rs 4 lakh for hosting a Test match.
- The yearly retainership for women cricketers stays at Rs 50 lakh for Grade A, Rs 30 lakh for Grade B, and Rs 10 lakh for Grade C, while men get paid Rs 1-7 crore depending on their grade.
- This is a huge step forward for the game and Indian players.
- Following the recent announcement on the women's IPL, it is another step toward gender equality in all sectors of the game in India and other countries across the world.
- The Indian women's team on-field performance has improved dramatically in recent years.
- As a result, India became the second country in international cricket to implement equal pay.

- New Zealand Cricket announced equal match payments for its female players earlier this year.



Board of Control for Cricket in India (BCCI)

- Board of Control for Cricket in India (BCCI) is India's national governing organisation for cricket.
- The board was established in December 1928 as a society under the Tamil Nadu Societies Registration Act.
- It is a consortium of state cricket associations, and the state associations choose their delegates, who then elect the BCCI executives.
- The BCCI is not financially dependent on the government.
- In January 2015, the Supreme Court formed a committee led by Justice (Retd) RM Lodha to evaluate sanctions for individuals listed in the Mudgal Committee report and to recommend reforms for cricket in India, namely changes to the BCCI's systems.
- Recently, the former cricketer Roger Binny was chosen as the 36th President of the Board of Control for Cricket in India.

Gender Inequality in payments in india

- The Gender Pay Parity, also known as the Gender Pay Gap or the gender wage gap, is the average disparity in pay between men and women who work.
- According to National Sample Survey Office (NSSO) labour force survey statistics, the gap narrowed to 28% in 2018-19.
- The gap increased by 7% between 2018-19 and 2020-21, according to the Periodic Labour Force Survey (PLFS).
- The World Economic Forum (WEF) recently rated India 135th out of 146 nations in its 2022 Global Gender Gap (GGG) Index.
- According to World Inequality Report 2022 projections, men earn 82 percent of labour income in India, while women earn 18 percent.
- A human-centred recovery strategy is required to promote productive and fair economic growth.
- Reducing the gender wage gap and increasing women's employment outcomes might be beneficial in this regard.

- At the present rate, closing the gender wage gap would take more than 70 years. Accelerated and decisive action is required to prevent the gender wage gap from expanding and, eventually, closing.
- Some actions that might help close the gap are as follows:
- Hiring more women in various positions
- Creating a career allows women to stay in the workforce longer.
- Periodic gender-based wage data assessment to look for disparities
- Examining for conscious and unconscious biases, particularly at upper levels of the work hierarchy.

INTEGRATING TRIBAL KNOWLEDGE SYSTEMS IS KEY TO MAKING INDIA A 'KNOWLEDGE SUPERPOWER', SAYS PRESIDENT DROUPADI MURMU

Priority: Medium



Primary Source: The Hindu

Prepp Prepp Booster: IKS, National Commission of Scheduled Castes

Prepp Mains Booster: Indian Heritage and Culture; Indian culture will cover the salient aspects of Art Forms, literature and Architecture from ancient to modern times.

Context:

- Recently, President Droupadi Murmu addressed the delegates of a National Workshop on 'Janjatiya Anusandhan – Asmita, Astitva evam Vikas' on November 28, 2022.
- President Murmu said that the Indian Knowledge System (IKS) that the National Education Policy is currently emphasising needs to incorporate the knowledge of indigenous tribes.
- She asserted that the knowledge of tribal communities will play an important role in making India a "knowledge superpower" in terms of everything from ways to treat illnesses and ways to make weapons to ways of protecting nature and ways to pass along knowledge through community songs.

Integrating Tribal Knowledge

- The National Commission for Scheduled Tribes (NCST), along with the Union Government, is now pushing for the "re-documentation" of the cultures and social practices of indigenous and tribal societies in India as existing scholarly literature is heavily reliant on the body of knowledge created by colonizing governments.
- The NCST held a series of events over the past year at more than 125 institutions and TRIs under the theme of "Azadi Ka Amrit Mahotsav," where the history of tribal freedom fighters was a prominent focus. These events served as the framework for the workshop this week.
- Following these incidents, numerous conferences were held in New Delhi to discuss what areas of research in the areas of tribal identity, tribal rights, and tribal development could be pursued

Significance:

- The idea is to encourage more sociologists, anthropologists, and researchers from India's indigenous and tribal communities to study and record the cultural, social, and historical practises of their own communities in an effort to replace the body of work from the colonial era on this subject, with the added benefit of helping the government better understand tribal societies, identity, and rights.

Indian Knowledge System (IKS)

- Indian Knowledge System (IKS) is an innovative cell under Ministry of Education (MoE) at AICTE, New Delhi.
- Its goals are to advance interdisciplinary study of all facets of IKS, conserve and share IKS for use in future research and for social applications.
- It will actively work to disseminate our nation's rich cultural history and traditional expertise in the fields of literature, agriculture, basic sciences, engineering, architecture, management, and the arts.



National Commission for Scheduled Tribes

- The National Commission for Scheduled Tribes was established by amending Article 338 and inserting a new **Article 338A** in the Indian Constitution through **89th Amendment Act, 2003**.
- The National Commission for Scheduled Tribes is a **constitutional body**.
- Its role is to safeguard the interests of the scheduled tribes or under any other order to the Government and to evaluate the working of such safeguards.
- The Union and every State Government shall consult the Commission on all major policy matters affecting Scheduled Tribes.
- The Commission and its officers participate in formulation of policies and in the developmental programmes for Scheduled Tribes including Tribal Sub-Plan.

A VISION FOR WOMEN'S EMPOWERMENT: THE STORY OF ELA BHATT'S SEWA

Priority: Medium



Primary Source: The Hindu

Prepp Mains booster: Social Empowerment, Welfare Schemes for Vulnerable Sections of the population by the Centre and States and the Performance of these Schemes;

Context:

Recently Ella Bhatt, the founder of Self Employed Women's Association (SEWA), a trade union working for the empowerment of women has brought the contribution of Ella Bhatt's SEWA to women empowerment to limelight.

What is SEWA?

- Self-Employed Women's Association (SEWA), is a trade union based in Ahmedabad, India, that promotes the rights of low-income, independently employed female workers.

- With over 1.6 million participating women, SEWA is one of the largest organizations of informal workers in the world.
- Self-employed women are those who do not receive a salary like that of formally-employed workers and therefore have a more precarious income and life.
- SEWA is framed around the goal of full employment in which a woman secures for her family: income, food, health care, child care, and shelter.
- The principles behind accomplishing these goals are struggle and development, meaning negotiating with stakeholders and providing services, respectively.



Background:

- SEWA was founded in 1972 as a branch of the Textile Labour Association (TLA), a labour union founded by Gandhi in 1918.
- The organization grew very quickly, with 30,000 members in 1996, to 318,527 in 2000, to 1,919,676 in 2013.
- This uptick in members is linked with the changes in India's economy and society.
- Liberalizing the economy to foreign trade in 1991 caused a huge migration of rural inhabitants to Indian cities that then forced urban dwellers into informal occupations.
- Since the financial crisis of 2008, over 90% of India's working population was in the informal sector, yet 94% of working women in 2009 worked in the informal sector.

Contribution of SEWA to Women Empowerment

- The Self Employed Women's Association (SEWA) is a membership-based organization created in 1972 from a combination of the labour, women, and cooperative movements, to organize self-employed women in the informal economy and assist their collective struggle for social justice, equality and fair treatment.
- The first Union of Self employed women in India has expanded to include 130 cooperatives, 181 rural producer groups, and numerous social security organizations within its structure.
- Given the large network of institutions created and managed by its members, SEWA is now considered not just an organization, but a "movement" active in 50 districts of 12 states in India, with a membership of over 1.75 million.
- Though SEWA began in urban areas, since the late 1980s it has been successfully spreading into rural India using innovative structures, such as crafts and producers' groups, self-help groups (SHGs), SEWA Village Resource Centres, and the Rural Distribution Network (RUDI) that processes, packages and markets the agricultural goods produced by SEWA's rural members.

- It has also created a number of technical and management schools in rural India, to upgrade the skills of its members, many of whom have never received formal education or training.
- Presently, 66 per cent of SEWA's membership is based in rural areas.
- SEWA has overcome the significant challenges starting from creating a union for "self-employed" women that countered both patriarchal and traditional trade union norms, to convincing poor and disempowered women in the remotest areas of India that organizing, and cooperative structures and processes could improve their working and living conditions.
- Addressing these challenges and focussing on the specific needs of its members has led SEWA to expand its membership and activities.
- SEWA has gone beyond trade union work, namely setting up cooperatives, and other social-protection types of organizations for banking, housing, insurance, education and childcare.
- Its pioneering projects, such as the SEWA Cooperative Bank granting poor women access to credit, or the SEWA Academy allowing members to acquire education and skills, have broadened and deepened its impact.

What are the various initiatives taken by the Government for Women Empowerment?

- **Beti Bachao Beti Padhao (BBBP)** aims to ensure the protection, survival and education of the girl child and improving girl child sex ratio.
- **Sukanya Samridhi Yojna(SSY)** aims for economic empowerment of girls by opening their bank accounts.
- **Scheme for Adolescent Girls:** It aims to empower girls in the age group 11-18 and to improve their social status through nutrition, life skills, home skills and vocational training
- The **National Crèche Scheme** aims to ensure that women take up gainful employment through providing a safe, secure and stimulating environment to the children.
- **Pradhan Mantri Matru Vandana Yojna** ensures maternity benefits to pregnant and lactating mothers.
- **Pradhan Mantri Awaas Yojana** ensures to provide housing under the name of the woman also.
- **Pradhan Mantri Ujjwala Yojana** aims to provide and protect women's health by providing LPG cylinders free of cost.
- **Economic Empowerment:** To promote female entrepreneurship, the Government has initiated Programmes like **Stand-Up India** and **Mahila e-Haat** (online marketing platform to support women entrepreneurs/ SHGs/NGOs), Entrepreneurship and Skill Development Programme (ESSDP).
- **Deen Dayal Upadhyay National Urban Livelihoods Mission (DAY-NULM)** aims to create opportunities for women in skill development, leading to market-based employment.
- **Pradhan Mantri MUDRA Yojana (PMMY)** aims to provide access to institutional finance to micro/small businesses.
- **Mahila Shakti Kendra (MSK)** targets to empower rural women with opportunities for skill development and employment.
- **Working Women Hostel (WWH)** aims to ensure the safety and security for working women.
- **Pradhan Mantri Kaushal Vikas Yojana (PMKVY)** ensures to enable a large number of Indian youth including women to take up industry-relevant skill training in securing a better livelihood.

- **Prime Minister's Employment Generation Programme (PMEGP)** - aims to increase the women's participation in workforce by a providing credit-linked subsidy aimed at generating self-employment opportunities through establishment of micro-enterprises in the non-farm sector
- **Support to Training and Employment Programme for Women (STEP) Scheme** aims to provide skills that give employability to women.
- **Rashtriya Mahila Kosh (RMK)** is envisaged as an apex microfinance organization that will provide micro-credit at concessional terms to poor women for various livelihood and income generating activities.
- **Mahila Police Volunteers (MPV)** aims for engagement of Mahila Police Volunteers in States/UTs who will act as a link between police and community and facilitates women in distress.
- **UJJAWALA:** A Comprehensive Scheme for Prevention of trafficking and Rescue, Rehabilitation and Reintegration of Victims of Trafficking and Commercial Sexual Exploitation
- **SWADHAR Greh** (A Scheme for Women in Difficult Circumstances): To provide shelter, food, clothing and care to marginalized women and girls who are in need.
- **Other Initiative includes:** NIRBHAYA, NARI SHAKTI PURASKAR, Women Helpline Scheme, One Stop Centre Scheme

BIRTH ANNIVERSARY OF BIRSA MUNDA

Priority: Medium



Primary Source: The Hindu

Prepp Prelims Booster: Modern India History, Freedom fighters

Prepp Mains Booster: Modern Indian history from about the middle of the eighteenth century until the present- significant events, personalities, Issues relating to development and management of Social Sector/Services, Polity, Governance and Constitution.

Context:

- Recently, Shivraj Singh Chouhan, Chief Minister of Madhya Pradesh, stated that the **Panchayats Extension to Scheduled Areas (PESA) Act**, which gives more power to gram sabhas, will prevent "alluring" tribal women from getting land notified as tribal land.
- The rules for enforcing the Act in Madhya Pradesh were announced at a program in Lalpur village, Shahdol district. President Droupadi Murmu also attended the program.

President Murmu's visit to Madhya Pradesh

- President Murmu, who visited Madhya Pradesh for the first time, stated that the state has the highest tribal population in the country and that the PESA rules would aid in the development of tribal communities.
- The development of tribal communities is critical for the country's development, and the initiatives undertaken today are for that purpose.
- With regard to the challenges of climate change and global warming, tribals' lifestyles and commitment to forest conservation should serve as a lesson to all.
- Minister of State for Rural Development and Steel Faggan Singh Kulaste, Union Minister of Tribal Affairs Arjun Munda, Governor Mangubhai Patel, and State Forest Minister Vijay Shah were also present.

- It was stated that the initiative was not aimed at any particular community, but rather at empowering the tribal community.

What is the Pesa Act?

- The PESA Act was passed in 1996 in order to "provide for the extension of the provisions of Part IX of the Constitution relating to Panchayats to Scheduled Areas."
- Part IX of the Constitution, Articles 243-243ZT, contains provisions relating to municipalities and cooperative societies.
- Scheduled Areas are defined in Article 244(1) of the Act, which states that the provisions of the Fifth Schedule apply to Scheduled Areas and Scheduled Tribes in states other than Assam, Meghalaya, Tripura, and Mizoram.
- The Fifth Schedule contains a number of special provisions for these areas.
- Ten states have notified Fifth Schedule areas that cover (partially or completely) several districts in each of these states: Andhra Pradesh, Chhattisgarh, Gujarat, Himachal Pradesh, Jharkhand, Madhya Pradesh, Maharashtra, Odisha, Rajasthan, and Telangana.

Birth Anniversary of Birsa Munda

- Birsa Munda's birth anniversary was observed on November 15th.** Born on November 15, 1875.
- On his birth anniversary in 2000, the state of Jharkhand was established to honor his contributions to the national movement.
- Birsa Munda was a folk hero and tribal freedom fighter from the Munda tribe.
- He was a driving force behind the Millenarian movement, which arose in the Bihar and Jharkhand belt during British colonial rule in the nineteenth century. He is also known as 'Dharti Abba,' or the Earth Father.
- Birsa wanted to reform tribal society, so he urged them to abandon witchcraft beliefs in favor of prayer, abstaining from alcohol, believing in God, and following a code of conduct. On the basis of these, he founded the 'Birsait' faith.
- Birsa founded 'Ulgulan,' or 'The Great Tumult.'
- His fight against exploitation and discrimination against tribals resulted in a major blow to the British government in the form of the Chotanagpur Tenancy Act, which was passed in 1908.
- The act made it illegal for tribal people to transfer land to non-tribals.

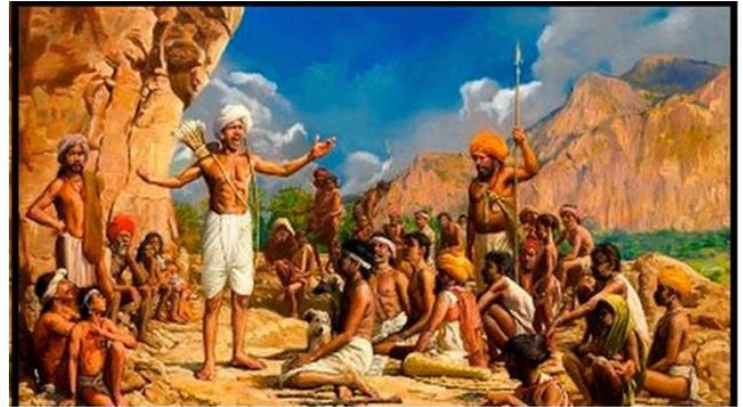
Objectives of PESA Act

- Gram Sabhas (village assemblies) are used to ensure self-governance for people living in Scheduled Areas.
- It recognizes the right of tribal communities who live in Scheduled Areas to govern themselves through their own systems of self-government, as well as their traditional rights to natural resources.
- Gram Sabhas are given the authority to approve development plans and manage all social sectors.

PESA - Related Issues

- The PESA Act only applies to areas designated as Scheduled Areas by law. This legislation does not apply to a large number of tribal members who live outside of the scheduled areas.
- Panchayats have been given insufficient authority to levy and collect taxes, fees, and other levies.
- Decisions of the State Finance Commission are only implemented selectively, giving Panchayats no real power in practice.

- Gram Sabhas are the primary tool for successfully implementing PESA by empowering tribal people to manage their own affairs in a mostly autonomous manner. In reality, they are subordinate to other state legislatures and external forces such as the forest department. It jeopardizes PESA's primary objectives.



Curbing of Land

- PESA delegated special authority to gram sabhas in scheduled areas, particularly for natural resource management.
- It will allow self-government through Gram Sabhas in the state's 89 tribal blocks, covering 2,350 villages in 5,212 panchayats.
- Many times, land is given in our tribal sisters' names and referred to as tribal lands through deception, trickery, and marriages arranged through allurements to our tribal sisters' daughters. Conversion is used on occasion.
- It was stated that Gram Sabhas will intervene when land is taken away from someone, emphasizing that conversions will not be permitted in the state.
- PESA empowers gram panchayats to make decisions on minor forest produce, land, and small water bodies, as well as implement government schemes and keep records on migrant laborers to combat bonded labor in these designated areas.

Population and associated Issues, Poverty and Development Issues, Urbanization, their Problems and Their remedies

IT'S TIME TO DISCUSS DEPOPULATION

Priority: Medium



Primary Source: The Hindu

Prepp Prelims Booster: Depopulation

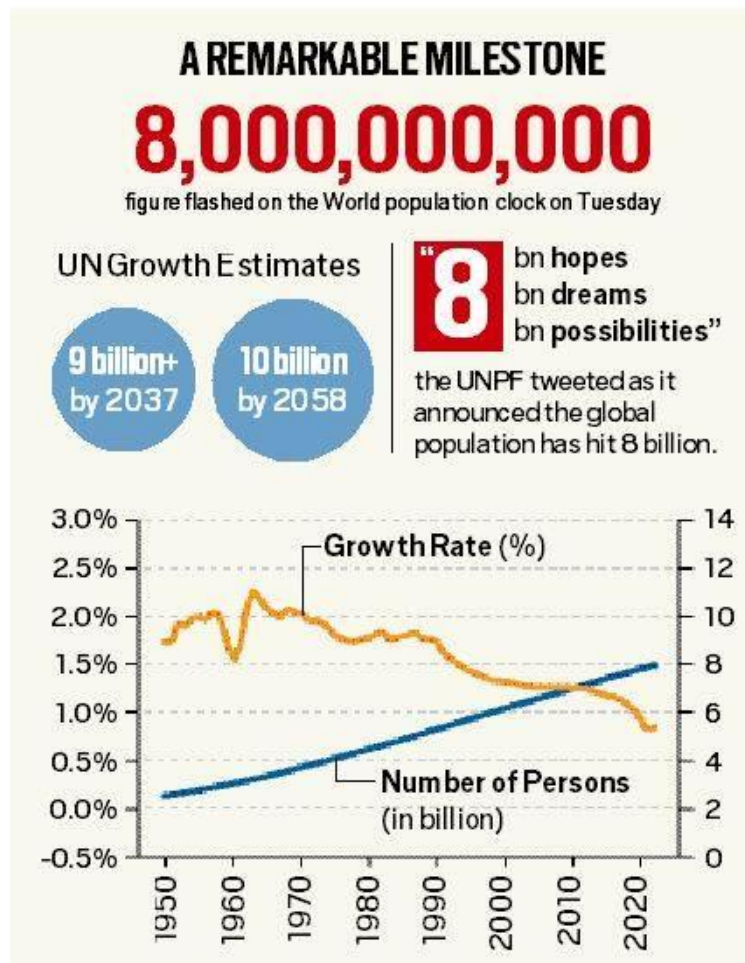
Prepp Mains Booster: Population and associated issues

Context:

- On 15 November 2022, the world's population was projected to reach 8 billion people, a milestone in human development. India was the largest contributor to the last billion and is set to surpass China as the world's most populous nation by 2023.
- China's population has begun to decline, while India's population is expected to grow for another 40 years.
- According to current United Nations estimates, India's population will begin to decline only in 2063, by which time it will be just shy of 1.7 billion.
- The world's population is expected to grow until 2086.

Fertility Rate In India

- India had a fertility rate of six children per woman at the time of independence, and it had taken 25 years for that number to drop to five with the government launching the first-ever family planning program in the world in 1952.
- Kerala became the first state in India to have a fertility rate below replacement level in the 1990s.
- According to the NFHS 2021, only five States—Bihar (3), Meghalaya (2.9), Uttar Pradesh (2.4), Jharkhand (2.3), and Manipur—have fertility rates that are higher than the replacement rate (2.2).
- India's overall fertility rate is currently lower than the fertility replacement rate.
- The fact that some areas of India have not only reached replacement fertility but have also consistently been below the replacement rate puts them on the verge of experiencing significant population decreases and calls for more urgent policy intervention.
- Kerala, where replacement fertility was attained in 1998, and Tamil Nadu, where it was attained in 2000, are two examples.
- The National Family Health Survey (NFHS) anticipated India's urban fertility rate in 2019–21 to be 1.6, placing it next to the U.K.
- In addition, even in States with relatively high fertility, many cities have been at the replacement rate or lower for over a decade, if not more.



Disparity across states

- **Older South and Younger North:** In light of this, both States will also need to reconsider whether their current low in-migration levels are

sustainable. Tamilians on average were 10 years older than Biharis on average in 2011.

- The median age of a Tamilian will be over 40 by 2036, and the working-age population will be skewed northward.
- By that time, they will be separated by more than 12 years.
- **Negative net migration rates:** both States had negative net migration rates as of 2011, the most recent year for which these data are available.
- This means that they sent out more migrants than they received.
- This will significantly alter access to people of working age compared to other low-fertility States.
- These include Delhi and Karnataka, both net migrant recipients who won't experience population drop anytime soon (though the future is uncertain given strident nativist political rhetoric across India).

Factors responsible

- The gradual decline in fertility rates has been attributed to **increased contraceptive use, more years of average education**, improved health care, and a rise in **women's average marital ages**, among other factors.
- It is now well-established that **rising wages and increased access to health and education for women** are directly responsible for India's birth rate declining along expected lines.

Advantages

- **Women's Education:** Lower fertility has a good effect on women's education, which in turn lowers fertility in the following generations.
- **Larger working Population:** Population Fertility declines and income increases with improved infrastructure development, healthcare, and education. A period of time when the ratio of people of working age to people of dependent age groups exists as the result of the spiral of lower fertility.
- **Higher level of saving:** Given the higher level of saving due to decreased reliance, this high percentage of working people enhances income and investment.
- **Less demand of resources:** The declining fertility rate will also result in less demand for land, water, and other resources, which will help us achieve our environmental goals.
- After a country's window of opportunity to profit from the demographic dividend has passed, a large portion of the working-age population transitions into old age and is supported by fewer employees.

Challenges

- **Skewed Sex ratio:** An imbalanced sex ratio poses a threat. Those with at least one male are less likely to want more children than families with just one daughter, according to the most recent NFHS round.
- **Disparity between northern and Southern states:** Workers from the southern States won't be easily replaceable due to the vast inequalities between northern and southern States in terms of basic literacy and enrollment in higher education, notably in technical disciplines.
- **Lower working population:** The proportion of the working population would suffer if the fertility rate fell below the replacement level, which would therefore impact the economy's output.
- The working-age populations of Tamil Nadu and Kerala will both experience the first absolute reductions in their histories over the next

Depopulation is the action of causing a country or area to have fewer people living in it.

four years.

- For the foreseeable future, these States' overall population will expand due to declining mortality (barring a pandemic), which implies fewer people of working age will be required to care for more elderly people than ever before.
- Economic reliance is a major worry, particularly for elderly women.

Wayforward

- The price that some States are paying in relation to others in terms of the proportion of federal tax receipts or political representation is frequently brought up in discussions about fertility reductions in the southern States.
- However, there is also the issue of how much their own citizens will have to sacrifice in order to continue economic growth and welfare.
- The discussion in India has been stagnant because of decades of attention on reducing fertility.
- The southern States should abandon this antiquated, fact-free discourse and participate in the global discussion on depopulation.

Distribution of Key Natural Resources across the World, Important Geophysical Phenomena such as earthquakes, Tsunami, volcanic Activity, cyclone etc.

INDONESIA QUAKE TOLL JUMPS TO 268, RESCUE WORKERS HUNT FOR SURVIVORS

Priority: Medium



Primary Source: The Hindu

Prepp Prelims Booster: Earthquake

Prepp Mains Booster: Important Geophysical phenomena such as earthquakes; Disaster and Disaster Management;

Context:

- Recently, a 5.6 magnitude quake struck a mountainous region on 21st November, causing landslides that buried entire villages near the West Java town of Cianjur.
- The **epicenter** of the shallow 5.6-magnitude quake was near the town of Cianjur where most of the victims were killed, hundreds were injured and dozens feared trapped as buildings collapsed and landslides were triggered.

West Java earthquake



Source: Indonesian Meteorology, Climatology, and Geophysical Agency

BBC

Epicerter refers to the place on the surface directly above the focus

Reasons

- The devastation caused by the quake was made worse by a wave of 62 smaller aftershocks that relentlessly shook Cianjur.
- According to an analysis by the Indonesian Ministry of Energy and Mineral Resources' Geological Agency, the region's soil composition may have made the earthquake's effects worse.

- It claimed that the "**weathered**" and "**young**" volcanic material that made up the region's "**undulating to steep slopes**" was present.
- These deposits tend to be **soft, loose, and unconsolidated**, which amplifies the effects of shocks and makes them more earthquake-prone.
- Indonesia's location on the Pacific "Ring of Fire," where tectonic plates meet, causes regular seismic and volcanic activity.
- In January 2021, a 6.2-magnitude earthquake that struck the island of Sulawesi killed over 100 people and left others homeless.

Factors

- The buildings were not being built using earthquake-proof techniques,
- being close to fault lines, and
- the Shallow depth of the earthquake. Although the earthquake was only moderate in size, it was near to the surface and situated inland, close to populated areas.
- The worst-affected area is close to several known faults.

What is the Pacific ring of fire?

- The Circum-Pacific Belt, sometimes known as the Pacific "Ring of Fire," is a region along the Pacific Ocean marked by active volcanoes and frequent earthquakes.
- More than 450 volcanoes, or nearly 75% of the world's volcanoes, are found there. Additionally, 90% of earthquakes on Earth happen here.
- With a length of more than 40,000 kilometres, it extends from New Zealand in a clockwise direction, passing via Tonga, the Kermadec Islands, Indonesia, Japan, the Philippines, and the Aleutian Islands before heading south along the western coasts of North and South America.
- The region is situated along a number of tectonic plates, including the North American plate, the Pacific plate, the Philippine plate, the Juan de Fuca plate, the Cocos plate, and the Pacific plate.
- Every year, a lot of earthquakes and tsunamis occur in the region as a result of the movement of these plates, or tectonic activity.

What is the difference between Shallow quakes and deep earthquakes?

Shallow Earth Quake	Deep Earth Quake
• Shallow quakes generally tend to be more damaging than deeper quakes. • Shaking is more intense from quakes that hit close to the surface like setting off "a bomb directly under a city."	• While deep quakes may be less damaging, they're usually more widely felt. • Seismic waves from deep quakes have to travel farther to the surface, losing energy along the way.

What are the different kinds of plate boundaries?

Three kinds of plate tectonic boundaries: divergent, convergent, and transform plate boundaries.

Diverging boundary

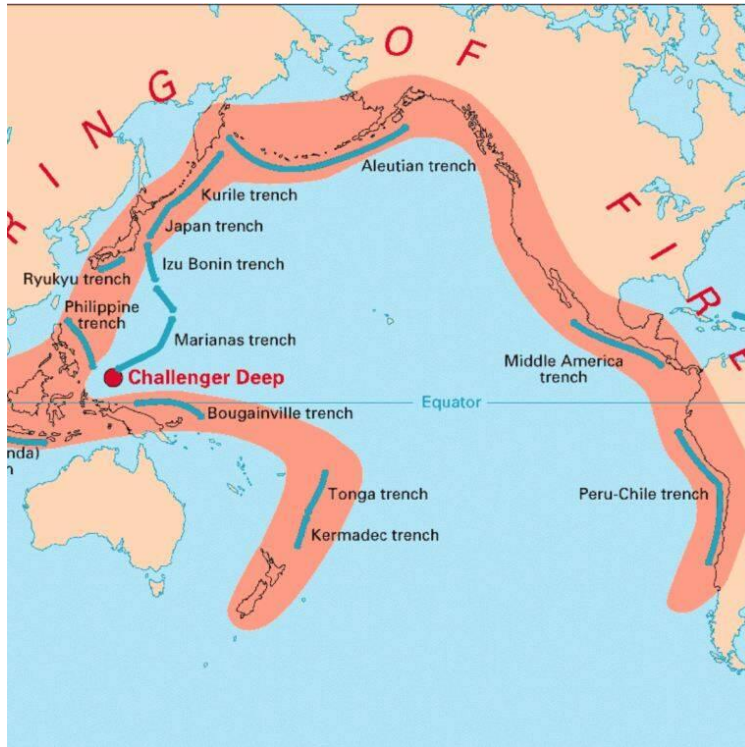
- When two tectonic plates diverge, a diverging boundary is created. As magma (molten rock) rises from the Earth's mantle to the surface and solidifies to form new oceanic crust. Earthquakes frequently occur along these borders.
- Example: the Mid-Atlantic Ridge.

Convergent boundary

- An area where two plates converge is referred to as a convergent boundary. The borders of one or both colliding plates may bow up into mountain ranges as a result of the impact, or one plate may bend

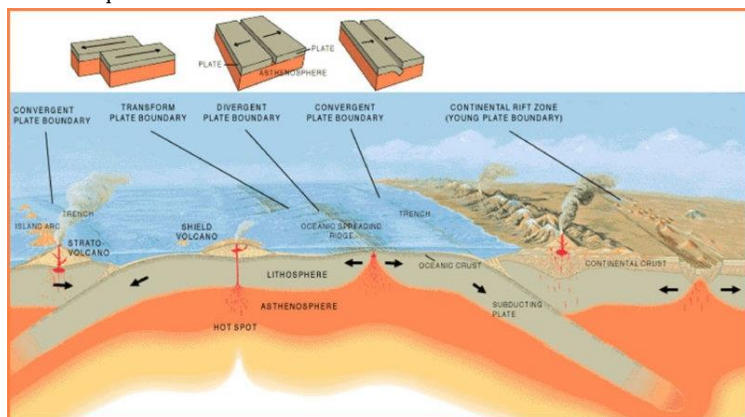
downward into a deep undersea trench. Along convergent plate borders, a chain of volcanoes frequently arises and strong earthquakes frequently occur.

- At convergent boundaries, continental crust is created and oceanic crust is destroyed.
- Example: Pacific Ring of Fire.



Transform plate boundary

- A transform plate boundary is created by two plates moving past one another. The San Andreas fault zone, which spans under the ocean, is home to one of the most well-known transform plate borders.
- As the plates move apart, the rocks that line the boundary are crushed, forming a fault valley or submarine canyon. These faults are prone to earthquakes.



FEWER CYCLONES IN BAY OF BENGAL BUT FREQUENCY INCREASED IN ARABIAN SEA

Priority: Medium



Primary Source: Down to Earth

Prepp Prelims Booster: Cyclones

Prepp Mains Booster: Important Geophysical phenomena such as earthquakes, Tsunami, Volcanic activity, cyclones etc; GS3 - Disaster and Disaster Management

Context:

- In recent times, researchers from the Indian Institute of Science Education and Research (IISER), Bhopal have registered that there is an **increasing trend in the cyclones in the Arabian Sea** over the last two decades when compared to the Bay of Bengal.
- This trend has been attributed to **global warming**.
- It was also found that the ratio of cyclones in the Arabian Sea to those in the Bay of Bengal was initially 1:4, but from 2001 to 2020, it increased to 2:4.

What are Cyclones?

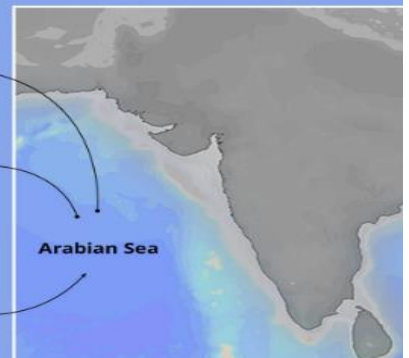
- Cyclones are a type of **low-pressure environment** with rapid **inward air circulation**.
- In the Northern Hemisphere, air flows counterclockwise, while in the Southern Hemisphere, it circulates clockwise.
- Storms and poor weather are frequently associated with cyclones.
- The word Cyclone comes from the Greek word Cyclos, which means snake coils.
- Henry Paddington invented the term because tropical storms in the Bay of Bengal and the Arabian Sea resemble coiled sea serpents.

CLIMATE CHANGE AND ARABIAN SEA

Scientists say climate change has warmed Arabian Sea

Warmer Arabian Sea is producing more cyclones

In 2019, 5 cyclones in Arabian Sea, 3 in Bay of Bengal



Key Data of the IMD

- According to data from the **India Meteorological Data (IMD)** for the 130-year research period, there were 50.5 tropical cyclones on average every decade over the area between the Arabian Sea in the west and the Bay of Bengal in the east.
- The researchers discovered that throughout the same 130-year period, 28.9% of tropical storms occurred in the **pre-monsoon** season between April and June, whereas 49.8% of tropical cyclones occurred in the **post-monsoon** period from October to December.

Increase in the Arabian Sea Cyclones

- On the other hand, the number of cyclonic storms (63-88 km/h) on the Arabian Sea side of the north Indian Ocean **increased by 52%** between 2001 and 2019.
- The **post-monsoon months** saw an increase in the frequency of very severe cyclonic storms, extremely severe cyclonic storms, and super cyclonic storms in the Arabian Sea.

- With **2019 being an exception**, there were three tropical cyclones in the Bay of Bengal and five tropical storms across the Arabian Sea.
- Contrarily, but not much, the frequency of **Bay of Bengal** cyclonic storms has **marginally decreased**.
- The El Nino Southern Oscillation (ENSO) years showed increased tropical cyclonic activity over the region, according to the researchers' analysis of the Bay of Bengal tropical cyclones from 1982 to 2020.

Vertical Shear and Cyclone Development

- Along with rising temperatures and humidity due to the increase in greenhouse gases and global warming, winds are also fluctuating and getting weaker at the same time.
- Vertical shear, or the **strength with which winds can fluctuate** from the surface to the top of the stratosphere for up to 10 kilometres or so, is one aspect of the environment that prevents cyclones from intensifying.
- It decides whether or not the cyclone, which is attempting to grow like a tunnel, is chopped off.
- If it does, its energy is taken away, preventing it from strengthening into a powerful cyclone.
- In other words, **cyclones are decreased by strong vertical shears and increased by mild vertical shears**.

How are Cyclones Formed?

- Cyclogenesis is an important factor in the generation and strengthening of cyclones.
- It's a catch-all term for a number of various processes that result in a cyclone.
- Tropical cyclones occur near the equator over warm ocean water.
- Warm, moist air at the ocean's surface rises upward. This results in a low-pressure zone close to the surface.
- This causes cooler air from the surrounding areas to flow into the low-pressure area.
- Even this frigid air is now warm and moist, and it rises. The cycle described above continues.
- The water in the air cools as warm wet air rises, resulting in the development of clouds. This cycle repeats itself, resulting in a cyclone.
- A tropical storm occurs when winds exceed 63 miles per hour, and a tropical cyclone or hurricane occurs when winds reach 119 miles per hour.

Consequences of Cyclone in India

- **Cyclones** are related with three components that inflict devastation during their occurrence. These are as follows:
- **Strong winds/squalls:** They cause damage to installations, homes, communications systems, trees, and other structures, resulting in loss of life and property.
- **Inland floods and torrential rains:** Rain is a major issue for those who have lost shelter as a result of the hurricane.
- Heavy rainfall is typically dispersed across a considerable region, causing large-scale soil erosion and embankment deterioration.
- **Storm Surge:** An abnormal rise in sea level along the shore induced by a powerful **tropical cyclone**.
- Storm surge causes sea water to inundate low-lying coastal areas, drowning people and livestock, **eroding beaches and embankments, destroying vegetation**, and reducing **soil fertility**.

Management of Cyclones in India

- There are several **structural** and **non-structural** measures for successful cyclone catastrophe management.
- **Construction of cyclone shelters**, construction of cyclone-resistant buildings, road linkages, culverts, bridges, canals, drains, saline embankments, surface water tanks, communication, and power transmission networks, and so on are among the structural measures.
- Non-structural interventions include early warning dissemination systems, coastal zone management, disaster risk management, and capacity building for all stakeholders.
- These measures are being implemented and addressed on a state-by-state basis under the **World Bank-funded National Cyclone Risk Mitigation Project (NCRMP)**.
- National Cyclone Risk Mitigation Initiative India launched this project to implement structural and non-structural measures to lessen the impacts of a cyclone.
- Project for **Integrated Coastal Zone Management (ICZM)**
- The **Ministry of Environment, Forestry, and Climate Change (MoEF&CC.)** issued a draft of the **Environmental and Social Management Framework (ESMF)** for integrated coastal management in August 2019.
- It intends to develop a comprehensive strategy for coastal management.
- **Coastal Regulation Zones (CRZ)** — Zones that govern the use of land along the coast.
- The Notification of CRZ New changes pertaining to the sustainable development of coastal regions will be implemented in 2018 and 2019. In the linked article, you may learn more about the **Coastal Regulation Zones**.

ARE EL NIÑO-LA NIÑA WEATHER PATTERNS CHANGING?

Priority: Medium



Primary Source: The Hindu

Prepp Prelims Booster: El Nino, La-Nina

Prepp Mains Booster: Important Geophysical phenomena such as earthquakes, Tsunami, Volcanic activity, cyclones etc.

Context:

A new study projects that climate change will significantly impact El Niño-La Niña weather patterns approximately by 2030 — a decade before what was earlier predicted. This is bound to result in further global climate disruptions.

What are the Findings of the study?

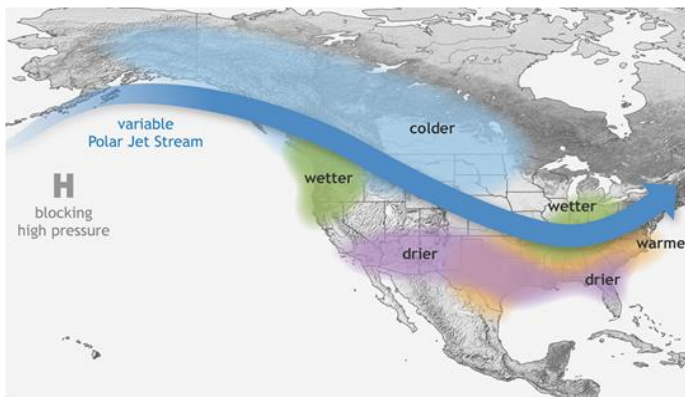
- According to the study, published in the Nature Communications journal, increased Sea Surface Temperature (SST) variability from ENSO in the eastern Equatorial Pacific (EP) will emerge around 2030 (error margin of +/- 6 years), more than a decade earlier than that of the central Pacific (CP) ENSO.
- If the Central Pacific and Equatorial Pacific are not separated, SST variability from ENSO will occur almost four decades earlier than previously suggested.
- Changes in the equatorial Pacific will be visible first due to a stronger increase in the Equatorial Pacific- ENSO rainfall response, leading to increased SST variability.

What is the El Niño phenomenon?

- Every few years, a phenomenon known as El Nio causes the sea water in the central-east Equatorial Pacific to warm.
- Surface temperatures in the equatorial Pacific rise during El Nino, while the east-west trade winds that blow close to the equator weaken.
 - Typically, trade winds from the Americas move eastward towards Asia.
- Because of El Nio, trade winds diverge and alter the course to become westerlies, carrying warm water from the western Pacific to the Americas.
- El Nio reduces the phenomenon of upwelling, in which nutrient-rich waters rise to the surface.
- The result is a decrease in phytoplankton. As a result, fish that consume phytoplankton are impacted, then organisms further up the food chain.
- Additionally, tropical animals are transported by warm waters to cooler regions, upsetting numerous ecosystems.
- The Pacific Ocean makes up about one-third of the earth's surface, therefore variations in its temperature and ensuing changes to its wind patterns have an impact on the planet's overall weather patterns.
- El Nino brings about a dry, warm winter on the North American continent and Canada and raises the risk of floods along the Gulf Coast and in the Southeast. Additionally, it delivers drought to Australia and Indonesia.

What is the La Niña phenomenon?

- La Niña is the reverse phenomenon of El Niño. Sea surface temperature (SST) is lower than typical during La Niña in the equatorial Pacific. Stronger than average trade winds are driving warmer water toward Asia.
- Upwelling increases throughout the west coast of the United States, bringing nutrient-rich water to the surface.
- Jet streams, which are narrow bands of powerful winds in the upper atmosphere, are forced northward by Pacific cold waters near the Americas.
- This causes the Southern United States to become drier and Canada to have considerable rains.



- Heavy floods in Australia have also been linked to La Niña. Intense flooding and substantial destruction were brought on by two consecutive La Niña episodes in Australia during the past two years.

El Niño Southern Oscillations (ENSO)

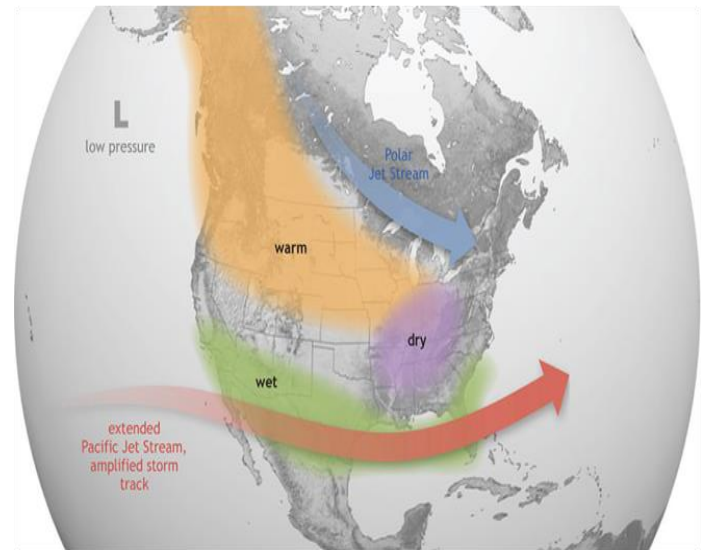
- El Niño Southern Oscillations (ENSO) are a phenomenon that causes the equatorial Pacific Ocean's surface waters to periodically warm and cool.
- The ENSO is the result of the interaction between El Nio, La Niña, and the neutral state between the two opposing effects.

- Large-scale variations in sea level pressure in the tropical Pacific region are known as southern oscillations.
- It is well recognized for causing significant changes in the atmosphere and has a significant impact on regional weather patterns, particularly the Indian monsoon.

What are the impacts of El Niño and La Niña?

El Niño:

- El Nino affects local weather patterns from Australia to South America and beyond. It also affects ocean temperatures, ocean current strength and speed, the condition of coastal fisheries, and other factors.
- South America's rainfall dramatically increases, which causes erosion and coastal flooding.
- Natural disaster-ravaged areas, such as those affected by flooding in South America or drought in India, Australia and Indonesia, are ideal breeding grounds for diseases.
- El Nino-related floods have been associated in some parts of the world to an increase in cholera, dengue fever, and malaria, but dryness can lead to wildfires that cause respiratory problems.
- Australia and Indonesia experience drought due to El Nino, which brings rain to South America.
- Due to fewer cold air surges from the Arctic caused by a broad area of lower pressure centered on the Gulf of Alaska/North Pacific Ocean, El Nio is linked to milder winters in north-western Canada and Alaska.



La Niña:

- **No spring season in India:** La Niña typically brings chilly, wet winters and springs to India, but this year much of the country did not see any sign of spring.
- **India may suffer a lengthy monsoon season:** India in 2022 is experiencing La Niña effect for the third consecutive year, along with increased floods incidents.
- **Drought conditions in other regions of the world:** Due to the continuing of the La Niña, it is probable that the ongoing drought conditions across 40% of the United States, the Horn of Africa, and southern South America will also continue and intensify.
- **Hurricanes:** There is a 65 percent chance that the Atlantic Ocean will have an above-average hurricane season.
- **Heat waves and wildfires:** This state might have disastrous and unforeseen effects on India and many other regions of the world,

especially through more intense heat waves, drought, and the risk of wildfires that go along with it.

How are the monsoons in India affected?

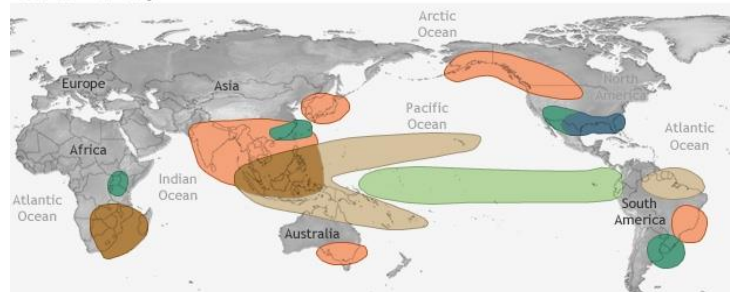
- La Nia amplifies rainfall across South Asia, especially in India's northwest and Bangladesh during the monsoon, while El Nino causes poor rainfall and increased heat in India.
- Like the rest of the world, India is currently experiencing a prolonged "triple dip" La Nia.
- This is in part the cause of India's unusually heavy rainfall in September, the month when the monsoon generally retreats.

Implication of study for India:

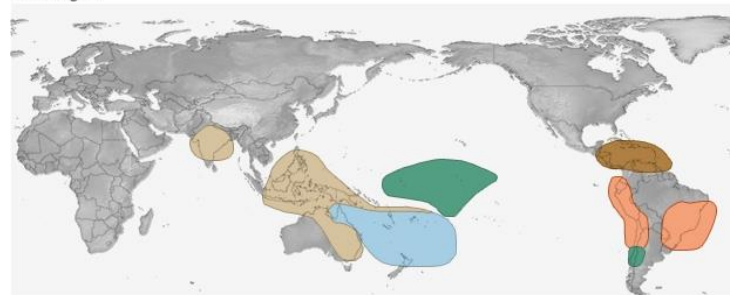
- As per the findings of the study, increased SST variability by 2030 means that there will be more El Nino and La Nina incidents. This will cause more variability in Monsoon in India.
- Subsequently it will increase the incidence of El Nino and La Nina and their intensity will also increase. Causing more number of events of Drought and floods in India.

EL NIÑO CLIMATE IMPACTS

December-February



June-August



NOAA Climate.gov

WHAT ARE CORONAL HOLES, WHICH PUT A 'SMILE' ON THE FACE OF THE SUN

Priority: Medium



Primary Source: Indian Express

Prepp Prelims Booster: Coronal Holes

Prepp Mains Booster: Science and Technology, Space Technologies

Context:

- The @NASASun Twitter handle recently released an image of the "Sun Smiling."
- The image, captured by NASA's Solar Dynamics Observatory, shows dark areas on the Sun's surface that resemble eyes and a grin.

- According to NASA, the patches are coronal holes that may be seen in ultraviolet light but are undetectable to the naked eye.

What are Coronal holes?

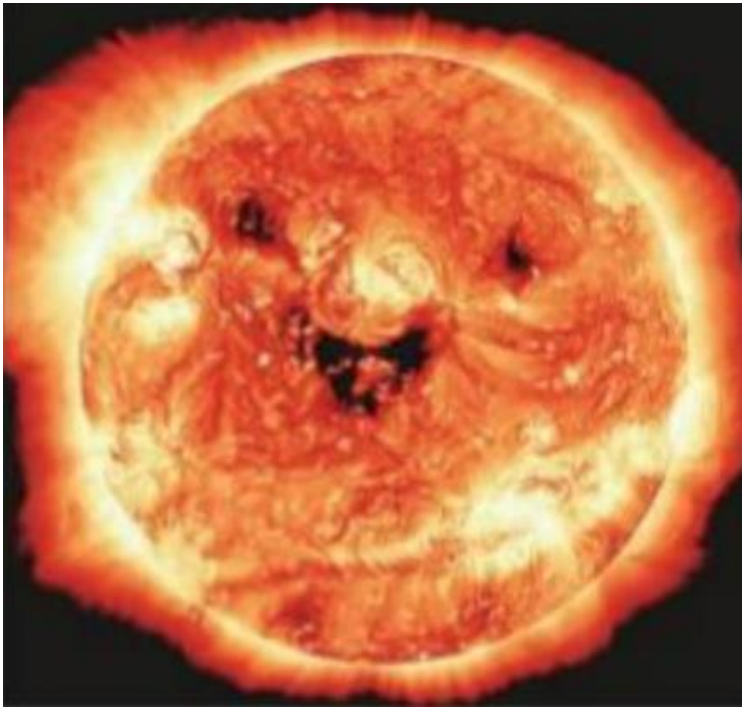
- Coronal holes are a component of the Sun's corona that are continually shifting and reshaping due to the corona's non-uniformity.
- Coronal holes are regions of the Sun's corona that are darker, colder, and have lower-density plasma than typical due to reduced energy and gas levels.
- Coronal holes are visible in extreme ultraviolet (EUV) and soft x-ray solar photographs as black spots in the solar corona.
- These are areas on the Sun's surface where rapid solar wind erupts into space.
- They have lower temperatures and hence look darker than their surroundings because they contain little solar material.
- The magnetic field is exposed to interplanetary space here, allowing solar material to escape in a high-speed torrent of solar wind.
- Coronal holes can last from a few weeks to months and emerge during the Sun's 11-year solar cycle.

Importance of understanding about Coronal Holes

- Coronal holes can form at any time and at any position on the Sun, although they are more prevalent and persistent during solar minimum.
- Coronal holes that are more persistent can occasionally endure multiple solar rotations (27-day periods)
- These coronal holes are crucial to comprehending the space environment surrounding the Earth through which our technology and astronauts pass," NASA noted in 2016, when coronal holes covering "6-8% of the entire solar surface" were discovered.
- It is unknown what causes coronal holes.
- Scientists are interested in these rapid solar wind streams because they occasionally interact with the Earth's magnetic field, resulting in a geomagnetic storm, which may expose satellites to radiation and interfere with communications signals.

What is a Geomagnetic storm?

- Geomagnetic storms are related to the earth's magnetosphere, which is the region around a planet that is impacted by its magnetic field, according to the National Oceanic and Atmospheric Administration.
- When a high-speed solar stream arrives at Earth, it can cause energetic solar wind particles to contact the atmosphere over the poles under specific conditions.
- As there is a highly efficient interchange of energy from the solar wind into the space environment around Earth, such geomagnetic storms cause significant disruption of the magnetosphere.
- When a powerful solar wind strikes the Earth, the accompanying geomagnetic storm can produce changes in the ionosphere, which is part of the Earth's upper atmosphere.
- When radio and GPS signals pass through this layer of the atmosphere, communications can be hindered.



NASA's Solar Dynamics Observatory

- Since 2010, NASA has been monitoring the Sun using the Solar Dynamics Observatory (SDO).
- The observatory was launched on February 11, 2010 as part of the Living With a Star (LWS) mission.
- The LWS program's purpose is to acquire the scientific understanding required to successfully address those components of the coupled Sun-Earth system that have a direct impact on life and society.
- The Solar Dynamics Observatory's mission is to comprehend the Sun's effect on Earth and near-Earth space by researching the solar atmosphere on small scales of space and time and at several wavelengths at the same time.
- The Solar Dynamics Observatory has been studying how the Sun's magnetic field is formed and organised, as well as how magnetic energy held in the Sun is converted and released into the heliosphere and geospace in the form of solar wind, energetic particles, and fluctuations in solar irradiance.

HUNDREDS OF ELEPHANTS, ZEBRAS DIE AS KENYA WEATHERS DROUGHT

Priority: Medium



Primary Source: Indian Express

Prepp Prelims Booster: Drought, Climate Change, World Geography

Prepp Mains Booster: Important Geophysical Phenomena such as earthquakes, drought, tsunami, volcanic activity, cyclone etc., Climate Change, Food Security, Disaster and Disaster Management.

Context:

According to a report, hundreds of animals have perished in Kenyan wildlife preserves during East Africa's worst drought in decades, including endangered Grevy's zebras, giraffes and elephants.



What is the status of drought in Kenya?

- In the past two years, parts of Kenya have gone through four seasons without enough rain, with disastrous results for both people and animals, especially livestock.
- According to the report, over the past nine months, 205 elephants, 512 wildebeests, 381 common zebras, 51 buffaloes, 49 Grevy's zebras, and 12 giraffes have perished.
- According to the authors of the report, some of Kenya's most popular national parks, reserves, and conservancies, including the Amboseli, Tsavo, and Laikipia-Samburu regions, are located in the worst-affected ecosystems.
- To get a better understanding of how the drought has affected wildlife there, they have demanded an urgent aerial wildlife census in Amboseli.
- The Horn of Africa is experiencing its worst drought in 40 years. At least 18 million people are facing extreme hunger.
- Northern Kenya has not seen a drop of rain in three years. 4 million people in Kenya are affected by hunger due to drought.

What is the cause of Drought in Kenya?

In the Arid and Semi-Arid Lands (ASAL) region of Kenya, four consecutive below-average rainy seasons have caused the longest drought in at least 40 years, leaving 4.2 million people in need of humanitarian aid.

What are the Impacts of Drought on Kenya?

- According to the revised Kenya Drought Flash Appeal, 4.1 million people are experiencing high **acute food insecurity** and facing the problem of **hunger**.
- At least 1.5 million **livestock** had already died as a result of the drought by February 2022, and the number is expected to increase till today according to the Short Rains Assessment.
- **Malnutrition** has risen at an alarming rate, with at least 942,000 children under age 5 and about 134,000 pregnant or lactating women in urgent need of treatment in the ASAL region.
- This includes 229,000 severely acutely malnourished children who faced an immediate threat to their life.

Drought:

- Drought is a geophysical phenomena resulting from temporary reduction in water or moisture availability below the normal or expected amount for a specific period. This arises commonly due to below average rainfall in the region.

Droughts in Africa:

- Recently, a study has revealed that the drought as a disaster has become serious in Africa because around 300 million people are in the grip of drought.
- Already Africa as a continent has deserts like the Sahara and Atakama and regions like the Sahel, which are constantly vulnerable to drought in the region.
- In 2022, Africa is facing the highest burden of this disaster.
 - East Africa is reeling under its worst drought in four decades.
- Large parts of **Ethiopia, Somalia, and Kenya** of **Horn of Africa** are going through driest times with 16.7 million people not having enough food to eat.
- In June 2022, nearly six million people in Somalia, roughly 40% of its population, are now facing extreme levels of food insecurity due to drought.
- A severe drought in **southern Madagascar** in the middle of 2021 led to food insecurity or starvation for hundreds of thousands of people—some estimates put the number at more than one million.
- In 2016, **South Africa** faced drought conditions with cities like CapeTown and Johannesburg facing no water to drink.
- The entire **East African region** was impacted by a severe drought that lasted from July 2011 until mid-2012.

Types of Droughts:

- **Meteorological Drought:** a situation where there is a reduction in rainfall for a specific period below a specific amount.
- **Hydrological Drought:** associated with reduction of water. There are two types of hydrological droughts,
 - **Surface Water Drought:** concerned with drying up of surface water resources such as rivers, streams, lakes, ponds, tanks, reservoirs etc.
 - **Soil Moisture Drought:** Also called Agricultural Drought. When soil moisture and rainfall conditions are not adequate enough to support the crops, thereby resulting in crop failures.
- **Ecological Drought:** When the productivity of a natural ecosystem fails due to shortage of water and as a consequence of ecological distress, damages are induced in the ecosystem.

Causes of Droughts:

- **Causes of Meteorological Droughts:**
 - Lean monsoon and below average rainfall
 - Late onset or early withdrawal of monsoons
 - Prolonged breaks in Monsoon
- **Causes of Hydrological Droughts :**
 - Large scale deforestation
 - Ecologically hazardous mining
 - Excessive pumping of groundwater
- **Causes of Agricultural Droughts:**
 - Excessive use of HYV(High Yielding Varieties) seeds
 - Change in cropping pattern e.g. with introduction of green revolution.

GENERAL STUDIES 2

Indian Constitution, Parliament & State Legislature, Structure, Organization and Functioning of the Executive and the Judiciary

SHOULD CHIEF MINISTERS HAVE A SAY IN THE APPOINTMENT OF GOVERNORS?

Priority: Medium



Primary Source: The Hindu

Prepp Prelims Booster: Governor

Prepp Mains Booster: Functions and responsibilities of the Union and the States, Issues and challenges pertaining to the federal structure, Parliament and State legislatures—structure, functioning, the conduct of business, powers & privileges and issues arising out of these.

Context:

- Recently, with the increase in instances of tension, and even stand-offs, between state governments and governors, the role of the Raj Bhavan is being debated once more.
- Discussion is made on the role and conduct of Governors, the relationship of Governors with the Centre and State governments, and whether Chief Ministers should have a say in the appointment of Governors in their respective States.

Who is a Governor?

- The Governor is the constitutional head of state, bound by the advice of his cabinet.
- He serves as a vital link between the Union Government and the State Government.
- Articles 153 to 162 of the Indian Constitution cover the Governor's appointment, powers, and everything else related to the office of Governor.
- The Governor's role is very similar to that of India's President. The Governor performs the same functions as the President, but for the State.
- The Governor serves as the executive head of a state, and his duties are the same as those of the President of India. According to the Indian Constitution, the governing machinery is the same as that of the Central Government.

Appointment of Governor

- The Governor is not elected directly by the people, nor is he elected indirectly by a specially formed electoral college, as the President is.
- He or she is appointed by the President by warrant bearing his or her signature and seal.
- According to the Supreme Court's decision in 1979, it is an independent constitutional office that is not controlled by or subordinate to the Central Government.
- During the Constitution's drafting, the Constituent Assembly accepted the Canadian model of Governor's appointment by the Centre.

Should Chief Ministers be consulted in order to appoint the Governor?

- According to Article 155 of the Constitution, the Governor is appointed by the President. However, the **Sarkaria Commission**, which was established in 1983 to examine the Centre-State relationship on various issues, believed that the Chief Minister should be consulted before appointing the Governor in order for the parliamentary system to function properly.
- The appointment of the Governor is currently in the hands of the ruling party. Many Governors act as if the Raj Bhavans are party offices of the ruling party.

- They always make decisions as directed by the [Union] Home Ministry and the Central Government.
- The Governor is supposed to be impartial and apolitical. He or she is expected to keep the State's interests in mind while also ensuring that the link between the State and the Centre runs smoothly. The relationship between the Governor and the Chief Minister determines how smoothly things run. However, this has not been the case in a large number of cases.
- As a result, the Sarkaria Commission most likely believed that making the appointment in consultation with the Chief Minister would result in smoother operations and better relationships.
- The Governor, on the other hand, must make independent decisions, whether it is about forming a government, the numbers, or the vote of confidence.
- The Governor must sometimes defy the Chief Minister's wishes. The Chief Minister's viewpoint would go a long way toward making the Governor's function in a State more effective and possibly more conducive to the State's interests.

Committee to appoint the Governor

- According to the **National Commission to Review the Workings of the Constitution**, "it would be appropriate to suggest a committee composed of the Prime Minister, the Home Minister, the Speaker of the Lok Sabha, and the Chief Minister of the State concerned to select a Governor." It also stated that the Vice-President could be included on the committee.
- Rather than leaving it solely to the executive, it stated that the Central legislature has a role through the Speaker, and the State has a role through the Chief Minister.

SC AGREES TO HEAR PLEA AGAINST FIRST AMENDMENT TO THE CONSTITUTION

Priority: Medium



Primary Source: Indian Express

Prepp Prelims Booster: Indian Constitution, Supreme Court

Prepp Mains Booster: Indian Polity and Constitution, Important and Latest Amendments, Basic Structure.

Context:

- Recently, the Supreme Court has decided to hear a petition contesting modifications to the right to free speech and expression established by the first amendment to the Constitution in 1951, with the petitioner claiming that the amendment violates the fundamental structural concept.

Background

- The bench chaired by Justice Sanjiv Khanna heard the petition earlier this month and stated that there is a "legal problem" that arises "for consideration" and sought the Centre's comments.
- Section 3(1) of the 1951 Amending Act replaced the original Clause (2) of Article 19, which dealt with reasonable restrictions on the freedom of speech and expression guaranteed by Article 19(1)(a), with a new Clause (2) that contained "two objectionable insertions" allowing restrictions also "in the interest of public order" and "in relation to incitement to an offence."
- The revised Clause (2) also removed the phrase "tends to subvert the State," which was in the previous Clause (2).

Issues on the First Amendment of Indian Constitution 1951

- Section 3 (2) of the Amendment Act validated some legislation, even though they restricted or limited the right to free speech and expression.

- The petition contended that these two insertions protect Sections 124A (sedition), 153A (promoting enmity between different groups on grounds of religion, race, place of birth, residence, language, etc., by words, either spoken or written, or signs, or visible representations, or otherwise, and doing acts prejudicial to the maintenance of harmony), and 154A (promoting enmity between different groups on grounds of religion, race, place of birth, residence, language, etc.,"
- The two dubious wordings introduced unreasonably limit the basic right guaranteed by Article 19(1)(a).
- The amendment also disregards national security by removing the phrase "tends to overthrow the State."
- The apparent exclusion of the phrase raises serious concerns in light of the threats that radicalism poses to the secular democratic republic.

The First Amendment of Indian Constitution 1951

The Provisional Parliament, which was elected on a restricted franchise, ratified the First Amendment in 1951. The following are the key provisions of the First Constitutional Amendment Act of 1951:

- Empowered the government to make particular arrangements for the progress of socially and economically disadvantaged groups.
- Provided for the preservation of legislation governing the purchase of estates, etc.
- The Ninth Schedule was added to insulate land reform and other measures listed in it from judicial scrutiny.
- Public order, good ties with foreign governments, and incitement to an offence were added as new grounds for restricting free speech and expression. Also, the limits were made reasonable, and hence justiciable.
- Provided, however, that state trading and nationalisation of any trade or company by the state are not illegal on the basis of infringement on the right to trade or business.

Implications of the First Amendment Act, 1951

- Article 31 provides that legislation included in the Ninth Schedule may not be challenged in court on the grounds that they infringe citizens' basic rights. Art.31-B is also a retrospective piece.
- As a result, even if a statute has previously been found unconstitutional by a court of law, it is regarded constitutionally valid from the day of its origin.
- In brief, when the Act is put in the Schedule, the court decision becomes null and invalid.
- Article 31(A) has given the State vast power in terms of acquiring estates or taking over administration of any property or organisation in the public interest.
- It aimed to exclude such purchases from judicial scrutiny under Articles 14 and 19.
- Even though the Supreme Court ruled in 1973 that judicial review as a fundamental structure could not be removed, Articles 31(A), 31(B), and 31(C) safeguarded land reform legislation and prioritised the application of the Directive Principles over individual liberty.
- The Ninth Schedule was commonly misused. The Ninth Schedule comprises almost 250 pieces of legislation that are immune from judicial review.
- With the proliferation of legislation put under the Ninth Schedule, it has today become a constitutional dumping ground and a home for every problematic bill made by the government of the day.

SUPREME COURT, IN A MAJORITY VERDICT, UPHOLDS THE EWS QUOTA

Priority: Medium



Primary Source: The Hindu

Prepp Prelims Booster: Indian Constitution, Supreme Court, EWS Quota

Prepp Mains Booster: Indian Polity and Constitution, Governance, Judiciary and Supreme Court judgements.

Context:

- A Constitution Bench of the Supreme Court recently upheld the validity of the 103rd Constitutional Amendment, which provides 10% reservation in government jobs and educational institutions to the Economically Weaker Sections (EWS) of society but excludes the "poorest of poor" among Scheduled Castes (SC), Scheduled Tribes (ST), Socially and Educationally Backward Classes (SEBC), and Other Backward Classes (OBC) from its scope.

Background

- The Supreme Court Constitution Bench confirmed the constitutionality of the 103rd Constitutional Amendment, which guarantees 10% reservation in government positions and educational institutions to the Economically Weaker Sections (EWS) of society.
- Three justices of the five-member Bench argue that 10% reservation for the "poorest of the poor" among advance castes does not damage the Basic Structure of the Constitution; CJI and another judge argue that exclusion of other groups is blatantly discriminatory.
- In an hour-long hearing, Justices Dinesh Maheshwari, Bela M. Trivedi, and J.B. Pardiwala gave the majority views on the five-judge Bench.
- On his last working day, Chief Justice U.U. Lalit and Justice S. Ravindra Bhat delivered the minority opinion, which Justice Bhat wrote.
- On whether such a reservation based solely on economic criteria violated the Basic Structure of the Constitution, Dinesh Justice Maheshwari took the broad view that reservation was a "instrument of affirmative action by the state" and should include "any class or sections so disadvantaged as to answer the description of 'weaker section'."

The 3:2 split

How the Bench was arrayed on vital points on reservation for the economically weaker section



Justice Dinesh Maheshwari

Whether reservation on the sole basis of economic criteria violates the Basic Structure of the Constitution:

Majority view: Reservation singularly on economic criterion does not violate the Basic Structure. Reservation is an instrument of affirmative action by the state for an egalitarian society

Minority view: Reservation is a powerful tool to enable equal opportunity and equal access. Introducing economic basis is permissible, yet the 'othering' of socially and educationally disadvantaged classes will amount to heaping injustice based on their past disability



Justice Ravindra Bhat

Whether EWS quota breaches the ceiling limit of 50% on reservation:

Majority view: It does not breach the ceiling limit, which is not inflexible and applies only to SC/ST/OBC/SEBC

Minority view: Permitting the breach will become a gateway for further infractions and result in compartmentalisation...

What is the 103rd Constitutional amendment act?

- The 103rd Amendment Act provides for reservations in appointments to public positions and admittance to educational institutions for "economically disadvantaged persons" (EWS).
- The 103rd Amendment Act provides for job reservations in both central government jobs and government educational institutions. It also governs admissions to private higher education schools.

- The 103rd Amendment to the Constitution included Articles 15(6) and 16(6) to give up to 10% reservation to economically weaker sections (EWS) among non-OBC and non-SC/ST sections.
- In other words, the amendment altered the Constitution by instituting a quota for the impoverished among the so-called "forward castes" or "general category."
- It applies to persons from any part of society who are economically disadvantaged.
- This reservation is "in addition to current bookings, with a maximum of 10% of total seats in each category."
- It is mandated under Article 46 of the Indian Constitution, a Directive Principle that requires the government to preserve the educational and economic interests of society's weakest sectors.

What is the EWS quota?

- The Department of Personnel and Training (DoPT) notified the EWS conditions for employment and admission on January 31, 2019 based on the 103rd Amendment.
- According to the 2019 announcement, an EWS was defined as someone who was not covered by the programme of quota for SCs, STs, and OBCs and whose family had a gross annual income of less than Rs 8 lakh.
- The announcement defined "income" and excluded some people from the EWS group if their families owned certain specified assets.

What are the issues with EWS Quota?

- The EWS quota continues to be a source of contention, with detractors claiming that it reduces the size of the open category while still exceeding the 50% overall reservation restriction.
- Arbitrariness in income restriction:** The court was intrigued by the income ceiling of Rs. 8 lakh per year. The same number is used to exclude the 'creamy layer' from OBC reservation advantages.
- Socio Economic backwardness:** Unlike those categorised as OBC, people in the general category, to whom the EWS quota applies, do not suffer from social or educational backwardness.
- Other problems include whether any effort was made to deduce the exceptions, such as why the flat criterion does not discriminate between metropolitan and non-metropolitan locations.
- Criteria similar to OBC: The court has highlighted the issue of whether the OBC category is socially and educationally disadvantaged and hence has additional challenges.
- Not supported by relevant data: In accordance with the Supreme Court's well-established view, any reservation or standards for exclusion should be based on relevant data.
- Exceeds reservation limit: According to the Indira Sawhney Case, there is a 50% reservation ceiling. Reservation is required under the idea of balanced equality.

Wayforward

- Preserving merit:** We cannot rule out the possibility that our country's economic backwardness is impeding merit.
- Rational criteria:** In order to construct the notion of economic justice, there must be common knowledge to identify and quantify the economic weakness of specific groups of society.
- Judicial interpretation:** Judicial interpretation will pave the way for determining the EWS Quota criteria.

- Beneficiaries chosen at random The centre must use more sensible criteria to determine who will benefit from this reservation system. Data from the Caste Census might be valuable in this regard.
- **Income analysis:** The per capita income or GDP, or the differential in purchasing power between rural and urban regions, should be considered when establishing a single income ceiling for the entire country.

CAN CONVICTED LEGISLATORS BE DISQUALIFIED FROM ASSEMBLY?

Priority: Medium



Primary Source: The Hindu

Prepp Prelims Booster: Indian Polity, Qualification of Members of Legislative assembly

Prepp Mains Booster: Representation of People's Act

Why in the news?

- Recently, two Uttar Pradesh legislators were convicted on criminal charges, but only one of them has been disqualified and his seat has been declared vacant by the State Legislative Assembly secretariat.
- Azam Khan, the Rampur MLA of the Samajwadi Party, was sentenced to three years in prison for making an inflammatory speech in 2019.
- The Assembly secretariat declared his seat vacant upon his conviction on a criminal charge, accompanied by a prison sentence of two years or more.
- However, there has been no such reaction in the case of Vikram Singh Saini, MLA from Khatauli, who was sentenced to two years in prison in connection with the 2013 Muzaffarnagar riots.

News Summary

- Section 8 of the **Representation of the People Act (RPA), 1951** contains provisions aimed at decriminalizing electoral politics.
- There are two categories of criminal cases that attract disqualification upon conviction. In the first category are offenses that entail disqualification for a period of six years upon any conviction. All other criminal provisions form a separate category under which mere conviction will not entail disqualification.
- The Supreme Court has the authority to stay not only a person's sentence, but also their conviction. In some rare cases, conviction has been stayed to enable the appellant to contest an election.

About Representation of the People Act (RPA), 1951

- The Representation of the People Act, 1951 is an act of the Indian Parliament that provides for the conduct of elections to the Houses of Parliament and the House or Houses of the Legislature of each State, the qualifications and disqualifications for membership in those Houses, corrupt practices and other offenses at or in connection with such elections, and the resolution of doubts and disputes arising out of or in connection with such elections.
- Dr. B.R. Ambedkar, a law minister, introduced it in Parliament.
- The Act was passed by the provisional parliament in accordance with **Article 327 of the Indian Constitution**, prior to the first general election.

Offenses Pertaining to Elections as in RPA 1951

- Instilling hatred and animosity.
- Breach of duty and support for any candidate
- Capturing and removing ballot papers from the booth

- Selling liquor within two days of the polls closing.
- Organizing public meetings within 48 hours of the election and causing disruptions.

The Legal Aspects of Criminal Candidate Disqualification

- The Indian Constitution makes no mention of what disqualifies a person from running for Parliament, Legislative Assembly, or any other legislature.
- The criteria for disqualifying a person from contesting a legislative election are mentioned in the Representation of Peoples Act 1951.
- Section 8 of the act, i.e. disqualification on conviction for certain offenses, states that an individual sentenced to more than two years in prison cannot run for office for six years after the sentence has ended.
- Because the law does not prohibit individuals with pending criminal cases from running for office, the disqualification of candidates with pending criminal cases is dependent on their conviction in these cases.

When does conviction result in disqualification?

- Section 8 of the **Representation of the People Act (RPA), 1951** contains provisions to decriminalize electoral politics. There are two types of criminal cases that will result in disqualification if convicted.
- The first category includes offenses that result in a six-year disqualification upon conviction. If the punishment is a fine, the six-year period begins on the date of conviction; however, if the punishment is a prison sentence, the disqualification begins on the date of conviction and continues until six years after the date of release from jail.
 - Major IPC offences are included under this heading: making speeches that cause enmity between groups (Sec.153A) and doing so in a place of worship (Sec.505), bribery and personation during elections and other electoral offences, rape and cruelty to women by husbands and the latter's relatives.
 - Furthermore, serious provisions of special laws such as the **Protection of Civil Rights Act, Customs Act, Unlawful Activities (Prevention) Act**, and others are included in the category of offenses that result in disqualification regardless of the quantum of punishment.
 - This category also includes laws prohibiting Sati, corruption, terrorism, and insults to the national flag and anthem, among other things.
- All other criminal provisions are classified in their own category, and mere conviction does not result in disqualification. Such disqualification requires at least two years in prison.

Is there legal protection for legislators against disqualification?

- Legislators could avoid immediate disqualification until 2013 under Section 8(4) of the RPA.
- The provision stated that a Member of Parliament or a State legislator will be disqualified for three months.
- If the convicted legislator files an appeal or revision application within that time frame, it will not take effect until the appeal or application is resolved.
- In other words, simply filing an appeal against a conviction will result in a stay of disqualification.
- The Supreme Court ruled in **Lily Thomas vs. Union of India** that clause (4) was unconstitutional, removing lawmakers' protection.

Authority of Supreme Court to lift the Disqualifications

- The Supreme Court has the authority to stay not only a person's sentence, but also his or her conviction.

- In a few rare cases, convictions have been stayed to allow the appellant to run for office.
- However, the Supreme Court has stated unequivocally that such a stay should be granted only in exceptional circumstances. The RPA itself provides a remedy through the **Election Commission(EC)**.
- According to Section 11 of the Act, the EC may record reasons and either remove or reduce the period of a person's disqualification.
- The EC used this power for Sikkim Chief Minister P.S. Tamang, who served a one-year sentence for corruption, and reduced his disqualification so that he could run in a byelection and remain in office.

Supreme Court Decisions and RPA

Lily Thomas vs Union of India 2013

- The Supreme Court of India ruled in 2013 in Lily Thomas vs Union of India (later in Lok Prahari vs UoI, 2018) that any MP, MLA, or MLC who is convicted of a crime and sentenced to a minimum of two years in jail loses their membership in the house immediately.
- In this case, the Supreme Court declared Section 8(4) of the Representation of the People Act 1951 invalid, giving convicted legislators three months to appeal to a higher court and obtain a stay of their conviction and sentence.

Other Supreme Court Decisions to Decriminalize Politics

- **The Association for Democratic Reforms (ADR) vs. Union of India in 2002:** It mandated the disclosure of information relating to a candidate's criminal antecedents, educational qualifications, and personal assets.
- **Public Interest Foundation and Others v. Union of India 2014:** The Supreme Court ordered that trials of sitting MPs and MLAs be completed within a year of charges being filed against them.
- **Rambabu Singh Thakur vs. Sunil Arora 2020:** All candidates, both state and federal, must make their criminal records public if they wish to run for office.

Government Policies and Interventions for Development in Various Sectors and Issues arising Out of Their Design and Implementation

UNION HEALTH MINISTRY ROLLS OUT COUNTRY'S FIRST SUICIDE PREVENTION POLICY

Priority: Medium



Primary Source: The Hindu

Prepp Prelims Booster: Health

Prepp Mains Booster: Government policies and interventions for development in various sectors and issues arising out of their design and implementation; Issues relating to the development and management of Social Sector/Services relating to Health

Context:

Recently, the Ministry of Health and Family Welfare announced a National Suicide Prevention Strategy, the first of its kind in the country, with time-bound action plans and multi-sectoral collaborations to reduce suicide mortality by 10% by 2030.

What is the action plan?

- It seeks to establish effective surveillance mechanisms for suicide within the next three years.

- The strategy aims to establish psychiatric outpatient departments that will provide suicide prevention services through the District Mental Health Programme in all districts within 5 years.
- To integrate a mental well-being curriculum in all educational institutions within the next eight years.
- It envisages developing guidelines for responsible media reporting of suicides, and restricting access to means of suicide.
- The focus is on fostering societal support for suicide prevention and community resilience development.
- While aligned with the WHO's South East Asia Region Strategy for suicide prevention, the strategy promises to be true to India's cultural and social environment.



Stats

- Suicide is the leading cause of death for those between the ages of 15 and 29 in India, taking more than one lakh lives per year.
- According to the document, the suicide rate jumped from 10.2 to 11.3 per 100,000 people in the last three years.
- Family issues and illnesses are the most frequent causes of suicide, accounting for 34% and 18% of all suicide-related deaths, respectively.

Conclusion

- Effective suicide prevention measures include a reinforced system for collecting data on suicides (attempts and deaths) from vital registry, hospital-based systems, and other surveys for creating policies and subsequent monitoring. Enhancing counselling and life-skills training in businesses and educational institutions to support preventative efforts.
- Additionally, destigmatized platforms for conversation on these taboo themes and counselling services may be taken into consideration.
- Suicide prevention must now be prioritized as a matter of public health. Suicides affect all facets of society, necessitating concerted efforts on the part of both individuals and the community at large.

Steps taken by government

- Decriminalisation of suicide through the Mental Healthcare Act 2017 (MHCA), paved way for suicide prevention to be a focus area for the Ministry of Health and Family Welfare (MoHFW).
- "National Tele Mental Health Programme" was announced in the 2022-23 Budget, to further improve access to quality mental health counselling and care services in the country.
- Issuance and dissemination of detailed guidelines by the National Institute of Mental Health and Neurosciences (NIMHANS), Bengaluru- "Mental Health in the times of COVID-19 Pandemic - Guidance for General Medical and Specialized Mental Health Care Settings".
- All the guidelines, advisories and advocacy material can be accessed on Ministry of Health and Family Welfare website under "Behavioural Health – Psychosocial helpline."

- Online capacity building of health workers by NIMHANS in providing psychosocial support and training through (iGOT)-Diksha platform.

CENTRE DEVICES NEW GUIDELINES FOR TV CHANNELS; BROADCAST OF SOCIALLY RELEVANT TOPICS COMPULSORY

Priority: Low



Primary Source: The Hindu

Prepp Prelims Booster: Fundamental Rights

Prepp Mains Booster: Government policies and interventions for development in various sectors.

Context:

- Recently, the Union Cabinet has approved new guidelines for uplinking and downlinking of TV channels, under which all stations with permission; except for foreign channels and where it may be impractical, **must broadcast content on national and social issues for at least 30 minutes** every day.
- According to the provision, "airwaves/frequencies are public property and must be used in the best interests of society."

News Summary

- The Union Cabinet has approved the "Guidelines for Uplinking and Downlinking of Television Channels in India, 2022."
- The consolidated Guidelines will make it easier to grant permissions to companies/LLPs registered in India for uplinking and downlinking of TV channels, setting up of Teleports/ Teleport Hubs, use of Digital Satellite News Gathering (DSNG)/ Satellite News Gathering (SNG)/ Electronic News Gathering (ENG) systems, uplinking by Indian news agencies, and temporary uplinking of a live event.

Airwaves as Public Property

- The airwaves are public property and must be used for the greater good. No one has the right to use them at his or her leisure and for personal gain.
- **Article 19 (1) (a) guarantees the right to free expression, but not the right to use airwaves, which are public property.**
- A citizen may use the airwaves for broadcasting only when permitted by law and in accordance with such law.
- Because airwaves are public property, it is the responsibility of the state to ensure that they are used in such a way that they advance citizens' free speech rights, which are served by ensuring plurality and diversity of views, opinions, and ideas.
- This is essential in any democracy where free expression is guaranteed. The right to free expression guaranteed to every citizen of this country does not include the right to use these airwaves at his leisure.
- Conceding, such a right would be detrimental to the free speech rights of the general public in that only a privileged few powerful economic, commercial, and political interests would come to dominate the media.
- They would be harming - and not serving - the principle of plurality and diversity of views, news, ideas, and opinions if they manipulated the news, views, and information, indulging in misinformation and disinformation.

Listed Themes Include

- Education and literacy spread,
- Agriculture and rural development,

- Health and family welfare,
- Science and technology,
- Women's welfare,
- Welfare of the weaker sections of society,
- Environmental and cultural heritage protection, and
- National integration.

Advantages

- The consolidated guidelines exempt channels, including those related to sports, where broadcasting such content would be impossible. The Centre would issue general advisories to the channels in this regard as needed.
- The new guidelines, which replaced those in effect since 2011, would make it easier to grant permission to companies and **limited liability partnership (LLP)** firms registered in India for uplinking-downlinking of TV channels and related activities.
- The requirement to seek permission for live telecast of events had been eliminated, and that only prior registration of events would be required for live telecast.
- Prior permission would not be required for a change in language or mode of transmission from Standard Definition to High Definition, or vice versa; only prior notification would be required.

India as a Teleport-hub

- It stated that LLPs/companies would be allowed to uplink foreign channels from Indian teleports, creating job opportunities and making India a teleport-hub for other countries.
- While no specific time frames have been proposed for the grant of permission, it was stated that LLPs/companies would be allowed to uplink foreign channels from Indian teleports, creating employment opportunities and making India a teleport-hub for other countries. It was also stated that a news agency could now obtain permission for a five-year period, as opposed to one year currently.
- According to the Ministry, a channel could be uplinked by utilizing the facilities of more than one teleport/satellite.
- The guidelines expanded the possibility of transferring a TV channel/teleport to a company/LLP, as permitted by the Companies Act or the Limited Liability Act.
- There is also a provision for security deposits to ensure that dues are paid. Penalty clauses have also been rationalized, with graduated penalties proposed for various types of violations.
- TV channels uplinking in frequency bands other than C-band must encrypt their signals by law.
- At the time of renewal, the net worth requirement for companies/LLPs holding permissions must be in accordance with the guidelines.
- The first channel requires a net worth of 20 crore, with subsequent channels requiring a net worth of 5 crore.

ARE THERE ANTI-SUPERSTITION LAWS IN INDIA?

Priority: Medium



Primary Source: The Hindu

Prepp Prelims Booster: Anti-superstition

Prepp Mains Booster: Salient features of Indian Society

Context:

- The alleged human sacrifice case in Kerala has drawn attention to the seriousness of crimes involving witchcraft and other occult activities.

- As per the 2021 report of the National Crime Records Bureau (NCRB), six deaths were linked to human sacrifices, while 68 killings across the nation were committed for witchcraft.
- Few States have passed laws to combat witchcraft and shield women from lethal "witch-hunting" in the absence of nationwide legislation.

What do the numbers tell?

- According to 2021 report of the **National Crime Records Bureau (NCRB)**, six deaths were linked to human sacrifices, while witchcraft was the motive for 68 killings.
- Chhattisgarh reported the most incidents of witchcraft (20), followed by Madhya Pradesh (18) and Telangana (11).
- Kerala saw two cases of human sacrifice.
- According to the NCRB research, 88 people died in India in 2020 as a result of witchcraft, while 11 people perished as part of "human sacrifices."
- Notably, the NCRB doesn't disclose information on crimes involving the occult. Additionally, it is not specified if the total number of victims includes those who have fallen prey to the rising number of witch hunts.
- According to a private study conducted by an NGO in 2021, instances of witch branding were reported in 12 States, and 2,300 alleged "witches" were killed nationwide between 1999 and 2013.

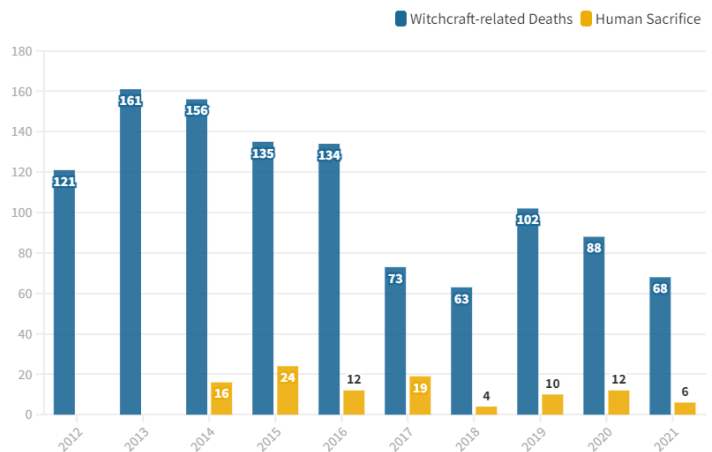
What are the laws in India?

- There is no specific central law in India that addresses offences involving witchcraft, superstition, or occult-related practises.
- Penalties for these incidents are listed in specific provisions of the Indian Penal Code.
- Human sacrifice is recognised by Section 302** (murder punishment), but only after the murder has been committed.
- In a similar vein, **Section 295A** (Deliberate and malicious conduct, intended to outrage religious sensibilities of any class by insulting its religion or its beliefs) aims to curtail such behaviour.
- The Indian **Constitution's Article 51A (h)** further declares that it is the essential responsibility of all Indian citizens to cultivate a scientific temperament, humanism, and a spirit of inquiry and reform.
- The debilitating effects of many superstitious practises that are common in India are also the focus of additional sections under the **Drugs and Magic Remedies Act of 1954**.
- Few States have passed laws to combat witchcraft and shield women from lethal "witch-hunting" in the absence of central legislation.
- Bihar:** The **first State to establish legislation to prohibit witchcraft**, declare a woman to be a witch, and "eradicate torture, humiliation, and murdering of women" was **Bihar**.
- In October 1999, the **Prevention of Witch (Daain) Practices Act** became law.
- Anyone who calls someone a "witch" and helps in that calling can be punished with up to three months in jail, a ₹1,000 fine, or both.
- Jharkhand:** It approved a similar law in 2001 called the Prevention of Witch (Daain) Practices Act.
- Chhattisgarh:** Despite being one of the States most severely impacted by crimes relating to witchcraft, Chhattisgarh only passed the Chhattisgarh Tonahi (witch) Pratadna Nivaran Act in 2005.
- According to the legislation, a person who is found guilty of labelling someone as a witch faces up to three years in prison and a fine.

- Odisha:** The Odisha Prevention of Witch-Hunting Bill was approved by the Assembly in 2013 in accordance with the instructions of the Odisha High Court to draft legislation to address the state's growing witch-hunting problem. A witch doctor or someone purporting to be a black magician will face sanctions under the proposed legislation.
- Maharashtra:** Following the assassination of anti-superstition campaigner Dr. Narendra Dabholkar, the Maharashtra Prevention and Eradication of Human Sacrifice and other Inhuman, Evil and Aghori Practices and Black Magic Act, 2013, was passed.
- Rajasthan:** In order to "provide for appropriate measures to confront the issue of witch-hunting and prevent the practise of witchcraft," Rajasthan passed the Rajasthan Prevention of Witch-Hunting Act in 2015.
- Assam:** Witch hunting is totally prohibited under the Assam Witch Hunting (Prohibition, Prevention and Protection) Act, 2015, which was signed into law by the president in 2018.
- According to the legislation, "No individual shall label, stigmatise, defame, or accuse any other person of being a witch by words, or by signs, or by conducts, or by acts, or by any other method, or initiate, help, or abet such an act, or engage in witch hunts."
- Karnataka:** The most recent law was approved in Karnataka, where the Karnataka Prevention and Eradication of Inhuman Evil Practices and Black Magic Act, 2017. It went into force in January 2020. The law forbids a number of superstitious and black magic-related behaviours, including making people walk on fire during religious celebrations and the practise of piercing rods from one side of the jaw to the other.

Witchcraft-related and child/human sacrifice-related deaths 2012-21

Data for child/human sacrifice-related deaths in 2012 and 2013 is not accounted for in the NCRB



Source: [National Crime Records Bureau](#) • The Hindu Graphics

Why is there a need for a country-wide Anti-superstition And Black Magic Act?

- Such behaviours frequently target the weaker groups in society disproportionately, including women, children, and the impoverished.
- The fundamental rights to **equality and life, as stated in Articles 14 and 21**, of the Indian Constitution, are both violated by allowing the unrestricted continuation of such activities.
- In the **absence of steps to combat superstition**, illogical and unscientific practises like faith healing, quackery, and disinformation about medical treatments may also proliferate and threaten the public's health and well-being.

- It is important to keep in mind that **passing legislation to address this social issue will only result in a partial victory.**
- In order to achieve **meaningful reform, awareness among the general public must be raised through information campaigns** and by enlisting the help of community and religious leaders to dispel common misconceptions about such practises.

COMING, A TOUGH LAW TO PREVENT CRUELTY TO ANIMALS. WHY IS IT NEEDED?

Priority: Medium



Primary Source: The Hindu

Prepp Prelims Booster: Prevention of Cruelty to Animals

Prepp Mains Booster: Welfare Schemes for Vulnerable Sections of the population by the Centre and States and the Performance of these Schemes;

Context:

- Recently the draft Prevention of Cruelty to Animals (Amendment) Bill, 2022, prepared by the Ministry of Fisheries, Animal Husbandry, and Dairying, has been put in the domain for public comments until December 7, 2022.
- Once the draft becomes final, the Bill will be brought either in the Winter Session or the Budget Session of Parliament.
- In similar context Supreme Court is also hearing the matter related to Prevention Cruelty Act in the Jallikattu Case

Background:

- One of India's most comprehensive laws addressing animal welfare is the Prevention of Cruelty to Animals Act, 1960.
- Rukmini Devi Arundale, a well-known dancer and animal advocate, prepared the Act.
- In order to stop animal cruelty, the Parliament passed this Act in December 1960.
- The Act provides for the establishing the Animal Welfare Board of India, as well as the Board's constitution, powers, and terms of office.

What are the Major amendments proposed in the Prevention of Cruelty to Animals (Amendment) Bill, 2022?

- In essence, it is proposed that the legislation be tightened and that harsher penalties be applied.
- A number of offenses have been rendered cognizable, allowing for the arrest of perpetrators without a warrant.
- According to the draft bill, "Bestiality" would fall under the new felony category of "Gruesome cruelty."
- Additionally, according to the proposed law, "in case of a community animal, the local authority, such as municipality or panchayats, shall be responsible for taking care of the community animals in a manner developed by the State Government or by the Board."
- The draft Amendment defines, a "community animal" is any animal that was born in a community and for which no one has claimed ownership, with the exception of wild animals as defined by the 1972 Wildlife Protection Act.

What is the need for amending the existing law?

- **Rising Incident of Barbaric behavior towards animals:** There has been rising incidence of brutal behaviour towards animals like throwing the dog from floors, tie a dog to the cars and roaming
- **Low level of Punishment in the act:** For example: This type of offense, which is rather widespread in India, would currently result in

prosecution under Sections 428 of the Indian Penal Code (mischief by killing or maiming animals) and Section 11 of the PCA Act of 1960 (treating animals cruelly).

- According to the PCA Act, first-time offenders face fines ranging from Rs 10 to Rs 50.
- The maximum penalty is a fine between Rs 25 and Rs 100, a three-month jail sentence, or both if it is found that the offender has committed similar crimes in the previous three years.
- **No deterrence of law:** The law as it currently stands imposes a relatively minor penalty that cannot serve as a deterrence to potential violators. To put it simply, since punishment under the law is too meager, there has been no deterrence of the law among people.



Who and why have amendments been requested?

- In 2014, the Supreme Court ruled in Animal Welfare Board of India vs. A Nagaraja & Others that "appropriate penalties and punishments should be imposed for violation of Section 11" and that "Parliament is expected to make proper amendments to the PCA Act to provide an effective deterrent."
- A cross-party group of MPs urged Giriraj Singh, the animal husbandry minister at the time, to enhance the penalty under the 1960 Act in a letter in 2020.
- In 2020, Mohammad Jawed, a Kishanganj MP, introduced a bill in Parliament in September 2020 that called for an increase in the maximum penalty.
- In 2021, Anubhav Mohanty, a member of parliament from Kendrapara, also put forth a bill that would have broadened the definition of cruelty to include situations in which "animals are subjected to cruelty either during the sport or activity itself."

What is the response of the Union Government?

- The Union Government announced that it would introduce a bill to alter the PCA Act in October 2021.
- Parshottam Rupala, the Union Minister for Animal Husbandry, stated, "We are prepared with the draft amendment Bill. The Cabinet's permission is something we are working on right now."
- Finally, the administration has taken action in this direction.

Legal remedies available for Animal Welfare in India:

- The Prevention of Cruelty to Animals Act of 1960, which is applicable to "all living species," acknowledges that animals can suffer physically and psychologically.
- The Constitution also states that all Indian people "have compassion for living creatures" and upholds the ahimsa principle.
- The primary organization in charge of ensuring the welfare of animals in India is the Animal Welfare Board of India (AWBI).

- The broad goal of the National Institute for Animal Welfare, established in 1999, is to enhance animal welfare via research, instruction, and public outreach.
- A Wildlife Offence Report (WLOR) may be submitted under Section 50(4) of the Wildlife Protection Act, 1972.

STILL A NIGHTMARE FOR DOMESTIC VIOLENCE SURVIVORS

Priority: High



Primary Source: The Hindu

Prepp Prelims Booster: Domestic Violence

Prepp Mains Booster: Welfare Schemes for Vulnerable Sections of the population; Mechanisms, Laws, Institutions and Bodies constituted for the Protection and Betterment of these Vulnerable Sections.

Context:

- The recent brutal murder and mutilation of a young woman by her partner in New Delhi, just ahead of the International Day for the Elimination of All Forms of Violence Against Women (November 25), has brought attention to intimate partner violence, recognised as a type of domestic violence under the Protection of Women from Domestic Violence Act 2005 (PWDVA).
- This has also raised several issues under the PWDVA 2005.

What is Domestic Violence?

- Domestic violence, also referred as domestic abuse or family violence, is violence or other abuse that occurs in a domestic setting, such as in a marriage or cohabitation.
- Domestic violence is often referred to as a synonym for intimate partner violence.
- It is a form of violence or abuse causing hurt, injury, mental, physical and emotional harm or duress, inflicted for any demand including dowry by partner.

Status of Domestic Violence in India:

- The recent years saw the reduction in the dowry related violence in India due to various legal measures.
- But there has been persistence of the various other type of domestic violence in the Indian society
- As per the National Family Health Survey-5 (2019-21) reports that only 14% of women who have experienced domestic violence have ever sought help;
 - But in reality which may not be true in all sense, as the reporting of domestic violence is not comprehensive and ignores the mental and emotional violence.

Features of Protection of Women from Domestic Violence Act 2005 (PWDVA):

- **Defines Domestic violence:** Defines Domestic Violence as a form of violence or abuse causing hurt, injury or danger to life, limb, health, safety or well-being, whether mental or physical.
- It also covers inflicting harm, injury, or danger to the woman with an intention to coerce her or any other person related to her to meet any demand for dowry.

It Includes:

- “Physical abuse”: covers hurt of any kind. Assault, criminal intimidation and criminal force.

- “Sexual abuse”: covers conduct of a sexual nature such as forced sexual intercourse, forcing the aggrieved person to watch pornography or other obscene material.

- **Coverage:** The Act covers all women who may be mother, sister, wife, widow or partners living in a shared household:
 - The relationship may be in the nature of marriage or adoption.
 - In addition relationships with family members living together as a joint family are also included.
 - However, no female relative of the husband or the male partner can file a complaint against the wife or the female partner, for e.g. the mother-in-law cannot file a complaint against a daughter-in-law, but she can file an application against her daughter-in-law for abetting her son to commit violence against her.
- **Filing of a complaint:** Any woman who alleges to have been subjected to any act of domestic violence by the offender or any person can file a complaint of Domestic Violence on her behalf.
- The complaint is filed against:
 - Any adult male member who has been in a domestic relationship with the aggrieved woman.
 - Any Relatives of the husband or the male partner. This includes both male and female relatives of the male partner,
- **Provision for shelter home and Medical Aid :** A person who feels unjustly treated may ask a person in charge of a shelter home or medical facility to give her shelter or medical care, or a Protection Officer or service provider may do so on her behalf.
- **Trial Procedure:** Act provides for the trial within 60 days of the filing of the case.
 - Recognizes women's assistance with legal procedures and other forms of support.
 - Recognizes verbal and emotional violence.
 - Provides for economic relief by recognizing economic violence.
 - Both petitioner and respondent can prefer an Appeal.
 - Domestic Violence Act, 2005 includes provisions for making Domestic Incident Reports.
 - Provides temporary custody of the child.



What are the recent issues with Domestic Violence?

- **Unable to access the law:** Despite the law, women are still largely unable to access the law in practice.

- It is due to the promise and provisions of the acts are unevenly implemented, unavailable and out of reach for most Indian women.
- **Low percentage of women seeking Help:** As per the National Family Health Survey-5 (2019-21) reports that only 14% of women who have experienced domestic violence have ever sought help; However, this number is much lower in the rural areas.
- But in reality almost a third of women are subject to domestic violence.
- **Most women choose not to report violence and remain silent:** In India where domestic violence is a cognizable offence and there are multiple laws explicitly intended to protect women against violence, most women victims and survivors of domestic violence never seek help or choose to report the domestic violence.
- Women had hope that things would improve in the future, that they could influence their husbands' actions, and the situation would change.
- **Police - as a part of the problem & the solution:** Women who reported violence to the police were pessimistic about the outcome. The police were more likely to send women back to abusive households to reconcile with the abuser or use violence against abusers as a deterrent instead of making a formal complaint or connecting women to protection officers. This increases the problem rather than solving it.

Conclusion

- Even while its legislature defines domestic abuse as a crime and offers legal remedies in the form of protection orders, survivors and the family are nonetheless left to deal with the aftereffects of domestic violence. The largest crime against women now being committed is that.
- State must implement suitable social empowerment measures in this approach. Women's empowerment without social justice is a pointless endeavor.

THE GOVERNOR IS UNDER THE CONSTITUTION, NOT ABOVE IT

Priority: Medium



Primary Source: The Hindu

Prepp Prelims Booster: Governor

Prepp Mains Booster: Appointment to various Constitutional posts, powers, functions, and responsibilities of various Constitutional Bodies.

Context:

- Recently, the increased instances of Governor and state government have brought the issue, of whether a governor appointed by the Union government is actively involved in the state's administration when a popularly elected government has been given the authority to govern.
- For instance, the power spat between the Delhi government and the Centre-appointed Lieutenant Governor over the appointment of bureaucrats or the deadlock between the Tamil Nadu government and Governor R.N. Ravi over assenting to the National Eligibility cum Entrance Test (NEET) exemption Bill and Kerala Government and Governor Arif Mohammed spat over the appointment of Vice-chancellors.

Constitutional provisions related to the Governor of the state

- **Article 153-** provides a Governor for each State,
- **Article 154 -** the executive power of the State shall be vested in the Governor ("Shall be exercised by him directly or through officers subordinate to him in accordance with this Constitution"). The Governor is **not allowed to carry out any duties "conferred by**

Existing Law on any other Authority," according to Article 154(2)(a).

- **Article 163-** "there shall be a council of ministers with the Chief Minister at the head to aid and advise the Governor... except in so far as he is by or under this Constitution required to exercise his function or any of them in his discretion".
- **Article 163** provides that the Governor acts with the assistance and advice of the cabinet.
- **Article 174** states that the Governor has the authority to summon "the House or each House of the Legislature of the State to meet at such time and place as he thinks fit."



What are the possible reasons for the conflict?

- The CM is answerable to the people. However, the Governor is answerable to no one except the Centre.
- There is **no provision for impeaching the Governor**, who is appointed by the President on the Centre's advice. Whereas the Governor has 5-year a tenure, he can remain in office only until the pleasure of the President.
- The notable exceptions for the Governor, where he may not follow the advice of the Cabinet and as interpreted by the Supreme Court, are when the state government's bias is inherent or apparent, such as in the case of the House's dissolution, or where the state Cabinet's decision is wholly irrational, or where the Cabinet loses its right to provide such advice due to some incapacity.
- One example is the Election Commission's opinion about disqualification under Article 192, where the Governor is not required to adopt the Cabinet's recommendation but the Chief Election Commissioner's recommendation is binding in such circumstances.
- Article 74(1) states that the President must follow the advice of the Cabinet when carrying out his duties, while Article 163(1) states that the Governor must have a council of ministers, with the chief minister serving as its head, to assist and advise him when carrying out his duties, with the exception of any instances in which he is required to do so by or pursuant to this Constitution.

Instances that reiterate the role of Governor

Constituent Assembly Debates (1949)

- **Professor K.T. Shah on Article 130 (now Article 154) of the Constitution:** The Constitution requires the Governor to exercise his authority in accordance with the Constitution based on the advice of his Ministers as provided for in the subsequent clauses and other sections of the Constitution.

- **Appointment by the President:** It was strongly contested whether or not the Governor should be chosen by the Indian President. Instead, the Assembly adopted appointment by the President out of concern that this might result in a **parallel State leadership**.
- The Constituent Assembly decided that the **Governor should be a constitutional head**, who would be the person to **lubricate the machinery and to see to it that all the wheels are going well by reason**, not of his interference.
- **B.R. Ambedkar on discretionary power:** Defending the discretionary power given to the Governor Dr.B.R Ambedkar said that the clause was limited and therefore, Article 143 (now 163) **will have to be read in conjunction with such other articles** which specifically reserve the power to the Governor.
- It is **not a general clause** giving the Governor power to disregard the advice of his ministers in any matter in which he finds he ought to disregard."
- **Duties of Chief Minister towards governor:** Dr. Ambedkar responded to a Member's reservations about the Governor's authority (Article 147, now Article 167) stating that Governor cannot act on his own, he can only act on the advice of the Ministry.

Shamsher Singh vs State of Punjab and Anr, 1974 Judgement

- The Governor exercises "all his powers and functions" by making rules for the convenient transactions of the business of the government of the State in accordance with Article 166 of the Constitution. These are called Rules of Business.
- The Court however reiterated that "wherever the constitution requires satisfaction of the President or the Governor for the exercise of any power or function by the President or the Governor, as the case may be, **as for example in Articles 123, 213, 311(2) proviso (c), 317, 352(1), 356 and 360.**
- The Court stated that the discretion conferred on the Governor is as the Constitutional or the formal head of the State and it is only in the exercise of the power under Article 356
- **And it will be justified in exercising his discretion even against the aid and advice of his council of ministers as per his discretionary power.**
- However, in all other matters where the Governor acts in his discretion, he will act in harmony with his Council of Ministers. **The Constitution does not aim at providing a parallel administration**
- The fundamental tenet is that in a democracy, the elected Ministers must assume accountability for every executive act. The Council of Ministers alone represents a responsible form of government in the States. The Constitution does not attempt to provide a parallel administration.

Way forward

- The emphasis must be on the Constituent Assembly debates of the 20th century, which shed light on the gubernatorial role, powers, and obligations, since Governors, particularly in Opposition-ruled States, are sliding away from the Constitution.
- These debates adequately describe the governor's function, authority, and responsibilities, and therefore the Governor has no authority to interfere with the administration in day-to-day affairs including refusing assent to Bills passed by the Assembly.

Welfare Schemes for Vulnerable Sections of the Population by the Centre and States

THE DISMAL CASE OF SLASHING SCHEMES AND CUTTING FUNDS

Priority: Medium



Primary Source: The Hindu

Prepp Prelims Booster: Government Schemes

Prepp Mains Booster: Government policies and interventions for development in various sectors and issues arising out of their design and implementation.

Context:

- Recently, over 50% of current central government-sponsored programs have been eliminated, absorbed, redesigned, or rationalized into other programs over the past three years. The effects have varied amongst Ministries.

Ministry of Women and Child Development

- Mission Shakti, Mission Vatsalya, Saksham Anganwadi, and Poshan 2.0 are only three of the 19 programs offered by the Union Ministry of Women and Child Development.
- The "Beti Bachao, Beti Padhao" scheme was one of 14 schemes that Mission Shakti replaced.

Nirbhaya fund

- The Nirbhaya fund (2013), which prioritised funding initiatives to increase women's safety in public places and promote their participation in economic and social activities.
- From 2013 to 2016, Rs. 1,000 crore was allocated to the fund annually, but the money was largely unutilized. Since the fund's inception, about Rs. 6,214 crore have been granted to it, however only Rs. 4,138 crore have been paid out as of FY21-22.
- Only Rs. 2,922 crore of this total were actually used; of the Rs. 660 crore that were given to the Ministry of Women and Child Development, only Rs. 181 crore had been used as of July 2021.



Ministry of Animal Husbandry and Dairy

- Only two schemes remain out of 12. Furthermore, the Ministry has ended three schemes which include **Dairying through Cooperatives, National Dairy Plan-II, etc.**

Ministry of Agriculture and Farmers' Welfare

- Currently, three out of 20 programs for the Ministry of Agriculture and Farmers' Welfare (Krishonnati Yojana, Integrated Scheme on Agricultural Cooperatives, and Rashtriya Krishi Vikas Yojana), while

little is known about the National Project on Organic Farming or the National Agroforestry Policy.

- Fertilizer subsidies have been decreasing over the past few years; Allocation for NPK fertilisers (nitrogen, phosphorus, and potassium) **was 35% less than revised estimates in FY21-22**. Due to these budget cuts and the steep increase in fertiliser prices following the Ukraine crisis, there are now fertiliser shortages and farmer

Employment programs

- The Garib Kalyan Rojgar Abhiyaan (June 2020, for a duration of 125 days) aimed to give the rural poor instant work and livelihood prospects;
- 50.78 crore person days of employment were offered at an estimated cost of Rs. 39,293 crore (against an announced budget of Rs. 50,000 crore, Ministry for Rural Development).
- It's important to remember that the scheme absorbed 15 other systems.
- Such a program ought to have been developed with between 60 million and 100 million migrant labourers looking for informal employment.
- Compared to the FY21-22 revised projections of Rs. 98,000 crore, the budget allotted for the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) **decreased by over 25%** in the FY22-23 Budget presented earlier this year.
- The Economic Survey 2022–23 has noted that since rural distress persists, demand for the programme is higher than it was prior to the epidemic.
- Anecdotal evidence suggests that actual **financial disbursement for MGNREGA has frequently been delayed**, which has lowered trust in the programme.

Health

- The first responders, Accredited Social Health Activists (ASHA), have experienced salary delays of up to six months.
- Regularisation of their jobs continues to be a struggle, with wages and honorariums stuck at minimum levels.

Biodiversity

- Biodiversity has likewise gone unnoticed. The Ministry of Environment, Forest, and Climate Change's funding for the creation of wildlife habitat has decreased from Rs. 165 crore (FY18-19) to Rs. 124.5 crore (FY19-20), to Rs. 87.6 crore (FY20-21).
- Project Tiger's funding has been drastically reduced from Rs. 323 crore (FY18-19) to Rs. 194.5 crore (FY20-21).

Concerns

- Reduced fertiliser subsidies** are anticipated to have a **negative effect on small and marginal farmers'** agricultural revenue and production.
- Meeting climate change obligations** in the face of funding reductions is a significant concern.
- Demand for jobs under the **MGNREGA program**, which by design is an **unemployment insurance** program for those who have fallen on hard times, is at an all-time high, and presumably many people have been turned away for lack of cash.
- Existing programs face obstacles such **funding reductions, disbursement, and fund utilisation**.
- long-term economic growth, such as investing in **infrastructure and education will be impacted**.
- ASHA workers act as bridge between marginalised communities and Primary health care. Lowering their budget will compromise the healthcare at rural level.

- The ineffective utilization of Nirbhaya Fund would prevent it from having the desired impact on improving the security situation for women on the ground.

Reasons behind rationalization of schemes:

- To bring down duplicity
- To promote coordination among ministries.
- To channel finances and prevent leakages in schemes.
- To promote efficiency.
- Redesigning the structures of the Government so as to reduce distortions and allow it to perform its key tasks optimally.

Steps to be taken

- Decentralization:** The transfer of financial and political authority to regional administrations.
- Reliable methods for managing human resources.
- Transparency:** Transparency and better information to parliaments and to the public, and has the potential to improve public management and efficiency.
- Accountability:** Reforms should focus on increasing responsibility, which ensures that negative outcomes linked with improper conduct are rapidly rectified and are difficult to repeat.
- Rationalizing of schemes should be done by creating awareness among people. For example, optimum use of fertilizers can be promoted by creating public awareness, which will not only decrease farmers' input cost and also prevent desertification of land.
- Civil services:** States must increase the efficiency of the public service while ensuring that each employee is engaged in work that is socially relevant. In order to promote accountability and improve performance quality, they must enforce rules for rewarding and promoting merit, disciplining dysfunction, and ensuring the long-term affordability of the civil services.

Way Forward

- The relationship between the Center and States has changed due to the Goods and Services Tax reform, with the Center now having a fiscal advantage.
- To face the difficulties of today, including running a contemporary economy, providing improved public goods, and ensuring a welfare system free from corruption, we must develop an effective civil service.
- Instead of aiming for fewer government programs, we ought to elevate our standards for greater public service delivery.

SKILL TRAINING OF MGNREGS WORKERS LAGS; CENTRE BLAMES IT ON THE STATES

Priority: Medium



Primary Source: The Hindu

Prepp Prelims Booster: MGNREGS

Prepp Mains Booster: Government policies and interventions for development in various sectors and issues arising out of their design and implementation.

Context:

- The UNNATI project, which intends to reduce dependence on Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) by imparting skill training to its beneficiaries has received less than lukewarm response, since its inception in 2020.

- Therefore, Union Rural Development Ministry wants to link the performances of the States under the UNNATI project with its labor budget for the upcoming financial year.
- The project has now been extended by two years from its original March 2022 completion date.



Stats

- Only over 25,000 persons have been trained under the project well below the intended target of 2 lakh.
- The performance so far has been far below this 20% target.
- For instance, 71 lakh households worked 100 days across the country during the 2020–21 fiscal year as part of the MGNREGS, but only 8,658 people received training as part of the Unnati program.
- Similarly, only 12,577 out of 59 lakh eligible households in 2021–2022 received training.

Reasons

- The project's sluggish deployment is also attributed to the COVID-19 pandemic's timing.
- The Ministry is hopeful that the project would take more momentum as the number of cases declines.

Need

There is a severe lack of skilled labour in the nation. Although the government offers aid to unskilled individuals, it is equally important to increase their abilities for long-term success. India should be able to provide the rest of the globe with skilled labour.

About Project UNNATI

- Project 'UNNATI' is a skilling project that intends to upgrade the skill base of the Mahatma Gandhi NREGA beneficiaries, thereby improving their livelihoods so that they can move from their existing part-time employment to full-time employment and **reduce their reliance on Mahatma Gandhi NREGS**.
- This project is meant to provide **training for one adult member** (18-45 years old) **of a household who has completed 100 days of work under Mahatma Gandhi NREGA** in the previous financial year from the year of commencement of the project.
- The **household** from which, candidates are selected for the training, is continuing to **enjoy 100 days of work under Mahatma Gandhi NREGA**.
- According to the project's requirements, the applicant undergoing training is paid a stipend for a maximum of **100 days and for one program per household at the going wage rate in the relevant State/UT**.
- The Central Government is solely responsible for covering all costs associated with a stipend in lieu of lost wages compensation.

- The selected candidate is eligible for wages on a par with that given under the MGNREGS during the period of the training.
- At least 20% of the households that complete 100 days of work under MGNREGS should be targeted by the States under the scheme [Unnati] to fully utilize its potential.
- Under the project, the selected candidates are skilled using three established training programs namely:
 - the Deen Dayal Upadhyay Grameen Kaushal Yojana (DDU-GKY),
 - the Rural Self Training Institute (RSETI) and
 - the Krishi Vigyan Kendra.
- **Deen Dayal Upadhyay Grameen Kaushal Yojana:** It is a placement-linked program, in which 70% of the trained candidates have to be compulsorily employed with a minimum salary of ₹6,000 per month.
- **Rural Self-Employment Training Institutes:** This is for entrepreneurial skills where persons aged 18-45 get short-term residential training with long-term hand-holding support for up to two years.
- A Krishi Vigyan Kendra trains candidates in trades related to the agricultural sectors

MGNREGA

- The Mahatma Gandhi National Rural Employment Guarantee Act, which is previously known as the National Rural Employment Guarantee Act was introduced on 7th September 2005.
- The act is for generating employees and social security in India. The act aims to cover all districts of India except the district which have a 100% urban population

WEIGHING IN ON PMGKAY, THE FREE GRAINS SCHEME

Priority: Medium



Primary Source: The Hindu

Prepp Prelims Booster: PMGKAY

Prepp Mains Booster: Government Policies and Interventions; Welfare Schemes for Vulnerable Sections of the population by the Centre and States and the Performance of these Schemes.

Context:

The recent extension of the Pradhan Mantri Garib Kalyan Anna Yojana (PMGKAY), a scheme to distribute free foodgrains to the poor, for another three months, has surprised many. In this context the author reasoned that the Govt cannot delay the commissioning of a study for the review of PMGKAY.

What is Pradhan Mantri Garib Kalyan Anna Yojana (PMGKAY)?

- Pradhan Mantri Garib Kalyan Anna Yojana (PM-GKAY) is a scheme as part of Atmanirbhar Bharat to supply free food grains to migrants and the poor.
- Considered as the world's largest food security scheme, the Pradhan Mantri Garib Kalyan Anna Yojana aims at ensuring sufficient food for the poor and needy during the coronavirus crisis.
- It is aimed at providing an additional allocation of foodgrains (rice or wheat) from the central pool at the rate of 5 kilograms per person per month for free of cost.

- This will be over and above the regular monthly quota under the NFSA, which is 35 kg per month per family for AAY and 5 kg per month per person for PHH.
- The PMGKAY also covers even Direct Benefit Transfer (DBT) beneficiaries.

Beneficiaries:

- The beneficiaries are the cardholders of the Antyodaya Anna Yojana (AAY) and Priority Households (PHH) categories, both falling under the National Food Security Act (NFSA).

Eligibility:

- Families falling under the Priority Households (PHH) and Below Poverty Line - Antyodaya Anna Yojana (AAY) categories will be eligible for the program.
- AAY & PHH are to be identified using criteria developed by State Governments/Union Territory Administrations.
- Households headed by widows, terminally ill, crippled, (or people 60 years of age or more without a guaranteed source of support from society or the economy), tribal households.

Achievement of PMGKAY:

- Policymakers and experts concede that the scheme made a difference to food security and public health during the COVID 19 pandemic.
- The PMGKAY scheme has received commendation from the Parliamentary Standing Committee on Food and Public Distribution or the authors of an IMF- working paper for its work of providing Social Security.
- The IMF working paper "Pandemic, Poverty, and Inequality: Evidence from India" (April 2022) concluded that "the social safety net provided by the expansion of India's food subsidy program under PMGKAY absorbed a major part of the pandemic shock."

PMGKAY and Extension:

- PMGKAY was launched in April 2020.
- From its launch the PMGKAY was not in force during December 2020-April 2021.
- It was reintroduced in May 2021 when there were indications of a second pandemic wave, and has been running since with many extensions.

Why is there a need for the review of the PMGKAY?

- **Funding Crunch:** as per the Expenditure Department, After taking into account the estimated outgo of food grains for extended phase the expenditure of ₹44,762 crore is for the existing phase, the overall expenditure of the PMGKAY will be approximately ₹3.91 lakh crore.
- **More food than required:** The Amount of food grains to AAY and PHH is more than a family of 5 persons required for a month. Considering PMGKAY, the family gets 50 kg of grains (Wheat and Rice) of which 25 kg is free. This may be leading to diversion
 - There are 50 kg of free grains in many States, including West Bengal, Kerala, and Karnataka.
 - In Tamil Nadu, rice-drawing cardholders, whether PHH or not, have received free rice for more than ten years.
- **Amount to be Freebies:** providing food grains beyond the mandate of the NFSA free of cost as is being done under the PMGKAY, is viewed as freebies in democracy, and hence providing freebies has to go
- **No need of free grain in post pandemic period:** The scheme was a social security measure during the Pandemic time and hence during the normal situation there is no need to extend the scheme which is adding fiscal burden.

- **Standing Committee recommended:** However, as suggested by the Standing Committee in its March 2022 report, it would have been far better had the Government taken the decision to extend the scheme based on findings of an objective study regarding the impact of the PMGKAY.



Issues Relating to Development and Management of Social Sector/ Services relating to Health, Education, Human Resources

RAJASTHAN GOVERNMENT GETS NHRC NOTICE OVER GIRLS' 'AUCTION'

Priority: Medium



Primary Source: Indian Express

Prepp Prelims Booster: National Human Rights Commission

Prepp Mains Booster: Statutory Bodies, Issues relating to Poverty, Important International Institutions

Context:

- Recently, the National Human Rights Commission (NHRC) issued a notice to the Rajasthan Government regarding the auctioning of girls to recover the debts.
- The NHRC has taken suo motu cognizance of a media report and 6 districts were recorded for the same.
- As stated by the NHRC, the allegations made in the report would constitute **violations of human rights**.

What exactly is the issue?

- Girls are being auctioned off on stamp paper, according to a notification published by the NHRC on Thursday.
- The **refusal** to do so is leading to the **rape of their mothers** to settle financial disputes on the dictats of caste panchayats.
- According to NHRC, girls between the **ages of 8 and 18** are auctioned off to recover funds if there is a disagreement between the parties, particularly when it involves **financial transactions and debts**.
- According to a media source, these girls are sent to the UP, MP, Mumbai, Delhi, and even foreign countries where they are forced into slavery and subjected to **physical abuse, torture, and sexual assault**.

What is NHRC?

- The National Human Rights Commission (NHRC) serves as a **watchdog for the country's human rights**.
- They include the rights to life, liberty, equality, and dignity guaranteed by the Indian Constitution or embodied in international accords and **enforceable by Indian courts**.
- The NHRC was established on 12 October 1993 in accordance with the **Protection of Human Rights Act (PHRA), 1993**.
- It has been revised by the Human Rights (Amendment) Act, 2006 and the Human Rights (Amendment) Act, 2019.

- It was founded in accordance with the **Paris Principles**, which were approved in October 1991 in Paris for the promotion and protection of human rights and endorsed by the United Nations General Assembly in December 1993.



What is Human Rights Violation?

- The Human Rights Violation is the **denial of the freedom** of thought and movement to which all humans are legally entitled.
- While individuals may violate these rights, the leadership or authority of civilisation frequently disrespects those who are disadvantaged.
- As a result, these people are caught in a cycle of oppression and poverty.
- The continuation of this cycle is promoted by people who approach life with the belief that not all human lives are equally valuable.

Example

- Forcible eviction of residents (the **right to adequate housing**)
- Contaminating water, for example: with waste from state-owned facilities (the **right to health**)
- Failure to ensure minimum wage sufficient to support a decent living (**right at work**)
- The inability of the country's government to avoid starvation in all areas and communities (**freedom from hunger**).

What is the United Nations' definition of "Violence against Women"?

- "Any act of gender-based violence that results in, or is likely to result in, physical, sexual, or mental harm or suffering to women, including threats of such acts, coercion, or arbitrary deprivation of liberty, whether occurring in public or private life," according to the United Nations.
- Women's violence is a social, economic, developmental, legal, educational, and human rights issue, as well as a physical and mental health concern.
- Emerging data and stories from individuals on the front lines suggest that all sorts of violence against women and girls, notably domestic abuse, has increased since the start of Covid-19.

International Level Initiatives

- The Spotlight Project:** The European Union (EU) and the United Nations (UN) have launched a new multi-year worldwide initiative to end all kinds of violence against women and girls (VAWG).
- It is so titled because it draws attention to this issue, bringing it to the forefront of efforts to achieve gender equality and women's empowerment.
- International Day for Eliminating Violence Against Women:** The 25th day of November is celebrated as international Day for the Elimination of Violence Against Women.

- UN Women:** UN Women is a United Nations agency dedicated to promoting gender equality and women's empowerment.

Constitutional and Legislative Frameworks by India

Constitutional Framework

- Fundamental Principles:** It ensures that all Indians have the right to equality (Article 14), that the state does not discriminate on the basis of gender (Article 15(1)), and that particular measures are made in favour of women (Article 15(3)).
- Fundamental Responsibilities:** Article 51 assures that practices that are insulting to women's dignity are forbidden (A).

Legislative Framework

- Protection of Children from Sexual Offences (POCSO), 2012
- Protection of Women from Domestic Violence Act, 2005
- Dowry Prohibition Act, 1961
- Sexual Harassment of Women at Workplace (Prevention, Prohibition, and Redressal) Act, 2013

CHILD WELFARE POLICE OFFICERS MUST IN ALL POLICE STATIONS

Priority: Medium



Primary Source: The Hindu

Prepp Prelims Booster: Child welfare

Prepp Mains Booster: Mechanisms, laws, institutions and Bodies constituted for the protection and betterment of these vulnerable sections.

Context:

- Recently, the Ministry of Home Affairs has asked the States/Union Territories to appoint a Child Welfare Police Officer (CWPO) in every police station to deal with children, either as victims or perpetrators exclusively.

Recommendations:

- The Home Ministry cited provisions under the Juvenile Justice (Care and Protection of Children) Act, 2015, which **mandates the designation of at least one officer, not below the rank of an Assistant Sub-Inspector**, CWPO in every police station, in response to a recommendation made by the National Commission for the Protection of Child Rights.
- Special Juvenile Police Unit:** The Commission also requested that a Special Juvenile Police Unit be established in every district and city, with each unit being led by a police officer with at least the rank of Deputy Superintendent of Police.
- To **coordinate all police activities relating to children**, the unit would be made up of CWPOs and two social workers with experience working in the field of child welfare, one of whom must be a woman.
- CWPOs:** The contact information for the CWPOs should be posted in all police stations so that the general public can get in touch with them.
- The Ministry called for reviewing the compliance and operation of the set-up in the States/Union Territories and, where they didn't exist, taking steps to operationalize the arrangement as soon as possible.
- The Ministry pointed to other provisions under the Juvenile Justice (Care and Protection of Children) Rules, 2016, which prescribed specific roles for CWPOs and the Special Juvenile Police Unit in cases of child rights violations.



Reasons behind the recommendations

- The warning comes amid a rise in crimes against children, including homicides and violations of the Protection of Children from Sexual Offences (POCSO) Act.
- According to data released by the National Crime Records Bureau, there were 1,28,531 offenses against children in 2020 and 1,49,404 in 2021.
- While Madhya Pradesh topped the country with 19,173 cases, Uttar Pradesh stood second with 16,838 cases.
- A total of 1,402 children were murdered in 1,279 cases reported nationwide. In 2021, there were 1,18,549 reported occurrences of kidnapping and abduction involving kidnapped children.

Child Protection Legislation

- The Juvenile Justice (Care and Protection) Act (2000, amended in 2015);
- The Prohibition of Child Marriage Act (2006);
- The Protection of Children from Sexual Offences Act (2012), and
- The Child Labour (Prohibition and Regulation) Act (1986, amended in 2016).

National Commission for Protection of Child Rights (NCPCR)

- The National Commission for Protection of Child Rights (NCPCR) is a **statutory body** constituted by the Government of India under section (3) of the **Commission for Protection of Child Rights (CPCR) Act, 2005**, under the aegis of the Ministry of Women and Child Development.

Functions

- It attempts to make sure that all laws, programs, policies, and administrative mechanisms are in line with the viewpoint on children's rights that is reflected in both the Indian Constitution and the UN Convention on the Rights of the Child.

Members

- This commission consists of a chairperson and six members, two of whom must be women.
- They are all three-year appointments made by the central government.
- The chairman's and members' maximum ages to serve on a commission are 65 and 60, respectively.

ENFORCING THE BAN ON THE TWO-FINGER TEST

Priority: Medium



Primary Source: The Hindu

Prepp Mains Booster: Indian Constitution - Evolution, Features, Amendments, Significant Provisions. Structure, Organization and Functioning of the Executive and the Judiciary.

Context:

On October 31, the Supreme Court declared that any person conducting the 'two-finger test' on rape or sexual assault survivors will be found guilty of misconduct. In this context of ban on two finger test, author in article "Enforcing The Ban on the Two-Finger Test" held that several steps need to be taken at several levels to ensure that the ban is followed in every corner of India.

What did the Supreme Court hold in its judgement?

- The court held that the test is "regressive and invasive" and has "no scientific basis as it neither proves nor disproves allegations of rape".
- Rather it instead "re-victimises and re-traumatises women who may have been sexually assaulted."
- This so-called test has no scientific basis and it neither proves nor disproves allegations of rape.
- Therefore the 'two-finger' test or pre-vaginum test must not be conducted.

What is the two-finger test?

- An overtly intrusive physical examination known as a "per vaginum" or "two-finger test" involves a doctor inserting two fingers within the vagina of a rape victim to see if
 - whether the hymen is still whole,
 - The size of the vaginal aperture and the laxity of vaginal
- It is used to establish whether the lady has engaged in sexual activity or has been the subject of sexual activity.
- The two-finger test is not scientifically valid, according to the WHO.



Criticism

- **Violates the rights of Victim:** The Supreme Court had already ruled that the two-finger test violates the rights of rape survivors in *Lillu v. State of Haryana* in 2013.
- **Lack scientific basis:** The two-finger test is not supported by science and neither supports nor invalidates claims of rape.
 - Instead, it violates the dignity of women who may have experienced sexual assault by re-victimizing and re-traumatizing them.

- **The IPC's Section 375 (rape):** For the purposes of assessing whether the elements of Section 375 (rape) of the IPC are present in a given case, it is irrelevant whether or not a woman is habituated to sexual intercourse.

What steps are taken to improve?

- **2013 Criminal Law Amendment Act:** It revised the Evidence Act by adding Section 53A, which states that in cases of sexual offenses, the question of consent or the quality of consent must not be affected by the victim's character or her prior sexual experiences with anyone.
- **Workshops:** The SC also mandated the holding of workshops to explain the proper way to identify rape and sexual assault.
- **Medical school curriculum:** In order to ensure that the practice is no longer practiced, SC also ordered the government to evaluate the curriculum in medical schools.
- **Committee recommendations:** The Justice JS Verma committee, which was established following the 2012 Delhi gangrape event, had advocated for its outlawing.
- **Government Guidelines:** In 2014, the Union health ministry published a document with recommendations for survivors and victims of sexual assault that was not legally enforceable.
 - The two-finger test must not be used to prove rape or sexual assault.
 - No case of sexual violence is affected by the size of the vaginal aperture.
 - Only adult women can get a per vaginum examination when it is medically necessary.
 - Any medical examination requires the agreement of the rape victim (or, in the case of a child or mentally challenged victim, the victim's guardian).
 - The victim cannot be denied medical care even if the permission is not given.
- **NMC's modified modules:** The National Medical Commission (NMC) changed modules for forensic medicine in which students will receive training on how to inform judges of the lack of scientific support for these tests.

What further steps need to be taken?

Creating Institutional Framework:

- To improve the investigation capacity there is need to create the institutional framework which will help in the training of investigating officer and medical practitioner in the case of sexual assault on girl/women.
- This is significant because there is no formal place for sharing such opinions with medical professionals. In most cases, forensic science laboratories (FSLs) are under the jurisdiction of state home departments.

Recognising the interaction of Health ministry in Criminal Justice System:

- However, cooperation between the Health Ministry and the Home Ministry (or the police department) is limited despite the Health Department's relevance in the investigation of offenses related to assault, rape, unnatural death, age determination (using the ossification method), etc.
- So recognising the health department in the Crime and Criminal Tracking and Network Systems (CCTNS), a mission mode project of the Home Ministry, is an extension of the Inter-Operable Criminal Justice System (ICJS) would strengthen implementation.

Doing away of Roll call System to ensure the accountability:

- The police use a traditional "roll call" procedure. Doing away with this and Every order from the Superintendent of Police (and from seniors through him) to be read to the assembled people, explained, and ensuring signatures of police personnel in addition to assigning duties to each member of the police force.
- This makes accountability certain in ensuring compliance of ban on the two finger test.

Improving training:

- In most departments, training is still one of the areas that gets the least attention. Officers are frequently not excused from duty to attend refresher courses even once every five years due to inadequate internal training capacity.
- Therefore focussing on the improvement in the training would bring greater result in ensuring the ban on the test.

Way Forward

- Therefore, it is necessary for all agencies involved in the criminal justice system or who have an impact on how crimes are investigated to regularly coordinate in order to share best practices, recent legal developments, and court decisions.
- To make sure that this process continues, an institutional structure must be created.
- Since it is just as crucial as the FSL, the Health Department's medico-legal division needs to be merged with the ICJS.
- To avoid the status quo, training capacity must also be examined, and communication routes must be enhanced.

ADIVASIS AT BOTTOM RUNG OF INDIA'S DEVELOPMENT PYRAMID, FINDS TRIBAL DEVELOPMENT REPORT 2022

Priority: Medium



Primary Source: Down to Earth

Prepp Prelims Booster: Tribal Development Report 2022

Prepp Mains Booster: Issues related to SCs & STs, Government policies and interventions for development in various sectors.

Context:

- According to the 2011 Census, **tribal communities in India account for 8.6 percent of the country's population.**
- According to a new report released, even after 75 years of independence, they remain at the bottom of the country's development pyramid.
- The **Tribal Development Report 2022**, published in two volumes by the **Bharat Rural Livelihood Foundation (BRLF)**, claims to be the first of its kind since 1947.

Tribal Development Report 2022

- The **Bharat Rural Livelihoods Foundation published the first Tribal Development Report 2022**, which was written by prominent academics, thematic experts, and practitioners and published by Routledge and CRC Press.
- The first-of-its-kind Tribal Development Report is published in two volumes. It focuses on the status of tribal communities in India and Central India in terms of livelihoods, agriculture, natural resources, economy, migration, governance, human development, gender, health, education, art, and culture. Central India is home to 80 percent of the country's tribal communities.

- This report combines data from government sources, case studies, archival research, and interviews on critical aspects of tribal lives and livelihoods. The goal is to educate stakeholders, including key policymakers, practitioners, activists, and academics, about the scope of tribal issues.
- The Tribal Development Report focuses on the overarching theme of Livelihoods for tribal communities in central India and provides a status report on the overall macroeconomic situation, agriculture, land, energy, and water use, particularly groundwater management.



Highlights of the Report

- The report focuses on the status of tribal communities across India, with a particular emphasis on central India, in terms of **livelihoods, agriculture, natural resources, economy, migration, governance, human development, gender, health, education, art, and culture.**
- Central India is home to 80% of India's tribal communities.

Themes of the Tribal Development Report - Volume One

- Provides a broad overview of tribal communities' current macroeconomic situation, with a particular emphasis on the challenges of agriculture, land, energy, and water use, particularly groundwater management.
- Highlights the need for local institutions to lead the transition to a new paradigm of agroecology-based, nature-positive farming and sustainable water use.
- Examine tribal areas' neglect in developing infrastructure in various dimensions, from irrigation to energy.
- Shares insights on the invisibility of tribal voices in policy processes and how political empowerment will enable socioeconomic changes for tribal people at the grassroots level.
- Discusses tribal communities in the informal sector and migration.

Themes of the Tribal Development Report - Volume Two

- Discusses the human development challenges that tribal communities face, with a focus on the state of health, education, and nutrition in tribal regions.
- Explores key issues concerning gender and development in tribal contexts, as well as the impact of the loss of traditional rights to land and forest resources.
- Describes the progress made so far in implementing the Panchayat (Extension to Scheduled Areas) Act (or PESA), 1996, and the Forest Rights Act (FRA).
- Examines the current status of "Denotified Tribes" in India, the state's policy response post-independence, and their place in the current socioeconomic context.

- Provides an overview and policy recommendations for preserving tribal arts, crafts, language and literature, and knowledge systems.

Findings of the Report

- The BRLF was established by the Union Cabinet on September 3, 2013 as an independent society under the Union Ministry of Rural Development to scale up civil society action in collaboration with central and state governments.
- The chief executive member of the Bodoland Territorial Council in Assam, stated that it is critical to understand the unique characteristics of tribal communities in order to develop policies for them.
- Many tribal communities prefer isolation and silence. They are shy and will not reach out to the outside world on their own. Policymakers and leaders in the country must understand this trait and then work for the welfare of Adivasis in order to better connect with them.
- Tribal areas have also seen a lot of disruption and conflict. This is one of the reasons why many government welfare schemes and policies fail to take off in these areas. The area's distress affects both sides.
- According to the report, indigenous communities in India have been pushed further away from alluvial plains and fertile river basins, into the country's harshest ecological regions, such as hills, forests, and drylands.
- Of the 257 Scheduled Tribe districts, 230 (90%) are forested, hilly, or dry. However, they constitute 80% of India's tribal population.

Adivasi Sub-Districts

- Adivasi sub-districts are part of a larger contiguous backward region or Adivasi belt that extends beyond the state, district, and sub-district administrative categories.
- Mapping of predominantly Adivasi-concentrated sub-districts "indicates a continuum of pockets of underdevelopment that are linked to one another and to the larger development processes around them."
- During British colonial rule, the bond between Adivasis and their symbiotic relationship with their immediate environment was severed.
- After the **Forest Conservation Act was passed in 1980**, the conflict was framed as one between environmental protection and the needs of local Adivasi communities, creating a schism between people and forests.
- Domestic needs of local people were explicitly recognized for the first time in the **National Forest Policy of 1988.**
- The Policy emphasized the importance of preserving their customary rights and involving Adivasis in forest protection. However, the shift toward a people-centered perspective has not been matched by reality on the ground.

Significance of the report

- The report combines data from government sources, case studies, archival research, and interviews to examine critical aspects of tribal life and livelihoods.
- The goal is to educate stakeholders, such as key policymakers, practitioners, activists, and academics, about the breadth of tribal issues.
- The overall theme of the report is livelihoods for tribal communities in central India. It provides an update on the macroeconomic situation, agriculture, land, energy, and water use, with a focus on groundwater management.

POPULATION CRITERIA FOR NEW EKLAVYA SCHOOLS 'IMPRACTICAL', SAYS PARLIAMENTARY COMMITTEE

Priority: Medium



Primary Source: The Hindu

Prepp Prelims Booster: EMRS

Prepp Mains Booster: Welfare schemes for vulnerable sections of the population by the Centre and States and the performance of these schemes;

Context:

- The Tribal Affairs Ministry intends to go ahead with its plan to construct new Eklavya Model Residential Schools (EMRS) on 15 acres of land in all sub-districts which have Scheduled Tribe communities of more than 20,000 people, who make up at least 50% of their total population, despite a Parliamentary panel declaring that this criteria is "impractical".
- The Parliamentary Standing Committee on Social Justice and Empowerment recommended immediate review of this criterion earlier this year due to significant challenges in locating and acquiring land in several districts, particularly in forested or hilly areas where it is difficult to find a contiguous 15-acre plot.



Stats about EMRSs

- According to Ministry as of now 688 EMRSs have been sanctioned, of which 392 are functional, and only a total of 230 schools are functioning from their own buildings. The remainder operate out of temporary locations made available for them in various government buildings.
- According to a top Ministry official, 234 of the total sanctioned schools are still under construction, while 32 schools are experiencing problems locating a property.
- However, as of the end of 2021–2022, 232 sanctioned EMRSs had not yet started construction, according to statistics provided by the government to the Standing Committee.
- While Ministry officials said that 688 EMRSs have been sanctioned so far, of which 392 are functional, only a total of 230 schools are functioning from their own buildings.

- The rest function from makeshift spaces made available for them in sundry government buildings. Of the total sanctioned schools, 234 remain under construction and 32 schools are having trouble finding land.

Concerns

- Land acquisition:** The government claimed that even in many places where the population requirements are met, there is not enough land available for construction of schools, and even in those cases where there is, the legal process for acquiring the land is cumbersome.
- Location of land:** Furthermore, it stated that "many irregularities also been detected" in a number of sites where land was located, and that it is taking time to rectify them.
- State government:** The Ministry informed the Committee that these were the issues brought up by the respective State administrations.
- Finding a contiguous piece of land spanning 15 acres, as advised, in places where the demographic criteria are met is becoming one of the most challenging challenges, especially in hilly areas, areas afflicted by Left-Wing Extremism, and North-East India.

Observations of standing committee

- Despite the easing provisions, some districts are having trouble acquiring the land needed to put up EMRS.
- Combining the population criteria with the 15-acre requirement is "impractical" and "makes land identification more difficult."
- The Committee recommended changing these requirements, but warned against compromising EMRS/infrastructure EMDBS's requirements in the process.
- The Committee wishes that these tribal regions with widely dispersed tribal population should not be denied the advantages of EMRSs/EMDBS, which are a means of empowering them via education.

About Eklavya Model Residential School (EMRS):

- Eklavya Model Residential School (EMRS) is a **Government of India scheme to establish model residential schools for Indian tribals (Scheduled Tribes) across India.**
- A project of the Indian government called Eklavya Model Residential School (EMRS) aims to build model residential schools for Indian tribals (Scheduled Tribes) all over the country.
- It was established in 1997–1998 and is one of the Ministry of Tribal Affairs' flagship initiatives to guarantee that tribal students have access to high-quality education in remote tribal areas.
- Every block having more than 50% ST population and at least 20,000 tribal members would have Eklavya Model Residential Schools, according to the Union Budget for 2018–19.
- Eklavya Model Residential Schools are being built, focusing on the holistic development of tribal pupils and high-quality education.
- The schools cater to students from class VI to class XII.
- Additionally, EMRSs offer free education, including free boarding and accommodation, and are equipped with amenities that cater to the students' on-campus needs for holistic development.

Issues Relating to Poverty & Hunger

THERE IS NO DEBATE: THERE HAS BEEN A PERSISTENT DECLINE IN POVERTY IN INDIA

Priority: Medium



Primary Source: Indian Express

Prepp Prelims Booster: Poverty, Global Hunger Index

Prepp Mains Booster: Issues relating to poverty and hunger

Context:

- Recently, the release of **NFHS data for 2019-21** allows for a detailed analysis of progress in reducing absolute poverty and related determinants such as nutrition.
- Few, if any, are disputing the trend of poverty decline in India; the only remaining debate is whether the rate of decline was faster in the **UPA Sonia Gandhi-Manmohan Singh period 2004-2013** or the **NDA Narendra Modi period 2014-2021**.
- The poverty decreased between 2011-12 and 2017-18 or 2019-20.

About NFHS

- The **National Family Health Survey (NFHS)** is a large-scale, multi-round survey conducted in a representative sample of households across India. Since the first survey in 1992-93, three rounds have been conducted.
- The survey provides state and national data for India on fertility, infant and child mortality, family planning practice, maternal and child health, reproductive health, nutrition, anaemia, utilization and quality of health and family planning services.
- Each round of the NFHS has had two specific goals:
 - To provide essential data on health and family welfare needed by the Ministry of Health and Family Welfare and other agencies for policy and program purposes, and
 - To provide information on important emerging health and family welfare issues.

What is Poverty?

- Poverty is defined as a state or condition in which an individual or a group lacks the financial means and necessities for a basic level of living.
- Poverty is defined as a situation in which one's earnings from work are insufficient to meet fundamental human requirements.
- Poverty, according to the World Bank, is a severe lack of well-being that has various dimensions. Low earnings and the inability to obtain the essential commodities and services required for a dignified existence are examples of poverty.
- The World Bank defined poverty as individuals living on less than \$1.90 per day which is called the International poverty line.

Poverty Estimation in India

- Poverty estimation in India is done by the NITI Aayog task force using data from the National Sample Survey Office under the Ministry of Statistics and Programme Implementation to calculate a poverty line.
- In India, poverty lines are calculated primarily on consumption expenditure rather than income levels.
- Consumer expenditure surveys conducted by the National Sample Survey Organization are used to determine poverty. A poor household is defined as one that spends less than a certain amount each month.
- The poverty ratio, which is the ratio of the number of poor to the total population stated as a percentage, is used to determine the prevalence of poverty. It's also referred to as the head-count ratio.
- The Alagh Committee (1979) established a poverty level based on an adult's daily calorie requirement of 2400 and 2100 calories, respectively, in rural and urban areas.

- Following that, the poverty estimation was done by other committees, including the Lakdawala Committee (1993), Tendulkar Committee (2009), and Rangarajan Committee (2012).
- According to the Rangarajan committee report (2014), the poverty line is set at Rs. 1407 per capita in urban areas and Rs. 972 in rural regions (monthly consumption).

Poverty Index

- Policymakers and academics have prioritized the poverty-reducing properties of inclusive growth over growth in general.
- The two time periods under consideration - **2005 to 2011 (P-1)** and **2011 to 2021 (P-2)** - are separated by declining per capita income growth in the world (2.8 to 2.2 percent) and in India (from 6.3 to 4.4 per cent).
- A priori, we would expect poverty to have declined at a faster rate between 2005 and 2011.
- The detailed NFHS data for 2005-6, 2015-16, and 2019-21 (supplemented by the NCAER 2011/12 NCAER IHDS survey) allow us to close this debate — indeed, the data suggests that there is no debate.
- The NFHS surveys are part of a multinational effort to provide estimates of a **multidimensional poverty index**. Its computation is based on poverty estimates based on ten different indicators.
- The deprivation index for each indicator is the percentage of people who are poor (deprived) based on that indicator.
- The aggregation of the ten indicators into one index raises legitimate weighting concerns, but individual components are not affected.

Data Facts

- Along with the NFHS indicator data, national accounts data for income and consumption are also provided.
- As a result, multidimensional poverty fell at a compounded annual average rate of 4.8% per year in P-1 and more than doubled to 10.3% per year in P-2.
- There are some issues with the 2011 child-mortality data, but the rate of decline in P-2 is significantly faster than in P-1 for each of the MPI index's ten components.
- The average equally weighted decline for nine indicators was 1.9 percent per year in P-1 and 16.6 percent per year in P-2, which was more than eight times higher.
- Another poverty indicator, the **Global Hunger Index (GHI)**, was recently released. This index shows a worsening of hunger in India between 2014 and 2021, contradicting the significant improvement documented in the NFHS data.

Global Hunger Index 2022

- The Global Hunger Index (GHI) is a tool for measuring and tracking hunger at the global, regional, and national levels. The Global Hunger Index aims to track hunger at the global, regional, and national levels.
- India ranks 107th out of 121 countries in the Global Hunger Index 2022 (down from 101st in 2021). Concern Worldwide and Welthungerhilfe have collaborated to create the index.
- The Hunger Index assesses a country's performance on four indicators: malnutrition, child wasting, stunting, and mortality.

Perspective on Inclusive Growth

- Every single household survey or analysis has revealed a decrease in consumption inequality during P-2.

- This improvement is not by chance, but rather the result of several public policy initiatives implemented by the Modi administration.
- The focus of government policies on each of the individual indicators indicative of a dignified standard of living is a major contributor to the inclusive nature of growth during P-2.
- Slow-moving variables such as housing, access to cooking fuel, sanitation, and so on have seen a significant increase as a direct result of this focused fiscal push.
- In P-2, the Modi government's Swachh Bharat mission built over 110 million toilets, many of which had easy access to water.
- Similarly, until recently, nearly one-third of Indians were without electricity. Only after a concerted effort (Saubhagya Yojana) was India able to electrify every village and, eventually, every household.
- After 2014, the rate of decline in electricity deprivation was 28.2 percent; between 2005 and 2011, the rate of decline was close to zero.
- Another example is the Jan Dhan Yojana, which made financial inclusion in India a reality, particularly for women.
- In five years, access to modern cooking fuel (via the Ujjwala Yojana) reduced deprivation from 26% to 14%. The previous halving took ten years (2005/6 to 2015/16).
- Because of the affordable housing scheme (Awas Yojana), less than 14% of people are now impoverished, compared to three times that number in 2011/12.
- More recently, after 2019, PM Modi launched the Jal Jeevan Mission, which aims to provide universal access to piped water.
- In 2019, rural piped water coverage was slightly less than 17%, but it is now well above 54% and expected to be close to, if not meet, the 100% target by 2024.

THERE IS NO DEBATE — POVERTY FELL FASTER AFTER 2011

Survey	NFHS	IHDS	NFHS	NFHS	CAGR (% change per year)			
Year	2005-6	2011-12	2015-16	2019-21	2011/05	2015/05	2020/11	2020/15
Headcount ratio (MPI), %	55.1	41.3	27.7	16.4	-4.8	-6.9	-10.3	-10.5
PC income per mth (Rs)	3990	5823	7232	8628	6.3	5.9	4.4	3.5
PC consumption per mth (Rs)	2221	3273	4165	4998	6.5	6.3	4.7	3.6
MPI DEPRIVATION %								
Nutrition	44.3	38.2	21.1	11.8	-2.5	-7.4	-13.1	-11.6
Child Mortality (CM)	-	4.5	2.2	1.5	-7.2	-7.7	-	-
Years of Schooling	24	17.6	11.6	7.7	-5.2	-7.3	-9.2	-8.2
School Attendance	19.8	19.5	5.5	3.9	-0.3	-12.8	-17.9	-6.9
Cooking Fuel	52.9	51.1	26	13.9	-0.6	-7.1	-14.5	-12.5
Sanitation	50.4	48.2	24.4	11.3	-0.7	-7.3	-16.1	-15.4
Drinking Water	16.4	11.9	5.7	2.7	-5.3	-10.6	-16.5	-14.9
Electricity	29	28.3	8.6	2.1	-0.4	-12.2	-28.9	-28.2
Housing	44.9	39.4	23.5	13.6	-2.2	-6.5	-11.8	-10.9
Assets	37.5	37.5	9.5	5.6	0.0	-13.7	-21.1	-10.6
Ave (above 10 excluding CM)	-	-	-	-	-1.9	-9.4	-16.6	-13.3

Source: OPHI (2022). All Published Global Multidimensional Poverty Index (MPI) Results 2010-2022. Oxford Poverty and Human Development Initiative, University of Oxford. Notes - 2011/12 data is from NCAER-U of Maryland, IHDS survey

Impact

- The proactive use of fiscal policy combined with effective targeting represents a significant departure from the previous attempt to spend money "in the name of the poor."
- This departure has resulted in a more equitable distribution of the benefits of growth across a broader class of citizens.
- The decline in multidimensional and extreme poverty reflects the Modi government's success in providing a dignified standard of living to all, but more importantly, in transforming deemed luxuries into necessities.

- This was accomplished without granting them rights, but rather by focusing on effective delivery through improved targeting, representing a significant departure from the "entitlements"-based approach used from 2004 to 2013.
- Prior to 2014, India's poverty reduction was already notable. Finally, with the exception of the dubious NSS survey conducted in 2017-18, India makes all of its data public.
- In contrast, China's unit-level poverty data is not even made available to the World Bank, a body authorized to publish country-level poverty estimates.

Poverty Alleviation Programs in India

- **Integrated Rural Development Program:** The Integrated Rural Development Program (IRDP) was established in 1978-79 and became universal on October 2, 1980, with the goal of giving support to the rural poor in the form of subsidies and bank loans for productive employment possibilities across consecutive plan periods.
- **Jawahar Rozgar Yojana/Jawahar Gram Samridhi Yojana:** The JRY was created with the goal of creating real employment possibilities for the unemployed and underemployed in rural regions by building economic infrastructure and community and social assets.
- **Rural Housing:** Indira Awaas Yojana: The Indira Awaas Yojana (LAY) initiative intends to provide free housing to BPL families in rural regions, with SC/ST households being the primary objective.
- **Food for Work Program:** The Food for Work Program aims to improve food security by providing pay jobs. Foodgrains are provided free of charge to states, however, deliveries from the Food Corporation of India (FCI) godowns have been delayed.
- **NOAPS (National Old Age Pension Scheme):** The central government provides this pension. Panchayats and municipalities are in charge of implementing the scheme in states and union territories. Depending on the state, the contribution may differ. For applicants aged 60-79, the old-age pension is worth \$200 per month. According to the 2011-2012 Budget, the sum for applicants over the age of 80 has been increased to \$500 per month. It's a profitable business.
- **Annapurna Scheme:** The Annapurna Scheme was established by the government in 1999-2000 to offer food to older adults who are unable to care for themselves, are not covered by the National Old Age Pension Scheme (NOAPS), and have no one in their community to look after them. This program would supply qualified senior folks with 10 kg of free food grains per month. They primarily target 'poorest of the poor' and 'indigent senior seniors' groups.
- **Sampoorna Gramin Rozgar Yojana (SGRY):** The scheme's core goals are the creation of wage jobs, the development of long-term economic infrastructure in rural regions, and the supply of food and nutrition security to the poor.
- **MGNREGA (Mahatma Gandhi National Rural Employment Guarantee Act):** Every rural household receives 100 days of guaranteed employment each year as a result of the Act. Women would be eligible for one-third of the proposed jobs. National Employment Guarantee Funds will also be established by the federal government. State governments will also establish State Employment Guarantee Funds to carry out the scheme. If an applicant is not hired within 15 days, he or she will be eligible for a daily unemployment allowance under the programme.

- **Aajeevika (2011): National Rural Livelihood Mission:** It evolved from the necessity to diversify the demands of the rural poor by providing them with occupations that pay a monthly salary. To assist the poor, self-help groups are organised at the village level.
- **National Urban Livelihood Mission:** The National Urban Livelihood Mission (NULM) focuses on forming Self Help Groups among the urban poor, providing opportunities for skill development that leads to market-based employment, and assisting them in establishing self-employment companies by providing easy access to loans.
- **Pradhan Mantri Kaushal Vikas Yojana:** It will concentrate on newcomers to the labour market, particularly class X and XII dropouts.
- **Pradhan Mantri JanDhan Yojana:** It planned to distribute subsidy, pension, and insurance benefits directly to beneficiaries, and it met its goal of opening 1.5 million bank accounts. The scheme is aimed mostly at the unbanked poor.

GETTING NUTRITION WRONG

Priority: Medium



Primary Source: Indian Express

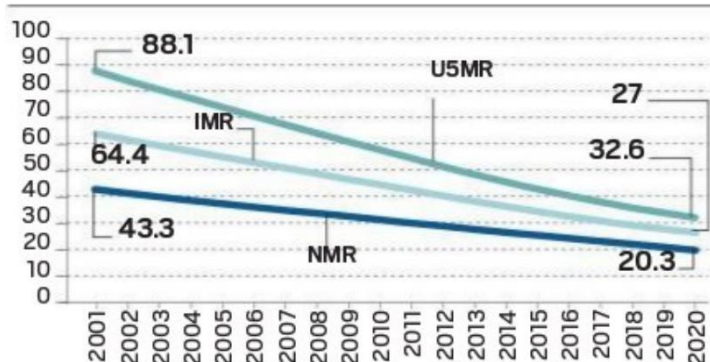
Prepp Prelims Booster: Global Hunger Index

Prepp Mains Booster: Social Justice and Development, Issues Related to Poverty and Hunger

Context:

- The Government of India is concerned by India's ranking of 107 out of 121 nations in the Global Hunger Index (GHI, 2022), which was released earlier this month by the relief organisations Concern Worldwide and Welthungerhilfe (CWW).
- India's low score was cited as "proof" of the government's bad policies and performance, prompting the government to reject the GHI and claim that the index is an intentional attempt to tarnish India's image.

NEONATAL (NMR), INFANT (IMR) AND UNDER-5 MORTALITY RATE (U5MR) (PER 1,000 LIVE BIRTHS) IN INDIA



What is the Global Hunger Index?

- The Global Hunger Index (GHI) is a method for evaluating and tracking global, regional, and national hunger.
- Concern Worldwide of Ireland and Welthungerhilfe publish the Global Hunger Index Report annually.

- The Global Hunger Index tries to measure hunger on a global, regional, and national scale.
- GHI rates nations on a 100-point scale, with zero denoting no hunger. The GHI scores are determined by four indicators.
- Undernourishment is defined as the proportion of the population whose caloric intake is inadequate.
- Child Stunting: the proportion of children under the age of five that are short for their age.
- Child wasting is defined as the proportion of children under the age of five that are underweight for their height.
- Child mortality is the rate of death among children under the age of five (a reflection of the fatal mix of inadequate nutrition and unhealthy environments).

Case of India - Issue on GHI

- India is ranked 107th out of 121 nations in the Global Hunger Index 2022 (down from 101st in 2021).
- The very nomenclature indicates a relationship to starvation—from the index, it appears that many people in the nation do not have access to basic food.
- In India, however, this is not the case.
- Since April 2020, India has provided literally free food (rice/wheat), 10/kg per person every month, to almost 800 million people in the aftermath of Covid-19.
- It will also export more than 30 million tonnes of grains in 2021. This prevented famine deaths not just in India but also in many other nations.
- India's initiative has been praised by global organisations such as the UNDP, IMF, World Bank, and others.
- The government is distressed because the GHI does not examine this massive free food plan under the PMGKY (Pradhan Mantri Garib Kalyan Yojana), but instead depends on an "opinion survey" of 3,000 people in a country of 1.4 billion.
- In defence, the GHI authors claim that the NSSO's consumption data was not created until 2011.
- As a result, they relied on this narrow "opinion survey." This is insufficient justification for a vast country like India.
- Using the FAO's food balance sheets might help the Global Hunger Index correct its flaws and become more reflective of India.

Why are balance sheets based on calorie intake necessary?

- Statistical experts advise against using NSSO consumption data to estimate total consumption.
- Even the NSSO data on consumption has major underestimate issues. The study at ICRIER demonstrates that the calorie consumption gap between NSSO consumption surveys and food production statistics has been expanding over time.
- The food balance sheet technique provides 15 to 20% more calories than the NSSO. We projected 2,581 calories for 2019, but the 2011 NSSO consumption survey was locked at 2088 calories.
- More research is required by the organisations that develop the GHI in order to refine the numbers.
- India's ranking will increase as a result of this development.
- And, because India is such a vast country, global hunger statistics will shift dramatically.

Need of a Comprehensive Index

- The NFHS measures improvement in stunting and wasting considerably more slowly because when children are spared from death, they ten times increase the influx of malnourished children.
- The discharge from this pool of stunted and wasted children is still insufficient to indicate a major drop in death rates.
- However, as mortality rates stabilise at low levels, I am confident that stunting and wasting will reduce considerably faster.
- However, it should be highlighted that stunting and wasting are caused by factors other than a lack of food (hunger).
- It is a multifaceted problem that necessitates an emphasis on female education, access to immunisation, and improved sanitary facilities.
- To represent the state of the entire population, we need a far more comprehensive index, such as the UNDP's Multidimensional Poverty Index (MPI), rather than the GHI.

Important Aspects of Governance, Transparency and Accountability, E Governance, Role of Civil services in Democracy

AADHAAR NORMS FOR PRISONERS SIMPLIFIED, MINISTRY OF HOME AFFAIRS CALLS FOR CAMPS AT ALL PRISONS TO ENROLL/UPDATE DETAILS OF PRISONERS

Priority: Low



Primary Source: The Hindu

Prepp Prelims Booster: Aadhaar

Prepp Mains Booster: Government policies and interventions for development in various sectors and issues arising out of their design and implementation.

Context:

- The Ministry of Home Affairs asked for utilizing the special dispensation made available by the UIDAI and enabling the enrollment/updating of Aadhaar cards for prison prisoners by conducting special camps at all prisons in a note to Heads of Prisons in all States/Union Territories.
- MHA has released a Standard Operating Procedure to be followed for such enrolments as part of the ongoing efforts to enroll all eligible residents for Aadhaar.

Standard Operating Procedure for prison enrolments

- The Unique Identification Authority of India (UIDAI) has consented to recognize the **Prisoner Induction Document (PID)** as a valid document for enrollment or updating Aadhaar as an exceptional measure to enroll prisoners across the nation.
- It was also decided **to conduct routine Aadhaar enrolment camps at the jails in coordination** with State governments to provide the prisoners with Aadhaar enrolment/update services.

Highlights

- The Aadhaar (Targeted Delivery of Financial and other Subsidies, Benefits and Services) Act, 2016, Section 57, permits the use of the Aadhaar Number to prove a person's identity for any purpose, subject to the requirements and obligations outlined in Section 8 and Chapter VI of the Act.
- The country's total Aadhaar penetration level has surpassed 93%, and for the adult population, it is almost 100%.
- According to the National Crime Records Bureau, there were 1,319 prisons in the nation as of December 31, 2021, housing a total of around

5.5 lakh inmates throughout 148 Central Jails, 424 District Jails, 564 Sub-Jails, 32 Women Jails, and 10 Borstal Schools, among others.



SUPREME COURT CALLS OUT CENTRE OVER SHORT TENURES OF CHIEF ELECTION COMMISSIONERS

Priority: Medium



Primary Source: The Hindu

Prepp Prelims Booster: Election Commissioner

Prepp Mains Booster: Appointment to various Constitutional posts, powers, functions and responsibilities of various Constitutional Bodies.

Context:

Recently, the Supreme Court said that the government paid mere "lip-service" to the independence of the Election Commissioners and it was evident from the way the tenures of Chief Election Commissioners (CECs) have "slid" down from over eight years in the 1950s to just about a few hundred days after 2004.

Background

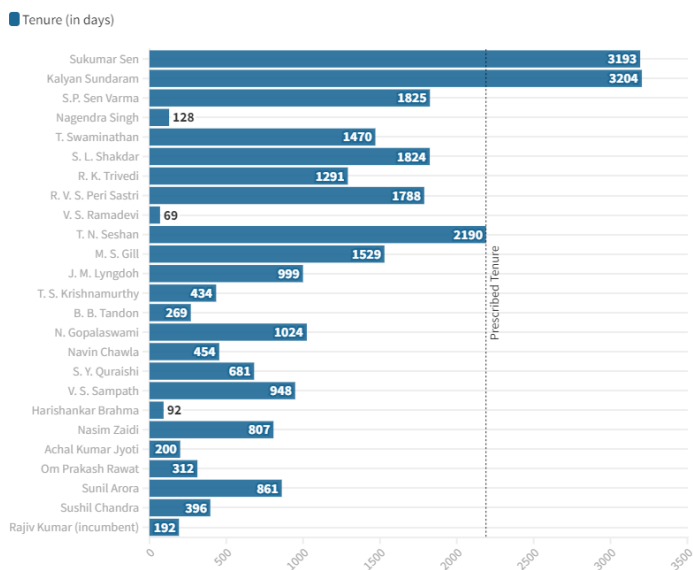
- A number of petitions for functional independence for election commissioners are being heard by the Constitution Bench.
- The court is explicitly looking into the issue of creating a "independent, neutral system" for the selection of Election Commissioners that is not under the jurisdiction of the executive branch.
- A person selected as an Election Commissioner could be 100 percent honest, but they could end up showing a clear political leaning while in service, the court had said orally during the previous hearing.

Highlights

- The previous UPA government had six CECs in just eight years, and from 2015 to 2022, for seven years, we had eight CECs, according to Justice Joseph, who was presiding over a five-judge bench.
- Following 2004, successive administrations "selected" individuals they were aware would "never ever" serve the entire six-year term required by the Election Commission (Conditions of Service of Election Commissioners and Transaction of Business) Act of 1991.
- According to Section 4 of the 1991 Act, a CEC and Election Commissioners' terms are six years long or until they reach age 65, whichever comes first.
- Justice Joseph said orally that the government is aware that these people would never serve even close to six years.

- The judge demanded an explanation from the government as to why "no checks and balances" had been applied to the situation.
- He cited the constitutional procedures used to nominate election officials in nations like Sri Lanka, Nepal, Pakistan, and the United Kingdom.
- Justice Joseph stated that the CECs' access to protections under Article 324, such as removal by impeachment, would only be useful if they served out their entire term.
- A full term in office, according to Justice Joseph, is the "most crucial" thing for a person in charge of an institution.

Chief Election Commissioner Tenures



What is the Election Commission (Conditions of Service of Election Commissioners and Transaction of Business) Act, 1991?

- The government made the CEC and the ECs equal by giving all three the status of a Supreme Court judge, retiring at the age of 65 years.
- In other words, all three Commissioners now had equal decision-making powers.
- The Act also added a new chapter called "Transaction of Business" that contains Sections 9, 10, and 11.
- In accordance with these three provisions, the CEC and the ECs were expected to make decisions with absolute unanimity and in case there was any difference of opinion on any issue, the majority view would prevail.

Election commission of India

- The Election commission of India is a permanent, autonomous, quasi-judicial and constitutional body created under Article 324 in part 15 of the constitution. It is the supreme body vested with powers of supervision, control and direction over all aspects of electoral governance in the country.
- The Election Commission was established in 1950 with the primary goal of managing and controlling and responsible for conducting free and fair elections of parliament, state legislature, the office of president of India and the office of vice-president of India

MUMBAI MEASLES OUTBREAK: WHAT IS THE ROLE PLAYED BY LACK OF VACCINATION

Priority: High



Primary Source: Indian Express

Prepp Prelims Booster: Measles

Prepp Mains Booster: Issues relating to development and management of Social Sector/Services relating to Health.

Context:

- Recently, a **measles outbreak in Mumbai** has alarmed the country's public health officials.
- Maharashtra Chief Minister Eknath Shinde has blamed the **outbreak on lack of vaccination**.
- Mumbai recorded **only 41% vaccine coverage against measles**.

Background

- Mumbai has recorded over 303 cases of measles this year, with 14 deaths.
- A sharp spike was witnessed in October and of the total number of cases so far, around 250 have been reported in the last two months alone.
- This is a huge jump from the past few years, 10 cases and 1 death in 2021, 29 cases and no death in 2020, and 37 cases and 3 deaths in 2019.

What is Measles?

- Measles is a highly contagious viral disease. Despite the availability of a safe and effective vaccine, it remains a leading cause of death among young children around the world.
- Droplets from an infected person's nose, mouth, or throat spread measles.



Why is there an increase in measles cases in Mumbai?

- Over the past few days, Mumbai has seen an increase in measles cases, with the majority of patients coming from lower socioeconomic backgrounds.
- Poverty, poor hygiene practices, poor nutrition quality, and a lack of vaccination in children have all contributed to the rising number of cases.
- The majority of cases have been reported in Bhiwandi (Thane) and Malegaon (Nashik), which have low vaccination coverage, particularly among children.
- Some families did not immunize their children due to religious or cultural beliefs.
- Many lives could have been saved if the children had been vaccinated on time and in larger numbers.

Which age group is most vulnerable to infection?

- Children under the age of five are the most vulnerable, particularly those under the age of two.
- Children who have not been immunized are most vulnerable.
- If children are immunized and contract the disease, the illness will be mild.

How critical are the two vaccine doses in containing the outbreak?

- Vaccines do not provide 100% protection against disease, according to studies, but once administered, the child will report mild illness even if affected. Complications or fatal issues such as pneumonia, diarrhoea, further sepsis, and other issues may be avoided.
- Vaccination is widely regarded as the most effective strategy for containing measles outbreaks.
- Individually, administering a measles vaccine within 72 hours of initial exposure may alter the clinical course of the illness and is generally recommended as a preventive measure.
- Recent studies have confirmed the benefit of this intervention, with post-exposure immunization effectiveness ranging from 91% to 100%, correlating with observations made prior to elimination.

How long does it take the vaccine to produce antibodies to fight the infection?

- It takes at least **four weeks after vaccination** for antibodies to develop. However, the most effective way to combat an outbreak is to vaccinate a large number of people, in this case children.
- Antibodies are produced as a result of vaccination, and when compared to unvaccinated children, those who have received a vaccine will undoubtedly have an advantage in fighting the infection if affected.

Did the pandemic have an effect on the national immunization program?

- Because of the pandemic and the lockdown, the national immunization program has suffered a setback. This has created a significant chasm.
- People were skeptical or scared of taking their children to hospitals, clinics, or healthcare centers to get vaccinated because they were afraid of them contracting Covid-19.
- Despite this hesitation, the BMC outperformed the vaccination drives and scheduled polio drives. Its officials have also kept track of vaccinations administered at private hospitals.
- According to the BMC, 20,000 children have received the MR vaccine.

What are the warning signs?

- It takes ten days for symptoms to appear after being exposed to the virus.
- Cough, cold, runny nose, sore throat, loss of appetite, high-grade fever, and body aches are some of the first common symptoms.
- After five days, rashes appear in the form of blotchy red marks. They usually begin at the child's hairline or behind his or her ears. These then spread to other parts of the body, including the throat, limbs, and joints.
- Tiny white dots on the roof of the mouth are another sign of measles in a few cases.

What is the treatment strategy?

- As measles is a symptomatic disease, complications can occur, particularly if the child is unvaccinated and has a history of malnutrition.
- Common complications include red eyes, pneumonia, diarrhoea, ear infections, and, in some cases, encephalitis, also known as brain inflammation.

- It can also cause **Subacute Sclerosing Panencephalitis (SSPE)**, a fatal central nervous system disease, in rare cases. SSPE usually appears seven to ten years after a child has recovered from measles.
- The best way to avoid the scenarios described above is to ensure that every child is immunized against measles.

How can we avoid a future surge?

- The best way to prevent future outbreaks is to raise public awareness about the importance of vaccines.
- Every child must receive the measles vaccine, and any prejudices a community may have against it must be overcome.
- It is completely safe and prevents measles from becoming fatal in children.

What are the immediate measures?

- Keep an eye out for infected children and treat them as soon as possible.
- Ensure that all children who did not receive vaccines due to the lockdown and pandemic are vaccinated.
- If children exhibit any disease-related symptoms, seek medical attention from specialized doctors and paediatricians.

Advantages of Early Vaccination

- Broad and early vaccination implementation has been linked to shorter outbreak durations, smaller outbreak sizes, changes in the epidemic curve, case reduction, lower than expected morbidity and mortality, and partial or complete avoidance of outbreaks in closed populations in a variety of studies.
- Increased use of this control measure may have an impact on disease transmission at the community level by directly reducing the number of secondary measles cases and increasing immunity to levels that can impede the spread.

Mop-up Vaccination Campaign

- The Maharashtra government has initiated a mop-up vaccination of all children with MRCV in areas affected by the recent outbreak. This dose will be in addition to the primary vaccination schedule for the first and second doses.
- Infants six months and older should also be immunized against measles.
- According to an expert, the efficacy of measles vaccination is estimated to be 85% on average if the first dose is given at nine months. When the second dose is administered, it rises to nearly 95%.
- However, even after two doses of vaccination, a few vaccinated children in the Mumbai and Mallapuram districts of Kerala became infected with the disease. This could be due to a failure to seroconvert following vaccination.
- The population's susceptibility to measles is determined by two doses of the vaccine, vaccine effectiveness, immunity from prior infection, and maternal antibodies in infants.

Efforts Taken by Government to Eliminate Measles

- The elimination of **measles and rubella (MR)** is a national health priority, and the government has adopted the National Strategic Plan for Achieving and Sustaining Measles and Rubella Elimination in India.
- After missing the 2015 target, the government decided to eliminate measles and rubella from India by 2020, and the MR elimination target was pushed back to 2023.
- **Campaigns:** In 2017, all states carried out school-based Measles-Rubella (MR) vaccination campaigns for children aged 5 to 15. Success was good in a few states, but not in others. At the national and subnational levels, the country is working toward the MR elimination goal of achieving and

maintaining 95% vaccination coverage with two doses of a measles-and-rubella vaccine.

- **Universal Immunization Programme (UIP):** The Universal Immunization Programme (UIP) of India provides free vaccines against 12 life-threatening diseases. It provides free vaccines to all children in the country to protect them against Tuberculosis, Diphtheria, Pertussis, Tetanus, Polio, Hepatitis B, Pneumonia, and Meningitis caused by Haemophilus Influenzae type b (Hib), Measles, Rubella, Japanese Encephalitis (JE), and Rotavirus diarrhoea.
- **WHO Assistance:** The WHO Country Office in India is assisting the Government of India and state governments in meeting key elimination targets. WHO has also provided technical assistance and monitoring for all rounds of IMI to support immunization strengthening.

INTERNATIONAL RELATIONS

FIREPROOFING INDIA FROM GLOBAL TURBULENCE

Priority: Low



Primary Source: The Hindu

Prepp Prelims Booster: International Relations

Prepp Mains Booster: Effect of policies and politics of developed and developing countries on India's interests, Indian diaspora; Effects of globalization on Indian society; political philosophies like communism, capitalism, socialism etc their forms and effect on society.

Context:

- Recently, Arjun Subramaniam (Retired Air Vice Marshal and President's Chair of Excellence at the National Defence College, New Delhi) in the article published in The Hindu "Fireproofing India from global turbulence" has written about the notions of firefighting and fireproofing approach of India's foreign policy as national responses to any global political crises.
- In this article, he argued for careful reconsideration of the rapidly changing geopolitical, geoeconomic, and security environments of International Politics.

Fireproofing strategies

- **Definition:** The firefighting approach in foreign policy is a reaction or a response to any initiative or incident in International politics.
- It denotes the response to any crises brought on by other actors in world politics.
- It highlights the lack of capability, readiness, national will, and coordination across various instruments of statecraft.

Need for developing fireproofing strategies:

- Lack of preparedness, lack of capacity, lack of national will, and cohesion between different instruments of statecraft could combine or work independently to drastically weaken national power.
- **Unity:** India is no stranger to fighting fires in **fields as diverse as repairing social fault lines, sealing economic fissures, and struggling to recover from failures** in terms of national security, despite its measured success and steady progress in many areas.
- However, the nature of deterrence has mostly been reactive and has rarely kept up with the continually evolving nature of conflict and internal dissent mechanisms.

- **Complexity:** A lack of capacity and doctrinal guidance will impede this in complex situations, notwithstanding recent attempts to shift to a more proactive and even preemptive approach to deterrence.
- **Security:** The core of fireproofing tactics should consist of credible coercive powers against external threats and improved strategic communication to seal internal fissures and cracks.
- **Economic growth:** Now is the time to consider whether a changing India, with goals of a five trillion dollar and ten trillion dollar economy in the coming decades, needs to seriously consider developing fireproofing strategies to adequately protect itself from the multitude of crises raging around the world, all of which have the potential to impede or even halt India's rise in the upcoming decade.
- **Globalization:** Despite the fact that globalization largely brought about universal economic prosperity, it also compelled nations to remove some of the built-in protection that the global economic order had provided and produced a number of vulnerabilities.
- While global issues like extremism, hyper-nationalism, the unequal distribution of wealth, migration, and the negative effects of climate change must be tackled, there are some specific ones that individual nations must devise plans to address.
- **Uncertainty:** If the phrase "stormy seas," frequent allusions to security threats, Black Swan/Grey Rhino events, and winning local wars dominated Chinese leader Xi Jinping's speech during the recently concluded 20th National Congress of the Chinese Communist Party, it is clear that there is a tacit understanding within the world's second-most powerful country that difficult times are ahead.
- To achieve developed nation status by 2047.
- Achieve undiluted regional hegemony and power parity with the United States globally

Steps to be taken

- **DIMES paradigm of diplomacy:** diplomacy, information, military, and economics (DIME) and Society
- Even though establishing strategic autonomy in a multipolar world may be the ultimate aim, and balancing and hedging are now vital Indian diplomatic strategies, it is impossible to disregard the limits of Indian national power in the face of a sharp rise in Chinese national power.
- The recalibrating of existing strategic relationships and alliance exploration will require difficult decisions.
- **Economic insulation:** Despite economic optimism that India is sturdy enough to weather a global energy crisis or a financial depression.
- This is where the fireproofing of the economy in the longer term must focus on combating poverty, ensuring that everyone has access to health care and education, creating jobs, and improving the other components of the human development index. India's economic insulation is found here.

Way Forward

- Indian society and the information domain require extensive fireproofing to be able to survive several fissiparous risks despite the country's resilient population.
- Periodic churn is a characteristic of evolving civilizations, and in the case of India, this churn has coincided with a number of significant global events, including the militarization of the information age and the rise of social media.

- The most considerable difficulty for India's leaders would be maintaining unity given its size, ethnic diversity, and demographic profile of being multi-religious, multi-cultural, and multilingual.
- And if India is to remain on the path over the next ten years, this calls for the highest level of sagacity and statesmanship.
- Fireproofing won't be simple; the Indian people would need to be more disciplined.
- For India, nevertheless, this will be a small price to pay to continue pursuing its fundamental national interests.

INDIA, BANGLADESH ESTABLISH CONTACT AS MORE KUKI-CHIN REFUGEES ARE EXPECTED TO ENTER MIZORAM

Priority: Medium



Primary Source: The Hindu

Prepp Prelims Booster: India Bangladesh Border

Prepp Mains Booster: India and its neighborhood- relations; Bilateral, regional and global groupings and agreements involving India and/or affecting India's interests.

Context:

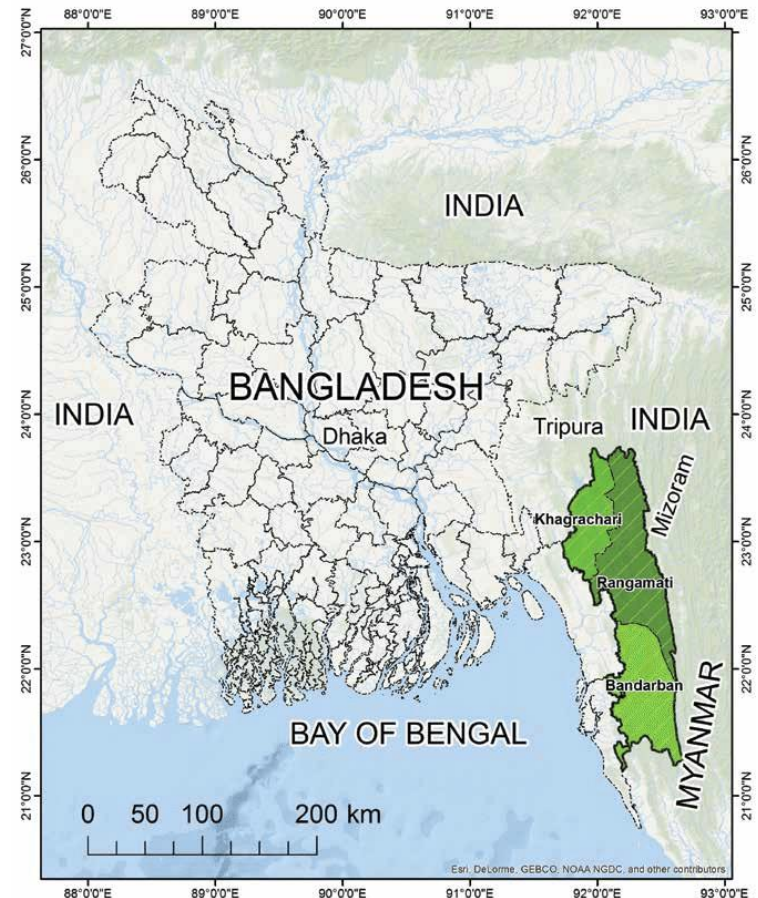
- Recently, on November 20, more than 270 members of the Kuki-Chin community from Bangladesh entered Mizoram and crossed over to India fearing an attack from Bangladesh security forces. On November 27, 21 Kuki-Chin members entered Mizoram, taking the total number of refugees to 293.
- The government estimate that 150 more refugees are expected to seek shelter in Mizoram in the next few days.

What is the issue?

- The Kuki-Chin National Front (KNF), an ethnic separatist group claiming to speak for the interests of the Kuki-Chin-Mizo communities residing in the region, has an **armed wing called the Kuki-Chin National Army (KNA)**, which is engaged in **combat with Bangladesh Rapid Action Battalion (RAB) soldiers in the Chittagong Hill Tract**.
- Around 2008, the KNF was created in response to the CHT's demand for a **separate state**.
- The KNF claims all members of the Bawm, Pongkhua, Lushai, Khumi, Mro, and Khyang ethnic groups belong to a greater Kuki-Chin race.
- In October, Bangladesh launched a **special armed operation to seize the KCNF cadre from the Chittagong Hill Tracts**, an area known to be home to a number of ethnically distinct communities.
- The KCNF and FAFHS have a similar desire to establish a base for their activities in the strategically significant region at the intersection of Myanmar, Bangladesh, and India.
- A fundamentalist group in Bangladesh named Jama'atul Ansar Fil Hindal Sharqiya (JAFHS) had provided financial support to Kuki-Chin National Front fighters.
- The Kuki-Chin fighters, according to Dhaka, had received weapons training but lacked money, which the JAFHS supplied to them.
- Since Bangladesh maintains a zero-tolerance attitude toward terrorism and extremism, the JAFHS has been kept in check and hasn't developed into a sizable armed organisation.

Kuki-Chin tribe

- The Kuki-Chin people share ethnic ties with the Mizos are spread over hilly areas in Bangladesh, Mizoram, and Myanmar.
- They fled their homes following armed conflicts between the Bangladesh army and an ethnic insurgent group Kuki-Chin National Army (KNA).



What is India's stand on refugees?

- India is not a signatory to the 1951 UN Convention relating to the Status of Refugees and the 1967 Protocol.
- All undocumented foreign nationals are governed as per the provisions of The Foreigners Act, 1946, The Registration of Foreigners Act, 1939, The Passport (Entry into India) Act, 1920 and The Citizenship Act, 1955.
- According to the MHA foreign nationals who enter the country without legitimate travel documents are classified as unlawful immigrants.
- Currently, there is no national law on refugees.
- The MHA only publishes Standard Operating Procedures to handle foreign nationals in India who claim themselves to be refugees.
- In some cases, the Center offers relief assistance in the form of a monthly cash dole, a subsidized ration, clothing materials, utensils, grants for cremation and shradh (last rites), as well as infrastructure facilities in camps.

AUSTRALIA, MALDIVES OFFICIALS DID NOT ATTEND CHINA'S INDIAN OCEAN MEET

Priority: High



Primary Source: The Hindu

Prepp Prelims Booster: China's Indian Ocean Meet

Prepp Mains Booster: Bilateral, regional and global groupings and agreements involving India and/or affecting India's interests; India and its neighbourhood- relations.

Context:

- Recently, the China International Development Cooperation Agency (CIDCA), an organization connected with the Chinese Foreign Ministry held a meeting of the China-Indian Ocean Region Forum on Development Cooperation on November 21, in which 19 countries took part. However, India was conspicuously absent.



- The meeting was held in a hybrid manner under the theme of "Shared Development: Theory and Practice from the Perspective of the Blue Economy" in Kunming, Yunnan Province.

Highlights

- Participants:** High-level delegations from 19 nations, including Indonesia, Pakistan, Myanmar, Sri Lanka, Bangladesh, Maldives, Nepal, Afghanistan, Iran, Oman, South Africa, Kenya, Mozambique, Tanzania, Seychelles, Madagascar, Mauritius, Djibouti, Australia, and representatives from three international organisations, were in attendance at the hybrid forum, according to a press release from CIDCA.
- A report claims that India was not invited.
- India was absent from China's COVID-19 vaccine cooperation meeting with some South Asian nations last year.
- Australia and the Maldives announced on 27th November that they had not attend** the recent Chinese-organized Indian Ocean Region Forum, which the organisers claimed.
- Both countries clarified there was no official representation** at the China-backed forum.
- The Chinese Foreign Ministry declined to provide the identities of the foreign participants. In multilateral engagements, participants' information is typically disclosed.
- According to a news statement from the CIDCA, China offered to create a **marine disaster prevention and mitigation cooperation mechanism** between China and nations in the Indian Ocean region at the China-Indian Ocean Region Forum on November 21. China is prepared to offer the necessary material, technical, and financial support.

What are the issues?

- Challenge India's Influence in The Region:** The fact that **India was not invited to this forum** is known, and experts interpret this as an attempt to undermine India's longstanding influence in the area amid concerns about the militarization of the Indian Ocean region.

- Even though it is geographically far from the Indian Ocean, China has steadfastly attempted to increase its political, economic, and security incursions.
- Challenge existing Forums:** The **creation of a new forum by China** for IOR nations despite the existence of existing successful forums raises **serious concerns and appears** to be a response to India's considerable influence in the area.
- China:** China has made major infrastructure and port investments in a number of nations, including Pakistan and Sri Lanka.
- In addition to developing the port at Pakistan's Gwadar in the Arabian Sea against India's western border and making infrastructure investments in the Maldives, Beijing has acquired Sri Lanka's Hambantota port on a 99-year lease.
- Debt diplomacy:** China has frequently been accused of using its Belt and Road Initiative to engage in "debt diplomacy" in these nations, purportedly in the name of infrastructure development.
- China has frequently stationed navy warships in the Gulf of Aden since 2008, and in 2017, it opened its first overseas military base in Djibouti.
- The Indian Ocean littoral has taken centre stage in China's massive Belt and Road Initiative due to China's significant involvement in global supply chains, the vast resource base of the Indian Ocean, and the passage of important sea lines of communication across the IOR.

India

- India has traditionally been a partner and supporter of the countries in the Indian Ocean Region (IOR), as well as a first response to major crises in the littoral countries.
- Under the slogan "Security and Growth for All in the Region (SAGAR)" as proclaimed by Prime Minister Narendra Modi during a visit to Mauritius in 2015, it has been regularly engaging with the nations along the Indian Ocean's littoral through organizations like the Indian Ocean Rim Association (IORA) and the Indian Ocean Navies Symposium (IONS).
- China is an **IORA dialogue partner along with the US, Russia, and numerous other European nations**.
- China, which is not an Indian Ocean nation, **is one of several observers in the IONS conference**, which brings together 24 nations from the region.

Indian Ocean Region Association:

- The Indian Ocean Rim Association (IORA) is a dynamic intergovernmental organisation that works with its 23 Member States and 10 Dialogue Partners to promote sustainable development in the Indian Ocean region.
- Members:** Commonwealth of Australia, People's Republic of Bangladesh, Union of Comoros, French Republic, Republic of India, Republic of Indonesia, Islamic Republic of Iran, Republic of Kenya, Republic of Madagascar, Malaysia, Republic of Maldives, Republic of Mauritius, Republic of Mozambique, Sultanate of Oman, Republic of Seychelles, Republic of Singapore, Federal Republic of Somalia, Republic of South Africa, Democratic Socialist Republic of Sri Lanka, United Republic of Tanzania, Kingdom of Thailand, United Arab Emirates and Republic of Yemen.
- All sovereign States of the Indian Ocean Rim are eligible for membership of the Association.
- To become members, States must adhere to the principles and objectives enshrined in the Charter of the Association.



RUSSIA'S NUCLEAR ICEBREAKERS AND MILITARISATION OF THE ARCTIC

Priority: High



Primary Source: The Hindu

Prepp Prelims Booster: Arctic Region, World Geography

Prepp Mains Booster: Bilateral, regional and global groupings and agreements involving India and/or affecting India's interests.

Context:

Recently, President Putin presided over the flag-raising ceremony and dock launch for two nuclear-powered icebreakers- Yakutia, that will ensure year-round navigation in the Western Arctic.

Nuclear Icebreaker-Yakutia: Features

- With a displacement of up to 33,540 tonnes, the 173.3-meter Yakutia was released into the ocean. It can break through three meters of ice. It'll start working by the end of 2024.
- On the Ural, a different vessel, the flag was raised. It is anticipated to start working in December.
- The Arktika and the Sibir, two further icebreakers in the same type, are already in use.
- The Chukotka, another icebreaker of the same class, is scheduled to be commissioned in 2026.
- By 2027, the Rossiya, a massive nuclear icebreaker with a displacement of up to 71,380 tonnes, would be completed.
- It will have the strength to cut through four meters of ice.

Relevance for Russia:

Bolster Russia's position as a major Arctic power:

- Both icebreakers are a part of our extensive, organized effort to restock the Russian icebreaker fleet.
- As a result, Russia's position as a dominant force in the Arctic will grow.

Arctic's strategic relevance:

- Due to climate change, the Arctic is becoming more strategically significant as a melting ice sheet creates new sea lanes.
- Arctic and near-arctic states have been racing to improve their capacities in an effort to be prepared to take advantage of the melting Arctic.
- For instance, NATO has been holding frequent drills in the area. A bold idea for a connection to Europe via the Polar Silk Route has also been announced by China, which proclaims itself a near-Arctic state.
- Unlike Antarctica, the Arctic is not a global common.
- Vast oil and gas resources lie in Russia's Arctic regions, including a liquefied natural gas plant on the Yamal Peninsula.

- As the earth further heats up, which is more profound at the poles, the race for the Arctic is set to accelerate. This makes the Arctic the next geopolitical hotspot.



Development of the Arctic:

- In order to expand trade along the Northern Sea Route, provide safe, sustainable navigation in this area, and conduct research and development in the Arctic, it is necessary to have these vessels.
- Russia will be able to more completely realize its export potential and build effective logistical routes, particularly those to Southeast Asia, thanks to the development of this crucial transport corridor.
- When compared to the current route via the Suez Canal, this route, also known as the Northern Sea Route, can cut the travel time to Asia by up to two weeks.

Why are countries increasing their activities in the Arctic?

- Arctic and near-Arctic states have been racing to improve their capacities in an effort to be ready to take advantage of the melting Arctic.
- In response to Russian military modernization in the Arctic, several Arctic states have jumped on board the race to militarisation of the Arctic.
- The Arctic, unlike Antarctica, does not contribute to the issue by being a global common.
- As an illustration, the North Atlantic Treaty Organization (NATO) has been doing regular drills in the area while its allies are spending money modernizing their militaries.
- At the same time, China, which describes itself as a country bordering the Arctic, has revealed ambitious ambitions to build enormous icebreakers and establish a 'polar silk route' connecting China to Europe.

What is India's involvement in the Arctic?

Initial Stage

- The Svalbard Treaty was signed in Paris in 1920, which marked the beginning of India's involvement in the Arctic.
- One of the very few nations to establish a permanent station in the Arctic for scientific research is India.
- In the first week of August 2007, it began its first scientific journey to the Arctic.
- India has since started sending research teams to the Arctic every summer and winter to conduct studies.
- Glaciology, hydrochemistry, microbiology, and atmospheric sciences are the main areas of Indian studies.

Following involvement:

- In July 2008, the Himadri research station opened in Ny Alesund, Svalbard, Norway.
- IndArc, a multimodal observatory, was set up by India near Kongsfjorden in 2014.
- At Gruve Badet, the northernmost atmospheric laboratory in India was created in 2016.
- It was created in order to research long-range pollutants, precipitation, clouds, and other background atmospheric characteristics.

India as an observer in the Arctic Council:

- Since 2013, India has served as an Arctic Council observer. In 2019, its observer status was extended for another five years.
- The Council is the top intergovernmental organization fostering collaboration on a unified Arctic policy.
- Through the Ottawa Declaration of 1996, the eight Arctic States, or nations whose territory are in the Arctic, were established.
- Canada, the Kingdom of Denmark, Finland, Iceland, Norway, the Russian Federation, Sweden, and the United States are members of the Council.

Arctic Policy of India was introduced:

- The Indian government published an Arctic policy in March 2022.
- India is envisioned as participating in Arctic climate research, environmental monitoring, marine cooperation, and energy security projects.
- The nodal agency for carrying out the Arctic Policy will be the National Centre for Polar and Ocean Research, which is under the Ministry of Earth Sciences.

Arctic Region:

- It is generally accepted to refer to the area north of latitude 66° 34' N, above the Arctic Circle, which contains the Arctic Ocean with the North Pole at its center.
- Canada, the Kingdom of Denmark, Finland, Iceland, Norway, Russia, Sweden, and the United States are the eight Arctic States that make up the **Arctic Council**.
- Nearly four million people live in the Arctic region, with about a tenth of them being indigenous people.
- The Arctic Ocean and its surrounding continent have drawn significant interest from the world's scientific community and are a major research priority for decision-makers.
- The Arctic has an impact on the earth's ecosystem's biogeochemical, oceanic, and atmospheric cycles.
- The region is controlled by national internal laws, bilateral agreements, international treaties and conventions, as well as indigenous peoples' customary laws.
- The Arctic Council, which was established with the dual goals of environmental preservation and sustainable development, is the main high-level intergovernmental forum for Arctic cooperation.
 - Members, permanent participants, and observers make up this group. Its six working groups are in charge of projects that are financed voluntarily.

BLACK SEA GRAIN INITIATIVE

Priority: Medium



Primary Source: The Hindu

Prepp Prelims Booster: Black sea Grain Initiative

Prepp Mains Booster: Effect of policies and politics of developed and developing countries on India's interests, Indian diaspora.

Context:

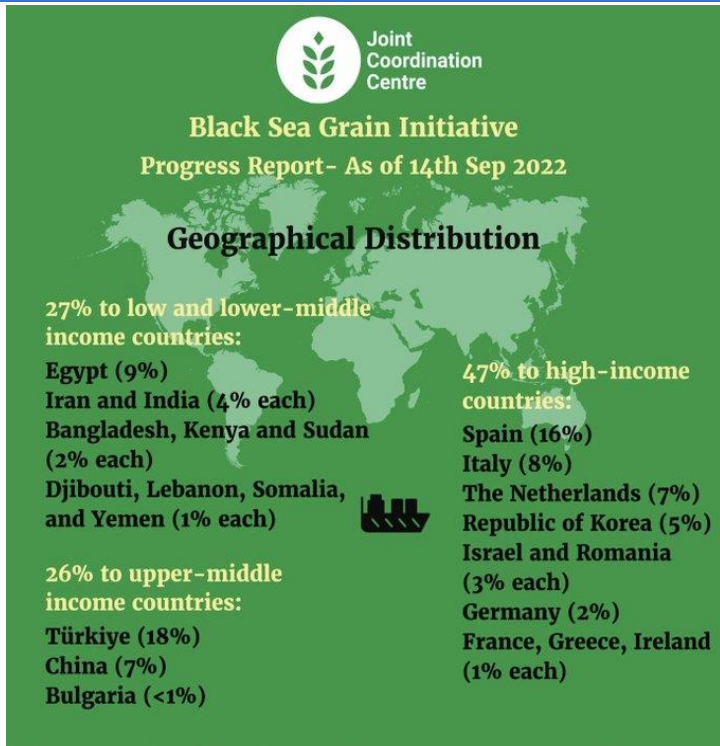
- Russia re-joined the Black Sea Grain deal last week, in a move that eased concerns about yet another disruption to global food supply chains. The mediation of the United Nations and Turkey secured continued cooperation.
- Earlier, Moscow claimed that the action had been taken in retaliation to Ukraine's involvement in an attack on Russian ships in the Crimean Peninsula's Sevastopol port (annexed by Russia in 2014).
- Due to the trend, Russia was accused by the US and Ukraine of using food exports to bolster its position in the conflict.

What is the Black sea Grain Initiative?

- The deal, brokered by the United Nations (UN) and Turkey, was signed in Istanbul on July 27 this year.
- The agreement, which was initially set forth for a period of 120 days with the option to extend or terminate after that in November, was intended to provide a safe maritime humanitarian corridor for exports from three of Ukraine's important ports, namely Chornomorsk, Odesa, and Yuzhny/Pivdennyi, of goods (particularly food grains).
- The main goal was to control market volatility by assuring a sufficient supply of grains and preventing increased food prices.
- Ukraine is one of the world's top exporters of rapeseed, sunflower oil, sunflower seeds, and wheat.

Features of the initiative

- A **Joint Coordination Centre (JCC)** composed of senior members from Russia, Turkey, Ukraine, and the UN was established as a result of the agreement for oversight and coordination.
- To ensure proper monitoring, inspection, and safe transit, all commercial ships must register directly with the JCC.
- Ships transiting the authorised corridor both inbound and outbound according to a schedule set by the JCC following an inspection.
- In order to guarantee that there is no unauthorized cargo or individuals onboard, this is done.
- After that, they are permitted to use the approved corridor to continue sailing to Ukrainian ports for loading.
- All ships are subject to national authority and responsibility once they enter Ukrainian territorial waters.
- A minesweeper from another country would be **required to sweep the approaches to the Ukrainian ports** should it be necessary to remove explosives, or tow the vessel using tugboats.
- **No military ships or unmanned aerial aircraft** are permitted to approach the corridor **any closer than the JCC-agreed-upon predetermined distance**. The parties would also need to be consulted on this, and the JCC would need to give its approval.
- The JCC would assist the crew or undertake an inspection against security assurances in the event of non-compliance or suspicious activity, at the request of a party.



Why is it significant?

- According to the UN Office for Coordination of Humanitarian Affairs, about 10.1 million tonnes of grains have been shipped since the initiative started.
- During the assessment period for September, the **FAO Food Price Index**, which measures the monthly change in **worldwide prices of a basket of food commodities**, **decreased for the sixth consecutive month**.
- Earlier, it was implied that there was a possibility for more price declines because the market supply situation was thought to be easing.
- Due to the shortage of supplies, many who were hoarding grain in the hopes of selling it for a significant profit were forced to sell.
- Additionally, the programme has been recognised with making a "big difference" in the world's affordability crisis.
- About 44% of the shipments, which included corn, wheat, rapeseed, and sunflower oil among other things, went to high-income nations like Spain, the Netherlands, and Italy, 28% went to low- and lower-middle-income nations like Egypt, Iran, Sudan, and Kenya, and 27% went to upper-middle-income nations like the United States and Canada (China and Bulgaria among others).

What would have happened if the deal was suspended?

- Inflation:** The deal's suspension was anticipated to bring back price pressure on foodgrains, particularly wheat as the inventories are at a historical low.
- Food Insecurity:** Countries in West Asia and Africa, such as Egypt, Turkey, Lebanon, Sudan, and Yemen, which benefited from the resumption and are especially reliant on Russian and Ukrainian exports, may have been disproportionately affected.
- Therefore, they claim that the suspension might have increased food insecurity as well as perhaps heightened political tensions.
- Reduced prices for Ukrainian farmers:** The researchers noted that storage facilities in Ukraine are already near capacity. Reduced export

opportunities along with this would have meant reduced prices for farmers even as global shortages drive up prices.

SHANGHAI COOPERATION ORGANISATION (SCO) 2022: THE VIEW FROM SAMARKAND

Priority: Medium



Primary Source: Indian Express

Prepp Prelims Booster: Central Asia

Prepp Mains Booster: International Relations, India and Its Neighbourhood, International Institutions and Global Groupings,

Context:

- This article is based on an article published in The Indian express titled "The view from Samarkand," which discusses the political chaos in the Central Asian region.

News Summary

- The Samarkand Declaration, which describes Central Asia as the "core" of the Shanghai Cooperation Organisation (SCO), also reflects on South Asia's difficulties and ambitions.
- The US policy recognises that a "safe and stable" Central Asia would "directly" help to the US's counter-terrorism operations, and that a "secure and stable Afghanistan should be a key goal for the region.
- The SCO, despite major internal conflicts, does not appear to have an anti-US bias.
- However, rivalry between the United States and China in the Indo-Pacific region has surpassed competition in Central Asia, Afghanistan, and Pakistan. This "area" is also critical to Chinese national security.

Samarkand Declaration

- The Shanghai Cooperation Organisation (SCO) 2022 summit was recently conducted in Samarkand, Uzbekistan. The participating countries signed the Samarkand Declaration.
- India will be the SCO's President in 2023.
- The Samarkand declaration was issued by the leaders of the Shanghai Cooperation Organisation (SCO) Member States during a meeting of the Council of Heads of State in the city of Samarkand on September 16, 2022.
- The Samarkand Declaration urged for "commitment to peaceful resolution of disagreements and issues among countries via communication and consultation."
- They emphasise that the values of mutual respect for sovereignty, independence, territorial integrity of states, equality, mutual benefit, non-interference in internal affairs, and non-use or threat of use of force form the foundation of long-term international relations growth.
- The member nations want to develop common concepts and procedures in order to create a consolidated list of terrorists, separatist and extremist organisations whose activities are illegal on SCO member states' borders.

Chaos in Central Asian Region

- In Afghanistan, the Taliban is confronting Pakistan's numerous threats to security and stability.
- The existence of foreign militants in Afghanistan, largely linked with the Taliban and hailing from Russia's north Caucasus area, Pakistan, and China's Xinjiang province, was recorded in a UN Security Council report in June 2021.

- Meanwhile, Pakistan has continued to develop its proxy game throughout the arc and beyond, with diplomacy serving as the ideal cover.
- China, in collaboration with Pakistan, is attempting to "reverse stretch" other regional governments through proxy bloodshed and border conflicts.
- Pakistan delivered the Taliban to the United States in preparation for the Doha negotiations.
- And the Taliban took advantage of the situation to reach out to the rest of the globe, particularly Central Asia and China.
- The Doha Agreement signalled that the Taliban will be a member of the administration.
- As a result, fearful of the departure of US forces from Afghanistan, China began a strong engagement with the Taliban. However, China's direct influence in Afghanistan remains limited.
- However, Pakistani forces are facing attacks in tribal regions, including Peshawar and the Swat Valley.
- The combined Chinese-Pakistani actions include regular hardening of the LAC with India and a technical halt on UN designations of terrorists supported by Pakistan.
- With the Ukraine war still continuing, Russia has fewer resources to spare for Central Asian security concerns.
- China does not appear to be "ready" to offer a security cover to Central Asia or Afghanistan.
- However, it is closely coordinating activities with Pakistan throughout this arc and beyond, where China aspires to become the preeminent Asian power and utilise it to undercut competition from the US across the Indian Ocean area.

US-China dominance over the SCO

- Due to the existence of three nuclear weapon nations, US-China rivalry in the area includes a nuclear component.
- China began assisting Pakistan in building up its military might and nuclear capability primarily to counter dangers resulting from close Indo-Soviet collaboration.
- China and Pakistan collaborated with the West during the Cold War era and their nuclear weapon programmes did not come under intense "scrutiny." China has already created Pakistan as an "all-weather" nuclear state, albeit it may take some time for it to reach nuclear parity with the US.
- The dominance of the Pakistani army, in contrast to the intermittent US-Pakistan engagements, supports China-Pakistan collaboration across the whole spectrum of security and geopolitical issues.
- Chinese spy ship Yuan Wang 5 and Pakistani frigate PNS Taimur, which recently docked at ports in Colombo and Hambantota, respectively, look to be expanding their influence in the Indian Ocean region.

What is the Stand of India?

- India is correctly focused on the issue of connection with Central Asia since India's potential to contribute to peace and development in Eurasia completely depends on overcoming the absence of direct connectivity to the area.
- In the upcoming year of its SCO leadership, India must give new connectivity projects with Eurasia its entire focus.
- Greater connection is made possible by Iran's participation in the conference and the mobilisation of regional support for travel to central Asia via Pakistan and Afghanistan.

Highlights of meet

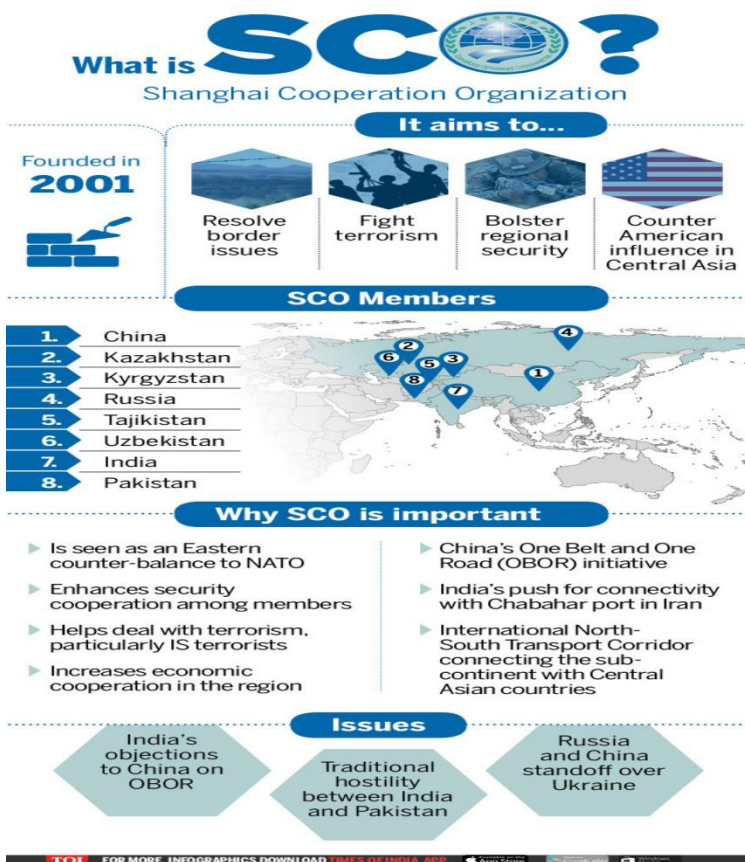
- India highlighted the need for better connectivity and fair market access
- **Connectivity:** In order to increase bilateral trade with Central Asian nations, External Affairs Minister advocated for **increased trade through the Chabahar port in Iran** and the **International North-South Transport Corridors**.
- India underlined the need for better connectivity in the SCO region built on the centrality of interests of Central Asian states.
- **Trade:** Only \$141 billion in total trade exists between India and SCO members, but that amount has enormous growth potential.
- The only way to advance is through fair market access, which is to everyone's benefit. China accounts for the majority of India's commerce with the SCO nations, which surpassed \$100 billion this year.
- While trade with Russia is less than \$20 billion. Trade with Central Asian countries is less than \$2 billion, and with Pakistan it is about \$500 million.
- **Climate Change:** The External Affairs Minister highlighted India's dedication to tackling the problem of climate change as well as India's successes in this area.

Steps taken by India to promote connectivity

- As an alternative to the BRI and transit trade through Pakistan, India has been developing and promoting the **Shahid Beheshti terminal at Chabahar and the link through the INSTC**.
- India has declined to join the BRI, which consists of a number of infrastructure projects that pass through Pakistan, Afghanistan, and Central Asia.
- Prime Minister Narendra Modi criticized Pakistan during the SCO conference in **Samarkand last month for not granting India "complete transit rights" to Central Asia**.

What is Shanghai Cooperation Organization (SCO)?

- The Shanghai Cooperation Organization (SCO) is an intergovernmental organization founded in Shanghai on 15 June 2001.
- The SCO has mostly concentrated on regional security issues, its fight against regional terrorism, ethnic secession, and religious extremism
- Regional development is another priority for the SCO at the moment.
- Since 2005, the SCO has participated as an observer at the UN General Assembly.
- **Member:** States China, India, Kazakhstan, Kyrgyzstan, Russia, Pakistan, Tajikistan and Uzbekistan),
- **Observer States** Afghanistan, Belarus, Iran, and Mongolia
- **Dialogue Partners-** Armenia, Azerbaijan, Cambodia, Nepal, Sri Lanka and Turkey.
- In 2021, it was decided to begin the process of Iran becoming a full member of the SCO, and Egypt, Qatar, and Saudi Arabia were made dialogue partners.



- Approximately 95% of the world's oil tanker fleet is covered by maritime liability insurance through the London-based International Group of Protection & Indemnity Clubs.
- Insurance:** A consistent price cap may make it easier for insurers to renew contracts and start new ones since they wouldn't have to worry about the price being changed by the nations that import Russian oil, which might have put them at risk of sanctions.

PETROLEUM CRUDE IMPORTS IN APR-SEP 2022



Figs in \$ billion; Source: Commerce ministry



G7 COALITION SAID TO AGREE ON SETTING FIXED PRICE FOR RUSSIAN OIL

Priority: Medium

Primary Source: The Hindu

Prepp Prelims Booster: G7 Countries

Prepp Mains Booster: Bilateral, regional and global groupings and agreements involving India and affecting India's interests.

Context:

- Recently, the Group of Seven rich nations and Australia have agreed to set a fixed price on Russian oil later this month, rather than adopting a floating rate.
- It aims to limit Moscow's ability to fund its war in Ukraine and at the same time not throttle the global oil market.
- The coalition has decided that rather than a discount to an index, the price cap would be a set price that is evaluated on a regular basis.

What does Russia's oil price cap mean?

- The G7 nations decided that the price cap would only apply to each consignment of seaborne Russian oil when it is first sold to a customer on land.
- The price cap is explicitly made to **limit Russia's income** and its capacity to finance the war in Ukraine, and its **impact on world energy prices**, especially in low- and middle-income nations.
- According to the price cap plan, the G7 nations will **refuse to provide insurance, financing, brokerage, navigation, and other services to oil cargoes** with prices that are higher than a yet-to-be-determined price ceiling on crude and oil products.

Impact

- Russia has threatened to stop supplying oil to any nation that agrees to the price cap scheme.
- It can have a 'detrimental effect' on global oil markets.
- Russian crude export disruption, according to Barclays analysts, may raise oil prices above \$200 per barrel.
- According to the energy cargo tracker Vortexa, **Russia has surpassed the historically dominating suppliers Saudi Arabia and Iraq to become India's main oil supplier.**
- The largest recorded monthly crude supply from Russia to India was 946,000 barrels per day in October.
- India purchases Russian oil at an **average discount of \$15 to \$20 per barrel on a delivered-at-place (DAP) basis**, with the seller taking on the transportation risk for delivery to the specified port.
- According to figures from the Union Ministry of Commerce and Industry, India bought crude oil **worth \$11.41 billion from Russia in the current fiscal year till the month of August.**

What is G7?

- The Group of Seven is an informal grouping of seven of the world's advanced economies, including Canada, France, Germany, Italy, Japan, the United Kingdom, and the United States, as well as the European Union.
- The G7 nations account for 10% of the worldwide population in 2022, 31% of the global GDP, and 21% of global carbon dioxide emissions.

- In 2021, yearly public sector spending will be more than revenue in all G7 nations.
- The majority of G7 nations also have significant levels of gross debt, including the US (133%), Japan (263% of GDP), and Italy (151%).
- The G7 has no permanent secretariat and is not established by a treaty. The group's presidency rotates annually among the seven member countries.

RUSSIA PULLOUT FROM BLACK SEA DEAL: THE IMPACT

Priority: Medium



Primary Source: Indian Express

Prepp Prelims Booster: Black Sea Grain Initiative

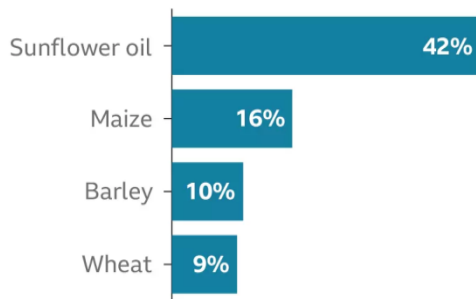
Prepp Mains Booster: Bilateral, regional and global groupings and agreements involving India and/or affecting India's interests, Effect of policies and politics of developed and developing countries on India's interests.

Why in the news?

- Recently, **Russia suspended its part of a deal under which Ukraine has been shipping grain from Black Sea ports.** The ships haven't yet stopped entirely, but the future of the humanitarian corridor that was set up in July is now very uncertain.
- It is unclear who would take the risk of sailing from Ukraine without Russia's protection after the Kremlin accused Kyiv of carrying out a drone attack against its Black Sea fleet.
- Ukraine and Russia are clearly global supporters of wheat, barley, sunflower oil and other food to Africa, the Middle East and parts of Asia.

Ukraine is a major supplier of key crops

% share of global exports, 2019



Source: Our World in Data, UN Food and Agriculture Organization



What is the Black Sea Grain Initiative?

- The Black Sea Grain Initiative was an agreement between Russia and Ukraine, as well as Turkey and the United Nations. It sought to ensure the safe passage of food grains exported from Ukraine, which is currently at war with Russia.
- This agreement allows for the resumption of grain, food, and fertilizer exports from Ukraine via a "safe maritime humanitarian corridor" from three key Ukrainian ports, namely Chornomorsk, Odesa, and Yuzhny/Pivdennyi.
- To carry out this agreement, a **Joint Coordination Centre (JCC)** with representatives from the Black Sea Grain Initiative signatories was established.
- According to JCC procedures, vessels wishing to participate in the Initiative will be inspected off the coast of Istanbul to ensure they are

empty of cargo before sailing through the maritime humanitarian corridor to Ukrainian ports to load.

- The JCC established the corridor, which is monitored 24 hours a day, seven days a week to ensure the safe passage of vessels. Vessels returning to Istanbul will also be inspected at the inspection area.
- More than 9 million tonnes of corn, wheat, sunflower products, barley, rapeseed, and soya have been exported since Russia and Ukraine signed the UN-backed Black Sea Grain Initiative in Turkey on July 22.

Why was the deal signed?

- Each year, Ukraine exports approximately 45 million tonnes of grain to the global market. However, after Russia launched its military campaign in February 2022, Ukraine was left with a large amount of grain stored in silos that couldn't be transported to other parts of the world.
- This has had a serious impact on the global grain supply. Many countries, particularly those in Africa, were on the verge of famine as a result of rising energy and food prices as a result of the conflict. These concerns were addressed by the Black Sea Grain Initiative.
- Under this agreement, over three million tonnes of cargo had left Ukraine by mid-September.
 - Corn accounted for approximately 51% of the total cargo, while wheat accounted for 25%, sunflower products accounted for 11%, rapeseed accounted for 6%, and barley accounted for 5%.
 - Soya beans and other food commodities made up the remainder of the cargo.
- Approximately half of the total cargo was shipped to high-income countries such as Spain, the Netherlands, Korea, Germany, Ireland, and Israel. Since the outbreak of the war, India has received 4% of Ukraine's total wheat exports.

Joint Coordination Centre for the Black Sea Grain Initiative

- The Joint Coordination Centre (JCC) will facilitate the implementation of the Black Sea Grain Initiative, which aims to establish a humanitarian maritime corridor that will allow ships to export grain, other foodstuffs, and fertilizers from Ukraine.
- The JCC was established on July 27, 2022, in Istanbul. The JCC is made up of representatives from Ukraine, the Russian Federation, Turkey, and the United Nations.
- The JCC arose from a recognition of the critical importance of global food security, as well as the region's reliance on grain and other foodstuffs produced in the region. The Initiative focuses on exporting grain, other foodstuffs, and fertilizers, including ammonia, from Ukraine.

What are the gains from the deal?

- The initiative brokered by the UN and Turkey has allowed more than 9 million tonnes of grain in 397 ships to leave Ukrainian ports. It has helped pull down global food prices by about 15% from their March peak.
- Following Russia's announcement, wheat futures jumped more than 5% on Monday in Chicago and key oil futures rose in Asian markets. With global markets tight, poorer countries will have to pay more to import grain.
- Before the deal was brokered, the US and Europe had accused Russia of starving vulnerable countries by denying exports. But after the deal, President Vladimir Putin has alleged, most of the grains went to Europe instead of the world's hungriest nations.

Status of the Ships

- A ship carrying 30,000 tonnes of wheat for Ethiopia left port on Monday, Ukraine said, one of a dozen ships laden with more than 3,54,000 tonnes of agricultural products that sailed.
- The UN said that three ships with 84,490 tonnes of corn, wheat and sunflower meal had sailed.
- Ethiopia, along with neighbouring Somalia and Kenya is badly affected by the region's worst drought in decades.

Why did Russia withdraw?

- Ukraine has launched a massive drone attack on the Black Sea Fleet in Sevastopol, Crimea, according to Russia.
- Russia also accused British troops of being involved in the recent attack and gas pipeline blowout.
- Ukraine has denied all of the allegations of an attack, calling the move 'rather predictable.'

Impact

- Russia has offered to supply up to 5,00,000 tonnes of grain to the poorest countries free of charge in the next four months.
- Developing nations will have to find new suppliers and pay more from countries such as the US, Argentina and Australia, where dry conditions or rain are posing problems.
- But high prices mean producers will plant more and countries like Brazil and India have shipped more.
- Ukraine accounted for 10 percent of world wheat exports.

CPEC: A STATUS CHECK

Priority: Medium



Primary Source: The Indian Express

Prepp Prelims Booster: CPEC

Prepp Mains Booster: India and its Neighbourhood relations, Bilateral Agreements involving India and/or affecting India's interests.

Context:

Recently India's MEA has raised an objection in the Council of Heads of Government of the Shanghai Cooperation Organisation about the violation of Sovereignty and integrity by the China Pakistan Economic Corridor (CPEC). In this context, Andrew Small has given a detailed account on the present status of CPEC in 2022.

What is the China-Pakistan Economic Corridor (CPEC)?

- China-Pakistan Economic Corridor (CPEC) is a 3000 KM Chinese infrastructure network project undertaken in Pakistan.
- It is a flagship component of the Belt and Road Initiative of China. The CPEC, which was launched in 2015, is the initiative's flagship project.
- CPEC is a sea-and-land based corridor, aimed to secure and reduce the passage for China's energy imports from the Middle Eastern countries by avoiding existing routes which in case of a war could be blocked and thus hampering the Chinese energy dependent economical avenues.
- The China-Pakistan Economic Corridor (CPEC) is a network of pipeline, railroad, and road networks.
- Through a large network of infrastructure projects, CPEC eventually hopes to connect the city of Gwadar in South Western Pakistan to Xinjiang in North Western China.
- China will be able to have access to the Indian Ocean through Gwadar Port, opening up access to the Middle East and Africa.
- In exchange, China will finance Pakistani development projects to help Pakistan overcome its energy crisis and stabilize its ailing economy.

What is the present status in CPEC?

- At present many energy projects have been finished, some road projects have been finished but others have not been finished.
- There are fewer special economic zones than originally planned and they are moving very slowly, and the majority of the projects in the area of Gwadar are still far from being finished.
- The multi-stage, transformative plans have generally been abandoned; the projects that were initially approved have mostly been moved forward;
- But nothing considerable new has been agreed upon over the past few years from the much larger package that was being negotiated in the CPEC framework.

Why was there a slowdown in the CPEC?

- **Opposition from Local Business to SEZ:** The special economic zones encountered resistance from Pakistani companies who were worried that China would receive preferential treatment at the expense of native companies.
- **Land:** Land distributions have been a source of contention.
- **Disagreement over financing:** There have been disagreements about how much money the Pakistani side would contribute to specific projects because the Chinese side frequently insists that they have a stake in the outcome.
- **Uncertainty over feasibility:** Some of the larger projects, most notably the construction of railways and hydroelectric dams, had questions regarding their economic viability. Gwadar
- Pakistan's Financial condition: By 2018, Pakistan's overall financial condition had begun to deteriorate, and when paired with China's political unpredictability.
- **Others:** Civil-military conflict over CPEC management, and subsequent Chinese conflicts with the PTI administration led by Imran Khan.

How much Chinese capital has been invested in CPEC to date?

- Both sides quote a current total of \$25 billion, up from \$19 billion five years ago. Chinese data is obviously problematic in many other scenarios, but when it comes to CPEC, official estimates from other independent sources haven't been that far off.

What is the progress on the Gwadar project?

- Several progress reports from the newly elected Pakistani government show that while some port infrastructure and planning work has been completed,
- There has also been a significant deterioration in the security situation. Therefore, it isn't much of a showstopper right now.
- It has been claimed that it will be commercially viable in just a few more years almost continuously since it was initially conceived.
- Although the challenges at Gwadar show how improbable it is that it will actually be a working port, for either commercial or military purposes, still it is expected that some of the work to be finished in the end.

What are India's concerns regarding CPEC?

Violation of India's Sovereignty:

- Since the project passes through the Gilgit-Baltistan area, which Pakistan claims as its own and is a crucial component of Kashmir, India's territorial sovereignty has been violated by this. India has consistently opposed CPEC from its beginning.

- The perception of Gilgit-Baltistan as a Pakistani territory will be strengthened if CPEC is a success and the region becomes prosperous, attracting foreign investment and industrial growth. As a result, India's claim to Gilgit-Baltistan will be undermined.

Strategic Concerns:

- China's "Malacca Dilemma" will be resolved once CPEC is fully operational, allowing China access to the Indian Ocean for trade and energy.
- India will be concerned about CPEC because it will result in the Belt and Road Initiative and the "String of Pearl" becoming realized around India.

Weakening of India's Economic Influence over Pakistan:

- Due to increased trade between Pakistan and China, Pakistan's inclination to normalize the relation with India will decline and hostility will continue.
- India's economic influence over the region including Afghanistan could further decline as a result of the CPEC's aspirations to expand into Afghanistan. India's position as Afghanistan's economic, security, and strategic partner could decline.

Terrorism and Security concern:

- Economic growth could further encourage Pakistan to continue supporting its cross-border terrorism campaign against India. This will raise more questions about India's security.
- This will strengthen China's power in India's sphere of influence in the Indian Ocean, coupled with the Belt and Road Initiatives and Gwadar port. This will raise the security threat that any country poses to India.



Way Ahead

- India could engage with other countries which share its principles and benefit from its strategic location by taking part in international projects such,
- The Asia-Africa Growth Corridor, an economic agreement between India and Japan, has the ability to aid India strategically and counterbalance China.

- The USA is promoting the Blue Dot network. This multi-stakeholder effort to establish dependable, high-quality standards for global infrastructure development involves governments, business, and civil society.
- It is projected to serve as a globally recognized evaluation and certification system for roads, ports, and bridges with a concentration on the Indo-Pacific region.

WHY HAS FRANCE ENDED ITS MILITARY OPERATION IN SAHEL



Priority: Medium

Primary Source: The Hindu

Prepp Prelims Booster: Events of International importance

Prepp Mains Booster: Effect of Policies and Politics of Developed and Developing Countries on India's interests.

Context:

Recently On November 9, French President Emmanuel Macron announced the end of the decade-long Operation Barkhane in Africa. French President, Mr. Macron said that, "Our military support for African countries will continue, but according to new principles that we have defined with them."

What is Operation Barkhane?

- In January 2013, France started conducting military operations in the Sahel. Operation Serval, as it was known, was restricted to going after Islamic extremists affiliated with al-Qaeda who had taken over northern Mali.
- The operation, now known as Operation Barkhane, was renamed and scaled up in 2014 with a counterterrorism focus.
- The goal was to support regional military forces in their efforts to stop the emergence of non-state armed groups throughout the Sahel.
- The regional joint counterterrorism force deployed about 4,500 French personnel



Has France achieved its objectives?

- In the Sahel Region, French Operation had two major goals:
 - First, to expel the northern rebellion from Mali.
 - Secondly, to complete counterterrorism operations in West Africa, including the elimination of important terrorists.
- With Operation Serval, France was able to retake the northern parts of Mali from the Islamists in 2014.

- Key figures from al-Qaeda in the Islamic Maghreb and its associate Groupe de Soutien à l'Islam et aux Musulmans, Abdel Malek Droukdel and Bah Ag Moussa, were killed in operations under French command in 2020.
- The **Operation Barkhane initiative**, which aims to combat terrorism in Mali, Niger, Burkina Faso, Mauritania, and Chad, was launched as a result of the 2014 success. But Operation Barkhane saw a number of setbacks.
- First, the region saw the expansion of new groups linked to terrorist organizations, notably the Islamic State, notwithstanding the operation.
- Second, the operation's failure triggered a humanitarian crisis.
- In just the first half of 2022, violence in Mali, Burkina Faso, and Niger claimed 5,450 deaths, a considerable increase from prior years, according to the Armed Conflict Location & Event Data Project (ACLED).
- In addition, compared to the 1,180 instances in the year prior, the Africa Center for Strategic Studies recorded 2,005 incidents of Islamist violence in the Sahel in 2021.
- Third, the failure of Operation Barkhane to put an end to the insurgencies in the area led to a rise in civilian military support, which in turn exacerbated the political unrest that followed in the Sahel.

Why did France decide to end Operation Barkhane?

- First, following a string of coups in Mali, Burkina Faso, and Guinea, France's relations with the military rulers turned antagonistic. After Mali dismissed the French ambassador because he objected to the junta's determination to stay in power until 2025, relations between France and Mali deteriorated. The fact that Malian authorities were negotiating a peace agreement with rebel groups infuriated France as well.
- Second, because Operation Barkhane was widely regarded as a failure, anti-French sentiments and doubts about France's objectives erupted, leading to a new call for France to leave the area.
- Last but not least, France and other Western nations assert that the Wagner Group, a private military firm affiliated with the Kremlin, is actively supporting the insurgency and undermining the French pullout.
- The Wagner Group is an option that interacts with military governments in Africa without upholding democratic and human rights ideals.

What is the Sahel Region?

- In Africa, the Sahel is the region of ecoclimatic and biogeographic transition between the Sudanese savanna to the south and the Sahara to the north.
- It covers the southern central latitudes of Northern Africa, between the Atlantic Ocean and the Red Sea, and has a semi-arid climate.
- The name is derived from the Arabic word for "coast, shore," which is used metaphorically to allude to the southernmost tip of the huge Sahara, it is said.
- From west to east, the Sahel region is made up of portions of northern Senegal, southern Mauritania, central Mali, northern Burkina Faso, the extreme south of Algeria, Niger, the extreme north of Nigeria, the extreme north of Cameroon and the Central African Republic, the center of Chad, the center and southern Sudan, the extreme north of South Sudan, Eritrea, and the extreme north of Ethiopia.

'NO CONSENSUS' IS DERAILING COUNTER-TERROR DIPLOMACY

Priority: Medium



Primary Source: The Hindu

Prepp Prelims Booster: CTC

Prepp Mains Booster: Bilateral, regional and global groupings and agreements involving India and/or affecting India's interests.

Context:

- Recently, India hosted a special meeting of the United Nations Security Council's Counter-Terrorism Committee (CTC).
- It discussed the overarching theme of 'Countering the use of new and emerging technologies for terrorist purposes.'
- The panel also discussed terror financing through crypto-currency and the use of drones in new-age terrorism.
- This is the first meeting of the UNSC-CTC in India since its establishment in 2001. The Permanent Representative of India to the UN serves as the Chair of the CTC for 2022.

What is the Delhi Declaration of Counter-Terrorism Committee (CTC)?

- The Counter-Terrorism Committee (CTC) unanimously adopted the Delhi Declaration on countering the **use of new and emerging technologies for terrorist purposes**.
- The Delhi Declaration on preventing the exploitation of cutting-edge technologies by terrorists was endorsed by the Counter-Terrorism Committee (CTC) with unanimous support.
- The Declaration outlines a number of decisions, including the intention to continue working on recommendations related to the three special meeting themes and the choice to create a set of **non-binding guiding principles** to help Member States combat the **threat posed by the use of new and emerging technologies** for terrorist purposes.
- The proclamation attempts to address the primary issues surrounding the misuse of crowdfunding, social media platforms, and drones and to establish rules that will aid in addressing the escalating problem.

Challenges

Global War On Terrorism (GWOT):

- The first difficulty is that the "Global War on Terrorism," which was conceptualized by the post-9/11 United States, has ended.
- The final chapter was written last year when the United States entered into negotiations with the Taliban and ultimately withdrew from Afghanistan.
- The foundation of the GWOT was an unequal campaign; when India requested similar assistance to deal with the hijacking of the IC-814 in December 1999, less than two years before the 9/11 attacks, its appeals were ignored by the United States, the United Kingdom, the United Arab Emirates (UAE), and of course Pakistan, all of which were later targeted by the same terrorists.
- Even after the start of the GWOT, **Pakistan's status as a partner of both the United States and China** meant that it was impossible for Masood Azhar and Hafiz Saeed to be included in the UNSC's list of individuals who posed the greatest threat to India.
- In October, Pakistan was removed from the Financial Action Task Force (FATF) grey list. This was the only significant international cooperation that India obtained.

- Additionally, the lacklustre response from the international community to the Taliban's occupation of Kabul and its persecution of women and minorities in the nation shows growing disinterest in "another country's problems."
- India must face the harsh reality that future counterterrorism cooperation will be less cooperative and that counterterrorism regimes like the UNSC Resolutions 1267, 1373, and others will become obsolete and ineffective.



A blur over definition, new technologies

- The conflict between Russia and Ukraine is dividing the world and diverting attention away from terrorism while also obscuring the definition of terrorism.
- For instance, Russian charges that the UK assisted Ukraine in launching drone assaults on Russia's naval fleet in Sevastopol caused the CTC conference in Delhi to be interrupted.
- Why was the line set for drone attacks on Russian ships in a port used for loading grain or a bridge bombing that placed so many civilian lives in danger if drone assaults by Yemeni Houthis on the UAE and Saudi Arabia's oil infrastructure were labeled as terrorist actions?

No support for the India-led Comprehensive Convention on International Terrorism (CCIT)

- The Comprehensive Convention on International Terrorism (CCIT) was proposed by India in 1996.
- The Organization of Islamic Countries (OIC), the United States, and the nations of Latin America are the three primary groups that oppose the conclusion and ratification of the Comprehensive Convention on International Terrorism (CCIT), despite India's attempts to promote it.

Use of emerging technologies and the weaponization of a number of different mechanisms

- Currently, **drones** are used to transfer money, drugs, ammunition, weapons, and even **homemade explosive devices**.
- Concerns over the use of biowarfare and **Gain-of-Function (GoF) research to alter viruses and vectors** that could be introduced into targeted populations have intensified since the COVID-19 outbreak.
- Using **robotic warriors and artificial intelligence (AI) technologies** makes it considerably simpler to carry out large attacks while remaining undetected in a future that is already here.

- **Bitcoin and other cryptocurrencies** are used in terrorism financing, and social media, the dark web, and even gaming facilities are used for terrorism communications.

Lack of consensus on what constitutes terror

- It will be **difficult to distinguish between the use of these emerging technologies by designated terror entities or state-sponsored terrorism unless there is an international agreement** on controlling their use by all responsible states.
- The most prominent instances of nations where the establishment has sponsored terrorist groups involved in cross-border strikes, drone operations, and cyber warfare include Pakistan, Iran, and North Korea.
- But how should one interpret North Atlantic Treaty Organization drone attacks that have murdered civilians in Yemen, Syria, Afghanistan, and Somalia or Chinese government-sponsored cyberattacks that take down metropolitan power grids?
- Additionally, there are no universally recognized standards regarding how to respond to such attacks, whether it be the U.S.'s destruction of Afghanistan following the 9/11 attacks, Pakistan's aerial attacks on its own people in Swat and Balochistan, India's crossing of the UN-monitored Line of Control following the Uri attack in September 2016 and missile strikes on Pakistani territory (Balakot, in February 2019), in response to the Pulwama suicide bombing in February 2019, or Israel's concessions.
- There cannot be a real global battle on terrorism without agreement on what terror is.

Way forward

- The third edition of the "No Money For Terror" (NMFT) conference, which will address potential new avenues for financing terrorism, will take place in New Delhi later this month.
- Additionally, in December, India will convene a special briefing on the "Global Counter-Terrorism Architecture," looking at the challenges ahead, when it assumes the United Nations Security Council Presidency for the final time before its two-year term in the Council comes to an end.
- Global stakeholders are currently preoccupied with territorial disputes and limited political differences; nevertheless, the next major causes of conflict and bloodshed in the globe will be concerns like global inequalities, food and energy shortages, pandemics, and climate change.
- Future terrorist attacks will become increasingly deadly, require fewer personnel to carry them out, and have more and more anonymous backers.
- India, as host of these counter-terrorism events, and the next G-20 and Shanghai Cooperation Organization (SCO), must stop fighting the "last war" on terrorism, and steer the global narrative towards preparing for the next ones.

PEOPLE vs THE STATE : IRAN

Priority: Medium



Primary Source: Indian Express

Prepp Prelims Booster: Events of International Importance

Prepp Mains Booster: Bilateral, Regional and Global Groupings and Agreements involving India and/or affecting India's interests.

Context:

- The death of a young Iranian-Kurdish woman while in the custody of the morality police has triggered nationwide protests in the Islamic Republic of Iran, bringing the clerical regime under public pressure.
- The Iranian leadership hopes to appeal to nationalist sentiments while simultaneously justifying its brutal response by promoting the idea that protests favor overseas opponents. Iran's authorities may be practicing temporary fire fighting without real reforms.

What is the issue?

- The morality police held Mahsa Amini, a young Iranian-Kurdish woman, in custody for reportedly donning her hijab improperly.
- Three days later, her death was attributed by the authorities to a heart attack she had while receiving hijab rules instruction.
- However, her family and activists claim she was murdered by beatings.
- In a nation where official repression of women's rights and resistance has always been a significant political issue, the episode caused widespread rage.
- Women publicly burned hijabs in several locations, including Tehran and Mashhad, where protesters were chanting anti-clerical chants.

Turning Anti Hijab Movement into Anti Government Protest:

- Two month long protest started by the death of a young woman on hijab issue has turned into an anti government protest.
- There has been widespread protest against ruling and State Authority in Iran demanding regime change in the country.
- The Protest has also been shown by Athletes, Sportsmen and personalities. For example, the Iran national football team refused to sing the National Anthem in the World Cup Match.



What is the nature of the Iranian Authority?

- The Shia clergy has established a clerical dictatorship with a sliver of democracy.
- The Islamic Republic of Iran is essentially a hybrid political system, with the "velayat-e-faqih" (guardianship of jurist(s)) embodying divine sovereignty, while the institutions of the president and parliament represent popular sovereignty.
- Constant conflict arises between the rulers and the ruled as a result of state-sponsored conservatism and social repression.
- The Revolutionary Guard Corps has referred to the protestors as "traitors," and President Ebrahim Raisi's government has made it clear that it will use force to put an end to the demonstrations.

What are the recent reasons for protest?

- In the Iranian city of Mashhad, the protests first started.
- Their first attention was directed toward the failing economy, official corruption, and a lack of social liberties.

- But as it spread to more cities, it evolved into political rallies.
- Significantly, hundreds of individuals have been detained and other people have died.
- Tens of thousands of people, on the other side, participated in counter-demonstrations in support of the clerically supervised government.
- It is noteworthy that President Hassan Rouhani acknowledged public rage about the failing economy.
- He vehemently opposed using violence, though, and put up a fierce fight using the security apparatus.

What are the international responses of the recent protest?

United States:

- Ever since taking office, US President Joe Biden has criticized Iran over various issue. The Death of a woman due to hijab added fuel to the fire.
- Iranians have recently been incited to commit disruptive acts by the US President and Vice President in their tweets.
- As a result, Iran accused the US of transgressing international moral boundaries by backing anti-government protests.
- Top Iranian leaders are now blaming foreign money, intelligence, and foreign agents for the protests.

Russia:

- Russia - Russia has asked the US not to meddle in Iran's "internal issues," as it puts it.
- Overall, the most recent uprising is reminiscent of the earlier Arab Spring in that it overthrew the governments of numerous West Asian nations.
- It is also developing as a possible hub for alliances and counter alliances among nations of the world.

INDIA NORWAY RELATIONS

Priority: Medium



Primary Source: The Hindu

Prepp Prelims Booster: Bilateral Trade

Prepp Mains Booster: India and Foreign Relations, Bilateral, regional and global groupings and agreements involving India and/or affecting India's interests.

Context:

- According to Norway's Ambassador to India, **bilateral trade between India and Norway has more than doubled to \$2 billion in the last two years.**
- It was expanded on Norway's interests in climate investments, clean energy, and ocean technology, among other things.
- It was stated that **Norway would invest \$1 billion from its climate investment fund** over the next five years worldwide, adding that the amount of money invested in India would depend on the projects. A significant portion of the investments will be made in India.

India - Norway Earlier Relations

History

- Norway and India have deep historical ties.
- A Danish-Norwegian trading station was established in Tranquebar (Tharangambadi), which is now located in the Indian state of Tamil Nadu, as early as the 1600s.

- Norway's first consulates in India opened in Kolkata and Mumbai in 1845 and 1857, respectively.
- The "India Fund" was established in 1952 with the goal of providing development assistance with a focus on fisheries.
- The Consulate General in Mumbai reopened in 2015. It had been closed since the 1970s.

India Strategy

The Norwegian government unveiled a new 'India Strategy' in 2018. The India Strategy outlines five thematic priorities, including

- Democracy and a rules-based world order.
- The oceans.
- Energy.
- Climate and Environment
- Research, higher education, and global health

Ocean nations

- Norway and India are both ocean nations seeking to capitalize on the oceans' vast economic, scientific, and ecological potential.
- Norway and India signed a Memorandum of Understanding (MoU) in 2019 to establish a structured and strategic cooperation on the oceans.
- This collaboration is based on our shared interest in the blue economy and the sustainable use of marine resources, as well as a desire to advance scientific knowledge about our oceans.

Climate change

- Norway regards India as a critical partner in addressing global climate, environment, and resource challenges, and is constantly seeking to expand cooperation in support of the Paris Agreement and the SDG-agenda.

Bilateral Trade

- Total bilateral trade increased from US\$ 974.22 million in 2013-2014 to US\$ 1,202.06 million in 2017-2018.



Upcoming Areas of Cooperation

- India is one of the countries with a high solar energy potential. The majority of Norway's investment has gone into solar energy infrastructure.
- Norway is collaborating with the **National Institute of Wind Energy** on onshore and offshore wind energy projects. However, according to Norway, only Tamil Nadu and Gujarat had sufficient wind stability to make wind energy projects viable.

- Norway has the world's fifth-largest commercial fleet, and ship recycling was critical to maintaining a modern fleet, both for environmental and competitive reasons.
- India has a thriving shipbuilding industry, particularly in Alang, Gujarat. Norway and India were collaborating closely on ship recycling.
- In addition, at the request of Norway, India joined the **Hong Kong Convention**.
- A Norwegian firm assisted in the creation of a digital archive for Indian monuments such as the Taj Mahal.
- In addition, the company was involved in the digitization of historical monuments such as Dholavira in Gujarat and the Bhimbetka Caves in Madhya Pradesh.

Hong Kong Convention

- The Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships, or Hong Kong Convention, is a multilateral convention that was adopted in 2009 but has yet to enter into force.
- The convention was created to improve the health and safety of current ship breaking practices.
- The ILO considers ship breaking to be "among the most dangerous of occupations, with unacceptably high levels of fatalities, injuries, and work-related diseases" because large ships are frequently beached and then dismantled by hand by workers with little personal protective equipment (PPE).
- This is most common in Asia, with India, Bangladesh, China, and Pakistan having the most ship breaking yards.

AT UNSC, INDIA ABSTAINS ON RUSSIAN RESOLUTION ON UKRAINE'S "BIO WEAPON"

Priority: Medium



Primary Source: The Hindu

Prepp Prelims Booster: UNSC

Prepp Mains Booster: Effect of Policies and Politics of Developed and Developing Countries on India's interests,

Context:

- Recently, India has abstained from voting on yet another resolution involving Ukraine; this time, it was a UNSC motion introduced by Russia that sought to create a commission to look into claims made by Moscow that the United States and Ukraine are engaging in "military biological activities" in Ukrainian laboratories in defiance of the biological weapons convention.

What was the motion about?

- The resolution was introduced by Russia in UNSC seeking to establish a commission to investigate claims by Moscow that the U.S. and Ukraine are carrying out "military biological activities" in laboratories in Ukraine in violation of the biological weapons convention.
- The resolution was not passed because just two Council members - Russia and China- voted in favor of it, whereas the U.S., the U.K. and France voted against it, while all the other Council members, including India, abstained.

What was India's response to the resolution?

- India abstained from voting in the resolution.

- Counselor of India's Permanent Mission to the United Nations stated that India places a high value on the Biological Weapons Convention (BWC), which is the first non-discriminatory disarmament agreement that outlaws an entire class of weapons of mass destruction.
- In its stand India also reiterated the need to negotiate a comprehensive legally binding protocol providing for an effective, universal and non-discriminatory verification mechanism and to strengthen the implementation of the Biological Weapon Convention (BWC).



What is the Biological Weapon Convention (BWC)?

- It is a key effort of the international community to address Weapons of Mass Destruction (WMD) proliferation and it has established a strong norm against biological weapons.
- WMDs are weapons with the potential to kill and destroy people on such a large scale and without regard for who they harm that their very existence in the hands of an adversary state can be viewed as a grave threat.
- The Convention was negotiated by the Conference of the Committee on Disarmament in Geneva, Switzerland.
- Its official name is "The Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction."
- It became available for signature on April 10, 1972, and went into effect on March 26, 1975.

Members:

- The Convention has 183 States Parties and 4 Signatory States (Egypt, Haiti, Somalia, and Syria).
- India is also a signatory of the convention.
- Ten states have neither signed nor ratified the BWC. These are :Chad, Comoros, Djibouti, Eritrea, Israel, Kiribati, Micronesia, Namibia, South Sudan, and Tuvalu.

Obligations Under the convention:

- The convention forbids the development, stockpiling, manufacturing, or transfer of "types and quantities" of biological agents and poisons that are not necessary for peaceful or protective purposes.
- The development of weapons, tools, or delivery methods to distribute such toxins or substances is also prohibited by the treaty.
- A state has nine months from the time the pact enters into force to destroy its stocks of any agents, toxins, or delivery systems it may have or divert them for peaceful purposes.
- According to the convention, governments must work together either bilaterally or multilaterally to resolve compliance-related problems.

- If a state thinks another state is breaking the treaty, it can file a complaint with the UNSCR.

Issues with the Convention:

- Since there is no implementation body under the convention, therefore obvious violations like those observed in the past are permitted.
- The convention's execution is only reviewed at a review conference, which is held once every five years, and confidence-boosting measures are set.

GENERAL STUDIES 3

Growth development poverty employment and unemployment

BIG TECH FIRMS SWING THE AXE ON TALENT

Priority: Medium



Primary Source: The Hindu

Prepp Prelims Booster: Employment

Prepp Mains Booster: Effects of liberalization on the economy, changes in industrial policy and their effects on industrial growth; Indian Economy and issues relating to planning, mobilization, of resources, growth, development and employment.

Context:

- Recently, faced with economic uncertainty, the **world's largest technology companies** are either **laying off workers or instituting hiring freezes**. Several large technology firms have already paused hiring and, in some cases, laid off employees.
- Apple's update has affected social media platforms such as Meta and Snap. The iPhone maker introduced an app tracking feature that allows users to opt out of apps that track them.
- Higher inventory for chip makers, lower demand for handset manufacturers, revenue loss from selling ad spaces for social platforms, and uncertain long-term bets like the metaverse have all played a significant role in forcing large tech firms to restructure their business practices.

What are Layoffs?

- Layoffs are simply the suspension or termination of an organization's employees.
- Depending on the nature of the crisis, this can be temporary or permanent.
- Layoffs are a practice that occurs during organizational downsizing or restructuring by their employers in order to maintain their position in the business market.

Why are companies laying off workers?

- Apple CEO Tim Cook recently told investors that the company would "continue to hire people and invest in areas, but we are being more deliberate in doing so."
- According to a new Business Insider report, the **iPhone maker is freezing hiring for the next two quarters**.
- Despite the US government's support for the semiconductor industry via the CHIPS Act, Intel has decided to lay off employees in certain divisions. In its third-quarter earnings report, the chipmaker announced plans to cut \$3 billion in costs over the next year.
- Snap Inc., a social AR company, plans to lay off one-fifth of its workforce. In a memo to employees, CEO Evan Spiegel announced that the company would cut over 1,000 jobs due to bleak revenue

projections. He also stated that a restructuring was required for long-term success in a competitive environment.

- Facebook's parent company has announced the layoff of 11,000 employees. Just a year ago, after CEO Mark Zuckerberg renamed the company Meta Platforms and plunged into the amorphous metaverse, the company made elaborate plans to hire 10,000 employees in the European Union (EU) region over five years.
- That plan appears to be on hold now as the company prepares to cut discretionary spending and extend a hiring freeze for the next several months.

Is Apple to blame for tech firms' decision to lay off workers?

- Apple's update has affected social media platforms such as Meta and Snap. The iPhone maker introduced an app tracking feature that allows users to opt out of apps that track them.
- Facebook and Snap generate a large portion of their revenue by selling ad space. In order for their platforms to be effective at placing relevant ads, they must collect and analyze user data.
- However, Apple's new feature has made it difficult for these companies to push targeted ads. According to some estimates, Facebook lost around \$12 billion as a result of Apple's app tracking feature.

What are the main reasons?

- The challenge for chipmakers such as Intel and Qualcomm is a drop in laptop and mobile device sales. Qualcomm said that "rapid deterioration in demand and easing of supply constraints across the semiconductor industry have resulted in elevated channel inventory."
- For smartphone companies, which typically end the year on a high note, Qualcomm's bleak outlook is cause for concern, as the chipmaker does not expect the market to recover anytime soon.
- Higher inventory for chip makers, lower demand for handset manufacturers, revenue loss from selling ad spaces for social platforms, and uncertain long-term bets like the metaverse have all played a significant role in forcing large tech firms to restructure their business practices. This has caused them to pause hiring in some cases and axe talent in others.



Biggest Layoffs and Hiring Freezes in the Tech Industry

Meta

- Facebook-parent Meta will lay off 13% of its workforce, or more than 11,000 employees, in one of the largest tech layoffs of the year.
- The massive layoffs are the first in the company's 18-year history, and they come as it battles a weak advertising market and rising costs.

- In October, the company predicted a weak holiday quarter this year and significantly higher costs next year.
- This wiped out about \$67 billion from Meta's stock market, adding to the nearly \$500 billion in value it has already lost this year.

Twitter

- Musk's takeover began immediately after the acquisition was completed, with the firing of Twitter CEO Parag Agrawal, CFO Ned Segal, and legal affairs and policy chief Vijaya Gadde.
- On November 4, Twitter laid off nearly half of its 7,500-person workforce. Twitter had between 250 and 300 employees in India.

Snap

- Snap, the company that creates and operates Snapchat, laid off approximately 20% of its 6,400-person workforce in August of this year. The layoffs were announced as Snap's stock price has dropped by more than 80% in the last year.
- Some departments are more affected than others, such as developers working on mini-apps and games and employees at the social mapping platform Zenly (which Snap acquired in 2017).

Microsoft

- Microsoft has laid off nearly 1,000 employees.
- The company cut jobs at many levels, teams, and locations around the world.

Intel

- Intel plans to lay off thousands of employees in order to cut costs. According to reports, up to 20% of the company's sales and marketing staff will be laid off.
- The decline in the PC market—which saw a brief revival during the Covid era—forced Intel to make this decision.

Amazon

- While Amazon has not yet announced any layoffs, it has frozen corporate hiring in its retail business for the remainder of the year. The New York Times reported this, citing an internal company announcement.
- The announcement, made in an email to recruiters, stated that the company was halting hiring for all corporate roles in its stores business.
- Amazon's stores division includes its physical and online retail operations, as well as its logistics operations. Before the freeze, there were over 10,000 job openings in that division.

Apple

- Apple has paused hiring for a number of positions outside of research and development. Apple predicts that growth will slow during the holiday season.
- It also predicts that due to China's lockdown policy in response to the new Covid-19 infections, supply of the iPhone 14 Pro and Pro Max will be impacted.
- The pause will not affect teams working on future devices or long-term projects, but it will impact standard hardware and software engineering roles, as well as some other corporate functions.

Stripe

- Stripe is an Irish-American financial services company that offers payment processing software and APIs to e-commerce businesses.
- Customers include Amazon, Uber, Zoom, Slack, and others. The company has announced that approximately 14% of its workforce will be laid off. Stripe will lose approximately 14% of its workforce.

Byju's

- Byju's was valued at \$22 billion during an October funding round in which the company raised \$250 million from existing investors. This makes the Bengaluru-based company one of the largest ed-tech companies in the world.
- However, the valuation and the new infusion of capital did not prevent Byju's from announcing the layoff of approximately 2,500 employees due to "job redundancy and duplication in roles."
- The company also stated that it intends to hire 10,000 new employees worldwide, with half of them based in India.

Salesforce

- Salesforce, based in San Francisco, laid off hundreds of employees this week, according to TechCrunch. The company did not provide an exact number to the publication, but stated that fewer than a thousand people were laid off.
- Employees affected by the layoffs were informed yesterday, according to the report, which cited a person close to the company.

FIXING INDIA'S MALNUTRITION PROBLEM

Priority: Medium



Primary Source: The Hindu

Prepp Prelims Booster: Global Hunger Index

Prepp Mains Booster: Issues relating to poverty and hunger; Government policies and interventions for development in various sectors and issues arising out of their design and implementation.

Context:

- Recently, released Global Hunger Index (GHI) showed India has slipped six places and ranked 107, out of 121 countries, in 2022.
- The GHI is a crucial indicator of nutrition, especially among children, as it looks at **stunting, wasting, mortality among children, and** caloric deficiency across the population.
- India's undernourished population proportion is considered **at a medium level, and its under-five child mortality rate is considered low.**



What is malnutrition?

- Malnutrition refers to deficiencies, excesses, or imbalances in a person's intake of energy and nutrients.
- The term malnutrition covers 2 broad groups of conditions.
- **Undernutrition** — includes stunting (low height for age), wasting (low weight for height), underweight (low weight for age) and micronutrient deficiencies or insufficiencies (a lack of important vitamins and minerals).
- **Over nutrition:** Overweight, obesity, and diet-related noncommunicable diseases (such as heart disease, stroke, diabetes, and cancer).

What is the issue?

- India's GHI score has decreased from 38.8 points (in 2000) — considered alarming — to a 2022 GHI score of 29.1, considered serious.
- According to India's National Family Health Survey (NFHS-5) from 2019 to 21, 35.5% of children under five had stunting, 19.3% had wasting, and 32.1% had an underweight condition.

Challenges

- **Financial:** For instance, the Indian government implements the Saksham Anganwadi and Prime Minister's Overarching Project for Holistic Nutrition (POSHAN) 2.0 scheme, which intends to work with teenage girls, pregnant women, nursing mothers, and children under three.
- However, the budget for this program was Rs.20,263 crore for FY2022-23, which represents an increase of less than 1% over two years and less than 1% of what was actually spent in FY2020-21.
- The budget allocated for PM POSHAN, or Pradhan Mantri Poshan Shakti Nirman, known previously as the Mid-Day Meal scheme (National Programme of Mid-Day Meal in Schools) in the FY2022-23 budget at ₹10,233.75 crores was 21% lower than the expenditure in FY2020-21.
- **Lack of supplementary nutrition:** According to an Accountability Initiative budget brief, the Supplementary Nutrition Programme's per capita costs—one of the most significant parts of this scheme—have not increased since 2017 and continue to be gravely underfunded, covering only 41% of the necessary amounts.
- **Understaffed:** The budget brief further notes that in Jharkhand, Assam, Uttar Pradesh, and Rajasthan, more than 50% of Child Development Project Officer (CDPO) posts were unfilled, indicating substantial staffing problems in efficiently implementing the scheme of such importance.
- And while PM POSHAN (or MDM) is widely acknowledged as a ground-breaking program that increased children's access to schooling worldwide, it is sometimes mired in disputes over **what should be served at the midday meals that are supplied at schools.**
- **Social audit:** Social audits, which are supposed to enable community monitoring of the calibre of services offered in schools, are not often conducted
- In conclusion, not only are important nutrition programs underfunded but the money that is allocated also isn't being used efficiently. Fixing these programs is the obvious solution to India's complex nutritional issue.
- **Limited Scope for Cash transfers:** The impact of cash transfers on child nutrition in India is limited so far. Evidence suggests primarily that while cash transfers improve household food security, they do not necessarily translate into improved child nutrition outcomes.
- The impact of cash transfers is particularly constrained in an environment where food prices are erratic and inflation reduces the purchasing power of money.
- **Example:** A study of the Mamata program in Odisha, which aimed to help expectant and nursing mothers, revealed that there were ongoing socio-economic differences in the recipients of cash transfers, particularly when compared to benefits received through the Public Distribution System (PDS).
- **Social Factors:** Equally important are social factors like "son preference," which, regrettably, is still pervasive in India and might

affect decisions made at the home level on the nutritional requirements of sons and daughters.

- It is evident that chronic levels of poor sanitation practises, the poor state of India's agriculture, and dismal economic conditions in many areas of the nation all contribute to the persistence of malnutrition.

Where cash transfers are needed?

- Cash transfers have a place, particularly in areas of extreme hardship where household purchasing power is severely eroded.
- Cash transfers can also be utilized as a motivator for behavior modification so that recipients seek out more institutional support. Food rations through PDS and particular supplements for the target population of newborns, young children, breastfeeding mothers, and pregnant women are crucial.

Way forward

- For these programs to be successful, local government and community organizations must be more actively involved in the development and delivery of specialized nutrition interventions.
- If the intergenerational nature of malnutrition is to be addressed, a comprehensive program aimed at adolescent girls is necessary.
- The nation should take a practical and creative approach to combat hunger and the malnutrition burden. For India to achieve its goal of being rid of malnutrition, this is crucial. Everyone has a stake in putting an end to malnutrition and should make a contribution.
- The government apparatus must immediately make preventing child malnutrition a year-round priority. We should not become part of a catastrophe that is preventable.

Infrastructure and investment models

WHAT THE CHIP INDUSTRY AND THE PETROLEUM SECTOR HAVE IN COMMON

Priority: Medium



Primary Source: Indian Express

Prepp Prelims Booster: Chip Industry

Prepp Mains Booster: Effects of liberalization on the economy, changes in industrial policy and their effects on industrial growth.

Context:

- Recently, India has embarked on a journey to develop **domestic chip fabrication facilities**. Given the commonalities the decision makers involved with electronics might draw useful lessons from our 'failed' experience in petroleum.
- Both industries are dominated by a small number of countries and corporations, both are capital intensive and cyclical, both are at the heart of interdependent global relations, both are in the crosshairs of international geopolitics, and both are characterized by technological dynamism.

International Geopolitics

- Petroleum:** The supply of petroleum is dominated by the "cartel" OPEC and mega-sized public and private multinational corporations known as "super majors."
- Weaponization:** Every oil-importing country has traveled to the Middle East to secure access to petroleum, and their efforts have been "weaponized" at times to achieve this goal.

- The **Saudi embargo** on exports to the **pro-Israeli Western world** in 1973, the US intervention in Iraq in 2003, and the current Russian gas cutback to Europe are three examples of this phenomenon.
- Gas was previously limited to overland routes defined by pipeline infrastructure, but with the commercialization of gas liquefaction, cryogenic shipping, and regassification in recent years, this limitation has been lifted.
- Oil and gas prices are cyclical, reflecting the capital intensity and long lead times of the investment cycle.
- Semiconductor:** The semiconductor value chain is relatively close-knit. The United States is the most powerful player. Every chip produced in the world has a direct or indirect link to the country.
- Cadence, Synopsys, and Mentor, for example, provide chip software. ASML, the sole manufacturer of EUV (Extreme Ultraviolet Lithography) equipment, is a Dutch company that relies on its wholly-owned San Diego-based subsidiary Cymer for manufacturing tools.
- Samsung and Hynix, which together produce 44% of the world's memory chips, and TSMC, which manufactures 37% of the world's logic chips and 92% of the most advanced chips, are both Korean and Taiwanese. Both are covered by the US military's security blanket.
- Vulnerabilities faced by semiconductor:** If TSMC's fabrication facilities gets destroyed due to human or natural causes. One-third of the world's computing power would halt, the 5G network would collapse, and the economic loss would be trillions of dollars.
- Technology Cold War:** Semiconductors have been both a cause and a result of the "technology Cold War" between the United States and China.
- The United States has imposed sanctions on the physical and intellectual export of chip technology to China, prompting President Xi to call for a "full scale assault" to "rejuvenate" the country.
- The ramifications of these actions is fragmenting along the geopolitical fault lines.
- Currently, efforts are being made to cut a swath through this supply chain and "**reshore**" **fabrication facilities**. This is because of the Cold War in technology.
- The United States passed the **Chips and Science Act**, allocating \$52 billion to the development of domestic chip fabrication.

Challenges in building semiconductor:

- The investment to build a portion or all of this chain is in the billions of dollars, and the returns are dependent on **engineering precision and technical talent**.
- INTEL has laid the groundwork for a \$20 billion fabrication plant. However, there are **economic constraints** on how far this process can be sustained.
- The **cost of constructing** a high-end semiconductor fabrication facility in the United States could be up to **44% higher than in Taiwan, Korea, or Singapore**.

Role of India

- As the world's fifth-largest economy seeks to boost its domestic chip sector, India could play a significant role in the semiconductor industry.
- India, like other countries such as the United States, has been looking to form strategic alliances around semiconductors, a critical technology that is used in many of the devices we use, from smartphones to refrigerators.

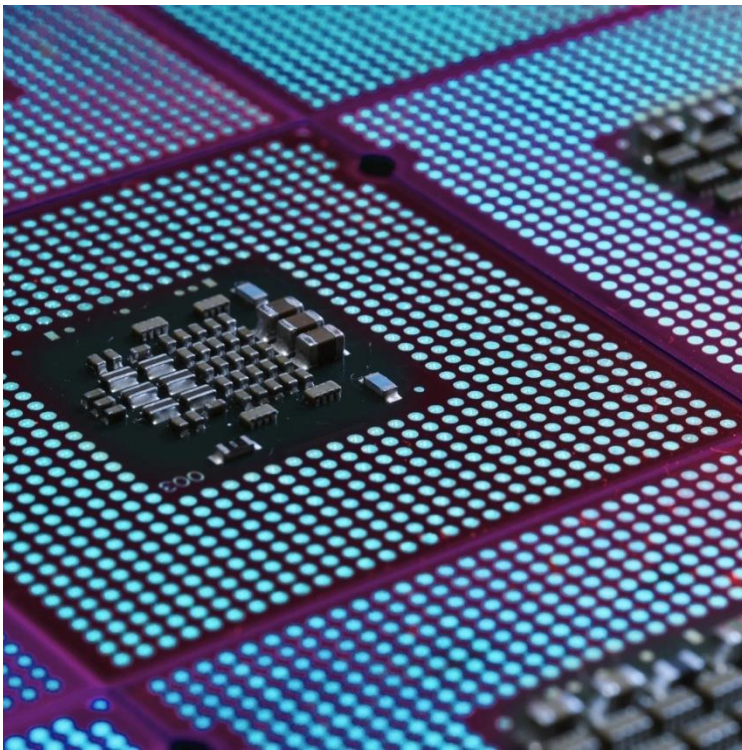
- However, India has been making moves to bring chip manufacturing to the country and has laid out incentives for the industry.

Advantages

- India possesses a number of advantages that could support its bid to become a global chipmaking hub.
- **Domestic Market:** India's strength in semiconductors is its massive domestic consumption market as the world's second-largest economy.
- **Low cost labor:** India has a large number of English-speaking engineering talent and a lower labor force, making it cost effective.
- Well-educated and low-cost labor force could benefit India in a specific area of the semiconductor supply chain — chip design — which requires a large number of skilled workers.

Concerns

- The problem for many countries looking to improve their chipmaking capabilities is that the companies and countries that dominate the industry are few and far between.
- Taiwan and South Korea, for example, account for approximately 80% of the global foundry market (Foundries are facilities that manufacture chips designed by other companies).
- **Historically, India has not been among the top semiconductor producing countries.**
- As a result, there **aren't many large Indian chip companies**, and there aren't **any cutting-edge manufacturing firms**.
- The large amount of capital required, the time it takes to set up factories, and the uncertainty surrounding the business, tax, and trade environments have often discouraged companies from establishing themselves in India.



Way forward

- India has recently begun a journey to establish domestic chip fabrication facilities.

- Given the aforementioned similarities, decision-makers in the electronics industry may be able to learn from our "failed" experience in petroleum. They should remember two things.
 - One, chip nationalism will be economically costly and may be technologically regressive. They should exercise caution when decoupling from the international supply chain.
 - Second, government assistance should be limited to financial assistance, agile collaboration, and the creation of an innovative ecosystem. Bureaucratic intervention should be limited.

INDIA PRESENTS LOW-COST MANUFACTURING AND HIGH OUTPUT OPPORTUNITIES: MODI

Priority: Medium



Primary Source: The Hindu

Prepp Prelims Booster: C-295

Prepp Mains Booster: Effects of liberalization on the economy, changes in industrial policy, and their effects on industrial growth. Government policies and interventions for development in various sectors and issues arising from their design and implementation.

Context:

- Recently, Prime Minister Narendra Modi laid the foundation stone of the C-295 Aircraft Manufacturing Facility in **Vadodra, Gujarat**.
- The manufacturing facility being set up by the **Tata-Airbus consortium** in Vadodra for **C-295 medium transport aircraft** for the Indian Air Force's transport fleet.



Background

- Earlier, in September 2021, the Ministry of Defence (MoD) signed a ₹21,935 crore deal with Airbus Defence and Space, Spain for the procurement of 56 C-295MW aircraft.
- This is the first project of its kind in which a military aircraft will be manufactured in India under technology transfer by the private sector, through collaboration between **Tata Advanced Systems Limited** and **Airbus Defence and Space, Spain**.

About C-295MW

- The C-295MW is a transport aircraft of 5-10 tonne capacity and has a rear ramp door for quick reaction and para dropping of troops and cargo.
- It is powered by Pratt & Whitney PW127 engines, part of the PW100 family.

- All 56 aircraft will be installed with indigenous Electronic Warfare Suite.
- Sixteen of the 56 aircraft will be delivered in flyaway condition from Spain within 48 months, while the Tata Group will construct the remaining within ten years after the contract date in India.
- It has a proven capability of operating from **short or unprepared airstrips**
- The C295 is utilised for tactical transport of up to **71 infantry or 50 paratroopers** and for **logistic operations to regions that are inaccessible** to current heavier aircraft.

Significance

- **Security:** The planes will significantly increase the IAF's tactical airlift capacity, particularly in the northern and northeastern regions as well as the Andaman and Nicobar Islands. The C-295s will replace IAF's fleet of ageing Avro-748 planes that entered service in the early 1960s.
- **Employment:** This will act as a catalyst for employment development and is predicted to create 600 highly skilled positions directly, over 3,000 indirect jobs, and an additional 3,000 medium-skill employment prospects.
- **Manufacturing:** The project would strengthen India's aerospace ecosystem by including several Micro, Small and Medium Sized Enterprises (MSME) located all throughout the nation in the production of aeroplane parts.
- **Make in India:** It is the **first Make in India aerospace programme in the private sector** to involve the **full development of an entire industrial ecosystem**, from manufacture to assembly, test and qualification, to delivery and maintenance of the complete lifecycle of the aircraft.
- By 2025, India wants to increase its production of defence goods to more than \$25 billion. More than \$5 billion of this will be used for exports.
- The defence corridors being built in Tamil Nadu and Uttar Pradesh will significantly aid in the expansion of this industry.

The Government has liberalised and allowed FDI under automatic route up to 74% and up to 100% through Government route wherever it is likely to result in access to modern technology.

RBI TO KICKSTART E-RUPEE PILOT IN G-SECS TODAY

Priority: Medium



Primary Source: Indian Express

Prepp Prelims Booster: E-Rupee

Prepp Mains Booster: Indian Economy, Economic Development, Infrastructure

Context:

- The Reserve Bank of India (RBI) has stated that the first trial in the Digital Rupee, or e-rupee, in the wholesale segment will begin on November 1, 2022, in government securities.

Background

- According to the RBI, the use case for this e-rupee pilot is the settlement of secondary market transactions in government securities.
- The use of e-rupee in the wholesale segment is projected to increase the efficiency of the interbank market.

- The first pilot in the Digital Rupee - Retail segment is scheduled to launch in a month in chosen regions with limited user groups of customers and merchants.
- Settlement in central bank money would lower transaction costs by eliminating the requirement for settlement guarantee infrastructure or collateral to limit settlement risk.
- The e-rupee pilot will involve nine banks: State Bank of India, Bank of Baroda, Union Bank of India, HDFC Bank, ICICI Bank, Kotak Mahindra Bank, Yes Bank, IDFC First Bank, and HSBC.



What is Digital Rupee or e-rupee?

- A Central Bank Digital Currency (CBDC) or Digital Rupee/e-Rupee is a digital version of a central bank's currency notes. A digital rupee, often known as an e-rupee, is a kind of money that may be used in contactless transactions.
- The Finance Minister, declared during the presentation of the Union Budget 2022 that the Reserve Bank of India (RBI) will shortly launch its digital currency.
- CBDC will be accepted as a payment medium and legal tender by all three parties - individuals, government agencies, and businesses.
- Because it is government-backed, it may be readily exchanged for money or notes from any commercial bank.
- It is quite similar to banknotes, but because it is digital, it is likely to be easier, faster, and less expensive.
- According to the RBI, it also offers all of the transactional benefits of other types of digital money.
- The central bank stated that the digital currency is intended to supplement, rather than replace, present forms of money and to give users with an extra payment pathway, rather than to replace existing payment systems.

What is the Significance of Digital Rupee or e-rupee?

- According to the central bank, e-rupee, or CBDC, can be structured as either token-based or account-based.
- A token-based CBDC would be a bearer instrument, similar to banknotes, in that whoever owns the tokens at any one moment is believed to own them.
- An account-based system would necessitate the keeping of a record of all CBDC holders' balances and transactions, as well as indicating the ownership of the monetary balances.
- In this situation, an intermediary will authenticate an account holder's identification.

- Under the RBI's consideration, there are two methods for the issuance and administration of CBDCs: direct model (single tier model) and indirect model (two-tier model).
- In the direct approach, the central bank will be in charge of all elements of the digital rupee system, including issuance, accounting, and transaction verification.
- In an indirect approach, the central bank and other intermediaries (banks and other service providers) each fulfil their respective roles.
- The central bank will issue CBDC to customers indirectly through intermediaries in this approach, and any claims by consumers will be managed by the intermediary.

What are the issues related to Digital Rupee in India?

- Cybersecurity: Digital Rupee ecosystems may be vulnerable to cyber-attacks in the same way that traditional payment systems are.
- Concerns about privacy: The Digital Rupee is projected to create massive amounts of data in real time.
 - The privacy of the data, as well as worries about its anonymity and effective usage, will be a hurdle.
- Financial illiteracy and the digital divide: The NFHS-5 also provides data segmentation based on the rural-urban difference.
 - Only 48.7% of rural males and 24.6% of rural females have used the internet at some point in their lives.
 - As a result, the CBDC may widen the gender gap in financial inclusion, as well as the digital divide.

What is the difference between Digital Rupee and Cryptocurrency?

- A cryptocurrency is a blockchain-based decentralised digital currency and medium of trade.
- However, it has mostly been problematic owing to its decentralised character, which means that it operates without the intervention of any middleman like banks, financial organisations, or central agencies.
- In contrast, the Reserve Bank of India's (RBI) Central Bank Digital Currency (CBDC) would be legal currency in digital form.

PRICE REGULATION OF UPI: POLICYMAKERS MUST BE CAREFUL

Priority: Medium



Primary Source: Indian Express

Prepp Prelims Booster: UPI

Prepp Mains Booster: Indigenization of technology and developing new technology.

Context:

- The RBI's recent discussion paper on charges in payment systems sparked widespread public debate, particularly on the zero-charge framework for **UPI transactions**.
- Many people, including market participants and the **National Payments Corporation of India**, have come out in favor of moving away from the zero **merchant discount rate (MDR)**, citing how the lack of commercial compensation discourages new players from entering the market and discourages investments in improving consumer protection and security.

About Unified Payments Interface (UPI)

- UPI is a system that integrates multiple bank accounts into a single mobile application (of any participating bank), combining several banking features, seamless fund routing, and merchant payments under one hood.

- It is a more advanced version of Immediate Payment Service (IMPS), a round-the-clock funds transfer service that makes cashless payments faster, easier, and smoother.
- UPI is currently the most popular of the National Payments Corporation of India (NPCI)-operated systems, which include the National Automated Clearing House (NACH), Immediate Payment Service (IMPS), Aadhaar enabled Payment System (AePS), Bharat Bill Payment System (BBPS), RuPay, and others.
- PhonePe, Paytm, Google Pay, Amazon Pay, and BHIM are the top UPI apps today, with the latter being the government's offering.
- As part of the agreement, India's UPI will be linked to Singapore's PayNow.
- In 2016, the NPCI launched UPI with 21 member banks.

National Payments Corporation of India

- NPCI is an initiative of the Reserve Bank of India (RBI) and the Indian Banks' Association (IBA) under the provisions of the Payment and Settlement Systems Act, 2007.
- It is a "Not for Profit" Company under the provisions of Section 25 of the Companies Act 1956 (now Section 8 of the Companies Act 2013), with the intention of providing infrastructure to the entire banking system in India for physical as well as electronic payment and settlement systems.

Reasons Why A Regulator Might Want to Intervene in the Price Setting of Payments Market

- Goals of financial inclusion or viewing digital payments as a public good.
- Addressing market failures such as the presence of dominant firms or externalities that may arise due to the market's two-sided nature.
- Regulators may want to cap or set to zero the MDR (paid by merchants to their payment service provider) or the interchange fee (paid by the acquiring bank to the issuing bank), or both.

What is MDR?

- A merchant discount rate is the rate charged to a merchant for payment processing services on debit and credit card transactions.
- Before accepting debit and credit cards as payment, the merchant must set up this service and agree to the rate.

Facilitating UPI Transactions

- In the case of UPI, the government subsidizes the operational costs of facilitating UPI transactions, which is reportedly insufficient.
- The Payments Council of India predicted **aRs 5,500 crore loss in January 2022**. Even if there is a public good motive, in the absence of evidence, one cannot assume that this is the best allocation of limited government resources.
- According to the **Indian Digital Payments Report (second quarter of 2022)**, the **average ticket size of P2M transactions (person to merchant) on UPI is Rs 820**.
- The RBI's estimated cost of Rs 2 for processing a Rs 800 transaction is 0.25 percent of the transaction value, which is much lower than the MDR cap of 0.9 percent for debit cards and the MDR of 2% proposed for RuPay credit cards on UPI.
- As a result, an MDR floor of 0.25 percent is not unreasonable. These are arguably substitutable services competing for the same pool of merchants.

- Policymakers must also consider behavioral challenges when transitioning from zero to positive MDR.
- Having been anchored at zero MDR since January 2020, merchants, particularly those with thin margins, may be hesitant to accept an increase in MDR, even if they benefit in net terms.

How and What to Regulate?

- To understand how and what to regulate, we borrow from the rationale used for other two-sided markets with cross-platform externalities.
- Simply put, consumers benefit more if the merchant network accepting a payment instrument (for example, debit cards) is larger, and merchants benefit more if many consumers use debit cards.
- Card networks such as Visa and Mastercard compete for a limited number of banks to issue their cards. Because the acquiring bank must pay the interchange fee, they recover these costs from merchants.
- In most jurisdictions, the interchange fee is regulated to prevent banks from charging exploitative rates, while the MDR is left to be determined commercially.
- This is also done for administrative convenience, as banks are few, and monitoring bank-merchant contracts can be time-consuming.

Price Regulation

- In the UPI parallel, involving payment service providers of payers and payees, remitter and beneficiary banks, and NPCI, the RBI could either regulate the interchange fee or the merchant discount rate charged by them.
- The market for merchant acquisition is typically more competitive and can be left unregulated, with the interchange fee between the two payment service providers regulated if necessary.
- If both markets are sufficiently competitive, regulation may imply imposing a floor/cap charge. The decision on what to regulate is thus critical.
- A similar example can be found in the telecom industry, where facility provision is regulated through the interconnection fee, while retail prices for the relatively competitive telecom services segment are left to the market.
- Externalities of the two-sided market must be internalized through careful instrument selection.
- The next step is to determine the price level, which is far more difficult. According to economic theory, the optimal level would be determined by whether the regulator is only concerned with consumer welfare (rather than total welfare) and whether the issuing and acquiring banks make positive margins on each transaction.
- In general, the benefits of regulatory intervention should outweigh the costs of intervention. The costs of intervening include not only administrative costs, but also potential costs resulting from setting the incorrect interchange fee or cap, as well as any costs resulting from the intervention's impact on future investment and innovation in the market.

Pix - A Payment System in Brazil

- Pix, a two-year-old interoperable digital payments system in Brazil, provides a good comparison of how price setting might be considered in the UPI context.
- Pix does not regulate MDR; payment service providers have the freedom to set MDR; however, most banks currently do not charge an MDR, primarily to onboard more merchants on their platforms.
- The indicated cost is R\$ 0.01 for every ten transfers, or 16 paise in Indian rupees for every ten transactions.

- This is significantly lower than the costs estimated for India and may explain why payment service providers are hesitant to recover costs through MDR.

Way Forward

- To help achieve the potential of UPI in India, policymakers must collect more data on transfer costs, user preferences, both merchants and consumers, and conduct a thorough analysis of substitutability and competition in the digital payments sector.
- A public policy-driven digital empowerment of the Indian electorate in a vibrant Indian democracy can help ensure responsible digital behavior in the interests of consumers and the larger public interest.

WHAT DOES THE WORLD BANK REPORT SAY ABOUT INDIA'S CITIES?

Priority: Medium



Primary Source: The Hindu

Prepp Prelims Booster: World Bank

Prepp Mains Booster: Urbanization, Their Problems And Their Remedies; Devolution Of Powers And Finances Up To Local Levels And Challenges Therein.

Context:

- According to the World Bank In Its Latest Report, Titled 'Financing India's Urban Infrastructure Needs: constraints to commercial financing and prospects for policy action', India would need to invest \$840 billion over the next 15 years, that is, an average of \$55 billion each year, to meet the demands of its fast-growing urban population.
- World bank holds that there is urgent requirement to leverage greater private and commercial investments to meet this emerging financial gaps.

Findings Of The Report

World bank in its report, titled 'Financing India's Urban Infrastructure Needs: constraints to commercial financing and prospects for policy action' highlights

Urban Population:

- By 2036, urban India would be home to 600 million people, or 40% of the world's population.
- As a result, there will likely be an increased demand for services such as clean drinking water, dependable power, efficient and secure road transit, etc., which would put additional strain on india's already overcrowded urban infrastructure and services.

Financing Of Urban Projects:

- Urban projects are currently funded by more than 75% of the federal, state, and local governments, with the remaining 15% coming from local governments' surplus funds.
- Currently, only 5% of the infrastructure requirements for indian towns are being funded privately.
- Cities' difficulty in gaining access to greater private financing is exacerbated by a lax regulatory environment and poor revenue collection.

Low Level Of Municipal Revenue Realisation:

- Between 2011 and 2018, the urban property tax was 0.15 percent of gdp, compared to 0.3-6 percent for low- and middle-income countries.
- Low revenue is a result of policy choices that keep service fees below what is necessary for cost recovery and financial stability.

Public-Private Partnership (Ppp):

- Over the past ten years, India has seen a considerable decline (both in terms of dollar value and transaction volume) in PPP agreements for urban infrastructure.
- As an illustration, 124 PPP projects totaling \$5.5 billion have been awarded in the urban sector since 2000.

Slow Implementation Performance:

- States and Urban Local Bodies (ULBs) are carrying out a number of the flagship missions slowly, including the Pradhan Mantri Awas Yojana (PMAY) And Smart Cities (SCM).
 - Example: over the past six financial years ULBs in India have only completed around one-fifth of the sanctioned projects under SCM and the Atal Mission For Rejuvenation And Urban Transformation (AMRUT).
- This is mostly caused by limitations on the city level's ability to implement.

On The Service Charges By ULBs:

- As per the report, the relatively low charges for municipal services, as well as a weak regulatory framework, exacerbate the challenges.
- Between 2011 and 2018, urban property tax was 0.15% of GDP, compared to a low and middle-income country average of 0.3-0.6% of GDP.
- Low municipal service charges also undermine their financial viability and attractiveness to private investment.



Who Provides Finances To Build Infrastructure In The Cities?

- In India, tied intergovernmental fiscal transfers - vertical and horizontal transfers of funds for achieving specific sub-national goals - fund a large portion of the urban infrastructure.
- 48% of the funding required for capital projects in Indian cities comes from state governments, 24% from the union government, and 15% from surplus funds held by urban local authorities.
- The remaining sum is made up of loans from the housing and urban development corporation, or HUDCO (8%), commercial debt (2%), and Public-Private Partnerships (3%).
- The world bank noted that only a small number of major cities have access to institutional banks and/or loans when it comes to private debt.
- Since states may grant loans to their organizations through their self-regulated financial institutions at favorable terms, the amount of commercial debt financing may not be a reliable indicator.
- For instance, loans are offered on favorable conditions by the Tamil Nadu Urban Development Fund and the Tamil Nadu Urban Finance and Infrastructure Development Company.

What Are Some Of The Constraints?

- The report makes the claim that because of the **poor fiscal health of the cities** and the **low absorptive capacity for project execution**, the entire financial base to increase commercial revenues "appears to be minimal."
- **Low service fees for municipal services**, according to the world bank, threaten their financial viability and sustainability. It even reaches the point where urban entities are unable to recover their operations and maintenance expenses, which limits their capacity to carry out additional projects.
- In a related vein, the report claims that due to the **heavily subsidized nature of services** city municipalities have been unable to increase their budget and resource bases to enable private finance for these types of services.
- Furthermore, it claims that revenue-sharing arrangements between the two parties are not particularly viable for private investors and do not properly take into consideration risk-sharing or risk-transfer methods for project hazards.

What Are The Recommendations Of The Report?

- **Fiscal Base:** The main goal is to strengthen cities' fiscal base. It states that cities must establish a robust tax base and be able to recover the cost of providing their services in order to strengthen their fiscal foundation.
- Increasing creditworthiness: the latter could be achieved by raising revenue streams like property taxes, user fees, and service costs from their existing low foundation.
- In its report, the World Bank suggests that India quickly needs to increase its capacity in order to complete significant infrastructure projects.
 - Only two-thirds of the capital budget allocated to the ten largest ULBs during the previous three fiscal years have been actually spent.
- The bank predicts that India's inadequate regulatory framework and poor revenue collection will make it difficult for cities to secure more private finance.
- Due to the need for a number of structural reforms, including those to the fiscal transfer system and taxation policy, cities should be able to access greater private funding.

IN LAST 5 YEARS, RS 10 LAKH CRORE IN WRITE-OFFS HELP BANKS HALVE NPAS

Priority: High



Primary Source: Indian Express

Prepp Prelims Booster: NPAs

Prepp Mains Booster: Indian Economy and issues relating to Planning, Mobilization of Resources, Growth, Development and Employment

Context:

According to information provided by the Reserve Bank of India (RBI) in response to the Right to Information (RTI) request, the massive write-off exercise allowed banks to reduce their non-performing assets (NPAs), or defaulted loans, by Rs 10,09,510 crore (\$123.86 billion), over the course of the previous five years.

What was the RTI response by RBI?

- Banks have only been able to recoup 13% of the enormous amount of loans that they had written off in the last five years, totaling more than Rs 10 lakh billion.

- With the help of this sizable write-off, which would have been sufficient to eliminate 61% of India's projected gross fiscal deficit of Rs 16.61 lakh crore for 2022–23, the banking industry reported that gross non-performing assets (NPAs) had decreased to Rs 7,29,388 crore, or 5.9% of all advances, as of March 2022. In 2017–18, gross NPAs were 11.2%.
- Significantly, the RTI response revealed that banks were only able to recoup Rs 1,32,036 crore from the written-off debts over the previous five years.

What is a Non Performing Asset?

- Non-performing assets are those that no longer bring in revenue for the bank.
- A credit for which interest and/or principal payments have been "past due" for a predetermined amount of time is referred to as a "non-performing asset" (NPA).
- With effect for the fiscal year that concluded on March 31, 2004, "90 days' overdue rules" for recognizing NPAs were made applicable in an effort to align with worldwide best practices and promote greater transparency.
- Banks typically classify commercial loans that are more than 90 days past due and consumer loans that are more than 180 days past due as nonperforming assets.
- If the interest, installment, or principle on an agricultural loan is not repaid after two harvest seasons, NPAs are declared.
- However, this time frame shouldn't exceed two years. After two years, any unpaid loan or installment will be labeled as NPA.

Classification of NPAs

- Sub-standard: When the NPAs have aged $\leq$ 12 months.
- Doubtful: When the NPAs have aged $>$ 12 months.
- Loss assets: When the bank or its auditors have identified the loss, but it has not been written off.

Status of NPA in India

- With an increase in the amount of non-performing assets after 2011, the Indian banking industry was faced with a serious difficulty (NPAs).
- NPAs started to increase in 2011 and reached a peak of 11.18% in the fiscal year that just ended in 2018.
- As was to be expected, this increase coincided with the depreciation of non-financial enterprises' balance sheets, and this twin balance sheet crises greatly influenced the slowdown in growth in the late 2010s.

Recent Data:

- According to data provided by the Reserve Bank of India (RBI), public sector banks' (PSBs') recovery during the fiscal year as a percentage of their gross non-performing assets (NPAs) at the start of the fiscal year (FY) has increased from 11.33% to 13.52% to 14.69%.
- According to the Reserve Bank of India's Financial Stability Report, gross non-performing assets (GNPAs) of scheduled commercial banks (SCBs) reached a six-year low of 5.9 percent in March 2022 and may drop even further to 5.3 percent by March 2023. (RBI).

Concerns with NPA:

- **Disproportionate share NPAs:** Public sector banks have a disproportionate amount of non-performing assets (NPAs).
- Differences in business models between public and private sector banks contributed significantly to the variation in NPAs between those two types of banks.

- Because compared to private sector banks, public sector banks had a substantially higher exposure (percent of total loans) to sectors that depend on commodities, such as iron and steel and textiles.
- Profitability problems Banks are required to set aside money from their operating profits for problematic loans. As a result of having to utilize some of its revenues from other loans to make up for the loss on the bad loans, the concerned bank experiences a decrease in profitability.

REDUCTION IN NPAS DUE TO LOAN WRITE-OFFS

Amount in ₹ cr



RECOVERY FROM WRITE-OFFS IN 5 YEARS

Amount in ₹ cr



Loan write-offs in last ten years
₹13,22,309 cr

Recovery from written off accounts
₹132,036 cr in 5 years

Source: RBI RTI reply

What are the actions taken to address NPAs?

- The government of India and the Reserve Bank of India (RBI) regularly issue directives and have implemented a number of initiatives aimed at resolving long-standing stressed assets on banks' books as well as timely identification and recognition of stress immediately upon default and take corrective action for mitigating the same.
- In addition to the Recovery of Debts and Bankruptcy Act of 1993, the Securitization and Reconstruction of Financial Assets and Enforcement of Security Interest Act of 2002 (SARFAESI), and the Insolvency and Bankruptcy Code (IBC) of 2016, these methods are also accessible to lenders for recovery and settlement.
- The India Debt Resolution Company (IDRCL) and the National Asset Reconstruction Company (NARCL) have been tasked by the Finance Minister with taking over the first batch of troubled bank debts.

GST PANEL ON ONLINE GAMING, CASINOS, RACING: ISSUES IN THE DEBATE

Priority: Medium

Primary Source: The Hindu

Prepp Prelims Booster: Online Gaming, GST

Prepp Mains Booster: Indian Economy and issues relating to Planning, Mobilization of Resources, Growth, Development and Employment.

Context:

- The ministerial panel established under the Goods and Services Tax (GST) regime for casinos, racetracks, and online gaming is anticipated to restate its prior position of a unified tax rate of 28% for the three categories.
- At the moment, online gaming platforms only pay 18% GST on the platform charge and not on the total value that includes prize money.
- The GST Council, however, will make the final determination about the valuation mechanism.
- This is because the panelists disagreed on whether the cost should be applied to the platform fee or the total amount that participants paid.

Highlights recommendations of Group of Ministers for GST on Online Gaming:

- Conrad Sangma, the chief minister of Meghalaya, and the eight other members of the ministerial panel had earlier presented a report to the Council, which was then discussed during the meeting in June.
- Regardless of whether an activity is a game of skill, chance, or both, it had advocated a standard rate of 28% on racetracks, casinos, and online gambling.
- The GoM has noted that casinos charge bettors and gamblers the full 28% GST.
- Because online games constitute actionable claims other than betting and gambling, the online gaming industry does not pay equally.
- The GoM believed that taxation should be uniform as a result.
- The GoM also talked about how to calculate net value or gross gaming revenue (GGR) to determine if these activities should be taxed.
- However, on this matter, no agreement was reached.

What is the status of the online gaming market in India?

- **e-Sports:** Video games from the 1990s that were previously only played privately or on consoles in video game stores are now played professionally online, either solo or in teams. These games are known as e-Sports.
- **Fantasy sports:** The user chooses a squad of genuine sports players from a variety of teams and receives points based on how effectively the players perform in actual games.
- **Online casual games:**
 - These could be skill-based, with a significant mental component influencing the outcome, or chance-based, with a significant random component, like rolling a die, influencing the outcome.
 - Players who wager money or other items with monetary value are considered to be gambling in a game of chance.

Statistics:

Indian market for online gaming:

- The Covid-19 pandemic saw a rapid expansion of the online gaming sector.
- According to a recent analysis by EY and ASSOCHAM, the amount of GST that online gaming currently contributes to is above Rs 2,200 crore.
- According to a KPMG report, the online gaming industry will increase from Rs 13,600 crore in 2020–21 to Rs 29,000 crore in 2024–25.

What are the issues with the online gaming industry?

Absence of regulatory oversight:

- There is no comprehensive legislation defining the legality or limits of online gaming, which operates in a regulatory gray area.
- Additionally, there is currently no legislative framework to control several facets of online gaming businesses, such as having a method for handling complaints, protecting data and intellectual property rights, and forbidding deceptive advertising.



Online gaming as a state subject (Under Entry 34, List II "Gambling" and "Betting"):

- State governments have acknowledged that it is very challenging for them to enact some limitations, such as geo-blocking particular apps or websites inside their state's boundaries.
- Additionally, state governments lack the essential blocking jurisdiction to impose blocking orders for offshore betting sites (unlike the Centre).
- Additionally, there is worry that laws approved in one state would not be applicable in another, leading to variances across the nation.

Social issues:

- There have been several instances of people losing a lot of money playing online games and then committing suicide across the nation.

'RUPEE-SETTLED TRADE SUITABLE FOR EXPORT, OBLIGATION PERKS'

Priority: Medium



Primary Source: The Hindu

Prepp Prelims Booster: Rupee settlement

Prepp Mains Booster: Changes in industrial policy and their effects on industrial growth, Government policies and interventions for development in various sectors and issues arising out of their design and implementation.

Context:

- Recently, the Central Government allowed international trade settlements in the Indian rupees for export promotion schemes under foreign trade policy.
- The government of India has made suitable amendments in the Foreign Trade Policy and Handbook of Procedures to allow for international trade settlement in Indian rupees.
- According to the ministry, new rules have been put in place for giving export incentives and benefits as well as for meeting the requirements for importers to fulfil their export obligations for export realisations made in Indian rupees.

Fillip for ₹ trade

Transactions settled in Indian currency qualify for perks

■ Ministry says policy tweaks aimed at facilitating international trade transactions in rupees

■ EEPCC chairman says move signals the 'internationalisation of the domestic currency'

■ "These are early steps towards 100% convertibility" of the rupee, remarks EEPCC's Garodia



Background

- In July, to enable the use of the rupee for invoicing, payment, and settlement of export and import dues, the RBI and the Directorate General of Foreign Trade amended the Foreign Trade policy and trade settlement processes.
- The new standards for realising export proceeds in Indian rupees apply to schemes including imports for exports, advance authorization and duty-free import authorization, and realisation of export proceeds under the Export Promotion Capital Goods Scheme.

Reason behind the move

- The rise in interest in the **internationalization of the Indian Rupee**
- To **bring ease in international trade** transactions in Indian Rupees
- To encourage the **growth of global commerce** with a focus on **exports from India and support the growing interest** of the global trading community in INR.
- International Trade Settlement mechanism in INR would facilitate **trade with countries under sanction like Iran and Russia**.
- These are early steps towards 100% convertibility.

Significance

- With this modification, invoices, payments, and trade settlements can all now be made in Indian rupees.
- **Reduce transaction cost:** Internationalization of the Rupee can lower cross-border transaction costs of trade and investment operations by mitigating exchange rate risk.
- **Boost exports:** Allowing trade settlement in Rupee under the various export promotion schemes should help boost exports
- **Reduce trade deficit:** It will help counter the trade deficit by introducing Rupee trade for major imports.
- **Access to global financial markets:** It enables local businesses and financial institutions to access foreign financial markets without taking on exchange rate risk and to borrow money at lower interest rates and in larger amounts than they could at home.

Challenges:

- If not supported by substantial and deep domestic financial markets that could effectively absorb **external shocks, exchange rate stability** and a domestically **focused monetary policy** will be more difficult to achieve.
- Right now, we must rely on a third currency to benchmark rates when contracts expire.

- Defining a workable model in collaboration with other international federal banks
- Standard policies and operating model by RBI to undertake trade in Rupee, and also control local effects of outside shock.

Conclusion

In the long run overall benefit of the Rupee trade outweighs the negative factors in the long run. Also, the local currency should be the preferred trading instrument to become a global trade player.

Biodiversity and Conservation, Environmental Pollution, Environmental Impact assessment and related Issues

EMISSION GAP REPORT 2022

Priority: Medium



Primary Source: Indian Express

Prepp Prelims Booster: UNEP

Prepp Mains Booster: Climate Change, Environmental Conservation and Issues

Context:

- Ahead of COP27, the United Nations Environment Programme (UNEP) stated that the world is falling short of the goals set out in the 2015 Paris Climate Agreement, and that no credible pathway is currently in place to limit global warming to less than 1.5 degrees Celsius above pre-industrial levels.

Emission Gap Report 2022

- According to the report, the top seven emitters (China, the EU27, India, Indonesia, Brazil, the Russian Federation, and the United States) accounted for 55% of world GHG (greenhouse gas) emissions in 2020.
- G20 members are collectively responsible for 75% of global GHG emissions.
- In 2020, the world average per capita GHG emissions were 6.3 tonnes of CO2 equivalent (tCO2e).
- The United States continues to be considerably over this threshold, at 14 tCO2e, followed by Russia at 13 tCO2e, China at 9.7 tCO2e, Brazil and Indonesia at around 7.5 tCO2e, and the European Union at 7.2 tCO2e.
- India remains far below the world average at 2.4 tCO2e.
- GHG emissions (excluding land use and forestry sectors) returned in 2021, reaching pre-pandemic 2019 levels for most major emitters, including China, India, the Russian Federation, Brazil, and Indonesia, the report added.
- According to this year's analysis, emissions are unlikely to rise after 2030. But the good news doesn't stop there.
- The combined climate ambitions of countries will not restrict temperature increase to 1.5 degrees Celsius by the end of the century – the Paris Climate Pact's aim.
- The present combined National Determined Contributions (NDCs) will lead to at least 2.5 degrees of warming on the globe.

What are the Current Issues?

- In its annual Emissions Gap report, the United Nations Environment Programme estimated that revised country pledges made since last year's COP26 meeting in Glasgow would only cut less than 1% of global greenhouse gas emissions by 2030.
- Since the start of the Industrial Revolution, the world has warmed almost 1.2 degrees Celsius, and we now confront increasingly intense

climate-enhanced weather extremes such as heatwaves, storms, and floods.



What are the Policies ahead?

- According to UNEP, the G20 countries have just recently begun to work on fulfilling their new objectives, and altogether, they are anticipated to fall short of their commitments by 2030.
- "Without additional strengthening, present policies point to a 2.8°C increase. To fulfil the Paris Agreement objective, the world must decrease greenhouse gas emissions at historic levels over the next eight years."
- Unconditional and conditional NDCs are expected to reduce global emissions by 5% and 10%, respectively, in 2030, when compared to existing policies.
- To be on the most cost-effective road to reducing global warming to 2°C or 1.5°C, these percentages must reach 30% and 45%, respectively.
- Emissions must continue to fall fast beyond 2030 to prevent depleting the remaining carbon budget in the atmosphere.

What is the Paris Agreement?

- The Paris Agreement was adopted by 196 nations on December 12, 2015, during the UNFCCC Conference of the Parties (COP 21) in Paris, and it went into force on November 4, 2016. The goal of the agreement is to minimise and mitigate greenhouse gas emissions.
- It took the place of the Kyoto Protocol, an earlier accord to address climate change.
- For the first time, it pulls all nations together in a single cause to undertake ambitious measures to mitigate climate change and adapt to its repercussions.
- The agreement aims to keep global warming far below 2°C, preferably 1.5°C, as compared to pre-industry levels.
- To meet the agreement's aims, member nations must propose their own targets that they feel would result in significant progress toward the Paris temperature goal.
- These aims are first referred to as Intended Nationally Determined Contributions (INDCs).
- When a country ratifies the agreement, they are transformed to NDCs.

What are the Barriers to implementation of the Paris Agreement?

- Increasing climate ambition necessitates challenging decisions in fields as diverse as agriculture, forest management, transportation, and urban design.

- These challenges concern people's livelihoods and well-being, and governments must strike a balance between sustainability and development goals.
- In this regard, all countries are not on equal footing, particularly because climate cooperation has seldom transcended silos.
- Inadequate technology transfer from the developed world continues to be a source of frustration for developing countries.
- There are concerns that numerous countries' high ambitions may remain on paper if enough funding is not provided.
- Developed countries committed in 2009 to raise \$100 billion per year until 2020 to assist poor countries in reducing emissions and dealing with the impacts of global warming.
- The target was never fulfilled; according to some estimates, the gap is more than half the total sums that needed to be mobilised.

India's Status on Emission Gap Report 2022

- It is good to see that India has maintained its pace in renewables adoption and is making inroads into photovoltaic (PV) technology.
- To reach its ambitions, it will need to increase its reliance on non-fossil energy.

WayForward

- To meet this long-term temperature objective, governments should attempt to peak global greenhouse gas emissions as soon as feasible in order to attain a climate-neutral planet by mid-century.
- Countries with a low carbon footprint are anticipated to make a strong case for climate-related reparations at the meeting.
- Following the recent floods in Pakistan, numerous Pakistani authorities stated that the "nation has to pay the price for others' emissions."
- The ideals of fairness and climate justice are at the heart of challenges like these, which UNFCCC texts recognise, but action has been slow. The upcoming COP should not follow in the footsteps of its predecessors.
- In addition, under the Paris Agreement, a new supervisory body can be established to oversee emission reduction units and ensure that they are not credited several times.

MISSION LIFE: INDIA'S ACTION PLAN FOR THE WORLD TO SHUN MINDLESS CONSUMERISM

Priority: Medium



Primary Source: Indian Express

Prepp Prelims Booster: Mission LiFE

Prepp Mains Booster: Government policies and interventions aimed at development in various sectors and issues arising out of their design and implementation. Environmental pollution and degradation.

Context:

- Indian Prime Minister Narendra Modi on October 20 launched an initiative called **Mission LiFE (Lifestyle for Environment)**, an India-led global mass movement that will encourage people and communities to take action to safeguard and preserve the environment.
- Mission LIFE is a call to action for people and governments to save the world.

What is Mission LiFE?

- Mission LiFE is a **sustainable lifestyle program** that centers the fight against climate change on smaller, individual actions.

- India has launched a global initiative called Mission LIFE with the aim of promoting sustainable living and assisting nations in achieving the UN's Sustainable Development Goals.
- Mission LIFE will cover every way of life connected to protecting the environment so that it can become a part of our way of life today.
- This mission is based on the fundamental concept of "**Lifestyle of the planet, for the planet, and by the planet.**"

Evolution of the Concept "LiFE"

- On November 1, 2021, during COP26 in Glasgow, Prime Minister Narendra Modi announced the concept of LiFE.
- India advanced the goals of LiFE by establishing the LiFE Global Movement on June 5, 2022, **World Environment Day**.
- Additionally, it encouraged academics, researchers, and start-ups from all around the world to consider concrete, scientific ways that the entire power of group action may be utilized to address the environmental crisis.
- Leaders from throughout the world gave the LiFE movement tremendous support.



Mission LiFE: Vision & Mission

- Vision:** The vision is to create a way of life that is in harmony with the environment and does not destroy it.
- People who follow this way of life are referred to as "Pro-Planet People."
- Mission:** Mission LiFE draws inspiration from the past, works in the present, and thinks about the future.
- This initiative makes utilization of the **Reduce, Reuse, and Recycle** principle that permeates every aspect of our lives.
- The initiative's mission is to capitalize on the **Circular Economy's** fundamental role in Indian culture and lifestyle.

Mission LiFE: Three Prolonged Strategies

- Strategy I:** Encourage people to adopt simple yet efficient eco-friendly practices in their daily lives (demand). **Example:** Using alternatives to single-use plastic bags and turning off faucets when not in use.
- Strategy II:** Making it possible for markets and businesses to react quickly to shifting demand (supply). **Example:** Alternatives to single-use plastics.

- Strategy III:** Achieving sustainable consumption and production by influencing governmental and industrial policies (policy). **Example:** Electric Mobility.

Mission LiFE: Features

- Circular Economy:** It aspires to replace the present "use-and-throw" economy with a circular economy, which is characterized by thoughtful and intentional utilization.
- Utilization of Social Networks:** The initiative aims to make use of the power of social networks to impact social norms and practices.
- Individual Networks at Global Level:** The mission intends to establish and support a global network of people known as "Pro-Planet People" (P3) who will share a commitment to embrace and advance environmentally sustainable lifestyles.
- Differentiated Strategy:** The mission acknowledges the relationship between contribution and accountability. People who are in charge of producing more emissions will be held more accountable. Based on their capacity, each stakeholder is encouraged to take action.

India's Commitment to Mission LiFE

- Through a mission-mode, scientific, and quantifiable program, Mission LiFE will put its principles into practice and show how committed India is to taking action on climate change.
- India has the **fourth-largest capacity for renewable energy** in the world, but its yearly per-capita carbon footprint is only approximately 1.5 tonnes, compared to the global average of 4 tonnes.
- India **ranks fifth in the world** for solar energy and fourth for wind energy.
- In the previous 7-8 years, India's capacity for renewable energy has expanded by roughly 290%.
- Additionally, the nation has met its **goal of obtaining 40%** of its electricity from non-fossil fuel sources nine years earlier than expected.
- With the help of the **National Hydrogen Mission**, India has made progress toward a sustainable energy source.
- This will assist India and many other nations in achieving their objective of having a **net zero carbon footprint**.
- India's initiative with the **International Solar Alliance** demonstrates that the nation is working to develop environmentally friendly policies that will limit the use of fossil fuels and encourage renewable energy.
- India has shared its vision of environmental conservation with the rest of the globe by taking the lead in the formation of the **Coalition for Disaster Resilient Infrastructure**. The next installment in this series is Mission LiFE.

Other Related Initiatives

International Solar Alliance

- The International Solar Alliance (ISA), also called the International Agency for Solar Policy and Application is a group of 106 signatory countries (86 of which are members).
- The majority of the member nations are **sunshine countries** that lie entirely or partially between the Tropics of Cancer and Capricorn.
- The alliance's main goal is to promote efficient solar energy use in order to lessen reliance on fossil fuels.
- This program was first presented by Indian Prime Minister Narendra Modi, who co-launched it with French President Emmanuel Macron at the United Nations Climate Change Conference in Paris.

One Sun One World One Grid

- The One Sun One World One Grid is also known as **Green Grid**.

- Its aim is '**The Sun Never Sets**,' and that it is a constant in some geographical regions, globally, at any given point in time.
- This is by far the most ambitious scheme launched by any country (India) and is significant on a worldwide scale in terms of economic benefit sharing.
- It has been taken up as part of the **World Bank's technical assistance** program.
- The OSOWOG strategy may potentially make use of the International Solar Alliance (ISA), which India co-founded and currently has 80 member countries.
- The solar spectrum, with India at the center, may readily be divided into two broad zones:
- The Far East includes countries such as Myanmar, Vietnam, Thailand, Laos, and Cambodia. The Far West encompasses the Middle East and Africa.

COP27: CLIMATE FINANCE, LOSS & DAMAGE, CARBON BORDER TAX, AND THE AMBIGUITY ABOUT RESPONSIBILITY

Priority: Medium



Primary Source: The Hindu

Prepp Prelims Booster: CoP27

Prepp Mains Booster: Bilateral, regional and global groupings and agreements involving India and/or affecting India's interests; Climate Change

Context:

- Recently, the 27th Conference of Parties to the United Nations Framework Convention on Climate Change (UNFCCC) was held in Sharm-El-Sheikh, Egypt.
- A number of topics were on the table for discussion, ranging from the more familiar reductions in emissions to the more detailed rules governing carbon markets.

Key Highlights

- This year, at COP27 in Egypt, a dizzying array of topics were on the table for discussion, ranging from the more familiar emissions reductions to the more detailed rules to govern carbon markets.
- The stories about climate finance, on the other hand, are important to developing countries, including India.
- With rising energy needs and vulnerable populations, developing countries require financial support for low-carbon transformations, building resilience to inevitable climate impacts, and other daunting challenges, the most significant of which is **loss and damage (L and D)** from climate-induced impacts.
- The establishment of a new L and D fund was possibly the biggest headline following COP27.

Background

- Since the Paris Agreement (2015), the main L and D agendas for developing countries have been to shift the existing narrative of averting L and D to addressing losses that have already occurred, and to begin holding developed countries morally and financially liable for the same.
- Droughts in Africa, floods in Pakistan, and wildfires around the world set the stage for this COP. Given the frequency of these climate events, developing countries have been attempting to separate L and D from

adaptation. They argue that losses from these events have not, and most likely cannot, be adapted to.

- Because scientists can now attribute these events to climate change, and thus to greenhouse gas emissions, developing countries argue that developed countries should bear the associated responsibility and liability.



Understanding Loss and Damage

- L and D in ratified UN texts have mostly entailed prevention and pre-disaster preparation, conflating L and D with adaptation. This is in the interests of developed countries that do not want any new responsibilities.
- The decision text accompanying the Paris Agreement even took liability and compensation for L and D off the table — and developing countries were only able to get L and D on the COP27 agenda by once again avoiding discussion about liability.

The L and D burden and responsibility

- Against this backdrop, the new L and D fund announced at COP27 appears to be a narrative failure, save for the distinction between adaptation and L and D.
- Following the G77+China recommendation, the text finally frames L and D as post-event "rehabilitation, recovery, and reconstruction."
- However, it makes no mention of historical responsibility or the principle of **Common but Differentiated Responsibilities (CBDR)**. Furthermore, there is no clear indication that the fund will be funded by developed countries.
- The decision investigates a "mosaic" of solutions, encouraging a variety of actors to contribute, which could simply mean a gradual shift of the L and D burden onto the private sector, and possibly even richer developing countries such as China.
- The ambiguity about responsibility is carefully phrased to dilute the notion that there are distinct victims and perpetrators in the case of L and D.
- Once liability and CBDR are removed from L and D — in essence, an adversarial notion to hold developed nations morally and financially accountable — it risks becoming toothless: more voluntary reward than recompense.

Regarding Climate Finance

- COP27 also focused on ways to increase finance flows to support positive climate action in developing countries.
- In 2009, developed countries promised developing countries \$100 billion in climate finance per year by 2020, a promise that has yet to be fulfilled.

- Developing countries expected this amount to come from public sources, though the sources were never specified. And, while it is only a fraction of what developing countries require, it is an important symbol of trust.
- Much financial debate has centered on assessing progress toward this goal, which developed countries now aim to achieve by 2023.
- Lessons learned from this progress should also inform ongoing discussions about a new, enhanced developed-country target to replace this \$100 billion commitment by 2025.
- Meeting the current pledge and developing a meaningful new pledge based on the needs of developing countries will be critical trust-building exercises that will encourage greater cooperation on climate action.

Significant Development related to climate finance at COP27

- With this track record, developing countries have been eager to maintain their focus on developed-country obligations.
- As a result, there was no discussion of Article 2.1c of the Paris Agreement, which seeks to make all financial flows compatible with low-carbon development.
- Developing countries feared a shift in focus away from developed-country obligations, while developed countries argue that this Article can play a transformative role in mobilizing the trillions of dollars required to address climate change. As a result, this item on the finance agenda was postponed, but it is expected to be raised next year.
- With growing evidence that developed-country public finance will fall far short of meeting developing-country needs, COP27 saw a shift toward encouraging finance through alternative channels.

What is “loss and damage”?

The phrase refers to costs already being incurred from climate-fuelled weather extremes or impacts, like rising sea levels

■ Climate funding so far has focused on cutting CO2 emissions, while a third of it went towards helping communities adapt to future impacts

■ Loss and damage funding is expected to cover the cost of damage that countries cannot avoid or adapt to

■ A report by 55 vulnerable countries estimated that their combined climate-linked losses in the last two decades totalled



\$525 billion, or 20% of their collective GDP. This could go up to \$580 billion per year by 2030

■ Vulnerable countries and campaigners argue that rich countries that caused the bulk of climate change with their historical greenhouse gas emissions should pay

Source: Reuters

Multilateral System and Carbon Markets

- The COP27 decision text included a call for reforming the global financial system, particularly **multilateral development banks (MDBs)**, to make them more supportive of climate action for the first time.
- Simultaneously, **carbon markets have emerged as more prominent vehicles** for channeling private capital.
- In carbon markets, some entities sell credits by lowering their emissions below a certain level, while others buy these credits to offset emissions they cannot reduce.

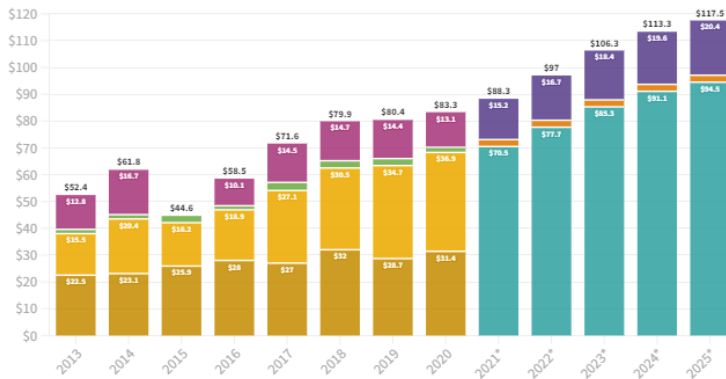
- According to Article 6 of the Paris Agreement, two types of markets will allow countries and businesses to trade in emissions reductions.
- Although many questions about the design of these markets were addressed at COP26, discussions on unresolved issues raised concerns about whether these markets would be transparent, resulting in actual emissions reductions, and risk reductions being counted twice — by the buyers and sellers of credits. Such a lack of transparency and double-counting can pave the way for greenwashing.
- Carbon markets are also becoming more prevalent in **just energy transition partnerships (JETP)**, which are emerging as avenues for developed countries to quickly channel finance to developing countries transitioning to clean energy systems.
- As India considers such collaborations for its own energy transition, plans to use carbon credits to enable private investments raise similar concerns about the sufficiency and predictability of finance; whether it can reach sectors that require more assistance; and whether this is an attempt by developed countries to offload responsibility.
- While developing countries wanted to focus on the public finance that developed countries should provide at COP27, the finance conversation is becoming multi-faceted and spreading to arenas outside formal negotiating channels.
- India will need to keep a close eye on these trends and what they might mean for amounts, sources, predictability, impacts, and equity.
- The new L and D fund has blurred the distinction between victim and perpetrator. However, given that all of the fund's practical mechanisms have yet to be determined, it will be interesting to see if developing countries can redraw the lines of responsibility, and possibly liability, in future negotiations.

What is the demand of the Developing Countries on Climate Finance?

- Developing countries, including India, are pushing Developed countries to agree on a new global climate finance target - also known as the New Collective Quantified Goal on Climate Finance (NCQG) - which the developing countries are claiming to be in trillions as the costs of addressing and adapting to climate change have grown.
- According to estimates from the Standing Committee on Finance, resources between \$6 trillion and \$11 trillion would be needed until 2030 to achieve the goals established by developing nations in their Nationally Determined Contributions (NDCs).
- On the other hand, the developing countries would seek commitment to finance and technology needed to address climate change.
- India stated that although the earlier technical expert discussions on the NCQG held under the Ad Hoc Work Programme provided a forum for the exchange of ideas, a more structured and focused approach is required to ensure that the mandate is successfully completed by 2024.
- Recognizing the significance of such debates for developing nations, it was stated that discussions within the technical expert dialogues in 2023 should concentrate primarily on the quantum of Climate Financing and focus should be on increasing it.

What is the present status of Climate Finance?

■ Bilateral Public ■ Multilateral Public ■ Export Credits ■ Mobilised Private ■ Public (Predicted)
■ Export Credits (Predicted) ■ Mobilised Private (Predicted)



Source: OECD • The Hindu Graphics
Values for 2021 to 2025 are predictions

- Developed nations agreed to mobilize \$100 billion annually by 2020 to support developing nations in addressing the effects of climate change at the COP15 conference in Copenhagen in 2009.
- The Organization for Economic Cooperation and Development (OECD) said that developed countries raised \$52.5 billion in 2013.
- After falling to \$44.6 billion in 2015, the flow of financing has been rising consistently ever since.
- According to a fact sheet released by the Centre for Science and Environment, the developed countries raised \$83.3 billion in 2020, an increase from the \$80.4 billion in 2019.

What is Climate Finance?

- The **UNFCCC Standing Committee on Finance** defines climate finance as "finance that aims at reducing emissions, and improving sinks of greenhouse gasses and aims at reducing vulnerability of, and maintaining and increasing the resilience of, human and ecological systems to negative climate change impacts."
- Developed nations have interpreted the term "new and extra financial resources" broadly to apply to all financial flows connected to climate change mitigation and adaptation, and more specifically to refer to transfers of public resources to developing countries, in light of their commitments under the UN Climate Convention to provide "new and additional financial resources."
- The **Kyoto Protocol and Paris Agreement** call on Parties with greater financial resources (Developed Nations) to support those who are less fortunate and more vulnerable financially (Developing Nations).
- The "**Common but Differentiated Responsibility (CBDR) and Respective Capabilities**" paradigm governs climate finance.
- At **COP26**, new financial pledges were made in order to support developing countries in coping with the effects of climate change, which is a worldwide goal.

What is the target of climate finance?

- At the UNFCCC COP15 (held in Copenhagen in 2009), the developed country decided to set a target of USD 100 billion a year by 2020 to address the needs of developing nations in order to achieve significant mitigation efforts and transparency on implementation.
- At COP16 in Cancun, the UNFCCC Conference of the Parties subsequently acknowledged the goal of climate finance in public.
- At COP21 in Paris, developed countries extended the \$100 billion goals until 2025.

- In order to achieve a balance between adaptation and mitigation, wealthy countries would collectively increase their commitment to adaptation funds from 2019 levels to 2025 levels, it was decided after COP26.

What are the various climate finance mechanisms?

- In order to facilitate the provision of climate financing, the UNFCCC has established a financial mechanism to provide financial resources to developing nation Parties. The Paris Agreement and the Kyoto Protocol are likewise served by the financial system.
- According to UNFCCC, one or more established international institutions may be given control over the finance mechanism.
- The **Global Environment Facility (GEF)** has been the financial mechanism's operating entity since the Convention's entrance into force in 1994.
- The **Green Climate Fund (GCF)** was established at the COP 16 in 2010, and it was recognized as an operating entity of the financial mechanism in 2011.
- The finance mechanism submits reports to the COP, which establishes the policies, program priorities, and eligibility standards.
- In addition to providing guidance to the GEF and GCF, the Parties established the **Special Climate Change Fund (SCCF)**, the **Least Developed Countries Fund (LDCF)**, both of which are managed by the GEF, and the **Adaptation Fund (AF)**, which was established under the Kyoto Protocol in 2001.
- At the Paris Climate Change Conference in 2015, the Parties decided on the GCD and GEF as the operating institutions of the financial mechanism, as well as the SCCF and the LDCF, to support the Paris Agreement. Negotiations about the Adaptation Fund supporting the Paris Agreement are currently taking place inside the **Ad hoc Working Group** on the Paris Agreement (APA).
- BASIC, a group of nations, including India, has stated that Carbon Border Taxes, which could lead to market distortion and exacerbate the lack of trust between parties, must be avoided.

What the Joint Statement of BASIC said?

- The Joint statement held that, unilateral measures and discriminatory practices, such as Carbon Border Taxes (Carbon Border Adjustment Mechanism), that could result in market distortion and aggravate the trust deficit amongst Parties signatory countries to the UN climate agreements, must be avoided.
- BASIC countries have called for a united solidarity response by developing countries to any unfair shifting of responsibilities from developed to developing countries.
- BASIC expressed "grave concern" that developed nations were still not showing leadership or responding with a matching progression of effort.
- Their statement underlined that, Developed nations had "backtracked on finance and mitigation commitments and pledges" and there was a "significant increase" in the consumption and production of fossil fuels in the past year by developed nations even as they continue to press developing countries to move away from the same resources.
- And held that Such double standards are incompatible with climate equity and justice.
- BASIC said that adaptation was still not being accorded the balanced and substantive attention they deserved in the U.N. climate framework process, despite the opportunities and linkages with "loss and damage."



What is the Carbon Border Tax?

- “Carbon Border Tax” is the European Union’s (EU’s) recent proposal under the Carbon Border Adjustment Mechanism (CBAM).
- ‘Carbon border tax’ is referred to as a penalty tax to discourage import of carbon-intensive goods such as steel, Aluminum, cement, fertilizers and electricity via the Carbon Border Adjustment Mechanism (CBAM).
- The aim is to help reduce the EU’s overall greenhouse gas emissions 55% below 1990 levels by 2030.
- The first ever carbon border tax on imported goods is being pushed by the EU Commission. It intends to begin implementing the tax in 2026 in a phased manner.
- Making the “polluting sources” more expensive serves as the main disincentive for environmentally unfriendly manufacturing and consumption behaviors.
- It operates under the ‘polluter pays’ principle. The carbon tax will essentially be a Pigovian tax that internalizes the costs of environmental harm by balancing the marginal social costs and benefits of increasing emissions. Consumers and producers may be encouraged to switch to more energy-efficient sources and goods as a result.
- The issues associated with choosing a baseline are avoided with CBAM. A zero carbon tax is appropriate for a price strategy.
- The policy of a carbon price will be better able to adjust to the degree of uncertainty that permeates the field of climate change. While price restrictions are tied to the flow of emissions, quantity constraints on emissions are related to the inventories of greenhouse gas emissions.

Concerns of India along with BASIC countries:

- By increasing the prices of Indian-made goods in the EU, this tax would make Indian and goods from BASIC countries less attractive for buyers in EU and parts of the world which adopts Carbon Border Tax and could shrink its demand.
- Companies with a high carbon footprint would face substantial short-term issues as a result of the tax, and the world trading system would be further disrupted by increased protectionism, trade wars, and renegotiations.
- If crude oil prices stay between \$30 and \$40 per barrel, a fee of \$30 per metric ton of CO₂ emissions might cut the profit for international producers by around 20%.

Issues with the Carbon Border Tax:

- **Discriminatory and Violates CBDR-RC:** In a joint statement, the BASIC countries—Brazil, South Africa, India, and China—opposed the CBT, calling it “discriminatory” and incompatible with the principles of equity and “Common but Differentiated Responsibilities and Respective Capabilities” (CBDR-RC).
- **Non-Consensual with Rio Declaration:** Article 12 of the Rio Declaration, which states that norms relevant to industrialized countries cannot be imposed to developing countries, contradicts the EU’s idea that there should be a single worldwide standard for the environment.
- **Change in Climate-Change Regime:** The greenhouse content of these imports would also need to be adjusted in the greenhouse gas inventories of the importing countries, which in essence means that GHG inventories would need to be calculated not on the basis of production but at the point of consumption basis.
- **Protectionist Policy Disguised as Climate change Measure:** The policy can also be seen as a covert kind of protectionist trade policy. It can be viewed as a non quota tariff barrier like a Sanitary and Non Sanitary Barrier. Usually, the purpose of implementing such policies is to protect domestic industries from foreign trade mandated under the WTO.

Who are BASIC Countries?

- Brazil, South Africa, India, and China are the four newly industrialized nations that make up BASIC.
- The grouping was established via an agreement in November 2009.
- At the Copenhagen Summit, the four nations decided to coordinate their actions regarding the negotiations of UN Climate Change agreements.

GLOBAL SHIELD AGAINST CLIMATE RISKS INITIATIVE

Priority: High



Primary Source: Down to Earth

Prepp Prelims Booster: Global Shield Against Climate Risks

Prepp Mains Booster: Environmental Conservation, Environmental Pollution And Degradation, Environmental Impact Assessment, Climate Change.

Context:

The Global Shield Against Climate Risks Initiative was launched on November 14, 2022 by the Vulnerable Twenty (V20) group of finance ministers, which represents 58 nations that are vulnerable to climate change. The initiative was introduced at the United Nations Framework Convention On Climate Change's 27th conference of parties (COP27), which took place in Sharm El-Sheikh, Egypt.

What Is The Global Shield Against Climate Risks Initiative?

- It is envisaged as a social protection and insurance-based finance mechanism for the loss and damage outside the UNFCCC process.
- The initiative is aimed to provide pre-arranged financial support designed to be quickly deployed during climate disasters such as the devastating Pakistan floods in August.
- Bangladesh, Costa Rica, Fiji, Ghana, Senegal, Philippines and Pakistan will be among the first countries to receive assistance from the Global Shield Initiative.
- Other nations, including the United Kingdom and UN agencies like the UN development program and the UN office for disaster risk reduction, also support the project.

- This initial corpus of money would introduce other public and private funding into the process for loss and damage financing.

Background:

- The gGlobal South are the ones of the worst affected by the consequences of climate change and they often do not have the resources needed to protect their citizens from them.
- Germany is very engaged in (further) developing support programmes for dealing with climate-related damages, with a view to providing protection against climate risks for as many poor and vulnerable people as possible.
- It is against this background that, under Germany's G7 presidency in 2022, the g7 has recognised that vulnerable developing countries need more support for dealing with climate-related damage.
- During its G7 presidency, Germany launched the initiative of a "global shield against climate risks"(the shield), which was unanimously supported by the G7.
- The shield will bundle activities in the field of climate risk insurance and prevention in close cooperation with the V20 (an association of states that are particularly threatened by climate change).
- Germany is thus one of the founding members of the shield, which was formally introduced on November 14, 2022, along with Denmark.

Working Mechanism:

- The shield is a hub for initiatives related to financing and readiness for climate risk.
- Under the shield, protective measures will be developed that can be quickly put into effect if climate-related harm occurs. This procedure is related to developing nations' backup plans.
- As a result, when a crisis happens, people and authorities will have easier and quicker access to the support they urgently need.
- In order to accommodate the rising need for financing, the shield will also raise more money.

Contribution:

- Initial funding for the shield comes from Germany with 170 million Euros, Denmark with 35 million Danish kroner, Ireland with 10 million euros, and Canada with \$7 million. the us is sponsoring the insurance and disaster risk solutions company African risk capacity as well as participating in the Global Shield Effort.

Other Initiative Launched At Cpo27:

Methane Alert And Response System (Mars)

- Mars is a Data-To-Action System. It was established as a part of the International Methane Emissions Observatory (IMEO) plan of The Un Environment Programme (UNEP) to get policy-relevant data into the proper hands for emissions mitigation.
- The technology will link methane detection to alerting procedures for the first time in a publicly accessible, global system.
- It will identify large emission events, alert pertinent parties, and support and monitor abatement activities using cutting-edge satellite data.
- The us government, the European Commission, and other partners provided initial funding for mars' development under the scope of the global methane pledge energy pathway.
- The global methane pledge (GMP) energy pathway was introduced in june 2022.
- Its aim is to promote cuts in methane emissions in the oil and gas industry, promoting both climate change and energy security.

- The GMP energy pathway intends to urge all nations to: seize the greatest potential for methane mitigation at the lowest feasible cost in the oil and gas industry; and eliminate routine flaring as soon as practicable, but no later than 2030.
- Mars will be put into action in collaboration with organizations like the international energy agency and the climate and clean air coalition, which is run by UNEP.

HERBICIDE-TOLERANT COTTON SET TO GET RECOMMENDATION FOR RELEASE

Priority: Medium



Primary Source: Indian Express

Prepp Prelims Booster: Herbicide-tolerant cotton

Prepp Mains Booster: Biotechnology| E-technology in the aid of farmers.

Context:

- Recently, herbicide-tolerant cotton is set to get recommendations for **environmental release** by the Genetic Engineering Appraisal Committee (GEAC).
- The herbicide-tolerant cotton is of the German multinational company **Bayer AG** which requires the farmers to spray the herbicide **glyphosate**.

What are the characteristics of Cotton?

- **Kharif** is a type of crop that takes 6 to 8 months to mature.
- It is a **drought-resistant crop** that thrives in arid areas and covers 2.1 percent of the world's arable land and supplies 27% of the world's textiles.
- **Temperature:** Temperature ranges from 21 to 30 degrees Celsius.
- **Rainfall:** Rainfall ranges between 50 to 100 cm.
- **Soil Type:** Regur Soil (well-drained black cotton soil) (E.g. Soil of Deccan Plateau)
- **Main Products:** Fibre, oil, and animal feed are the main products.
- **Top Cotton-producing Countries:** China > India > United States are the top producers of cotton.



- **Top Cotton-producing States:** Gujarat > Maharashtra > Telangana > Andhra Pradesh > Rajasthan are the top cotton-producing states in India.
- **Cultivated Cotton Species:** Gossypium arboreum, G.herbaceum, G.hirsutum, and G.barbadense are four cultivated cotton species.

- Old-world cotton, often known as Asiatic cotton, is made up of *Gossypium arboreum* and *G. herbaceum*.
- *G. hirsutum* is also known as upland cotton or American cotton, while *G. barbadense* is known as Egyptian cotton. Both of these are new-world cotton species.
- Cotton is produced by crossing two parent strains with distinct genetic characteristics. When open-pollinated plants naturally cross-pollinate with other related kinds, hybrids are often generated spontaneously and randomly in nature.
- **Bt Cotton:** Bt Cotton is a pest-resistant variety of cotton that has been genetically modified to resist pests.

What exactly is Bt Cotton?

- Bt cotton is a **transgenic insect-resistant crop** developed to combat the bollworm.
- It was developed by genetically modifying cotton to express a microbial protein from the ***Bacillus thuringiensis* bacterium**.
- The transgenic introduced into the plant's genome produces poison crystals that the plant would not usually produce, which, when consumed by a specific population of organisms, dissolves the gut lining, ultimately killing the organism.
- In India, only Bt cotton is allowed as a genetically modified (GM) crop.

India's Cotton Industry

- Cotton is a **valuable fiber and cash crop** that plays a significant part in India's industrial and agricultural economies.
- India is the **world's largest cotton producer** and **third-largest exporter**. It is also the world's largest cotton consumer.
- Since their introduction in 2002, **pest-resistant Genetically Modified (GM) Bt cotton** hybrids have dominated the Indian market (covering over 95 percent of the area under cotton).
- India produces over **6 million tonnes of cotton each year**, accounting for roughly 23% of global cotton production.
- India generates around **51% of the world's total organic cotton production**.

What is a Genetically Modified (GM) Crop?

- A Genetically Modified or transgenic crop is a plant with a novel combination of genetic material obtained through modern biotechnology.
- For example, a GM crop can contain a gene(s) that has been artificially inserted instead of the plant acquiring it through pollination.

Advantages of GM crops

- **Crop Protection:** Genetic engineering can boost crop protection: Crops with better resistance to pests and diseases can be developed.
- **Reduction in Pesticides and Herbicides:** The use of herbicides and pesticides can be reduced or even eliminated.
- **Income:** Farmers can achieve high yields, and thereby get more income.
- The nutritional content can be raised.
- **Reduction in Wastage:** The shelf life of foods can be extended which can reduce wastage.
- **Climate Resilience:** Crops can be engineered to withstand extreme weather

What are the Concerns?

- The long-term effects of genetic engineering are yet unknown because it is a relatively new field.
- Some plants have been modified to produce their own poisons to ward off pests. This could be harmful to non-targets such as farm animals that consume them.
- Activists also mention social and economic problems in addition to health and environmental challenges.
- They have expressed grave worries about large agribusiness corporations taking over farmland from small farmers. Dependence on GM seed producers can be expensive for farmers.

What is Genetic Engineering Appraisal Committee (GEAC)?

- The Genetic Engineering Appraisal Committee (GEAC) is a body that functions under the Ministry of Environment, Forests, and Climate Change (MoEF&CC).
- It is responsible for the **environmental assessment of operations** involving the widespread use of dangerous microorganisms and recombinants in research and industrial production.
- Additionally, the committee is **responsible for reviewing proposals** for the release of genetically modified (GE) organisms and products into the environment, including field trials.
- The Special Secretary/Additional Secretary of MoEF&CC chairs the GEAC, which is co-chaired by a representative from the department of Biotechnology.

Related Laws in India

- In India, genetically modified organisms are regulated by a set of rules, guidelines, and policies backed by the **"Rules for the Manufacture, Use Import, Export, and Storage of Hazardous Microorganisms/Genetically Engineered Organisms or Cells, 1989"** notified under the Environment Protection Act, 1986.
- Aside from that, the **Indian Council of Medical Research (ICMR)** 2017 National Ethical Guidelines for Biomedical and Health Research involving Human Participants, as well as the Biomedical and Health Research Regulation Bill, both imply regulation of the gene-editing process.
- This is particularly true when the phrase "modification, deletion, or removal of sections of heritable material" is used.
- However, the word **"gene editing"** is not mentioned at all.

NEW MATERIAL MAY HOLD PROMISE FOR MORE EFFICIENT LITHIUM-ION BATTERIES

Priority: Medium



Primary Source: Down to Earth

Prepp Prelims Booster: Lithium ion battery

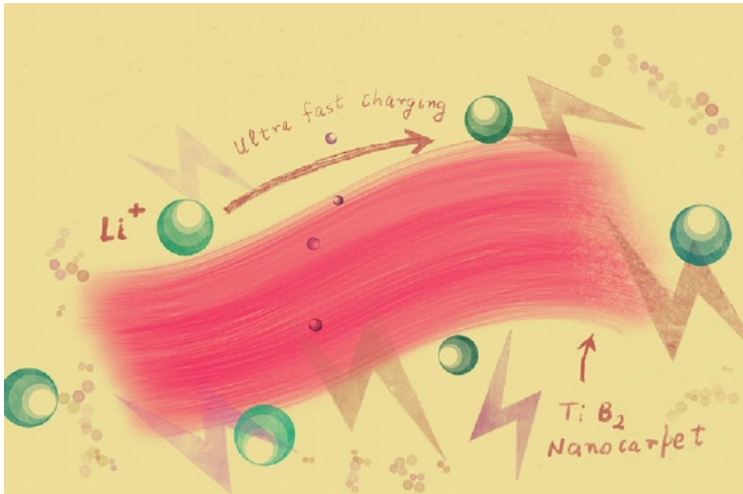
Prepp Mains Booster: Science and Technology- developments and their applications and effects in everyday life ; Achievements of Indians in science & technology; Indigenization of technology and developing new technology.

Context:

- Recently, a study carried out by researchers from the Indian Institute of Technology (IIT) Gandhinagar in collaboration with the Japan Advanced Institute of Science and Technology (JAIST).
- Researchers discovered a new anode material, which could be helpful in ensuring the life and fast charging of lithium-ion batteries (LIBs).

What is the significance?

- **Ultra-fast charging:** This breakthrough might make it possible to charge electric vehicles (EVs) and battery-powered equipment at ultra-fast speeds.
- Nanosheets made of **titanium diboride (TiB₂)**, which resemble a stack of sandwiches with layers of boron between them, are used to create the **novel two-dimensional (2D) anode material**.
- Li-Ion batteries with anodes made of nanosheets have an advantage since they **have a high density of pores**, a quick charging time (full charge in minutes), and a long life cycle (10,000 cycles at high charge currents).



- While the planar structure and chemical makeup of nanosheets give them a large surface area for capturing Li-ions, **the pores allow for greater ion diffusion**.
- The intertwined carpet-like structure tackles a **problem with lithium-ion diffusion by enabling effective charge migration** into and out of nanosheets.
- The **titanium and boron** atoms present in the nanosheets are contributing to **effective charge transport and storage** by being arranged in a carpet-like interwoven porous structure.
- The process used to create **TiB₂ nanosheets is inherently scalable**, which makes this work very valuable.
- All needed is to combine the TiB₂ particles with an aqueous solution of **diluted hydrogen peroxide and let it crystallise again**.
- **Scalability:** This technique is quite adaptable because it only calls for stirring and no specialised equipment to create these TiB₂ nanosheets.

Other LIBs

- In lithium-ion batteries, anode material is the negative electrode. It is combined with cathode material in a lithium-ion battery cell.
- In lithium-ion batteries, the anode materials serve as the host, permitting reversible lithium-ion intercalation and de-intercalation during charge and discharge cycles.

LIBs with Graphite anode	lithium titanate anodes
Pros ○ Extremely Energy dense ○ Can power an electric vehicle for hundreds of kilometers on a single charge Cons:	Pros ○ Safer and more popular ○ enable quick charging. Cons

○ Prone to fire hazards .	○ Reduced energy density, they would require more frequent charging.
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RUSSIA-UKRAINE CONFLICT PUSHING WORLD TOWARDS CLEAN ENERGY, FINDS WORLD ENERGY OUTLOOK 2022

Priority: Medium



Primary Source: Down to Earth

Prepp Prelims Booster: World Energy Outlook 2022

Prepp Mains Booster: Mineral & Energy Resources, Environmental Pollution & Degradation

Context:

- The **World Energy Outlook 2022** was recently released by the International Energy Agency. Every year, the report provides critical analysis and insights into **energy demand and supply trends**.
- The 2022 report said that the ongoing Russia-Ukraine is **pushing the world towards a clean energy alternative**.
- The supply of natural gas is becoming hard since the economic sanctions on oil and coal imports from Russia and its cutback on the natural gas supply have created a shortfall in the global energy supply.
- Besides, Russia is the supplier of 40% of Europe's natural gas.



What is International Energy Agency (IEA)?

- The International Energy Agency (IEA) is a Paris-based autonomous intergovernmental organisation.
- 75% of the world's energy consumption is met by its **31 member countries** and the **11 association countries** of the IEA.
- Following the 1973 oil crisis, the Organisation for Economic Co-operation and Development (OECD) established the International Energy Agency (IEA) to address actual shortages in the world's oil supplies.
- In March 2017, India joined the IEA as an associate member

What is the Russia - Ukraine conflict?

- The Ukraine crisis is based on a contest about the post-Cold War central European territoriality and the resurrecting of a burnished Russian past.
- **Ukraine and Russia** have had cultural, linguistic, and familial ties for hundreds of years.

- For many in Russia and ethnically Russian regions of Ukraine, the countries' shared heritage is an emotional issue that has been used for electoral and military purposes.
- Ukraine was the **2nd-most powerful Soviet republic** after Russia as part of the Soviet Union, and it was significant strategically, economically, and culturally.
- The major causes of the ongoing conflict are the region's balance of power, Ukraine's role as a crucial buffer between Russia and the West, Ukraine's bid for NATO membership, and Russian interests in the Black Sea, all of which are accompanied by protests in Ukraine.

Key Findings of the Report in Relation to Russia-Ukraine Conflict

- According to the report, Russia's invasion of Ukraine marks an important moment in the history of the world's energy markets and offers an incomparable incentive to **accelerate the switch to clean energy** sources of fuel.
- Governments are making desperate efforts to ensure energy security in response to this global energy crisis.
- Governments either attempted to pursue **short-term solutions** by increasing fossil fuel investment and subsidies or **accelerating the transition to clean energy** with initiatives like the REPowerEU and laws like the United States Inflation Reduction Act.
- According to current estimates, **Russia's share** of natural gas supplied on the international market **may decrease from 30% in 2021 to 15% in 2030**.
- Its share of global natural gas trade will **even drop to 10%** if nations fulfil their goals.
- The report stated that while developing nations in South and Southeast Asia are no longer enthusiastic about gas as a transition fuel, global natural gas demand may rise by 5% by 2030 and plateau without much change by 2050.
- Thus the economic reasons in favour of affordable, cost-competitive clean technologies are now stronger, and so is the case for energy security.

What are the challenges Pertaining to Renewable Energy?

- **Environmental Impact:** Although renewable energy generation is carbon-free (apart from some biofuels), there are emissions at other stages of its lifespan, such as during raw material extraction and equipment manufacturing. Additionally, RE has negative effects on environment and biodiversity.
- **Shortage of Skilled Personnel:** India's electricity sector has long struggled with a lack of skilled workers, a problem that is now being exacerbated by the current situation. This issue affects not just the private sector but also DISCOMs, grid management organisations, regulators, and policymakers.
- The development of skills within India is of the utmost importance for capacity building. In India, the country is in desperate need of well-developed training programmes.
- **Installation Cost Issue:** One of the biggest challenges to the adoption of renewable energy is the high initial cost of installation.
- It is well known that wind and solar power facilities also demand significant investment, even if the construction of a coal plant necessitates considerable expenditure.
- In addition, the cost and complexity of energy storage devices provide a significant obstacle to the production of megawatts.

- **Resource Locator:** The majority of renewable energy facilities that contribute to the grid need considerable spaces. The location-based nature of renewable energy sources is typically off-putting to users.
- **Other Challenges:** Additionally, because renewable energy depends on the weather, climate, and geographic location, only one type of energy generation is suitable for a given area.

A GOLD-MUSHROOM COMBO TO EASE DRUG DELIVERY

Priority: Medium



Primary Source: The Hindu

Prepp Prelims Booster: Gold Mushroom

Prepp Mains Booster: Achievements of Indians in Science & Technology; Indigenization of Technology and Developing New Technology.

Context:

Bodoland University in Assam is collaborating on the development of biosynthesised nanogold particles that have been recently granted an international patent from Germany.

What is the research about?

- Scientists from four Indian institutes worked together to create Cordy gold nanoparticles (Cor-AuNPs), the product of which has been granted an international patent by Germany.
- These nanoparticles, which were created by combining gold salts and Cordyceps militaris extracts, may speed up and improve drug delivery in the body.
- The Department of Biotechnology's Technology Incubation Centre (TIC) at Bodoland University, one of the collaborators of the patented scientific study, has been growing Cordyceps militaris in the lab which is a high value parasitic fungus,
- Ionic chemical gold compounds known as gold salts are frequently employed in medicine.
- The eastern Himalayan belt is where you can find wild cordyceps mushrooms.

Mechanism:

- Penetration in the cells is more where the drug particles are smaller in size.
- Cordyceps militaris, called super mushroom because of its tremendous medicinal properties, adds bioactive components to the synthesis of gold nanoparticles for better penetration and the drug delivery.

Applications:

- The therapeutic and nutraceutical effects of the super mushroom have been confirmed by the collaborative investigation.
- The development of medicinal medications that can be administered as creams, tablets, capsules, and other forms may now use biosynthesised nanogold particles.

What is a Nanoparticle?

- A matter particle with a dimension of between 1 to 100 nanometers (nm) is referred to as a nanoparticle or ultrafine particle.
- When referring to fibers and tubes that are smaller than 100 nm in only two orientations or larger particles up to 500 nm, the phrase is occasionally used.

Application:

- All different industrial areas can use nanotechnology and nanomaterials. They frequently inhabit the following places:

- **Electronics:** In order to create quantum nanowires that are lighter, more conductive, and stronger, as well as smaller, faster, and more efficient microchips and gadgets, carbon nanotubes are quickly displacing silicon as the preferred material. Due to its characteristics, graphene is a great choice for flexible touchscreen development.



- **Biomedicine:** Some nanomaterials' characteristics make them perfect for enhancing early cancer or neurological disease diagnosis and treatment. They can target cancer cells specifically without endangering healthy cells. Additionally, certain nanoparticles have been employed to improve medicinal goods like sunscreen.
- **Energy:** Solar panels that convert twice as much sunshine into power are now conceivable thanks to a new semiconductor created by Kyoto University. Costs are decreased, stronger and lighter wind turbines are produced, fuel efficiency is increased, and energy savings are possible due to some nanocomponents' ability to insulate heat.
- **Environment:** Some of its environmentally friendly applications include heavy metal nanofiltration systems, wastewater treatment with nanobubbles, and ion-based air purification. There are also nanocatalysts available to improve the effectiveness and reduce the pollution of chemical reactions.
- **Food:** In this area, nanocomposites might be utilized to enhance food production by enhancing mechanical and thermal resistance and reducing oxygen transfer in packaged goods, or nanobiosensors could be used to find infections in food.
- **Textile:** Nanotechnology enables the creation of stronger, lighter, and more durable materials for sports equipment and motorcycle helmets as well as intelligent fabrics that are wrinkle- and stain-resistant.

NITI AAYOG PROPOSES DECARBONISING OF INDUSTRIAL EMISSIONS

Priority: Medium



Primary Source: The Hindu

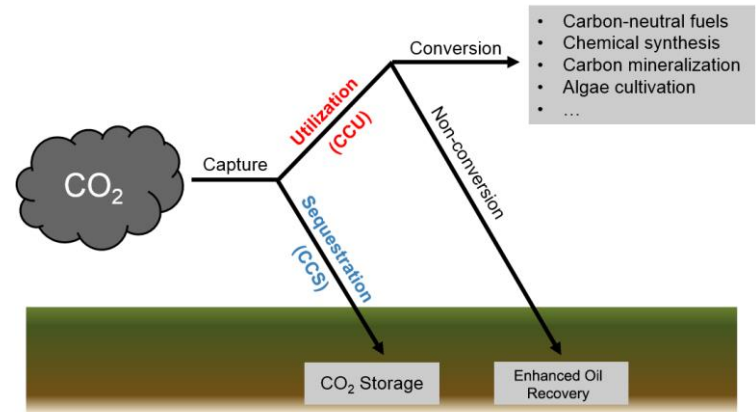
Prepp Prelims Booster: Carbon Capture Utilisation and Storage

Prepp Mains Booster: Conservation, environmental pollution and degradation; Government policies and interventions for development in various sectors and issues arising out of their design and implementation.

Context:

- A report on the policy framework of the CCUS prepared by the NITI Aayog and MN Dastur & Company said that Carbon Capture Utilisation and Storage (CCUS), the technology for decarbonizing carbon dioxide (CO₂) from high-polluting sectors such as steel, cement, oil, gas, petrochemicals, chemicals and fertilizers, has a critical role to play for the country to halve CO₂ emissions by 2050.

- According to the report, India's per-person CO₂ emissions were at 1.9 tonnes per year, less than 40% of the global average and roughly one-fourth of China's.



What is Carbon capture, utilization, and storage (CCUS)?

- It is the process of capturing carbon dioxide emissions and either using them to make things such as building materials (utilization) or permanently storing them thousands of feet below the surface (storage).

Significance

- **Low carbon economy:** The CCUS technology would help promote the low carbon-hydrogen economy and remove the CO₂ stock from the atmosphere.
- **Net zero:** CCUS can play a critical role, especially for India to accomplish net-zero by 2070.
- **Sunrise sectors:** CCUS is crucial in enabling industry sectors like coal gasification and India's budding hydrogen economy.
- We will be able to accomplish some CO₂ valorization using CCUS technology.
- The economy will be impacted if we are successful in producing value-added goods from this captured CO₂, such as green methanol and green ammonia.
- **Employment:** CCUS initiatives will also generate a sizable amount of new jobs. It predicts that 750 mtpa of carbon capture by 2050 can gradually provide 8–10 million full-time equivalent (FTE) employment opportunities.
- **Circular economy:** According to the report, CCUS can offer a wide range of opportunities to transform the captured CO₂ into various value-added products, including green urea, food and beverage form application, building materials (concrete and aggregates), chemicals (methanol and ethanol), polymers (including bio-plastics), and enhanced oil recovery (EOR), all of which have significant market opportunities in India. These opportunities can help to significantly advance a circular economy.

Challenge:

- The main obstacle would be to bring down the price of the tools needed to put the technology into use.
- The private sector is unlikely to invest in CCUS unless there are sufficient incentives or unless it can benefit from the sale of CO₂ or gain credits for emissions avoided under carbon pricing regimes.

Steps to be taken:

- Enacting a policy framework that supported the development of sustainable and profitable markets for CCUS projects was essential to the implementation of CCUS in India.-

- Regarding the policy framework, the paper recommended that in the near future, CCUS policy should be carbon credit or incentive oriented, to seed and develop the CCUS sector in India through tax and monetary credits.
- The strategy should eventually switch to carbon taxes (probably after 2050) in order to help India achieve its net zero goals by 2070.
- The policy should include financial sources and early-stage finance for CCUS projects.

National Institution for Transforming India

- The National Institution for Transforming India, also known as NITI Aayog, was formed via a resolution of the Union Cabinet on 1 January 2015.
- It is the premier policy "Think Tank" of the Government of India, providing directional and policy inputs.
- Apart from designing strategic and long-term policies and programs for the Government of India, NITI Aayog also provides relevant technical advice to the Centre, States, and Union Territories.

Circular Economy

- A circular economy is a way of producing and consuming goods that prioritises sharing, renting, reusing, repairing, and recycling already manufactured goods for as long as possible.

Farming, Major Crops and Cropping Patterns, Irrigation Farm Mechanization, Public Distribution System, Minimum Support Price, Food Subsidies and Food Security, Food Processing Industries

LEVEL OF GROUNDWATER EXTRACTION IS LOWEST IN 18 YEARS, FINDS STUDY

Priority: Medium



Primary Source: The Hindu

Prepp Prelims Booster: Ground Water, Natural Resources

Prepp Mains Booster: Conservation, environmental pollution and degradation, environmental impact assessment; different types of irrigation and irrigation systems storage

Context:

- According to an assessment by the Central Ground Water Board (CGWB) made public, groundwater extraction in India saw an 18-year decline.
- According to the 2022 assessment report, the total annual groundwater recharge for the entire country is 437.60 billion cubic meters (bcm), while the total annual groundwater extraction for the entire country is 239.16 bcm. Additionally, the report classifies 1,006 of the 7,089 assessment units in the nation as having been "over-exploited".

Highlights of assessment

- An in-depth review of the data from the evaluation reveals an increase in ground water recharge, which may be primarily attributable to rises in recharge from canal seepage, irrigation water return flow, and recharges from water bodies/tanks & water conservation structures.
- When compared to assessment data from 2017, research further shows improvement in ground water conditions in 909 assessment units across the nation.
- Additionally, the Ministry of Water Resources said that it has seen a general decline in the number of overexploited units and a decline in the stage of groundwater exploitation.

- The annual groundwater recharge was 436 bcm while the annual groundwater extraction was 245 bcm, according to a 2020 assessment.
- Recharge in 2017 was 432 bcm, while extraction was 249 bcm. According to the 2022 assessment, groundwater extraction is at its lowest level since 2004, when it reached 231 bcm.
- The CGWB and States/Union Territories previously conducted similar joint exercises in 1980, 1995, 2004, 2009, 2011, 2013, and 2020.

About Central Ground Water Board (CGWB)

- Central Ground Water Board (CGWB) is the apex organization of the Ministry of Water Resources dealing with groundwater and related issues.
- It was constituted under sub-section (3) of Section 3 of the Environment (Protection) Act, 1986 for regulating and controlling ground water development and management in the country.
- Mandate:** To Develop and disseminate technologies, and monitor and implement national policies for the scientific and sustainable development and management of India's groundwater resources, including their exploration, assessment, conservation, augmentation, protection from pollution, and distribution, based on principles of economic and ecological efficiency and equity.
- Vision:** Sustainable Management and Development of the Nation's Groundwater Resources.

Mission

- To develop groundwater policies, programs, and practices to monitor and enable the effective use of the country's groundwater resources in a sustainable manner with the active involvement of all stakeholders.
- To put into place scientific systems and practices, which would result in a sustained increase in groundwater use efficiency.
- To disseminate information, skills, and knowledge, which would help in capacity building and mass awareness in the groundwater sector.

Water resources in India

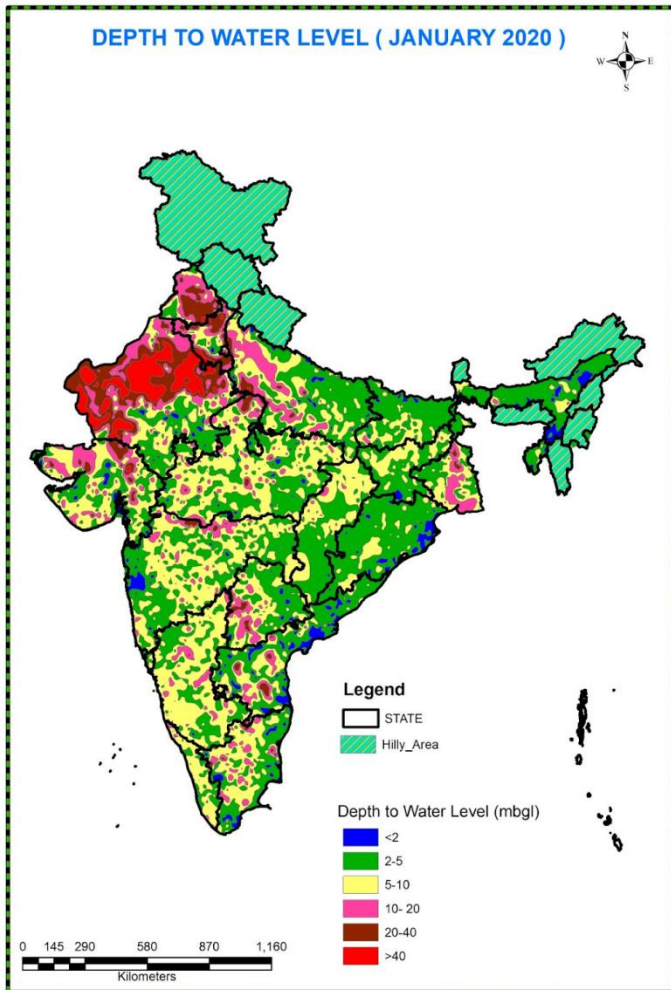
- India account for 16 percent of the world's population living in less than 2.5 percent of the global area and has just 4 percent of the global water resources.
- The Central Water Commission (CWC) estimates that 1,999 billion cubic meters of water are available in the nation's rivers as a result of natural runoff.
- It is projected that 1,122 billion cubic meters of resources are usable annually, including 690 BCM of surface water and 432 BCM of replenishable groundwater.
- The country's per capita availability will drop from 1,434 cubic meters in 2025 to 1,219 cubic meters in 2050, according to the CWC.

Steps taken by India to conserve water

- Water is a State subject, therefore, is for the State Governments concerned to take up programs and schemes for the protection of its water bodies.
- The Central Government is limited to providing technical support and, in some cases, partial financial assistance under the existing schemes.
- Jal Shakti Abhiyan:** The government introduced Jal Shakti Abhiyan, 2019 followed by "Jal Shakti Abhiyan: Catch The Rain" (JSA:CTR) in 2021.
- Focused initiatives under these yearly campaigns undertaken by the Government of India and the State Governments include, the renovation of traditional and other water bodies/tanks, the enumeration, geo-

tagging, and inventory of all water bodies, the removal of encroachments of tanks/lakes, and the de-silting of tanks.

- Water conservation and rain water harvesting structures, as well as reuse and recharge structures, are being developed by the State Governments under Jal Shakti Abhiyan campaign



- **Minor Irrigation Census:** In conjunction with the sixth cycle of the Minor Irrigation Census (reference year 2017–18), the government has also begun the first Census of Water Bodies under the Centrally Sponsored Scheme known as the "Irrigation Census." Creating a national database for all water bodies in the nation is the goal of the Census of Waterbodies.
- **Groundwater augmentation through artificial recharge:** Central Ground Water Board (CGWB) has taken up the project on 'Groundwater augmentation through artificial recharge in certain water-stressed areas of Rajasthan and Haryana' in 2021-22.
- **Atal Bhujal Yojana (Atal Jal), 2019:** A community-led sustainable groundwater management that can be taken to scale. The major objective of the scheme is to improve the management of groundwater resources in select water-stressed areas in identified states viz. Gujarat, Haryana, Karnataka, Madhya Pradesh, Maharashtra, Rajasthan, and Uttar Pradesh.
- **Aquifer Mapping:** Since the implementation of the XII Plan, the CGWB has also commenced the mapping and management of aquifers throughout the entire nation, including low groundwater level districts.

Aquifer mapping is intended to define aquifer disposition and their characterization in order to prepare groundwater management strategies tailored to individual aquifers or geographic areas with community involvement.

- **Mahatma Gandhi National Rural Employment Guarantee**

Scheme: The Mahatma Gandhi National Rural Employment Guarantee Scheme (MNREGS) includes provisions for public works involving natural resource management, water conservation, and water harvesting structures to increase and improve groundwater, such as underground dykes, earthen dams, stop dams and check dams, as well as rooftop rainwater harvesting structures in public buildings.

What is the depth to the water level?

- This is defined as the distance (in meters) from the ground surface to the water table.
- The depth to water level in the majority of northwestern states typically ranges from 10 to 20 m below ground level.
- Deeper water levels between 20 and 40 metres below ground level have been seen in the western areas of the nation.
- Water levels greater than 40 m bgl have been recorded in northern Gujarat, western Rajasthan, and parts of Haryana.
- **Units:** meter below ground level

IMPORTANCE OF AGRI EXPORTS

Priority: Medium



Primary Source: Indian Express

Prepp Prelims Booster: Agri Exports

Prepp Mains Booster: Transport And Marketing Of Agricultural Produce And Issues And Related Constraints.

Context:

- Recently, **India's agricultural exports increased 16.5%** in April-September and are on track to surpass the **\$50.2 billion mark set in 2021-22 (april-march)**.
- Even commodities, whose exports have been restricted – Wheat, Rice, and Sugar have seen significant increases in shipments.

Previously:

- **India's agricultural exports surpassed the USD 50 billion mark for the first time during the fiscal year 2021-22 (fy22)**, owing to significant growth in Sugar, Rice, Wheat, and other cereals exports.
- The growth rate is significant because it exceeds the 17.66% growth rate of USD 41.87 billion achieved in 2020-21, and it was achieved despite unprecedented logistical challenges such as high freight prices, container shortages, and so on.
- Rice (USD 9.65 billion), wheat (USD 2.19 billion), sugar (USD 4.6 billion), and other cereals (USD 1.08 billion) have achieved their highest-ever exports.
- Farmers in Punjab, Haryana, Uttar Pradesh, Bihar, West Bengal, Chhattisgarh, Madhya Pradesh, Telangana, Andhra Pradesh, and Maharashtra have benefited from an increase in exports of these products

.Surge in Exports

- Wheat exports were banned by the government on may 13. According to

revenue. Except for two (cotton and spices), all have shown positive

TABLE 3

INDIA'S TOP AGRI-EXPORT ITEMS (IN \$ MN)

	2021-22	Apr-Sep 2021	Apr-Sep 2022
Marine products	7772.36	3836.75	4120.08
Non-basmati rice	6133.63	2968.77	3207.29
Basmati rice	3537.49	1659.60	2279.66
Sugar	4602.65	1820.68	2649.00
Spices	3896.03	1992.11	1928.67
Buffalo meat	3303.78	1593.60	1636.54
Raw cotton	2816.24	1137.83	435.87
Wheat	2122.13	630.15	1487.47
Fruits & Vegetables	1692.48	736.71	752.98
Processed F&V	1190.59	583.89	694.63
Castor oil	1175.50	615.62	662.93
Oilseeds	1113.65	453.28	531.02
Other cereals	1087.39	467.42	524.85
Oil meals	1031.94	471.65	556.61
Coffee	1020.74	460.40	610.23
TOTAL*	50240.21	22984.54	26771.64

*Includes all other items.

growth in the first half of the current fiscal year.

- commerce ministry data, wheat exports totaled 45.90 lakh tonnes (LT) from April to September, nearly double the 23.76 lt recorded during the same period last year.
- Sugar exports were moved from the "free" list to the "restricted" list on may 24. Furthermore, total exports for the 2021-22 sugar year (October-September) were set at 100 lt. Exports of broken rice were prohibited on September 8, and all other non-parboiled non-basmati shipments were subject to a 20% duty.
- Despite these measures, non-basmati rice exports increased from 82.26 lt in April-September 2021 to 89.57 lt in April-September 2022, paralleling basmati rice exports (from 19.46 lt to 21.57 lt).
- Sugar exports increased 45.5% in value terms to \$2.65 billion from April to September, on track to surpass the all-time high of \$4.6 billion set in the fiscal year 2021-22.

Surge in Imports

- However, the impressive growth in exports has been somewhat offset by an even greater increase in imports.
- As can be seen, the years 2021-22 saw both record exports (\$50.2 billion) and imports (\$32.4 billion). The resulting surplus of \$17.8 billion was significantly less than the \$27.7 billion surplus recorded in the previous all-time high export year of 2013-14.
- The current fiscal year's surplus has narrowed slightly in the first six months, owing to higher import growth (27.7%) than lower export growth (16.5%).
- The agricultural trade surplus is significant because, aside from software services, it is one sector in which India has a comparative advantage.
- The overall merchandise trade account deficit in India increased from \$76.25 billion in April-September 2021 to \$146.55 billion in April-September this year. During the same time period, the agricultural trade surplus fell only slightly, from \$7.86 billion to \$7.46 billion.

Trends In India's Top Agri Export Items

- The table below shows the top agricultural export items from India. During 2021-22, as many as 15 of them earned more than \$1 billion in

- Cotton:** cotton exports have fallen from over \$1.1 billion in April-September 2021 to \$436 million in April-September 2022, while imports have risen from less than \$300 million to \$1.1 billion.
 - This is primarily due to lower domestic production — the 2021-22 crop is expected to be only 307.05 lakh bales (of 170 kg each), compared to 353 lakh bales and 365 lakh bales in the previous two years, forcing mills to import.
 - In the process, India has become a net importer of cotton.

TABLE 1

INDIA'S AGRICULTURAL TRADE (IN \$ MN)

	Exports	Imports	Surplus
2012-13	41.73	18.98	22.75
2013-14	43.25	15.53	27.72
2014-15	39.08	21.15	17.93
2015-16	32.81	22.58	10.23
2016-17	33.70	25.64	8.05
2017-18	38.90	24.89	14.01
2018-19	39.20	20.92	18.28
2019-20	35.60	21.86	13.74
2020-21	41.90	21.65	20.24
2021-22	50.24	32.42	17.82
Apr-Sep 21	22.98	15.12	7.86
Apr-Sep 22	26.77	19.31	7.46

TABLE 2

INDIA'S TOP AGRI-IMPORT ITEMS (IN \$ MN)

	2021-22	Apr-Sep 2021	Apr-Sep 2022
Vegetable oils	18991.62	8862.38	11097.72
Fresh fruits	2460.33	1101.08	1237.86
Pulses	2228.95	835.35	595.78
Spices	1299.38	658.37	755.27
Cashew	1255.46	755.62	1412.52
Natural rubber	1032.71	442.99	542.18
Alcoholic beverages	693.23	319.28	435.80
Raw cotton	559.55	297.25	1081.16
TOTAL*	32422.30	15119.78	19309.05

- Spice trade:** in the spice trade, India's recent exports have been led primarily by chilli, mint products, oils and oleoresins, cumin, turmeric, and ginger. In traditional plantation spices such as pepper and cardamom, on the other hand, the country has become an importer as well as an exporter.

- In the pepper market, Vietnam, Sri Lanka, Indonesia, and Brazil have outpriced India, while Guatemala has gained market share in the cardamom market.
- **Cashew:** cashew is another traditional export item where India has largely become an importer. Cashew exports in 2021-22 were valued at \$453.08 million, compared to \$1.26 billion in imports. Imports have risen to \$1.4 billion or more in the first six months of this fiscal year.

Vegetable Oils as a Major Import

A single commodity, vegetable oils, accounts for nearly 60% of India's total agri imports. In 2021-22, their imports were valued at a massive \$19 billion, and imports increased by more than 25% in the first half of this fiscal year. After petroleum, electronics, gold, and coal, vegetable oils are now the country's fifth largest import item.

Two Major Government Decisions:

- The first is an increase in the minimum support price of mustard for the 2022-23 crop season, from ₹ 5,050 to ₹ 5,450 per quintal.
 - This increase, in addition to a similar increase last year (from ₹ 4,650 to ₹ 5,050), is greater than the one announced for wheat (from ₹ 2,015 to ₹ 2,125 per quintal).
- The second decision was to grant permission ("environmental release") for commercial cultivation of **genetically modified (gm) hybrid mustard**.
 - Seed yields from the transgenic mustard dmh-11, developed by Delhi University scientists, are said to be 25-30% higher than those of currently grown popular varieties.
 - Furthermore, the "barnase-barstar" gm technology is viewed as a strong platform for developing new mustard hybrids with higher yields than dmh-11 and better disease resistance or oil quality traits.

Gm Mustard DMH-11

- Mustard is one of India's most important winter crops, planted between mid-October and late November.
- It is a self-pollinating crop that is difficult to hybridize naturally because it cross-pollinates.
- It is India's most important edible oil crop.
- DMH-11 (dhara mustard hybrid) is a genetically modified mustard variety developed by Delhi University's Centre for Genetic Manipulation of Crop Plants.
- It was a government-sponsored project.
- However, researchers at Delhi University have created hybridized mustard dmh-11 using "barnase / barstar" technology for genetic modification.
- It is a herbicide tolerant (ht) crop.
- The genetic engineering appraisal committee (geac) approved the commercial production of another gm crop, mustard dmh-11

India's Cotton Production

- Cotton may require a similar approach to boost domestic output and yields.
- Insect pest-resistant genetically modified Bt cotton technology helped nearly triple India's cotton production from 140 lakh bales in 2000-01 to 398 lakh bales in 2013-14, with exports peaking at \$4.33 billion in 2011-12.
- Production has since fallen, reaching a 12-year low in 2021-22, despite India becoming a net importer.

- It demonstrates the importance of focusing on domestic production and productivity while not impeding the development of technologies that enable these.

Importance of Agri Exports In India

- According to the government's goal of doubling farmer incomes, record agri exports will help farmers earn more money.
- In addition to meeting domestic demand, Indian agricultural and horticultural products, as well as processed foods, are exported to over 100 countries worldwide.
- The export of goods such as wheat and rice will help to rationalize India's buffer storage capacity for food grains.
- India's rise as a major exporter of agricultural goods bodes well for the country's global standing.
- India's exports are helping to lower global food inflation.

CENTRE 'DOUBLES' FERTILIZER SUBSIDY AS PRICES SEE A SURGE

Priority: Medium



Primary Source: The Hindu

Prepp Prelims Booster: Fertilizer subsidy

Prepp Mains Booster: Issues related to direct and indirect farm subsidies and minimum support prices.

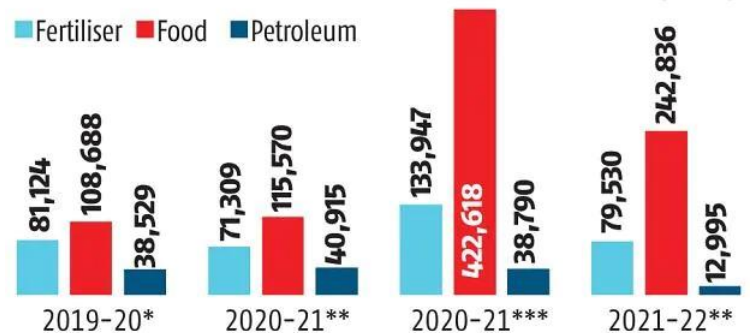
Why in the news?

- Recently, the Union Cabinet authorised a subsidy for phosphoric and potassium (P&K) fertilisers for the current rabi season totaling 51,875 crore for nitrogen (N), phosphorus (P), potash (K), and sulphur (S).
- The Centre "doubled" the fertiliser subsidy for this rabi season in response to the sharp rise in fertiliser prices on the international market.
- The amount of nutrient-based subsidies has increased significantly from the budget estimate of 21,000 crore.

Reason behind rise in fertilizer

- Commercial prices had doubled due to the Ukraine-Russia conflict
- Logistics issues due to pandemic.
- Surging power prices and local lockdowns in China is impacting the supply chain.

THE SUBSIDIES MATHS



*Actuals **Budget Estimate ***Revised Estimate

Source: Budget papers

Why fertilizer subsidy is provided in India?

- Agriculture employs about **60% of labor force** and contributes about **15% to GDP**.

- The majority of farmers in India are small and marginal farmers, who account for 51% of the country's agricultural output, 70% of its high-value crops, and 46% of its operating land holdings.
- Fertiliser use has been a **major factor in the increasing agricultural production and productivity**.
- Not providing subsidy to farmers will increase the input cost and promote meagre earnings which may in turn prevent people from **taking up agricultural and threaten food security of the country**.
- To **stimulate domestic production** by giving fertiliser producers an acceptable return on their investments.

Cons of fertilizer subsidies

- While input subsidies can assist society economically, they can also stimulate excessive use of fertilisers, agrochemicals, and irrigation water, which can have a **harmful impact on the environment**.
- subsidies to **inefficient producers**.
- the benefits of fertiliser subsidy are **largely tilted towards the large farmers** growing water-intensive crops like rice, sugar cane, wheat and cotton in a handful of states.
- About 70% of India's total fertiliser subsidy is made up of urea.

Steps taken government to reduce subsidy burden

- **Direct Benefit Transfer (DBT)**: Under this scheme, fertiliser businesses receive a 100% subsidy on various fertiliser grades based on the retailers sale to the beneficiaries.
- **New Urea Policy-2015 (NUP-2015)**: It aims to increase domestic urea production while increasing energy efficiency and reducing the burden of government subsidies on 25 currently operating gas-powered units.
- In addition, the GOI supports the balanced use of fertiliser in conjunction with bio and organic fertilizers based on recommendations from soil tests.
- **Soil Health Card (SHC) scheme**: The GOI has introduced the Soil Health Card (SHC) scheme, which not only provides information on the soil's fertility level but also suggests the amount of nutrients that should be administered to each crop separately.
- **Neem coated Urea**: the GOI promotes **fertiliser efficiency and has added neem-coated urea to FCO**. Over normal urea, neem-coated urea is more effective. This might aid in lowering pollution levels in the air and water.
- **Nano Urea**: IFFCO Nano Urea is the only Nano fertilizer approved by the Government of India and included in the Fertilizer Control Order (FCO). Application of 1 bottle of Nano Urea can effectively replace at least 1 bag of Urea.

GOVT MOVES TO SET UP FODDER-CENTRIC FARMER PRODUCER ORGANISATIONS

Priority: Medium



Primary Source: Indian Express

Prepp Prelims Booster: Animal Husbandry

Prepp Mains Booster: Food processing and related industries in India

Context:

- The wholesale price index-based **fodder inflation** reached a nine-year high of 25.5%, highlighting the hardships faced by rural families whose livelihoods are dependent on livestock.

- The **Ministry of Fisheries, Animal Husbandry, and Dairy** first proposed the establishment of fodder-centric FPOs, with the goal of addressing the country's fodder deficit.

Background

- After the Ministry of Fisheries, Animal Husbandry, and Dairying proposed the formation and promotion of fodder-centric **Farmer Producer Organizations (FPOs)** to address the fodder deficit, the government has designated the **National Dairy Development Board (NDDB)** as the implementing agency, with a target of 100 such FPOs in 2022-23.
- The competent authority in the Department of Agriculture & Farmers Welfare has approved to designate NDDB as implementing agency under the scheme of formation and promotion of 10,000 **Farmer Producer Organizations (FPOs)** to form and promote FPOs, primarily fodder centric, with animal husbandry activities as a secondary activity,
- NDDB has been tasked with forming 100 FPOs within the scheme guidelines in 2022-23."

What are Farmer Producer Organizations?

- **Farmer Producer Organizations (FPO)** are farmer-controlled organizations that actively participate in policy development and decision-making.
- They are open to anyone who can use their services and is willing to accept the responsibilities of membership, regardless of gender, social, racial, political, or religious beliefs.
- FPO operatives provide education and training to their farmer-members, elected representatives, managers, and employees so that they can effectively contribute to the development of their FPOs.

How is FPO helpful to farmers?

- FPO is a farmer-led organization. Farmers Producers Organization provides small farmers with end-to-end support and services that include technical services, marketing, processing, and other aspects of agricultural inputs.
- The concept behind Farmer Producer Organizations (FPO) was that "farmers who are producers of their agricultural products can form groups and register themselves under the Indian Companies Act."
- The Small Farmers Agribusiness Consortium (SFAC) was mandated by the Department of Agriculture and Cooperation, Ministry of Agriculture, Government of India, to assist the State Government in the formation of Farmer Producer Organizations (FPOs).
- The goal is to increase farmers' competitiveness and advantage in emerging market opportunities.
- Farmers Producer Organization (FPO) major operations include the supply of seed, machinery, market linkages, and fertilizer, as well as training, networking, financial, and technical advice.
- The Farmer Producer Organization's main goal is to ensure a higher income for producers by forming their own organization.
- Small producers lack the volume to benefit from economies of scale.
- In agricultural marketing, there is a chain of intermediaries who frequently work in an opaque manner, resulting in a situation in which the producer receives only a small portion of the value that the final consumer pays. This will be removed. Primary producers can benefit from economies of scale by accumulating.
- Farmers and producers have more bargaining power because they are bulk buyers of produce and bulk suppliers of inputs.



Wholesale Price Index based Fodder Inflation Rate

- The wholesale price index-based fodder inflation reached a nine-year high of 25.5 percent in August 2022, highlighting the hardships faced by rural families whose livelihoods are dependent on livestock. The reports highlighted how the government's plan to establish 100 fodder FPOs as part of its ambitious scheme to establish 10,000 FPOs had remained on paper.
- Recently, a meeting was held to assess the country's fodder situation, at which the states informed the Centre that dry fodder prices were significantly higher than the previous year.
- Senior central government officials, including those from the Ministry of Agriculture and Farmers Welfare, attended the meeting, as did representatives from at least 14 states: Uttar Pradesh, Rajasthan, Gujarat, Punjab, Haryana, Madhya Pradesh, West Bengal, Jharkhand, Bihar, Tamil Nadu, Andhra Pradesh, Karnataka, Uttarakhand, and Himachal Pradesh.
- The Ministry of Fisheries, Animal Husbandry, and Dairying first proposed the establishment of fodder-centric FPOs in 2020, with the goal of addressing the country's fodder deficit.

What are the causes of rising fodder inflation?

- **Lack of dry and green feed:** rice and wheat straw are burned rather than fully transformed into high-quality feed.
 - Combine harvesters need a second round of cutting for fodder since they leave a significant portion of the stalk on the field.
- **Fodder Scarcity due to stubble burning:** Stubble Burning has also causing to the destruction of paddy and wheat straws which can be used as fodder.
- **Crop Damage due to untimely rain:** Due to the late, severe monsoon rain and unseasonal rain, crops were damaged.
- **Changing cropping pattern:** Farmers are now turning away from cereal crops that produce fodder, changing their cropping patterns.
- **Decline in grazing pasture:** decrease in grazing areas brought on by the creation of protected areas and the spread of alien species.
- **Breed and crossbreed:** Jersey and Friesian Holstein crossbred cows were introduced in India in the 1970s. These cows produce more milk but also require more food to sustain them.

Impact of High Fodder Inflation

- The high fodder inflation has a direct impact on rural livelihoods.
- According to the National Statistical Office report, 'Situation Assessment of Agricultural Households and Land and Livestock Holdings of Households in Rural India, 2019', 48.5 percent of the total 17.24 crore rural households (or an estimated 8.37 crore) reported owning cattle 'in

milk,' young cattle, and cattle in the 'others' category between July and December 2018.

- Furthermore, 43.8 percent of the total 9.3 crore agricultural households used green fodder, 52.4 percent dry fodder, 30.4% concentrates, and 12.5% other animal feed.

Food Price Inflation in India in 2022

- In order to manage the COVID-19 pandemic in 2020-21, Prime Minister Modi's National Democratic Alliance-led government is shifting its focus to returning the Indian economy to pre-pandemic growth levels while keeping inflation within a reasonable range.
- Food inflation in India reached 7.3 percent in June 2022, down from 10.9 percent in May but still higher (6.3 percent) than a year ago. According to FAS New Delhi, rising wholesale food prices will likely fuel consumer food prices in the coming months.
- Vegetables, condiments and spices, vegetable oils, animal feed, dairy products, and meat/egg/fish products have seen the greatest year-on-year price increases.
- Domestic food price movements will remain vulnerable to expected continued high global commodity and fuel prices.
- Food prices will also be affected by the progress and performance of the 2022 monsoon, which is critical for the planting and production prospects of the 2022 kharif (fall harvested) season crops.

Challenges to Internal Security, Terrorism, External States, Non State Actors, cyber security

ISSUES ON TABLE AT TERROR FUNDING MEET: USE OF DARK WEB AND CROWDFUNDING

Priority: Medium



Primary Source: Indian Express

Prepp Prelims Booster: Terror funding

Prepp Mains Booster: challenges to internal security through communication networks, the role of media and social networking sites in internal security challenges, money-laundering and its prevention.

Context:

- The **third ministerial 'No Money For Terror (NMFT)' conference**, will be held on november 18 and 19, and will be hosted by the ministry of home affairs.
- The key issues that the government plans to discuss with representatives from 75 other countries and global bodies attending the ministerial conference on countering terrorism financing, include:
 - Terrorist entities' use of virtual assets and crowdfunding platforms,
 - Their use of the dark web,
 - The links between terror financing and legitimate economic activities, and
 - Payment intermediaries.

Background

- For many years, countries around the world have been affected by terrorism and militancy. Over the past three decades, India has faced various forms of terrorism and its financing.
- As a result, it understands the anguish and trauma experienced by similarly affected nations. In order to demonstrate solidarity with peace-loving nations and to help build a bridge for long-term cooperation on countering terrorist financing, India hosted two global events in October:
 - The annual general assembly of INTERPOL in Delhi and

- A special session of the UN counter terrorism committee in Mumbai and Delhi.
- The upcoming NMFT conference will contribute to our efforts to increase international understanding and cooperation.



What Is Terror Funding?

- Terrorism financing is the provision of funds or financial assistance to individual terrorists or non-state actors.
- Terrorists and terrorist organizations frequently use any source of money they can get their hands on to fund their operations. This can include the distribution of narcotics and black market oil. Isis is known to use black market oil distribution to fund their terrorist activities.
- The internet is a growing modern form of terrorist financing because it protects the anonymity that it can provide to both the donor and the recipient.
- Terrorist organizations use propaganda to garner financial support from those who support them. The funds may also come from an illegal source but appear to come from a legal source due to money laundering.
- Most Countries Have Implemented **Counter-Terrorism Financing (CTF)** measures, often as part of their money-laundering legislation.
- The **Financial Action Task Force on money laundering (FATF)** has made recommendations to members regarding ctf. It has developed a blacklist and a greylist of countries that have not taken adequate CTF action.

What Is The NMFT Conference?

- The Ministerial No Money For Terror (NMFT) Conference aims to provide a forum for international discussions on countering terror financing.
- The conference will include discussions on technical, legal, regulatory, and cooperative aspects of terrorism financing.
- It aims to set the tone for other high-level official and political discussions on terror financing.
- The first edition of this conference was held in Paris, France, in 2018. The 2019 NMFT was held in Melbourne, Australia.
- The third edition was scheduled to take place in India in 2020, but it was postponed due to the COVID-19 pandemic, which caused global travel restrictions.

Objectives Of The Conference

- **India's efforts:** The event conveys India's determination in its fight against terrorism, as well as its support systems for success.
- **Global cooperation:** It also intends to include discussions on technical, legal, regulatory, and cooperation aspects of all aspects of terrorism financing.

- **Compliance mechanism:** The involvement of a compliant state frequently exacerbates terrorism, particularly its financing.

Focus Area Of The Meeting

- The Indian government will discuss the misuse of non-profit organizations and non-financial businesses and professions in terror financing, as well as terror financing through the money transfer service scheme and hawala networks.
- India will also discuss the challenges faced by investigation agencies while investigating terror financing crimes, information sharing among financial intelligence units, and recent trends in combating terror financing/money laundering risks.
- This conference aims to advance the international community's discussions on combating terrorist financing held at the previous two (NMFT) **Conferences In Paris (In 2018) And Melbourne" (In 2019).**
- The third nmft conference will focus on global trends in terrorism and terrorist financing, the use of formal and informal channels of terrorist financing, emerging technologies and terrorist financing, and the necessary international cooperation to address related challenges.

Concerns

- The threat posed by terrorist funding via cryptocurrency and terrorist outfits' use of the internet were among the key concerns raised at the UN Security Council's counter-terrorism committee meeting last month.
- The Delhi declaration, adopted at the meeting, urged member states to "consider and assess risks associated with prepaid cards, virtual assets, and crowdfunding platforms, and implement risk-based anti-money-laundering and counter-terrorist financing regulations, monitoring, and supervision to providers of relevant services.
- The declaration acknowledged the "critical" role of the **Financial Action Task Force (FATF)** in this regard and urged member countries to improve the traceability and transparency of financial transactions.

About Financial Action Task Force (FATF)

- It is an intergovernmental policy making body.
- Its goal is to establish international standards for combating money laundering and terrorist financing.
- It was established in 1989 during the G7 summit in Paris (France) to combat the growing problem of money laundering.
- It is made up of 39 different countries.
- India is a member.
- The FATF secretariat is based at the OECD headquarters in Paris.
- Initially, it was only concerned with developing policies to combat money laundering. However, in 2001, it was expanded to combat terrorism financing.

Need To Curb Terror Financing

- Terrorist Financing Not Only Hinders Internal Security, But It Can Also Hinder Economic Development And Financial Market Stability. It Is Therefore Critical To Halt The Flow Of Funds To Terrorists.
- One Of The Most Effective Ways To Combat Terrorism Is To Restrict And Disrupt The Flow Of Funds To Terrorist Organizations.
- The Money Trail Can Be Easily Traced Through Their Transactions And Withdrawals, Which Can Not Only Prevent Future Attacks But Also Provide Information For Further Investigation.
- As Terrorists And Terrorist Groups Continue To Raise Funds Through Various Means, Countries Must Prioritize Understanding The Risks Of Terrorist Financing And Developing Policy Responses To All Aspects Of It.

- There Are Numerous Bodies And Collaborations Working To Provide A Platform For The Secure Exchange Of Expertise And Financial Intelligence In Order To Combat Money Laundering And Terrorist Financing (ML/TF).
- They Include The Financial Action Task Force (FATF), The Egmont Group Of Financial Intelligence Units, The Asia/Pacific Group On Money Laundering (APG), Etc.

INDIA DEPLOYS NEW DOCKS, UPGRADES SPEEDBOATS FOR PANGONG TSO PATROL

Priority: Medium



Primary Source: The Hindu

Prepp Prelims Booster: Pangong Tso

Prepp Mains Booster: Security challenges and their management in border areas; India and its neighborhood- relations.

Context:

- In order to patrol the Pangong Tso Lake in Eastern Ladakh, the Army has installed new landing docks and speed boats in a manner similar to that of the Chinese. The lake is located at a height of about 14,000 feet.
- This is a component of an overarching capability improvement and infrastructure-building initiative India has undertaken since the 2020 standoff in Eastern Ladakh to fill gaps and keep up with Chinese construction along the Line of Actual Control (LAC).

Significance

- The induction has given huge impetus to our patrolling capability and we now have boats that match the adversary.
- The landing craft can accommodate 35 soldiers or a vehicle and 12 people, while the speed boats can travel at 35 knots.
- For the landing craft and speed boats delivered in the second half of 2021, the Army secured two contracts in early 2021.
- A 65 crore contract for 12 specialized patrol boats with Goa Shipyard Limited (GSL) was signed at the end of December. Another Goa-based private firm was given the second contract for 17 troop-carrying, flat-bottom landing docks.

About Pangong lake

- Pangong Tso is an **endorheic or landlocked lake** that is partly in India's Ladakh region and partly in Tibet.
- The name reflects the mixed heritage of the lake: Pangong in Ladakhi means extensive concavity, the word Tso is Tibetan for lake.
- It is an about 135-km long, thin lake that is shaped like a **boomerang and is located at an elevation of around 4,270 m.**
- Approximately one-third is in India and the remainder in China, with width varying from one to five km is a major obstacle.
- Its widest point is 6 km. Over 600 sq km make up its entire surface.
- The brackish water lake has mountain spurs of the Chang Chenmo range jetting down referred to as 'fingers'.
- Along its southern bank, there are also tall, shattered mountains that slope in the direction of Spangur Lake.
- Despite being perfectly pure, the lake's water is brackish, making it unsafe to drink.



Significance of the lake

- The water body has enormous strategic significance since it offers a favorable setting for carrying out large-scale operations.
- In 1958, the People's Liberation Army (PLA) took control of Khurnak Fort. Later, in 1959, the PLA also built a camp near Maldo-Spanggur Lake, south of Pangong Tso.
- Wintertime freezing of the lake permits some vehicular traffic on it as well.

INDIA HAS EVIDENCE OF TERROR FINANCING THROUGH SOCIAL MEDIA PLATFORMS

Priority: High



Primary Source: The Hindu

Prepp Prelims Booster: NMFT

Prepp Mains Booster: Role of Media and Social Networking Sites in Internal Security Challenges, Basics of Cyber Security; Money-Laundering and its prevention.

Context:

- Recently, Director-General of the National Investigation Agency (NIA) said that India has evidence of social media platforms using crowdfunding measures to fund terror activities.
- As per the DG NIA, the misuse of social media platforms was an issue that needed to be discussed at the third "No Money for Terror Conference" (NMFT) which India would be hosting from November 18-19.

News Summary:

- DG NIA, while sharing the details of the NMFT Conference that is to be attended by representatives of 78 countries that the use of crowdfunding platforms to finance terrorist activities and weak control mechanisms of social media platforms were one of the four main agendas to be discussed at the conference.
- The aim of NMFT Conference is to build an integrated approach to countering terrorism.



What is “No Money for Terror Conference” (NMFT)?

- The NMFT conference was started in 2018 as an initiative of the French government which itself had laid the foundation of the Financial Action Task Force (FATF) in 1989.
- Around 70 delegations from different nations and the heads of nearly 20 agencies attended the Conference in France.
- By creating frameworks to address the risks associated with the use of cash, informal remittance systems (including hawalas), prepaid cards, anonymous means of payments, and by promoting digital transactions, the conference decided to "fully criminalize terrorism financing... even in the absence of a link to a specific terrorist act" and "enhance the traceability and transparency of financial flows."

3rd “No Money For Terror Conference” (NMFT) 2022

- India is hosting the 3rd edition of No Money For Terror Conference from November 18-19.
- The Union Ministry of Home Affairs is in charge of organizing it.
- It intends to advance the conversations the world community had about preventing the financing of terrorism at the two previous conferences, which were held in Paris (2018) and Melbourne (2019).
- Additionally, explanations of the technological, legal, regulatory, and cooperative implications of all facets of terrorism financing are intended to be included.
- Additionally, it aims to set the tone for other important political and official discussions centered on preventing the financing of terrorism.
- Representatives from 75 nations and international organizations will participate in the Conference, which will take place over two days.

Agenda of Conference:

- The use of crowdfunding websites and virtual assets by terrorist organizations, as well as their use of the dark web, the connections between financing for terrorism and normal economic activity, and payment intermediaries are all on the agenda for the NMFT 2022.
- It is essentially an expansion of worries expressed recently in Delhi at the UN General Assembly's Counter Terrorism Committee Conference and the Interpol Conference.
- India will talk about how non-profit organizations, non-financial enterprises, and occupations are used to finance terrorism as well as how it is done through the Money Transfer Service Scheme and hawala networks.
- India will also pay attention to "the difficulties faced by law enforcement agencies in pursuing cases involving the financing of terrorism, the sharing of information among financial intelligence units,

and emerging trends in reducing the risks associated with money laundering and terrorism financing."

Role of Social Media Platform in Terror Funding:

- The act of giving money or other forms of support to lone terrorists or other non-state actors is known as terrorism financing.
- Terrorists and terrorist organizations frequently exploit every financial source they can get their hands on to finance themselves.
- The ability of the internet to safeguard the anonymity it can offer to the donor and recipient makes it a growing source of modern terrorist financing.
- Social Media platform are growing as medium to gather finance to terror activities by using platform for advertising, and other activities.
- Propaganda tool is also used by terrorist organizations to enlist financial support from their supporters.
- Social media is used to give effect to money laundering, the cash may potentially originate from an illicit source but appear to be legitimate.
- The majority of nations have put in place measures to Combat Terror Financing (CTF), frequently as part of their anti-money-laundering regulations.

Issues with Social Media on Internal Security:

- The spread of "Internet-enabled" terrorism, the incitement of hatred and tension, and the disruption of general peace are all achieved by state and non-state actors using the internet and social media, which have grown in popularity and accessibility.
- **Youth radicalization:** The NIA has intercepted information being spread on telegram to recruit for terrorist organizations like AQIS and LeT.
- **Utilization of the Internet by Daesh:** Daesh has been using the Internet to disseminate its propaganda through sites like Twitter, YouTube, and others.
- **Communication and interaction:** by "cyber-planners," who will be in charge of organizing terrorist attacks, selecting recruits, acting as "virtual coaches," and offering direction and inspiration all during the process.
- **Promoting Lone wolf attack practices among youth:** Lone wolf strategy will create disturbance in the society.
- **Propagating agenda:** Social media serves as a good medium to propagate the propaganda materials, video, documents, picture and stem the hatred among society.
- **An increase in sentiments about sensitive topics:** employing altered films, misleading claims of evidence of injustice, and other dubious ideologies to promote false propaganda on delicate and provoking subjects in India.

Science & Technology, Space Missile Technologies, IPR and its related issues

ATOMIC ENERGY, HYDROGEN POWER INDIA'S NET ZERO PLAN

Priority: Medium



Primary Source: The Hindu

Prepp Prelims Booster: Atomic Energy

Prepp Mains Booster: Environmental Pollution And Degradation

Context:

- Recently, India announced its **long-term strategy** to transition to a "**low emissions**" pathway at the **United Nations Conference Of Parties (CoP) In Sharm El-Sheikh, Egypt**.
- It premised on increasing its nuclear power capacity by at least threefold over the next decade, as well as becoming an international hub for producing **green hydrogen** and increasing the proportion of ethanol in petrol
- Prime minister Narendra Modi made a commitment last year in Glasgow, where the 26th cop was held, to India's "five-decade journey" **to net zero, or carbon neutrality, by 2070**.

News Summary

- During the **27th Conference Of Parties (CoP27)**, India submitted its **long-term low-emission development strategy** to the united nations framework convention on climate change (unfccc).
- The long-term low emission development strategy was launched by Shri Bhupender Yadav, Union Minister for Environment, forests, and climate change, who is leading the Indian delegation to CoP 27 In Sharm-El-Sheikh, Egypt, from November 6 to November 18, 2022.
- **The National Hydrogen Mission**, which was launched in 2021, aims to make India a green hydrogen hub. Other milestones planned alongside overall power sector development include rapid expansion of Green Hydrogen production, increased electrolyser manufacturing capacity in the country, and a threefold increase in nuclear capacity by 2032.

What Was The National Hydrogen Mission (Nhm)?

- The finance minister announced the **National Hydrogen Mission (NHM) in the union budget for 2021-2022**.
- Nhm was supposed to create a road map for using hydrogen as an energy source.
- The NATIONAL HYDROGEN ENERGY MISSION aims to push for the implementation of hydrogen energy, which will drive the country in the right direction of making the most of the renewable energy sector.
- The hydrogen policy is all set to capitalize on the most abundant elements on the planet for a better, safer, and cleaner alternative fuel option.



Green Hydrogen In India

- Because of its favorable geographic location, India has a significant advantage in harnessing the power of hydrogen and producing hydrogen.
- The demand for hydrogen in india is approximately 6 metric tonnes per year, primarily from industrial sectors.

- Hydrogen demand is expected to more than fivefold by 2050. As a result of cost reductions, technological advancements, and carbon-reduction initiatives, the demand for hydrogen will be around 28 mt by 2050.
- Green Hydrogen production in india may become cost-effective in the future, ensuring self-sufficiency and energy security.
- The government has expanded the gas pipeline infrastructure and implemented power grid and smart grid reforms. These steps would unquestionably incorporate renewable energy.

What Is A Long-Term Low-Emissions Development Strategy?

- The 2015 Paris Agreement requires all parties to develop long-term low greenhouse gas emissions development strategies based on their respective responsibilities and capabilities in light of the various national-level circumstances.
- The cop26, held in glasgow in november 2021, required parties who had not yet communicated their It-leds to do so by CoP27.
- India's It-leds was developed following extensive consultations with various government entities, state governments, research institutes, and civil society organizations.

Features Of The Strategy

- The **It-leds (long term-low emission development strategy)** was developed in the context of india's right to an equitable and fair share of the global carbon budget.
- It was made certain that the strategy emphasizes energy security, energy access, and employment, while remaining focused on our vision of **Atmanirbhar Bharat**.
- The journey to net-zero is a five-decade one, and india's vision is thus evolutionary and flexible, accommodating new technological developments as well as developments in the global economy and international cooperation.
- The emphasis will be on the prudent use of national resources while maintaining energy security. Transitions away from fossil fuels will be just, smooth, sustainable, and all-inclusive.
- The increased use of biofuels, particularly ethanol blending in gasoline, the push to increase electric vehicle penetration, and the increased use of Green Hydrogen fuel are all expected to drive low-carbon development in the transportation sector.

India

- India "aspires" to **increase the use of electric vehicles, with ethanol blending increasing to 20% by 2025** (it is currently 10%) and a "strong shift" to public transportation for passenger and freight traffic.
- India will also focus on improving energy efficiency through the **perform, achieve, and trade (pat) scheme, the National Hydrogen Mission**, increasing electrification, improving material efficiency, and recycling, as well as ways to reduce emissions.
- India's forest and tree cover are a net carbon sink, absorbing 15% of co2 emissions in 2016, and the country is on track to meet its ndc commitment of 2.5 to 3 billion tonnes of additional carbon sequestration in forest and tree cover by 2030.
- The NDCs, which India must periodically update, are voluntary commitments by countries to reduce emissions by a fixed number relative to a previous date in order to achieve the long-term goal of climate agreements of preventing global temperatures from rising above 1.5 or 2 degrees celsius by the end of the century.

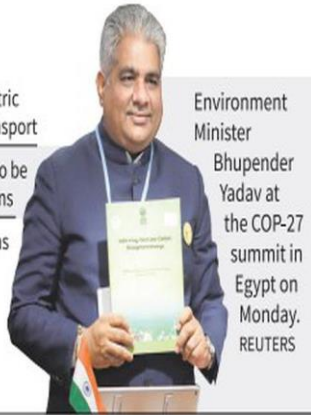
- Thus, India's most recent NDC commits to ensuring that half of its electricity is derived from non-fossil fuel sources by 2030, as well as reducing emissions intensity by 45% below 2005 levels by 2030.

India's road to 'net zero'

At COP-27, India announced its long-term strategy to transition to a 'low emissions' pathway to become carbon neutral by 2070

KEY MILESTONES

- The National Hydrogen Mission, launched in 2021, aims to make India a green hydrogen hub
- At least a three-fold increase in nuclear capacity by 2032
- Achieving an ethanol blending target of 20% by 2025
- Maximising the use of electric vehicles, increase public transport
- Increased climate finance to be provided by developed nations
- The long-term strategy aims at keeping global temperatures well below 2 degrees Celsius and, ambitiously, 1.5 degrees Celsius by the century-end



Environment Minister Bhupendra Patel Yadav at the COP-27 summit in Egypt on Monday. REUTERS

Significance Of The Strategy

- The Lt-Leds are qualitative in nature and are a requirement arising from the 2015 Paris Agreement in which countries must explain how they will transition their economies beyond achieving near-term NDC targets and work towards the larger climate goal of cutting emissions by 45% by 2030 and reaching net zero by 2050.
- According to scientists, this is the best way to keep temperature rises below 1.5 degrees celsius. So far, no country has taken such a step.
- However, the document also stated that this transition would incur costs in the "trillions of dollars," which developed countries, who are responsible for the existing carbon accumulation, should bear. “
- The transition to a low-carbon development path will incur several costs related to the development of new technologies, new infrastructure, and other transaction costs. While estimates vary from study to study, they all fall in the trillions of dollars range by 2050.
- Climate finance provided by developed countries will play a critical role and must be significantly increased in the form of grants and concessional loans, ensuring scale, scope, and speed, primarily from public sources, in accordance with UNFCCC principles.

Way Forward

- India's Long-Term Strategy (LTS) can guide the development of Indian industry, urban planning, and infrastructure construction.
- Connecting India's net-zero target with near-term climate actions is critical to avoid investments that may be incompatible with a low-emissions and climate-resilient future.
- At present, only half of the 50+ long-term strategies submitted by countries have full or partial legal backing." in the future, India may wish to establish a legal or institutional framework to pursue policies based on its long-term goal.
- India's Long-Term Strategy (LTS) builds on the net zero pledge. It clearly outlines key interventions across sectors that will be the focus of India's efforts. Importantly, the document is the result of extensive stakeholder discussions.

- However, given that the government has already announced the creation of a domestic emissions trading scheme in India, it could have included carbon pricing as a key component of India's strategy.

ANTIMICROBIAL RESISTANCE: CAN SUSTAINABLE INTEGRATED MULTI-TROPHIC AQUACULTURE REDUCE AMR IN AQUATIC SYSTEMS

Priority: Medium



Primary Source: Down to Earth

Prepp Prelims Booster: Integrated Multi-Trophic Aquaculture (IMTA)

Prepp Mains Booster: Issues relating to the development and management of Social Sector/Services relating to Health, Education, and Human Resources; Environment; Awareness in the fields of bio-technology;

Context:

Recently the global aquaculture industry has undertaken a dual approach to increase production while addressing criticisms of the environmental impact of aquaculture production by using Integrated Multi-Trophic Aquaculture (IMTA).

What is Integrated Multi-Trophic Aquaculture, or IMTA?

- Integrated multi-trophic aquaculture, or IMTA, is similar to polyculture, which involves farming two or more organisms.
- Multiple aquatic species from various trophic levels are incorporated into IMTA farming in order to increase productivity, cut waste, and provide ecosystem services like bio-remediation.
- **Benefits:** In order to increase productivity, minimize energy losses, reduce waste and environmental deterioration, and provide ecosystem services like bioremediation, the IMTA strives to integrate the production of numerous aquaculture species at different trophic levels.
- **Utilization of Waste Material:** Lower trophic level species, typically plants or invertebrates, utilise waste materials, such as excrement and uneaten fish food, as nutrition.
- **Halting spread of diseases:** IMTA systems may be more effective at controlling illnesses and halting the spread of some parasites. Although it is heavily reliant on species choice and environmental conditions, it is discovered that IMTA systems have a lower incidence of disease and parasite transmission.
- **Reduced use of antibiotics:** IMTA might necessitate less antibiotics and other medications, thereby lowering the threat of antimicrobial resistance (AMR) in the immediate environment of the farm.
- **Boost earnings:** IMTA has been widely applied to lessen aquaculture's environmental impact and boost earnings.

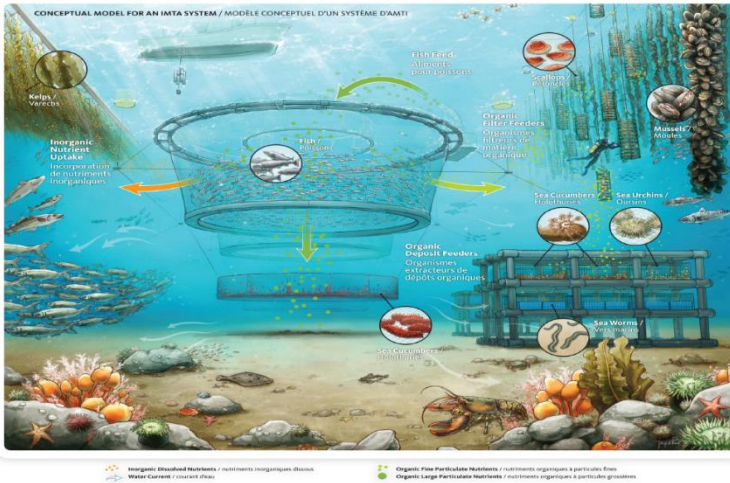
What is the Trophic level?

- In ecology, a trophic level pertains to a position in a food chain or ecological pyramid occupied by a group of organisms with similar feeding modes.
- It is the position it occupies in a food web.
- Multi-trophic" means that the various species occupy different trophic levels, i.e., different (but adjacent) links in the food chain.
- Many consumers feed at more than one trophic level. For example, Humans, are primary consumers when they eat plants such as vegetables. They are secondary consumers when they eat chicken. They are tertiary consumers when they eat salmon.

- **Food chain:** A group of organisms linked in order of the food they eat, from producers to consumers, and from the prey, predators, scavengers, and decomposers.
- **Food Web:** A food web consists of all the food chains in a single ecosystem.

Concerns:

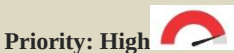
- little is known about how IMTA affects host immunological and metabolic responses, as well as the dynamics of bacterial communities and antibiotic resistance genes (ARG).
- ARGs normally aggregate from all of the different trophic levels into one trophic level, there may be a possible issue.



Way Forward:

- As IMTA systems work to lessen pathogen outbreaks, developing long-lasting and well-maintained IMTA systems may offer a fresh hope for limiting AMR.
- When compared to the conventional farming system, a sequential IMTA system should demonstrate a greater ability to sustain AMR prevalence and the integrity of the bacterial community structure, making it a potentially viable aquaculture system.

NEW FRONTIERS IN THE SPACE



Priority: High

Primary Source: Indian Express

Prepp Prelims Booster: Vikram-S

Prepp Mains Booster: Awareness in the fields of Space and Technology, Achievements of Indians in science & technology; Indigenization of technology and Developing new technology.

Context:

- Recently Indian private firm Skyroot launched its Technology Demonstration rocket Vikram-S, marking the entry of the private sector in the Satellite launch industry in India.
- India's first private rocket launch marks a push into a Sector dominated by governments.
- Author C. Raja Mohan writes that India has much distance to travel before it catches up with the rest of the world in private sector participation in space programmes.



Mission Parambh: Flight details

- The private company Skyroot Aerospace Private Limited built the 6-meter-tall spacecraft, which peaked at an altitude of 89.5 kilometers before splashing down into the Bay of Bengal about five minutes later.
- The firm showcased its technological prowess with this flight.
- The rocket will help validate technology that will be used in Skyroot's future Vikram-1 orbital vehicle, which is expected to launch next year, subject to IN-technical SPACE's permission.
- It signaled the start of the commercial sector in Indian satellite launches.
- Particularly when India opened up the space sector to commercial engagement in 2020, the development of privately manufactured rockets and satellites saw a boost.

Vikram-S Rocket:

- It was a suborbital launch vehicle with only one stage.
- Three customer payloads were transported by it in a sub-orbital flight. A 2.5 kg satellite created by children in India, the US, and Indonesia for Space Kidz India is one of the three payloads.
- Skyroot is creating three Vikram rockets to use a variety of solid and cryogenic fuels to launch payloads weighing between 290 kg and 560 kg into sun-synchronous polar orbits.
- The engine used in the launch vehicle was Kalam-80, which is named after former president Dr A P J Abdul Kalam.
 - Vikram-I has a payload capacity of 480 kg for Low Earth Orbit. A Kalam-100 rocket will power it.
 - Vikram-II is capable of taking off with 595 kg of cargo.
 - Vikram-III, with an 815 kg launch weight, can reach a 500 km low Inclination orbit.
- In contrast, the PSLV from India can launch up to 1,750 kg into such an orbit, while the recently developed Vikram class small satellite launch vehicle is designed to launch smaller commercial satellites and can launch up to 300 kg into sun-synchronous orbit.

Significance:

- Technology in the Vikram series of space launch vehicles will be tested and validated by the performance of the Vikram-S and its engine Kalam-80.
- The business is creating three Vikram rockets, each of which will use a different type of solid or cryogenic fuel and feature a carbon composite core.
- The vehicle's spin stability thrusters were created via 3D printing.
- the introduction of private players and the impending launch of additional private sector missions in India's space industry.

- As an illustration, Agnikul Cosmos' semi-cryogenic Agnilet engine recently underwent testing at ISRO's vertical testing facility at Thumba Equatorial Rocket Launching Station (TERLS), Thiruvananthapuram.
- It's also likely that private companies will soon produce and run the SSLV developed by the ISRO.
- About 100 startups have registered with the ISRO and are collaborating with it in a number of areas related to the space industry.

Space Sector in India:

- Over the past 50 years, India's space program has impressively advanced under the direction of the Indian Space Research Organization (ISRO).
- India is one of the top 5 space faring countries in the world in terms of technological prowess.
- India is renowned around the world for producing affordable satellites and launch vehicles.
- India's space industry only makes up between 2 and 3 percent of the global space economy, despite having the most successful space program in the world.
- US \$440 billion is the estimated value of the worldwide space economy.
- The Indian government has started reforms in the space industry to encourage, assist, govern, and give permission to start-ups and private businesses to engage in space operations in order to boost India's market share internationally.

WHAT IS BLUEBUGGING, AND HOW IS IT USED TO HACK BLUETOOTH-ENABLED DEVICES?

Priority: Medium



Primary Source: The Hindu

Prepp Prelims Booster: Bluebugging

Prepp Mains Booster: Awareness in the fields of IT, Computers; Challenges to internal security through communication networks, cyber security

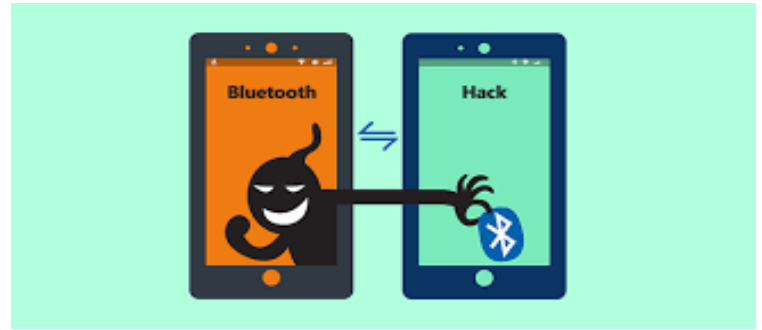
Context:

- The article 'What is bluebugging, and how is it used to hack Bluetooth-enabled devices?' published in the Hindu on 28th November talks about bluebugging, a hacking technique that lets attackers access a device through its discoverable Bluetooth connection.
- These kinds of attacks can succeed even on the most protected cellphones, like the iPhone.

What is bluebugging?

Definition: It is a form of hacking that lets attackers access a device through its discoverable Bluetooth connection.

- It first appeared to be a threat to laptops having Bluetooth functionality. Later, mobile phones and other gadgets were the targets of the approach utilised by hackers.
- Bluebugging can happen whenever a Bluetooth enabled device is within a 10-metre radius of the hacker.
- However, according to NordVPN, hackers can use booster antennas to widen the attack range.



concern:

- The audio from the iOS keyboard dictation capability when wearing AirPods or Beats earphones can be recorded by any programme with access to Bluetooth, according to certain app developers. This includes chats users have with Siri.
- **Security:** An unauthorised user can access these apps and devices through this and take control of them as they want.
- **Invasion of privacy:** A hacker can listen to calls, read and transmit messages, steal and alter contacts after a device or phone has been "bluebugged."
- **Obtain call logs and phone books:** Martin Herfurt, an independent security researcher, pointed out that the bug took use of a Bluetooth protocol flaw to obtain call logs and phone books from the phone of the targeted user.

Why devices are susceptible for such attacks?

- Any device that supports Bluetooth can be blue-bugged. Such hacks are possible with wireless earbuds. Conversations can be recorded via apps that let users connect to TWS (True Wireless Stereo) devices or earphones.
- These TWS devices' apps have the ability to record conversations. Once hacked, the attacker can change or take your contacts, initiate and listen to conversations, read and send messages, and more.

Steps to be taken

- Some techniques to avoid bluebugging include **disabling Bluetooth and uninstalling paired Bluetooth devices when not in use**, updating the system software on the device, using WiFi networks sparingly, and adding a VPN as an additional layer of security.
- **Disabling bluetooth:** By default, the majority of gadgets make Bluetooth discoverable, leaving your devices open to unauthorised connections. Therefore, the first step would be to disable Bluetooth settings so that no one can discover your Bluetooth devices.
- This will prevent hackers from seeing them, preventing them from pairing with the device.
- **Watch for strange activities:** Additionally, users must keep an eye out for any strange activity on their devices such as suddenly disconnecting and reconnecting calls.
- **Removal of unfamiliar apps:** Remove any unfamiliar apps from the smartphone or reset it to its factory settings. Also keeping an eye on data use surges that come on suddenly.
- A botnet that consumes up data may be in control of the device if the usage of data surges unexpectedly and unreasonably.
- **Anti virus:** Such attacks can also be repelled with the aid of contemporary antivirus software.

- By **screening, blocking, and persistently warning** users to be vigilant, modern antivirus software assists users in identifying unusual and spam-like content.

WHY WAS GOOGLE SUED FOR ITS LOCATION TRACKING PRACTICES?

Priority: Medium



Primary Source: The Hindu

Prepp Prelims Booster: Location Tracking

Prepp Mains Booster: Awareness in the fields of IT; Effect of policies and politics of developed and developing countries on India's interests, Indian diaspora.

Context:

- Recently, on November 14, Google has agreed with the attorneys general of 40 U.S. states to pay a historic \$391.5 million settlement, over its location tracking practices.
- The multi-million dollar settlement led by Oregon and Nebraska is the largest attorney general-led consumer privacy settlement ever.

Background

- An Associated Press report from 2018 revealed that Google kept track of users' location data even after they disabled a function called "location history" to stop tracking locations served as the impetus for the states' probe.
- Arizona accused Google of deceiving its customers and brought the first state lawsuit against the search giant in May 2020.
- Last month, Google and Arizona reached a \$85 million settlement.
- Meanwhile, the Attorneys General of other states and the District of Columbia brought their own claims against the search engine behemoth for misleading users.

What is the issue?

- Consumers were encouraged to believe that the corporation **had switched off location monitoring, but in reality, location data was still being collected and used for advertising.**
- A crucial component of Google's digital advertising business is location data.
- The business **creates extensive user profiles and targets them with adverts** using the behavioral and personal information it gathers.
- Location information is **one of the most delicate and vital personal data that Google gathers.**
- According to the release, even a small bit of location information can reveal a person's identity, routines, and ability to infer personal information.

How google tracks location?

- Majority of the mobile phones are equipped with GPS, which uses signals from satellites to determine a device's location – however, using Google Location Services, additional data from neighbouring Wi-Fi, mobile networks, and device sensors can be gathered to pinpoint a device.

Steps to be taken by Google:

- As part of the settlement, Google has agreed to dramatically enhance its user controls and location tracking disclosures beginning in 2023.
- Additionally, the firm has been urged to disclose more of its procedures.
- Every time a user toggles a location-related account option "on" or "off," Google must provide the user with more information.

- The corporation is not permitted to withhold any important information regarding location tracking from its users, and it is required to provide them with information about the many types of location data it gathers and how it uses it at an improved "Location Technologies" webpage.
- The business is developing a solitary, comprehensive information portal to highlight important location settings and assist users in making decisions on their data.
- Google will add more disclaimers to their Data & Privacy and Activity settings pages.
- In a blog post, Google stated, "We will be updating in the coming months to enable even better controls and transparency over location data."
- The dominant search engine will also make it simple for users to disable Location History and Web & App Activity settings and remove old data.
- Users who have not recently added fresh Location History data to their accounts will continue to have their Location History data deleted by the corporation.
- According to the company's blog post, it will give consumers creating new accounts a more thorough explanation of Web & App ActivityWeb & App Activity is, what data it contains, and how it enhances their Google experience.



Way forward

- The issue is not only of Big Tech not doing enough but of actively going against the broader interests of society.
- Big Tech companies pose threat to economic and political democracy due to their dominance.
- The nations must create the best regulatory framework for controlling the escalating influence of Big Tech.

GENERAL STUDIES 4

ON CHILDREN'S DAY, CAN WE IMAGINE A SYSTEM THAT VALUES EMPATHY, NOT JUST EXAMS?

Priority: Medium



Primary Source: Indian Express

Prepp Prelims Booster: Children's Day

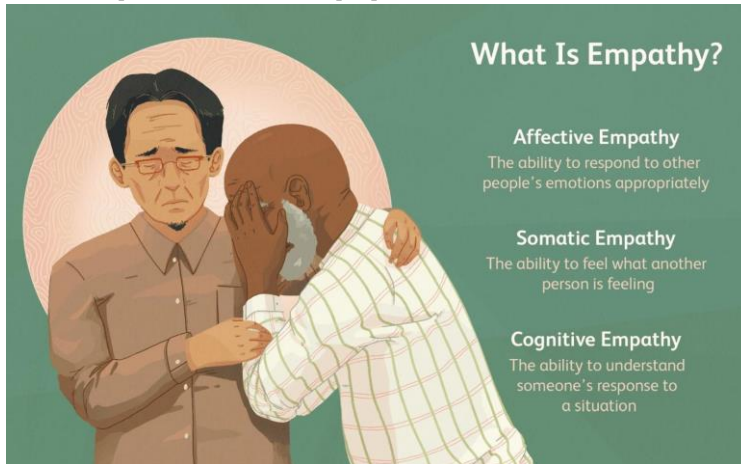
Prepp Mains Booster: Foundational Values for Civil Service - Integrity, Impartiality and Non-partisanship, Objectivity, Empathy.

Context:

- On the occasion of Children's Day, author Mini Krishnan, in the article titled "On Children's Day, Can We Imagine a System that Values Empathy, not just Exams?" above has expressed the need for inclusion of empathy in the school.
- This has been due to the recent trends of rising violence cases among the children, as teenage suicides and child-against-child violence over the last decade.

What is Empathy?

- Empathy is the capacity to experience what other people feel on an emotional level, see things from their perspective, and put yourself in their shoes. In essence, it involves placing yourself in another person's shoes and experiencing their feelings.
- While most people are well aware of their own sentiments and emotions, it can be more challenging to understand the thoughts and feelings of others. People who possess empathy can "walk a mile in another's shoes."
- Setting aside our own interests, temperament, and relationship to the agent, we can develop an empathic point of view by empathizing with how a person's actions affect people around him.



Various forms of empathy:

- Affective Empathy:** The capacity to comprehend another person's feelings and react accordingly is known as affective empathy.
 - Such emotional comprehension could make someone feel concerned for the welfare of another person or it might make them feel distressed personally.
- Somatic Empathy:** Somatic empathy entails having a physical reaction to what another person is going through. Sometimes people can actually feel what another person is feeling.
- Cognitive Empathy:** Understanding another person's mental state and potential thoughts in response to the scenario is a requirement for cognitive empathy.
 - This is associated with theory of mind, often known as thinking about what other people are thinking, according to psychologists.

Why empathy in the school?

- Understanding of Emotional stability of Student:** Empathy is needed as Children must express their concerns and uncertainties, as well as the reasons behind their anger or inability to control themselves. As teachers need to understand, it is only when Child is emotionally stable, then only his/her cognitive development will take place.

- Lack of personality development of students:** When textbook-based universal education was introduced into a traditional Indian culture like ours, it left little place for a teacher to mentor a student's personality development.
- Increasing Detachment of Student:** The student's detachment from his surroundings, his community, and his culture grew as he learned more. This practice has persisted, with the child's whole education between the ages of five and fifteen being wholly centered on the material world she is constantly assessed on.
- Rise in violence:** A question has recurred over the past few years as teen suicides and child-on-child violence increased.

How to promote empathy in school?

- The development of empathy for them can be greatly aided by role-playing activities at school that urge students to put themselves in another person's shoes as well as sensitivity training.
- Interacting informally and openly with individuals from various social groupings. celebrating holidays from other cultures or religions in accordance with the Indian concept of Sarvadharmā Sambhava
 - For instance, taking part in the celebrations of festivals like Diwali and Eid
- Through the use of literature and art, people can learn more about the conditions of particular groups of people. It entails enhancing our curiosity in diverse cultures, broadening our comprehension of various lives, and appreciating the moral values stressed.

Need for value Education in India:

- To direct the development of science and technology toward the wellbeing of humanity, moral awareness should be encouraged which will take place by realisation of education as means to achieve the end.
- As traditional values have generally declined, it is important to rediscover shared principles that can bring people together.
- Through their behavior inside and outside of the classroom, teachers subconsciously and intentionally impart values to the students. As a result, the necessity for a carefully thought out value education program is evident in order to create a formal learning environment.
- The pupils may have to make more difficult decisions regarding moral dilemmas. Through value education, we should support them in acquiring the capacity to make wise decisions in such circumstances.
- an increase in young people going through the process of personal development, juvenile delinquency is a crisis. Value-based education takes on a special significance in such circumstances.
- Value education arouses curiosity, the growth of appropriate interests, attitudes, and values, as well as the capacity to consider and assess oneself.
- Promoting social and natural integration is made easier through value education.

SHOULD GOVERNMENTS SELL LIQUOR AND RUN LOTTERIES?

Priority: Medium



Primary Source: The Hindu

Prepp Prelims Booster: Welfare state

Prepp Mains Booster: Ethical concerns and dilemmas in government and private institutions; Government policies and interventions for development in various sectors and issues arising out of their design and implementation.

Context:

- Recently, Kerala Governor Arif Mohammed Khan criticized the State government for relying heavily on liquor and lottery to generate revenue.
- According to him, the State government was making poor people spend their earnings on lottery tickets and getting them addicted to alcohol.

Should the government sell sin goods?

Arguments against

- **Welfare state:** The consumption of sin goods is linked to 'public bad' however, the role of the state is to provide public goods.
- **Health:** The sin goods have a negative impact on **weaker sections of society**.
- The rise in alcohol demand role is a **public health concern**.
- Since Independence, the state has regulated **all aspects of alcohol on the supply side**.
- Historically, the state's engagement in sinful products has been driven by a need **to generate income**. Here the goal of maximizing revenue takes precedence above the interest of the general population.
- It's not a healthy position for any state to be so dependent on a single commodity.
- **Limitation:** There are restrictions on utilizing taxes or high costs as the only means of limiting the use of sinful products.
- Even though the cost of alcohol is high, a household will suffer if an alcoholic cannot kick the **habit**. Therefore, it's crucial to use additional tools, such as public campaigns against alcohol misuse.
- Although they can reduce consumption, **sin taxes have a regressive impact on the poor**.
- This is due to the fact that such taxes affect the poor **more through their income than through a direct pricing effect**. The poor may want to **switch to illegal, lower-quality alcohol that is less expensive but harmful to their health**.
- **Changing preferences:** There has been an increase in the demand for alcohol over the past 20 years. There is a limit to how much demand we can control with sin taxes alone, regardless of the sin tax, if the demand is moving outwards.
- **Regulator:** The sale and consumption of sinful commodities can be positively regulated by the state.
- **Taxes:** According to studies, increasing the tax rates on sin products and hence their prices will make people less likely to consume them over time.
- In addition, the state receives a sizable portion of its revenue through taxes, which can be put toward programs that promote development.
- Some contend that these sin taxes result in a win-win scenario.

Reasons for state's dependence on alcohol for revenue

- **Only 43.5% of the overall income of the States and Union Territories** were made up of their own tax revenues obtained by the States in 2019–20.
- State administrations rely largely on the **Centre's budgetary devolutions**.
- **GST:** Since the implementation of the GST, the State governments can only independently decide the tax rates for a **small subset of goods and services**, mostly alcohol and petroleum products.
- Therefore, the fact that alcohol taxes are becoming a bigger part of state budgets is mostly due to the States' limited financial autonomy.

Consequences

- **Increase in prices:** When the state has a monopoly and the intention is to restrict supply, there is an increase in prices. The prices have been reduced in states where the alcohol trade is privatized.

Way forward

- The fact that drinking alcohol is becoming more socially accepted is the true issue. Women and people in the middle and upper classes are the ones who are increasing their intake.
- The increase in alcohol use is being driven by rising aspirational demand.
- Additionally, abstinence standards have been slipping.
- Measures to limit consumption should go hand in hand with steps for providing alternative livelihood opportunities for those engaged in the industry.
- Religious and cultural norms are no longer as powerful as they once were.
- We must reconsider how the state's intervention on the demand side and people's increased accountability for the negative effects of their drinking can both affect this rising demand.

'ARC OF MORAL UNIVERSE BENDS TOWARD JUSTICE': WHAT THE FAMOUS PHRASE MEANS

Priority: Medium



Primary Source: Indian Express

Prepp Prelims Booster: Constitution day

Prepp Mains Booster: Contributions of moral thinkers and philosophers from India and world; Ethics and Human Interface: Essence, determinants and consequences of Ethics in-human actions.

Context:

- Recently, **Chief Justice of India DY Chandrachud** used the famous phrase about the arc of the moral universe bending towards justice during the **Constitution Day (November 26)** celebrations at the Supreme Court.
- Concerning the accessibility of the justice system, the CJI stated, "The Indian judiciary has been adopting several measures of institutional reform with the single objective — and I borrow the celebrated phrase of American civil rights activist Dr Martin Luther King Junior to describe it — **to bend the arc of the moral universe towards justice.**"

Key Highlights

- Martin Luther King has used the phrase several times in different contexts.
- The statement is not originally his and it was borrowed from the 19th

Article 47 "The state shall undertake rules to bring about prohibition of the consumption except for medicinal purposes of intoxicating drinks and of drugs which are injurious to health

century Unitarian Minister and abolitionist Theodore Parker of Massachusetts.

- The phrase means that though justice may take long, the universe moves towards it.
- Justice is a foregone conclusion, and will eventually become about on its own because that is how the arc of the universe bends.
- The arc won't automatically bend towards justice, but has to be made to bend in that direction through human efforts.
- The claim expressed a specific kind of informed optimism, and eye-wide-open faith in humanity.

What is the full quote?

- Martin Luther King used the phrase several times in various contexts. According to the US's National Public Radio (NPR), one of its recorded uses was during the march from Selma in 1965, which was held over the issue of African-American people's right to vote.
- The statement was borrowed from Theodore Parker, a Unitarian minister and abolitionist from Massachusetts in the nineteenth century.
- Because of Dr. King's popularity and prominence in the US civil rights movement, the quote is frequently attributed to him.

What was the original quotation?

Dr. King paraphrased Parker's words, who said in a sermon in 1853, "I do not pretend to understand the moral universe." The arc is quite long. My eye reaches but little ways. I cannot calculate the curve and complete the figure by experience of sight. I can divine it by conscience. And from what I've seen, I'm sure it bends toward justice."

Meaning of the Phrase

- The phrase means that, while justice may take a long time, the universe is working towards it.
- "The arc of the moral universe is long, but it bends toward justice" — makes it sound as if justice is a given and will eventually occur on its own since that is how the arc of the universe bends.
- What is usually forgotten is that the arc of justice **must be generated by human action; it does not simply curve in that direction.**
- **Change is a slow process, but it does occur.**
- Individual activism, policy reform, and litigation are all methods through which change can occasionally be brought about.
- Each of us who works for social change is a piece of the mosaic of all those who fight for justice; when we work together, we can achieve a lot.

Indian Context

- In his speech, CJI Chandrachud stated that the judiciary is "adopting several measures" to achieve the goal of bending "the arc of the moral universe towards justice."
- Another criticism of the phrase — and one that is particularly pertinent to the Indian context — is that it appears to assume that everyone agrees on what constitutes "justice."
- Competing interest groups in a diverse population, such as India, can often have very different ideas of what is "justice," and critics argue that before trotting the phrase around like a happy platitude, a robust debate is required to arrive at an informed and fair definition of justice.

Significance of the Phrase

- Martin Luther King, Jr. reminded us that "the arc of the moral universe is long, but it bends toward justice." Change takes time, but it occurs.
- Change can occur through individual advocacy, policy reform, or litigation.
- Each of us who works for social change is a part of the mosaic of all those who work for justice; together, we can accomplish a great deal.

Example of Justice Delayed

- The biggest example of delayed justice is the Nirbhaya case, which was a three-judge bench judgment led by Justice R Bahumathi and other judges Justice Bhushan and Justice A S Bopanna, in which all four men convicted in the 2012 Nirbhaya gang-rape and murder case were finally hanged seven years later.
- It is not only rape cases that take a long time for judgments, but also religious cases. The best example of this is the verdict in the Babri Masjid demolition case, which took 28 years to announce the final verdict.

PRELIMS

VOSTRO/NOSTRO ACCOUNTS

Priority: Medium



Primary Source: The Hindu

Prepp Prelims Booster: Vostro Nostro and loro accounts

Prepp Mains Booster: Effects of liberalization on the economy, Inclusive growth; Government policies and interventions, Effect of policies and politics of developed and developing countries on India's interests,

Context:

- Recently, the government announced that **nine special Vostro accounts had been opened with two Indian banks** following permission from the RBI to facilitate rupee trade in the aftermath of US and European sanctions against Russia.
- A Vostro account is one that a domestic bank holds for a foreign bank in the domestic bank's currency, i.e., rupee. The plan is to trade in rupees in order to avoid Western sanctions against Russia.

Background

- In July 2022, the RBI established a mechanism to settle international trade in rupees "in order to promote growth of global trade with emphasis on exports from India and to support the growing interest of the global trading community in the rupee."
- The move by the central bank comes in the wake of increased pressure on the Indian currency as a result of Russia's invasion of Ukraine and sanctions imposed by the US and EU.
- According to the central bank, AD (authorized dealer) banks in India are now permitted to open rupee Vostro accounts.
- As a result, for the settlement of trade transactions with any country, an AD bank in India may open special rupee Vostro accounts of correspondent banks of the partner trading country.

What is a Vostro account?

- A Vostro account is one that a domestic bank holds for a foreign bank in the domestic bank's currency, which in India is the rupee. The RBI approved nine such accounts, including **IndusInd Bank and Uco Bank.**
- In the case of trade with Russia, payments in rupees for export and import of goods will be made to these Vostro accounts. The owners and beneficiaries of this money will be the exporters and importers in both countries. Banks will keep track of money transfers.



What is a Nostro account?

- Vostro and Nostro accounts are frequently mentioned in the same sentence. Both Vostro and Nostro are technically the same type of

account, with the only difference being who and where the account is opened.

- A Nostro account is an account held by one bank in another. It enables customers to deposit funds into the bank's account in another bank. It is frequently used when a bank has no branches in a foreign country.

Example:

- If an Indian bank, such as SBI, wants to open an account in the United States, it will contact a bank in the United States, which will open a Nostro account and accept payments in dollars on behalf of SBI.
- The account opened by the Indian bank in the US will be a Nostro account for the Indian bank, but a Vostro account for the US bank.

Concept of Loro Account

- Loro account is derived from the Italian word "Loro," which means "their," indicating that this account is a "Third Party Account."
- In bilateral correspondence between any two banks, the words Vostro (Your) and Nostro (Our) are used, referring to the bank whose book the account is maintained and the bank who is maintaining the account.
- In such cases, a third bank's account is referred to as a Loro account.

Meaning of Nostro and Vostro

- In Latin, **Nostro means "ours,"** and **Vostro means "yours."** As a result, accounts opened by IndusInd and UCO are Vostro, while those opened by Russia's Sberbank and VTB Bank are Nostro.

INDIA PLANS CHANGES TO CAPITAL GAINS TAX STRUCTURE IN NEXT BUDGET

Priority: Medium



Primary Source: The Hindu

Prepp Prelims Booster: Capital Gains Tax

Prepp Mains Booster: Indian Economy and issues relating to Planning, Mobilization of Resources, Growth, Development and Employment.

Context:

According to recent updates, India is to make adjustments to its capital gains tax structure in the upcoming budget in an effort to achieve parity between tax rates and holding periods for investments in equity, debt, and real estate.

News in details:

- The industry has submitted several proposals to the government that would simplify the capital gains tax structure in India, and adjustments are anticipated in the budget for 2023–2024.
- At present, asset classes are not taxed uniformly and have different holding periods for levying capital gains tax, which are required to be aligned.

Present situation:

- India levies an investment gain tax based on a holding period or lock-in. These are:
 - Long Term Capital Gain Tax
 - Short Term capital Gain Tax
- Long-term investments are those held for more than a year in stocks or equity-linked mutual funds, and gains over one million rupees are subject to a 10% tax.
- Equity investments held for less than a year are regarded as short-term and are subject to a 15% tax.

Why is there a need to bring changes in Capital Gains Tax?

- **Bringing Uniformity in Tax rate structure:** Currently, long term capital gains on shares is taxable at 10 percent while for debt and immovable property, the tax rate is 20 percent.
- **Bringing Uniformity in Holding Period of Capital asset:** Currently, long term capital gains on shares is taxable when the holding period exceeds 1 year. For debt and immovable property, the holding period is 3 years and 2 years respectively.

What is Capital Gains Tax?

- Capital Gains refers to the taxation of any profit or gain realized throughout the year as a result of the transfer of a capital asset.
- The Income Tax Act states that no capital gains tax is payable if a person inherits property and does not sell it.
- However, if the inheritor decides to sell the property, he or she will be responsible for paying tax on the proceeds.
- Jewelry, equipment, leasehold rights, patents, machinery, real estate, buildings, and land are examples of capital assets.
- For instance, a trader might invest Rs. 1 lakh in stock and sell it for Rs. 11 lakhs after five years.
 - This represents a capital gain of Rs. 10 lakh.
 - Since the equity was kept for 5 years, the gain is regarded as long-term and is subject to a 10% tax.
 - Therefore, a capital gains tax payment of Rs. 1 lakh is to be paid.
- The items listed below are not regarded as capital assets:
 - any supplies, products, or raw materials kept for use in a business or profession.
 - Clothing and furniture held for personal use are examples of personal items.
 - India's rural areas have agricultural land.
 - Gold bonds issued by the central government in 1977 or 1980 at 612 percent or 7 percent, respectively, or gold bonds issued for national defense (1980).
 - exclusive bearer bonds (1991)
 - the Gold Deposit Scheme (1999) or the Gold Monetisation Scheme, a gold deposit bond or deposit certificate (2015).

What are the types of Capital Gain Tax?

Depending upon the Holding period of capital asset, There are two types of capital gain taxes mentioned below:

- **Long Term Capital Gain Tax:** If the capital assets are held for more than 1 year in the case of equity, 2 years for Immovable property and 3 years for debt, then tax payable due to the capital gain on the asset are known as Long Term Capital Gain Tax.
- **Short Term Capital Gain Tax:** If the capital assets are held for up to 1 year in the case of equity, Immovable property and debt, then tax payable due to the capital gain on the asset are known as Short Term Capital Gain Tax.

Benefits of Capital Gains Tax

- Businesses frequently invest their cash in low-tax assets rather than using it to innovate. Capital gains tax is a barrier.
- They behave fairly because passive income ought to be taxed just as heavily as earned income.
- The tax burden is shifted to working people as a result of low stock gain taxes.

Drawbacks of Capital gains Tax

- The investor ends up with less money, which they could have used to save or invest in stocks and bonds.
- This increased investment might promote economic growth.

- It is more challenging to create new jobs when businesses have less money to invest in growth and innovation.
- The money used to purchase stocks or bonds has already been subject to ordinary income tax; therefore, imposing a capital gains tax would be double taxation.

CURRENT ACCOUNT DEFICIT LIKELY TO BE LOWER AT 3% THIS FISCAL: SBI REPORT

Priority: Medium



Primary Source: The Hindu

Prepp Prelims Booster: Current Account Deficit

Prepp Mains Booster: Indian Economy and issues relating to planning, mobilization, of resources, growth, development;

Context:

- A recent report by the State Bank of India said that in contrast to the minimum consensus estimate of 3.5% a reduced current account deficit for this fiscal year of 3% has been projected.
- The report has Cited increased software exports, remittances, and a potential USD 5 billion increase in foreign exchange reserves through swap arrangements.

Highlights of the report

- According to the chief economic advisor at SBI, **every \$10 increase in oil prices has a 40 basis point impact on the Current Account Deficit (CAD)**, while the same rise in fuel inflation has a 50 basis point impact and also leads to a 23 basis point fall in growth.
- The CAD has a counter-cyclical shock absorber.
- **Exchange rates account for 40% of the fluctuation in software exports**, which substantially contributes to their growth.
- If expressed in real terms, every Re 1 decline versus the dollar results in a \$250 million rise in software exports.
- Combined with an anticipated \$5 billion accrual of currency reserves from swap transactions and higher remittances, **this will limit the Current account deficit share of the economy to 3% of GDP, down from the average lowest level projected for the year of 3.5%.**
- As swap transactions reverse, the FX reserves, which fell from \$642 billion in September 2021 to approximately \$531 billion last week, are anticipated to increase by \$5 billion.
- The **largest influence on CAD comes from oil imports**, which account for up to 30% of the nation's import bills. As a result, any increase in oil price directly affects the trade deficit by raising the cost of imports and widening the CAD.
- **Software exports have been increasing**, with the percentage of domestic IT services companies' **onsite software exports rising to 88.8% in FY22 from 82.8% five years earlier.**



What is the Current Account deficit?

- The current account tracks the inflows and outflows of goods, services, and investments into and out of a country. When the value of goods and services imported exceeds the value of those exported, the country runs a deficit.
- It keeps track of the country's transactions with other countries.
- When an economy runs a current account deficit, it consumes more than it produces (consumption = domestic consumption + investment + government spending).
- This can only happen when other economies lend their savings to it (via debt or direct/portfolio investment in the economy) or if the economy is depleting its foreign assets, such as its official foreign currency reserve.
- A rising CAD indicates that a country has become uncompetitive, and investors may be unwilling to invest there.
- A current account deficit isn't always a bad thing. A current account deficit is irrelevant when it is driven by the private sector because it is caused by private sector agents engaging in mutually beneficial trade.
- Current Account = Trade gap + Net current transfers + Net income abroad (Trade gap = Exports – Imports)

Significance of Current Account Deficit

- The current account deficit is a **key indicator of competitiveness** as well as the **level of imports and exports.**
- A large current account deficit usually indicates an **economic imbalance** that must be corrected through **exchange rate depreciation** and/or improved competitiveness over time.
- A current account deficit is **paid for by attracting capital inflows**, such as foreigners purchasing domestic assets. This means that **foreigners have a stronger claim to assets and dividends.**
- Because we are buying from abroad, the Current Account Deficit allows for higher levels of domestic consumption.

CHIEFS OF INDIAN, FRENCH AIR FORCES JOIN ONGOING GARUDA-VII AIR EXERCISE

Priority: Medium



Primary Source: The Hindu

Prepp Prelims Booster: Garuda VII

Prepp Mains Booster: Bilateral, regional and global groupings and agreements involving India and/or affecting India's interests.

Context:

- Recently, Air Force Chiefs of India and France joined the ongoing Air Exercise Garuda VII at Jodhpur. The Indian Air Force (IAF) Chief Air Chief Marshal (ACM) V. R. Chaudhary flew a sortie in an IAF Rafale fighter, whereas the French Air and Space Force (FASF) Chief General Stéphane Mille flew in an IAF Su-30MKI fighter.



Highlights

- For the **first time**, the recently added **Light Combat Helicopter (LCH) Prachand** and the **Light Combat Aircraft (LCA) Tejas** are both taking part in Ex Garuda VII to participate in any international exercise.
- The IAF and FASF's participation in this exercise will foster professional engagement, and exchange of experiences, and improve operational knowledge in addition to boosting bilateral ties between the two nations.
- The Air Exercise Garuda offers a unique chance for both Air Forces to absorb and learn from each other's finest operational methods.
- Since 2003, there has been a bilateral air exercise.
- Four Rafale fighters and one A-330 multirole tanker transport aircraft from the French side are participating in the exercise, which is scheduled to conclude on November 12.
- The IAF contingent also includes Mi-17 helicopters, Su-30 MKI, Rafale, and Jaguar fighter aircraft in addition to the LCA and LCH.
- The IAF contingent also consists of combat-enabling assets like flight refuelling aircraft, early warning aircraft, and Garuda Special Forces.

India-France bilateral relations

Political relations

- Relations between India and France were strengthened with the creation of the **Strategic Partnership in 1998**.
- Several areas of cooperation are the emphasis of this partnership, including civil nuclear energy, defence, counterterrorism, space cooperation, cyber security, and digital technology.

Economic relations

- France ranks 24th among countries supplying India, with a 1% market share, and is its 17th-largest customer.
- A sizeable amount of French exports are made up of communications equipment, chemicals, and the pharmaceutical and chemical sectors.
- France is one of the top foreign investors in India, with a stock of €9.8 billion by the year 2020. (6th-largest G20 investor).
- In India, there are more than 540 French subsidiaries operating in a variety of industries and employing close to 300,000 people.
- India and France are working together as a part of France's "Smart Cities" programme.

- More than 20 cities already have sustainable urban development projects being carried out by French enterprises (metro, water supply, etc.).

Cultural, scientific and technical cooperation

- 10,000 Indian students were enrolled at French universities in 2019 (20,000 are expected by 2025), owing to scholarship programmes and **collaborations between Indian and French academic institutions**.
- The number of Indian students studying in France has increased as a result of the conclusion of two agreements in March 2018: **one on migration and mobility and the other on diploma recognition**.
- Building blocks for scientific and technical cooperation include institutions like the Indo-French Centre for the Promotion of Advanced Research (IFCPAR), which has brought together French and Indian researchers and scientists since 1987, and collaborative research labs in exciting fields like neuroscience and chemistry.
- Regular festivals are held between India and France to promote each other's cultures. In France, the Namasté France festival, while in India, the Bonjour India festival.

Cooperation in the area of the environment

- Regarding the environment, both nations co-founded the **International Solar Alliance** during COP21.
- In addition, France joined the **Coalition for Disaster Resilient Infrastructure (CDRI)**, an initiative started by India, in July 2020.
- This framework aids in the implementation of investment principles in top-notch G20 infrastructures and aids in climate change adaptation.
- France welcomed the **Indo-Pacific Oceans Initiative (IPOI)**, which Prime Minister Modi inaugurated in November 2019, and offered to take on the position of lead partner of the Marine Resources pillar in April 2021.
- India is one of the nations that has ratified the **Brest Commitments for the Oceans**, which were the result of the Indo-French Year of the Environment that was held in 2021 and included the Roadmap on the Blue Economy and Ocean Governance, both of which were adopted on February 20, 2022.

THE GENE REVOLUTION

Priority: Medium



Primary Source: Indian Express

Prepp Prelims Booster: Gene revolution

Prepp Mains Booster: Science And Technology

Context:

- Recently, the government decided to release India's first **Genetically Modified (GM)** food crop, **Dhara Mustard Hybrid-11 (dmh-11)**, for "**environmental release**," but some activists petitioned the supreme court to prohibit it for a variety of reasons.

News Summary

- The opposition to GM food crops is not new. Many activists have launched a worldwide campaign in this regard. Gm crops have spread all over the world since 1996.
- By 2019, approximately 190 million hectares of gm crops had been planted, led by corn and soybean in the United States, Brazil, Argentina, and Canola (rapeseed/mustard) in Canada, with no adverse effects on human or animal health or the environment.
- Bangladesh has also moved forward with Bt Brinjal. Over 70 countries have approved the use of Genetically Modified Crops.

What Are Genetically Modified (GM) Crops?

- **GM crops** are plants whose genes have been artificially modified, usually by inserting genetic material from another organism, to give them new properties such as increased yield, herbicide tolerance, disease or drought resistance, or improved nutritional value.
- Golden rice is most likely the most well-known gm rice variety.
- Golden rice is made by combining genes from a plant - both Daffodils and Maize have been used - and a soil bacterium to create a grain rich in vitamin A.
- Previously, India approved the commercial cultivation of only one GM crop, Bt Cotton, but GEAC has recommended that GMMustard be approved for commercial use.

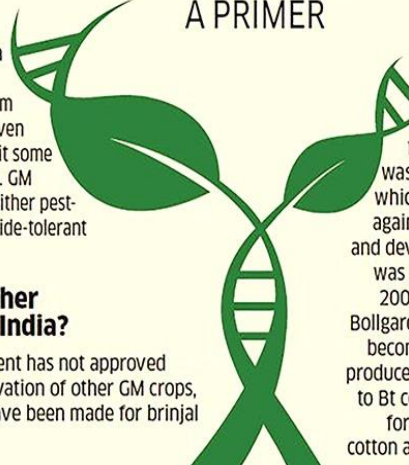
What is a GM crop?

A crop which has a gene artificially inserted into it from another species, even unrelated, to give it some desired properties. GM crops are mostly either pest-resistant or herbicide-tolerant

Are there other GM crops in India?

No, the government has not approved commercial cultivation of other GM crops, though efforts have been made for brinjal and mustard

**GM CROPS IN INDIA
A PRIMER**



When did India get its first GM crop?

The first GM crop variety approved for commercialisation was Bt cotton. Bollgard-I, which provided immunity against the pink bollworm and developed by Monsanto, was given the go ahead in 2002. Monsanto released Bollgard-II in 2006. India has become the world's largest producer of cotton partly due to Bt cotton, which accounts for over 90% of the total cotton acreage in the country

What Is The Purpose Of Genetically Modified Crops?

- Higher yields
- Increased nutritional value
- Longer shelf life
- Increase drought resistance
- Increase resistance to insects and pests
- Resistance to herbicides has increased

What Is DMH-11?

- DMH-11 Is a Mustard hybrid developed by researchers at the University of Delhi's Centre for Genetic Manipulation of Crop Plants.
- The efforts to develop hybrid mustard for decades began with DMH-1, a hybrid variant developed without the use of transgenic technology.
- DMH-1 was approved for commercial release in northwest india in 2005-2006, but scientists have stated that this technology is not bankable enough to consistently produce hybrid mustard.
- While india has many mustard varieties, it is a self-pollinating plant, making it difficult for plant breeders to cross different mustard varieties and induce desirable traits.
- The mustard plant's genes are to be manipulated by being able to turn off this self-pollinating trait to allow such crossings and then restoring the trait to allow seed production. **DMH-11 Is a hybrid Of Two Varieties: Varuna and Early Heera-2.**

- Such a cross would not have occurred naturally, and it was achieved through the introduction of genes from two soil bacterium known as barnase and barstar.
- Barnase in Varuna causes temporary sterility, preventing it from naturally self-pollinating.
- Barstar in Heera inhibits the action of Barnase, allowing seeds to be produced.
- As a result, DMH-11 (where 11 refers to the number of generations after which desirable traits manifest) not only has higher yield but is also fertile. DMH-11 is a transgenic crop because it contains foreign genes from another species.

Bt Cotton

- Bt cotton is a Genetically Modified Organism (GMO) or genetically modified pest resistant plant cotton variety that produces an insecticide to combat bollworm.
- For many years, Bt (*Bacillus thuringiensis*) cotton has been grown commercially in India.
- In 2002, the Genetic Engineering Approval Committee (GEAC) approved the release of Bt cotton for commercial cultivation in the western and southern parts of the country.
- In 2005, Bt cotton was approved for cultivation in Punjab. Prior to its release, it had been adopted by 72% of farmers on 22% of the cotton land.

Outcomes Of Vajpayee's Historic Decision To Introduce Bt Cotton In 2002

- Cotton production increased dramatically from 13.6 million bales (1 bale = 170 kg) in 2002-03 to 39.8 million bales in 2013-14, representing a 192% increase in just 12 years, ushering in the famous "gene revolution."
- Cotton productivity increased by 76%, from 302 kg per hectare in 2002-03 to 566 kg per hectare in 2013-14, while cotton cultivation area increased by 56%, with Bt cotton accounting for approximately 95% of the increase.
- Cotton farmers' incomes have increased significantly.
- Bt cotton was the driving force behind Gujarat's "agrarian miracle" of very high (above 8%) annual growth rate in Agri-GDP from 2002-03 to 2013-14.
- It elevated India to the world's second-largest producer of cotton after China, as well as the world's second-largest exporter after the United States.

Risks Associated With GM Crops

- Some Of These Include:
 - Increased sucking pest damage in bt cotton;
 - An increase in secondary pests such as mired bugs and Spodoptera;
 - The emergence of pest resistance;
 - Environmental and health implications in terms of toxicity and allergenicity that can cause hematotoxin reactions in the human body; and
 - Farmers' exposure to a greater risk of monopoly in the seed business.
- Based on largely unproven fears shared by left and right ideologues, commercial release of herbicide-tolerant (HtBt) cotton, BtBrinjal, and now GM Mustard has been halted. This is despite official

approval from the country's biotech regulator, the **Genetic Engineering Appraisal Committee (GEAC)**.

What Is The Genetic Engineering Appraisal Committee (GEAC)?

- It is in charge of assessing the environmental impact of activities involving the large-scale use of hazardous microorganisms and recombinants in research and industrial production.
- The committee is also in charge of evaluating proposals for the release of genetically engineered (GE) organisms and products into the environment, including experimental field trials.
- GEAC is chaired by the special secretary/additional secretary of MOEF&CC and co-chaired by a representative from the Department Of Biotechnology (DBT).

Impact

- GMOs have been present in our food systems for many years. India is heavily reliant on imported edible oils (55-60% of India's domestic requirement is imported).
- A large portion of this — approximately three to four million tonnes per year — is derived from gm technology (in Soybean and Canola) in Argentina, Brazil, Canada, and the United states.
- We consume a lot of our own cotton seed (Binola) oil, and approximately 95% of our Cotton is now genetically modified. Cotton seed is also fed to cattle, which contributes to the fat content of the milk.
- Even poultry feed, such as soya and corn, is imported. GM food is already in our food chain and has been for quite some time.
- By refusing to allow gm mustard or, for that matter, Bt Brinjal for so long, one is denying farmers' basic rights to increase their income.
 - The most effective way to accomplish this is to increase productivity in a sustainable manner.
 - This is where science comes in. Field trials of GMMustard in various locations revealed a 25-28 percent increase in yield and disease resistance compared to indigenous varieties.
 - This has the potential to significantly increase domestic mustard oil supplies and farmer income.

India's Position

- It was anticipated that India would lead the Gene Revolution and emerge as a major export hub for other Asian and African countries.
- The Bt Revolution has the potential to do in agriculture what it revolution has done in computer science.
- Unfortunately, our policy paralysis on gm technologies from 2003 to 2021 has cost farmers a lot of money. India is no longer on top.
- Dissent is a positive sign in any democratic society and is an important component of checks and balances.
- However, once the safety tests are completed and the scientific body (GEAC) has given the green light, political leadership is required to keep decision-making science-based.

ISRO'S CRYOGENIC ENGINE, INDIGENOUSLY DEVELOPED FOR LVM3, PASSES HOT TEST

Priority: High



Primary Source: The Hindu

Prepp Prelims Booster: Space

Prepp Mains Booster: Science and Technology- Achievements of Indians in Science & Technology; Indigenization of Technology and Developing

New Technology; Awareness in the fields of IT, Space, Computers, Robotics.

Context:

Recently, the ISRO's CE20 cryogenic engine, which was built domestically for LVM3, formerly known as the GSLV-Mk3, by the Indian Space Research Organisation (ISRO), has successfully undergone a hot test.



News Background:

- According to ISRO, CE20 cryogenic engine is indigenously developed for Launch Vehicle Mark3 (LVM3).
- On November 9 in Mahendragiri in Tamil Nadu, it underwent a successful hot test with an increased thrust level of 21.8 tonnes.
- With extra propellant loading, this will increase the LVM3's payload capacity to 450 kg.
- Thrust Control Valve (TCV) for thrust control was added as one of the test article's key improvements compared to earlier engines.
- ISRO reported that in addition to the hot test, the engine also received its first 3D-printed LOX and LH2 turbine exhaust casings.
- The engine ran at a thrust level of 20t for the first 40 seconds of the test, and then the thrust control valve was moved to boost the thrust level to 21.8t.
- According to ISRO, the test's engine and facility performed as expected and the necessary parameters were met.

What is LVM3?

- LVM3, earlier known as GSLV MkIII, is the heaviest launch vehicle of ISRO.
- LVM3 is the largest launch vehicle developed by India, which is currently in operation.
- This three-stage launch vehicle of the fourth generation has four liquid strap-ons.
- The third stage of the GSLV Mk III is the Indigenously developed, built and flight-tested Cryogenic Upper Stage (CUS).

Features:

- Able to hoist and park a 4.3-ton satellite on a GTO.
- For LEO missions, the payload capacity is 10 tons.
- Commercially viable from a financial perspective.
- Improved dependability, operability, and redundancy management.
- Possibility of future payload growth with minor design modifications.

- To support manned missions in the Indian Space Program, such the Gaganyaan mission.

Operational Past:

- The GSLV-Mk III-D1 launched the GSAT-19 satellite into a geosynchronous transfer orbit in 2017 as the vehicle's first developmental mission (GTO).
- The second developmental mission of the GSLV MkIII, GSAT-29, a high throughput communication satellite, was launched in 2018.
- Chandrayaan-2, India's second lunar mission, was successfully launched by the GSLV MkIII-M1 into Earth parking orbit in 2019.

Geosynchronous Satellite Launch Vehicle (GSLV):

- This space launch vehicle, known as the Geosynchronous Satellite Launch Vehicle (GSLV), was created, developed, and is used by the ISRO to place satellites and other spacecraft into geosynchronous transfer orbits (GTO).
- Greater payloads may be launched into orbit by GSLV than by Polar Satellite Launch Vehicle (up to 5,000 kg up to 37,000 km)
- Up to 2000 kilograms can go 600–900 kilometres into space on the PSLV rocket.
- While PSLV is primarily designed to transport earth observation or remote sensing satellites, GSLV is designed to launch communication satellites.
- Satellites are launched by GSLV into a GTO, or higher elliptical orbit.
- The three-stage GSLV launcher has strap-on motors.
 - The solid rocket motor with four strap-on liquid engine motors is used in the first stage. The stage that produces the most thrust.
 - The Vikas engine, a liquid rocket motor, is used in the second stage.
 - A cryogenic engine, which is used in the third stage, burns liquid oxygen and hydrogen as fuel.
- The first successful flight of the GSLV employing the domestic cryogenic engine was GSLV-D5, which was launched in 2014. (CE-7.5).

PERFORMANCE GRADING INDEX (PGI) - 2020-21

Priority: Medium 

Primary Source: The Hindu

Prepp Prelims Booster: Performance Grading Index

Prepp Mains Booster: Issues relating to development and management of Social Sector/Services relating to Health, Education, Human Resources.

Context:

- Recently, the Department of School Education and Literacy (DoSE&L) has released the Performance Grading Index (PGI) for States and Union Territories (UTs) for 2020-21, which shows an evidence-based comprehensive analysis of the school education system across States/UTs.
- With over 14.9 lakh schools, 95 lakh teachers, and close to 26.5 crore pupils from various socioeconomic backgrounds, the Indian education system is one of the biggest in the world, according to the Index.

Performance Grading Index (PGI) for 2020-21

- According to the Index, compared to none in 2017–18 and four in 2019–20, seven States and UTs—Kerala, Punjab, Chandigarh, Maharashtra, Gujarat, Rajasthan, and Andhra Pradesh—have obtained Level II (score 901–950) in 2020–21.
- Gujarat, Rajasthan and Andhra Pradesh are the new entrants to highest achieved level of any State so far.

- Ladakh, a recently created UT, improved significantly in PGI in 2020–21, moving from Level 8 to Level 4 or increasing its score by 299 points from 2019–20, the largest improvement in a single year ever.

What is the Performance Grading Index (PGI)?

- The Performance Grading Index of the **Ministry of Education** classifies States and Union Territories into **10 grades based on their score out of a total 1,000 points**.
- A total of 70 variables across **five Parameters**—
 - **learning outcome,**
 - **Access,**
 - **Infrastructure and facilities,**
 - **Equity, and**
 - **Governance process**
- The Unified District Information System for Education Plus (UDISE +) 2020–21, the National Achievement Survey (NAS) 2017 and the Mid Day Meal Portal are some data sources used to create the Index.
- The PGI 2020-21 graded the States and UTs into ten levels, with Level 1 being the highest rating attainable for States and UTs achieving over 950 out of a possible 1000 points. Level 10 is the lowest grade and is awarded for scores below 551.

Why Is It Required?

- **Data-driven:** It offers perspectives and data-driven tools on the effectiveness and accomplishments of school education.
- **Evidence-based policymaking:** The PGI's main goal is promoting evidence-based policymaking and emphasizing course correction to achieve high-quality education for all.
- **Encourage implementation of multifaceted initiatives:** Exercise anticipates that the Index will **encourage the States and Union Territories (UTs) to implement multifaceted initiatives** that will lead to the highly desired optimal academic outcomes.
- In order to ensure that the school education system is vital at every level, the PGI's goal is to assist States and UTs in identifying the **gaps and prioritizing areas for intervention in accordance with those priorities**.
- In addition, it will serve as a useful resource for information on best practices used by States and UTs that may be exchanged.
- The PGI system's performance is demonstrated by the States'/UTs' grades and scores for the academic years 2020–21. The areas in which a state needs to make progress are identified by the PGI score broken down by indicator.
- In order to motivate all States and UTs to perform better and adopt the best practises, the PGI will present the relative performance of each State and UT on a uniform scale.



Unified District Information System for Education Plus Report on school education

- According to a report released by the Ministry of Education, the number of kids entering pre-primary classes in 2021–2022 saw a further decline, resulting in 30% fewer students in this school section as **compared to the pre-COVID period**.
- Younger students, who have less access to remote learning, continue to bear the brunt of learning loss during the pandemic.
- A total of 94.95 lakh students enrolled in pre-primary courses in 2021–2022, a 10% decrease from the 1.06 crore kids who attended these programs the year before.
- According to the Unified District Information System for Education Plus report on school education, however, there was a decline of **21% in pre-primary enrollment in 2020–2021 as compared to 1.35 crore** the year before as the pandemic and lockdown measures led to school closures and classrooms moving online.
- The report also notes a drop in the number of schools owing to closures and a **shortage of teachers for the first time since the pandemic**.
- Decline in schools:** 2021–2022, as the overall number of schools fell from 15.09 lakh to 14.89 lakh, there were 20,000 fewer schools.
- According to the report, the majority of these were managed by "private and other management
- Decline in teachers:** Additionally, the number of teachers decreased by 1.89 lakh, or 1.98%, from 95.07 lakh in 2021–2022 to 96.96 lakh in 2020–2021.
- Improvement in Internet access and computer facilities:** Only 33.9% of schools had Internet connection, whereas 44.75 percent of schools had computer facilities. However, compared to the period before to Covid, where just 38.5% of schools had computers and 22.3% had access to the Internet, their accessibility has increased.
- Improvement in Gross Enrollment Ratio:** The gross enrolment ratio for the primary section increased from 101.3% in 2018–2019 to 104.8%

in 2021–2022, measuring enrollment at a given educational level in relation to the population of that age group. From 76.9% in 2018–19 to 79.6% in 2021–22 for secondary classes, and from 50.14% to 57.6% for higher secondary level classes.

PAHARI COMMUNITY ADDED TO ST LIST OF JAMMU AND KASHMIR

Priority: Medium



Primary Source: The Hindu

Prepp Prelims Booster: Pahari Community

Prepp Mains Booster: Mechanisms, laws, institutions and Bodies constituted for the protection and betterment of these vulnerable sections.

Why in the news?

- Recently, National Commission for Scheduled Tribes (NCST) has cleared the way for the inclusion of the 'Pahari ethnic group' in the Scheduled Tribes list of the Union Territory of Jammu and Kashmir.
- The proposal also called for the inclusion of the "Paddari tribe", "Koli" and "Gadda Brahman" communities to be included in the ST list of J&K.
- The suggestion for the inclusion had come from the commission set up for socially and educationally backward classes in the Union Territory, headed by Justice (Retd.) G.D. Sharma.



Who are the Paharis?

- Paharis are sociolinguistic groups primarily found in the hilly areas of the Poonch-Rajouri area, Mirpur, and some areas of the Kashmir Valley, such as Baramulla, Kupwara, and Uri.
- They represent around 20% of the total population in Jammu & Kashmir.
- Their native speech, **Pahari, is a dialect of the Pothwari language with its own distinct culture**.
- They frequently live in rural areas and are heavily interested in cattle and agricultural operations.
- The bulk of Paharis lives in areas that are underdeveloped socially and economically.
- They have struggled in the area over the years and have been ignored.

Why are Gujjars and Bakerwals opposing the ST tag for Paharis?

- After Kashmiris and Dogras, the Gujjars and Bakerwals make up Jammu and Kashmir's third-largest ethnic group, and they disagree with the Paharis on the ST designation.
- The Gujjars and Bakerwals obtained the ST classification in 1991, and as a result, they were eligible for **10% reservation in government employment and entrance to educational institutions**.
- The Paharis argue that as they also reside in the difficult and underdeveloped Pir Panjal region, in addition to the Baramulla and Anantnag districts, along with the Gujjars and Bakerwals, they should also be given the ST designation.
- The Gujjars and Bakerwals, however, argue that Paharis should not be classified as **ST because they are a collection of many religious and linguistic communities rather than an ethnic group**.
- This is due to the fact that nine seats in the new 90-member Assembly that will be constituted in J&K following the delimitation process will be designated for tribal members.

Inclusion of new communities in the ST list

- According to the modalities followed by the Union government for the inclusion of new communities in the ST list, once the NCST and the Office of the RGI have approved the proposal for inclusion, all that remains to be done is for the Union Cabinet to give the final nod.
- The Ministry of Tribal Affairs will therefore be needed to introduce a bill in Parliament to alter The Constitution (Jammu and Kashmir) Scheduled Tribes Order, 1989 in order to include the newly added STs in J&K.
- The addition will then be completed once the amended schedule has been officially announced by the President of India in accordance with Article 342 of the Indian Constitution.

National Commission for Scheduled Tribes (NCST)

- The Constitution (89th Amendment) Act of 2003 amended Article 338 and added a new Article 338A, establishing the National Commission for Scheduled Tribes (NCST).
- The National Commission for Scheduled Castes (NCSC) and National Commission for Scheduled Tribes (NCST) were established as independent commissions with effect from February 19, 2004, replacing the former National Commission for Scheduled Castes and Scheduled Tribes.
- The term of office of the Chairperson, Vice-Chairperson and each member is three years from the date of assumption of charge.
- The Vice-Chairperson has the level of a Minister of State, the Chairperson has the rank of a Union Cabinet Minister, and the other members have the rank of a Secretary to the Government of India.

Functions

- To investigate & Monitor matters relating to Safeguards provided for STs under the Constitution, other laws, or Govt. Order, to evaluate the working of such Safeguards.
- To inquire into specific complaints relating to the Rights & Safeguards of STs;
- To participate and Advise in the Planning Process relating to the Socio-economic development of STs, and to Evaluate the progress of their development under the Union and any State;
- To submit a report to the President annually and at such other times as the Commission may deem fit, upon/ working of Safeguards, Measures

required for effective implementation of Programmers/ Schemes relating to Welfare and Socio-economic development of STs;

- To discharge such other functions in relation to STs as the President may, subject to the provisions of any law made by Parliament, by rule specify;

MONKEYPOX TO BE CALLED MPOX TO END STIGMA

Priority: Low



Primary Source: Indian Express

Prepp Prelims Booster: MonkeyPox

Prepp Mains Booster: Issues relating to Health

Context:

- Recently, the **World Health Organization has renamed monkeypox as mpox**, citing concerns that the original name of the decades-old animal disease could be interpreted as discriminatory and racist.

Key Highlights

- The World Health Organization has renamed monkeypox as Mpox.
- The UN health agency said that mpox was its new preferred name for monkeypox, and that both names would be used for the next year while the old name was phased out.
- WHO expressed concern about the "racist and stigmatizing language" that arose after monkeypox spread to more than 100 countries.
- According to the statement, numerous individuals and countries asked the organization "to propose a way forward to change the name."

What is Monkeypox?

- Monkeypox is a viral **zoonotic disease** (transmission from animals to humans) that has been identified as a pox-like disease among monkeys.
- Monkeypox virus, a member of the Orthopoxvirus genus in the Poxviridae family, causes it.
- The virus's natural host remains unknown. However, the disease has been reported in a variety of animals.
- Monkeys and apes, as well as a variety of rodents (including rats, mice, squirrels, and prairie dogs), and rabbits, are known to be carriers of the Monkeypox virus.

Outbreak of the Disease

- The infection was discovered in 1958 after two outbreaks of a pox-like disease in colonies of monkeys kept for research, giving rise to the name 'monkeypox.'
- The first human case was discovered in the Democratic Republic of the Congo (DRC) in 1970.

Recommendations of WHO

- Adoption of the new English synonym mpox for the disease.
- After a one-year transition period, mpox will replace monkeypox as the preferred term. This alleviates experts' concerns about confusion caused by a name change during a global outbreak.
- It also allows time to complete the update process for the **International Classification of Diseases (ICD)** and to update WHO publications.
- In the coming days, the synonym mpox will be added to the online ICD-10. It will be included in ICD-11, the current global standard for health data, clinical documentation, and statistical aggregation, when it is officially released in 2023.
- To match historic data, the term "monkeypox" will remain a searchable term in ICD.



Spread of Monkeypox - A Global Emergency

- The World Health Organization began consulting experts in August about renaming the disease, shortly after the UN agency declared the spread of monkeypox a global emergency.
- More than 80,000 cases have been reported in dozens of countries that had not previously reported the smallpox-related disease.
- Until May, monkeypox, a disease thought to originate in animals, was not known to cause large outbreaks outside of central and western Africa.
- Outside of Africa, nearly all cases have involved gay, bisexual, or other men who have sex with men. Scientists believe monkeypox triggered outbreaks in Western countries after spreading via sex at two raves in Belgium and Spain.
- Vaccination efforts in developed countries, combined with targeted control interventions, have mostly brought the disease under control after it peaked in the summer.
- In Africa, the disease primarily affects people who come into contact with infected animals such as rodents and squirrels. The majority of monkeypox deaths have occurred in Africa, where vaccines are scarce.
- Health officials in the United States have warned that eliminating the disease may be impossible, and that it could pose a continuing threat to gay and bisexual men for many years to come.

Name Given

- Mpox was given the name monkeypox in 1958 after research monkeys in Denmark were found to have a "pox-like" disease, though they are not thought to be the disease's animal reservoir.
- Although WHO has named numerous new diseases shortly after they emerge, including Severe Acute Respiratory Syndrome or SARS and COVID-19, this appears to be the first time the agency has attempted to rename a disease decades after it was first named.
- Numerous other diseases, including Japanese encephalitis, German measles, Marburg virus, and Middle Eastern Respiratory Syndrome, have been named after geographical regions, which may now be considered prejudicial. WHO has not proposed changing any of the names.

What distinguishes monkeypox from smallpox?

- The monkeypox virus is an orthopoxvirus, which is a genus of viruses that includes the variola virus, which causes smallpox, and the vaccinia virus, which was used in the smallpox vaccine.
- Monkeypox has symptoms similar to smallpox, but they are less severe.
- Moreover, the symptoms of both diseases differ.
- While vaccination eradicated smallpox worldwide in 1980, monkeypox still occurs in Central and West African countries and has occasionally appeared elsewhere.

TWO MORE INDIAN BEACHES GET 'BLUE FLAG'-BLUE FLAG CERTIFICATION

Priority: Medium



Primary Source: Indian Express

Prepp Prelims Booster: Blue Flag

Prepp Mains Booster: Conservation, Environmental Pollution & Degradation

Context:

- Recently, **Minicoy**, **Thundi Beach**, and **Kadmat Beach** (both in Lakshadweep) have received Blue Flag Certification bringing the total count of Blue Flag beaches in the country to twelve.
- The Blue Flag Certification, an international badge of cleanliness and environmental sustainability is given by the global nonprofit **Foundation for Environmental Education (FEE)**.



What is the Blue Flag Certification?

- The "**Foundation for Environment Education in Denmark**" awards the Blue Flag certification, a well-recognized eco-label, based on 33 stringent parameters.
- These criteria are grouped into four categories:
 - Environmental Education and Awareness
 - Quality of Bathing Water
 - Environmental Management
 - Conservation and Safety Services on the Beaches
- Along with FEE, members of the United Nations Environment Programme (UNEP), United Nations World Tourism Organization (UNWTO), and International Union for the Conservation of Nature (IUCN) served on the **international jury** that issued the certification.
- Blue Flag Certification began in 1985 in France. This certification is **awarded each year**.
- **Benefits of the Certification:** Clean beaches are a sign of a healthy coastal environment, and India's conservation and sustainable development efforts have received international recognition with the Blue Flag certification.

Foundation for Environmental Education (FEE)

- The Foundation for Environmental Education (FEE) is headquartered in Copenhagen, Denmark.
- It was established in 1981 and currently has 77 member nations.
- The other programs of FEE include:
 - Green Key
 - Eco Schools

- Young Reporters for the Environment
- Learning about Forests
- Global Forest Fund



What is the 'Blue Flag Beach'?

- Blue Flag beaches are thought to be the **cleanest in the world**.
- It is an **eco-tourism strategy** that aims to provide clean and sanitary bathing water, facilities, a safe and healthy environment, and long-term development of the area for tourists and beachgoers.
- Data from the Blue Flag website shows that 48 countries have issued certificates to 5042 sites in total.
- **Spain** is at the **top of the list of nations** with Blue Flag-awarded sites with 729 sites.

Other Indian Beaches with Blue Flag Certification

S.No	Blue Flag Beach	State
1	Golden Beach	Odisha
2	Shivrajpur Beach	Gujarat
3	Kappad Beach	Kerala
4	Ghoghla Beach	Diu
5	Radhanagar Beach	Andaman and Nicobar
6	Kasarkod Beach	Karnataka
7	Padubidri Beach	Karnataka
8	Rushikonda Beach	Andhra Pradesh
9	Kovalam Beach	Tamil Nadu
10	Eden Beach	Puducherry

DOLPHINS RETURN TO GANGA AS WATER QUALITY IMPROVES

Priority: Medium



Primary Source: The Hindu

Prepp Prelims Booster: Ganges Dolphin

Prepp Mains Booster: Conservation, Biodiversity.

Context:

- Recently, the government of Uttar Pradesh has claimed that with the completion of 23 projects under the Namami Gange program started in 2014, has successfully stopped the flowing of more than 460 MLD (Million Litres per Day) of sewage into the Ganga.
- Dolphins have started coming back to the Ganga river with improvement in the quality of its water through the Namami Gange programme.

Highlights

- The dolphins have been spotted breeding in Brijghat, Narora, Kanpur, Mirzapur, and Varanasi, which suggests that their population will likely grow much more over the next few days.
- There are currently thought to be 600 dolphins living in the Ganga in Uttar Pradesh.
- The study of river water quality carried out during the period 2014–2022 at 20 locations in Uttar Pradesh showed significant improvements in dissolved oxygen (DO), biochemical demand (BOD), and faecal coliform (FC) parameters as well, according to the U.P. government.
- The test, according to the government, revealed that pH (a measure of how acidic the water was) satisfied the requirements for bathing at 20 places, while DO, BOD, and FC improved at 16, 14 and 18 of the 20 locations, respectively.



About Ganges river Dolphin

- The Ganges river dolphin was officially discovered in 1801.
- It once roamed the Ganges, **Brahmaputra, Meghna, and Karnaphuli rivers in Nepal, India, and Bangladesh**. But the majority of the species' original geographical regions have been lost to time.
- The Ganges river dolphin is **essentially blind and can only live in freshwater**.
- They use **ultrasonic noises** to hunt, and when the waves reverberate off of fish and other prey, they are able to "see" an image in their minds.

- Males are smaller than females, and just one calf is born once every two to three years.
- The Gangetic dolphin is one of five species of river dolphin found around the world.
- It was declared as a **National Aquatic Animal in 2009**.
- It is a reliable indicator of the **health of the entire river ecosystem**.
- As the Gangetic dolphin is at the top of the food chain, protecting the species and its habitat will ensure the conservation of the aquatic life of the river.
- **Threats:** The population of aquatic animals in rivers in general, and dolphins in particular, has decreased as a result of the construction of dams and barrages and rising pollution.
- **IUCN status - Endangered**
- **Wildlife Protection Act: Schedule I**
- **CITES : Appendix I**

Steps Taken to Conserve and Protect Dolphins

- National Dolphin Research Centre (NDRC)
- **Dolphin Sanctuary:** The Vikramshila Ganges Dolphin Sanctuary has been established in Bihar.
- **National Ganga River Dolphin Day:** On October 5, the National Mission for Clean Ganga observes National Ganga River Dolphin Day.
- **Conservation Action Plan for the Ganges River Dolphin 2010-2020**, which "identified threats to Gangetic Dolphins and the impact of river traffic, irrigation canals, and prey depletion on Dolphin populations."
- **Project Dolphin:** Project Dolphin is a conservation effort for Ganges river dolphins and the riverine ecosystem.
- The **Ministry of Environment, Forests, and Climate Change in India** is funding the project.
- It entails conducting systematic status assessments of target species and potential threats in order to develop and implement a conservation action plan.
- It aims to address existing conservation concerns while also empowering stakeholders to participate in dolphin conservation.

About Namami Gange

- The Namami Gange Program is an **integrated umbrella program**, aimed to ensure the effective reduction of pollution and conservation of river Ganga and its tributaries by adopting a river basin approach.
- For the **rejuvenation of the Ganga River**, Namami Gange has undertaken a comprehensive set of interventions in the fields of wastewater treatment, solid waste management, riverfront management (ghats and crematoria development), e-flow, afforestation, biodiversity conservation, and public participation.
- On the **basis of Annual Action Plans as needed**, the National Mission for Clean Ganga **allocates funds to State Project Management Groups (SPMGs)**.

Aquatic biodiversity conservation

- For **aquatic biodiversity conservation**, 7 projects have been launched.
- These projects aim to plan and manage aquatic species conservation and maintenance of ecosystem services in the Ganga river basin.
- To conserve and restore IMC & **Mahseer**, more than 56 lakh fish seeds have been placed into the Ganga River.

- Along with assisting in the preservation & breeding of freshwater **turtles & Gharial** at Kukrail, Lucknow, 930 turtles have been released in the Ganga River.
- **Four (4) aquatic species rescue and rehabilitation facilities have also been established.**

Challenges

- Delays in awarding projects due to restructuring, issues related to Land, delay in handing over land, delays in getting permission from National Highways Authority of India (NHAI) and Railways, delays due to Covid-19.

THE FALCON HEAVY LAUNCH: THE MOST POWERFUL OPERATIONAL ROCKET IN THE WORLD

Priority: Medium



Primary Source: The Hindu

Prepp Prelims Booster: Falcon Heavy rocket

Prepp Mains Booster: Awareness in the fields of Space

Context:

- On November 1, SpaceX launched the Falcon Heavy rocket into a geosynchronous Earth orbit from Launch Complex 39A at the Kennedy Space Center in Florida, U.S. This is considered a National Security Space Launch for the U.S. military.
- On November 1st SpaceX launched its massive Falcon Heavy rocket for the first time in more than three years, lifting military satellites and then landing the boosters side-by-side close to the launch pad.
- This was SpaceX's fourth launch of a Falcon Heavy, the most potent rocket in operation at the moment. The initial launch was in 2018.

About Falcon Heavy

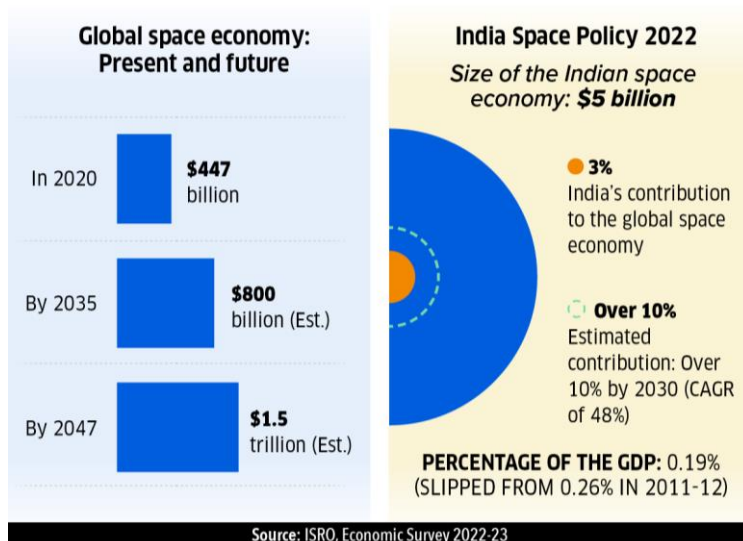
- Falcon Heavy is the **most potent** operational rocket in the world.
- The Falcon Heavy can lift more than **twice the payload of the next closest operational vehicle, the Delta IV Heavy**, and can launch roughly **64 metric tonnes (141,000 kg) into orbit**.
- Falcon Heavy is made up of three Falcon 9 nine-engine cores, each of which has 27 Merlin engines.
- These engines provide more than 5 million pounds of thrust at liftoff, these engines provide more than 5 million pounds of thrust or around eighteen 747 aircraft.
- Falcon Heavy's base is reusable.
- The Falcon Heavy uses three boosters for added thrust and lift capacity.
- The center booster plunged into the ocean as planned and the two side boosters landed on ground pads at the Cape Canaveral Space Force Station.
- To reduce mission costs, the boosters are re-used on other missions.

Earlier launches using falcon heavy:

- Elon Musk, the CEO of SpaceX, debuted the Falcon Heavy in 2018 by launching a test payload of his own red Tesla Roadster, an electric sports car, into orbit.
- The other two Falcon Heavy missions were launched by SpaceX in 2019.
- One launched an experimental satellite for the US Department of Defense, while the other launched a TV and phone service satellite for Saudi Arabia's Arabsat.

What is its current mission?

- The rocket is carrying satellites to space for the U.S. military in a mission named U.S. Space Force (USSF)-44.
- The TETRA 1 microsatellite, developed for a number of prototype missions in and around the geosynchronous earth orbit, is one of the two spacecraft payloads that were delivered during the mission. The other payload is intended for use in national defense.
- For the Space Systems Command's Innovation and Prototyping, it will position the satellites.



What about the other launches of Falcon Heavy?

- The Falcon Heavy debuted in 2018 when SpaceX CEO Elon Musk sent his personal red Tesla Roadster, an electric sports car with a dummy driver, into space as a test payload.
- The car is still in space, orbiting around the sun, traveling as far away as Mars' orbit and, at times, as close as Earth's orbit.
- SpaceX launched the other two Falcon Heavy missions in 2019.
- One carried a TV and phone service satellite to orbit for Saudi Arabia-based Arabsat, and the other carried experimental satellites for the U.S. Department of Defense.

Future launches

- According to a report by Reuters, SpaceX is targeting to launch its giant Starship rocket system in early December.
- The aim of these test launches of Starship is to advance knowledge and the creation of a fully reusable spacecraft that can carry passengers and cargo on lengthy interplanetary journeys, assist in human settlement on Mars, and go beyond.
- Starship will be the most potent launch vehicle ever created, capable of launching more than 100 metric tonnes into Earth orbit.

Scope of space Industry in India

- The commercial space market is valued at \$360 billion worldwide.
- India's part comes to about 2% at \$7 billion.
- The nation aims to significantly expand this to \$50 billion or 10% by the decade's end by increasing private investment in the commercial space sector.

How private companies might improve the space program of India ?

- ISRO's resources are being diverted from space missions to meet the rising need for satellite data and imaging for weather, agriculture, transportation, and urban development.

- The Indian Space Research Organization (ISRO) won't be able to employ all of its resources for research and development, interplanetary exploration, and strategic launches if private companies manage the commercial aspect of the space program.
- As the space industry develops, there may be specialized satellites for industries including agriculture, education, disaster relief, and e-commerce.

Steps taken

- **ISpA and IN-SPACe** : The Indian National Space Promotion and Authorisation Centre (IN-SPACe) and the Indian Space Association (ISpA) were declared by the government as being formed in 2020.
- In order to give ISRO time and resources to concentrate on spatial research and development, technological innovation, exploration, and human spaceflight, IN-SPACe will oversee the participation of private actors in the Indian space industry.
- On the other hand, ISpA will facilitate services and assist private players in conducting their own independent space activities.
- Technology created by ISRO will be used by the private sector, which will also benefit from regulatory and policy input from ISRO as well as funding for new businesses and space-related academic institutions.
- In India's first official public-private collaboration in the space industry, ISRO's Polar Satellite Launch Vehicle (PSLV)-C53 made history in June by launching payloads from two commercial Indian space firms into orbit.
- Recently, a rocket operated by Digantara Aerospace, with headquarters in Bengaluru, and Dhruva Space, with headquarters in Hyderabad, launched a satellite orbital deployer and Digantara's ROBusT Integrating (ROBI) proton fluence metre on the (PSLV)-C53 mission.
- One of the most crucial components of satellite deployment has been produced by Dhruva Space and is compatible with ISRO's PSLV launch vehicles.

Challenges

- Many companies have complained that the numerous approvals needed still provide a significant obstacle.
- The Hughes Corporation, a US-based firm, unveiled a \$500 million satellite communications system in India in 2017, according to the Indian Brand Equity Foundation (IBEF).
- The business has not yet gotten any approvals or an anticipated deadline.
- The absence of precise, concise, and explicit regulations presents another difficulty.

Way forward

- Private firms like Virgin Galactic, SpaceX, Blue Origin, and Arianespace have revolutionised the space industry over the past 20 years by cutting prices and turnaround times.
- Private businesses, however, can only serve as suppliers to the government's space programme in India.
- Even though several private firms, including Agnikul Cosmos, Skyroot Aerospace, Pixxel, and Dhruva Space, are planning to launch their separate missions this year, India is still a long way behind other countries in the battle for commercial space.
- The hope among the government and business community is that the Space Policy 2022 will be successful in bridging this gap.

THE INTERNATIONAL DAY FOR BIOSPHERE RESERVES

Priority: Medium



Primary Source: The Hindu

Prepp Prelims Booster: Biosphere reserves

Prepp Mains Booster: Environment, Biodiversity and Conservation.

Why in the news?

- This article is about "The International Day for Biosphere Reserves" and the Biosphere reserves in South Asia.
- November 3 will be the first 'The International Day for Biosphere Reserves', to be celebrated beginning 2022.

What is a Biosphere Reserve?

- Biosphere reserves are protected regions designed to safeguard flora and fauna. It also restores the traditional way of life of the tribes that live nearby. They protect the area's biodiversity.
- A biosphere reserve helps to preserve a region's biodiversity and culture.
- The Man and Biosphere Reserve Program identifies Biosphere Reserves to promote sustainable development. UNESCO launched this initiative in 1971.
- Some importance of biosphere reserves are Development in flora and fauna, Restoration, preservation of species, Education and Research, etc
- The preservation of species, ecosystems, genetic variety, and landscapes without altering the living organisms that inhabit them is known as conservation.
- The government built protected areas like as animal sanctuaries, national parks, and biosphere reserves, as well as regulations, techniques, and strategies to safeguard and conserve biodiversity.
- In India, the government has created 18 Biosphere Reserves to safeguard huge tracts of natural environment.

- Some Biosphere Reserves in India include:
 - Nilgiri Biosphere Reserve, Tamil Nadu, Kerala, Karnataka
 - Sundarbans Biosphere Reserve, West Bengal
 - Gulf of Mannar Biosphere Reserve, Tamil Nadu
 - Nanda Devi Biosphere Reserve, Uttarakhand

The World Network of Biosphere Reserves (WNBR)

- The World Network of Biosphere Reserves (WNBR) was established in 1971 to provide a foundation for biodiversity protection, ecological restoration, and living in peace with nature.
- The WNBR, an incredible network of excellence sites, is a one-of-a-kind instrument for collaboration that promotes best practices through sharing knowledge, exchanging experiences, building capacity, and advocating best practices.
- The World Network of Biosphere Reserves of the MAB Programme is a dynamic and interactive network of world-class sites.
- It fosters the harmonious integration of people and nature for sustainable development through participatory discourse, information sharing, poverty reduction and human well-being improvements, respect for cultural values, and society's ability to cope with change.
- It contributes to the 2030 Agenda for Sustainable Development and the Sustainable Development Goals (SDGs).
- The World Network of Biosphere Reserves (WNBR) promotes North-South and South-South collaboration and is a one-of-a-kind tool for

international cooperation via information sharing, experience exchange, capacity building, and the dissemination of best practices.

What are the Opportunities in South Asia?

- Over 30 biosphere reserves have been created in South Asia.
- The Hurulu Biosphere Reserve in Sri Lanka was the first, with 25,500 hectares of tropical dry evergreen forest.
- The blue mountains of the Nilgiris, which spread over Tamil Nadu, Karnataka, and Kerala, were recognised as India's first biosphere reserve by UNESCO in 2000. India's reserve network has grown from strength to strength.
- Given the significant long-term dangers to human survival (apart from pandemics and armed conflicts), such as biodiversity loss, climate change, pollution, and population dynamics, exacerbated by the naive confidence in technical solutions to all issues, the world needs many more biosphere reserves.
- South Asia has a plethora of alternatives.
- India is a large subcontinent and a growing superpower with limitless prospects. It has emerged as a key worldwide actor in environmental sustainability problems. In 2023, India is expected to overtake China as the world's most populous country.

Significance of Biodiversity in South Asia

- South Asia offers a diverse mix of habitats, with hundreds of glaciers surrounded by lakes and alpine ecosystems in Bhutan, India, and Nepal combined.
- Biosphere reserves have all produced science-based management plans in which local solutions for sustainable human life and environment protection are evaluated and best practices are implemented.
- Concerns include biodiversity, renewable energy, climate change, environmental education, and water and waste management, all of which are backed up by scientific study and monitoring.
- All biosphere reserves are globally recognised locations on land, at sea, or in the seas. Governments are the only ones who pick which places to designate.
- The sites are subjected to external scrutiny before being approved by UNESCO. If accepted, they will be governed according to a plan, with credibility checks, but remaining under the sovereignty of their national government.

What is the Current status of Biosphere reserves in South Asia?

- Some South Asian countries do not yet have any or adequate biosphere reserves.
- Most, if not all, situations have political intent, but there is a shortage of know-how and financial resources.
- More financial help from richer countries and the business sector would be preferable in order to progress biosphere reserves in these countries. The top priorities are Bangladesh, Bhutan, and Nepal.
- The establishment of the new World Network of Mountain Biosphere Reserves presents Bhutan and Nepal with an exciting chance to build their own biosphere reserves and join the global network.
- If these pockets of hope can be expanded to include at least one biosphere reserve per country in Bangladesh, Bhutan, and Nepal until 2025 (with additional biosphere reserves in India's North-East and along the coasts), millions of people will realise that a better future is truly possible one in which we will truly live in harmony with nature.

ATTEMPT NO.3 FOR ARTEMIS 1, WITH PROMISE OF NEW SPACE AGE

Priority: Medium



Primary Source: Indian Express

Prepp Prelims Booster: Space Technology

Prepp Mains Booster: Space & Technology, Indigenization Of Technology And Developing New Technology

Context:

- Recently, **NASA** launched its new 322-foot-tall **Space Launch System (SLS)** rocket to the moon for the third time.
- The rocket's first flight was postponed twice previously, on August 29 and September 3, due to technical issues discovered during the countdown.
- This unmanned mission, known as **Artemis 1**, is designed to test the rocket and the Orion space capsule, in which astronauts will ride on future missions.
- If the launch goes as planned, Orion will spend a few weeks in lunar orbit before returning for a Pacific Ocean splashdown next month.

About Artemis 1

- Artemis 1 Is An Unmanned Moon-Orbiting Mission, the first In NASA's Artemis Program, and the first flight of the agency's Space Launch System (SLS) rocket and the entire Orion Spacecraft.
- Artemis 1 was successfully launched from Kennedy Space Center on November 16, 2022, at 1:47:44 A.M. Est (6:47:44 UTC).



What Is Artemis' Mission?

- NASA's Artemis Mission, named after Apollo's twin sister from Greek Mythology, is billed as the next generation of lunar exploration. Artemis is also the goddess of the moon.
- Artemis I is the first of NASA's deep space exploration systems. It is an unmanned space mission in which the spacecraft will launch on SLS—the world's most powerful rocket — and travel 2,80,000 miles from earth for four to six weeks.
- The Orion spacecraft will spend more time in space without docking with a space station than any previous ship for astronauts.
- The SLS rocket was designed for space missions beyond low-earth orbit, and it can transport crew or cargo to the moon and beyond. NASA's

Artemis program aims to land humans on the moon by 2024, as well as the first woman and person of color on the moon.

- NASA's mission is to inspire a new generation of explorers while also contributing to scientific discovery and economic benefits.
- NASA will build an Artemis base camp on the surface and a gateway in lunar orbit to aid robot and astronaut exploration.
- The gateway is a critical component of NASA's long-term lunar operations, serving as a multipurpose outpost orbiting the moon.



Significance Of Artemis 1

- It's been 50 years since the six Apollo human moon landings between 1969 and 1972. Since then, spacecraft have traveled beyond the solar system, exploratory missions have probed Mars, Jupiter, And Saturn, more than 500 astronauts have returned to space, and permanent space labs have been established.
- What remains to be accomplished, however, is the promise of transporting humans to new worlds, landing and living on other planets, or possibly meeting aliens.
- Artemis 1 is regarded as the first step into the new space age. Humans will return to the moon in subsequent missions to investigate the feasibility of long lunar stays and assess the moon's potential as a launch pad for deep space explorations.
- While the mission objectives of Artemis 1 are modest — it is only a lunar orbiter mission, albeit one with a return-to-earth target, unlike most orbiter missions — it is intended to lay the groundwork for more complex and ambitious missions.
- The Cubesats it will transport are outfitted with instruments designed to conduct specific investigations and experiments, such as searching for water in all forms and hydrogen that can be used as a source of energy.
- Biology experiments will be conducted, and the effect of deep space atmosphere on humans will be studied using dummy 'passengers' on board Orion.
- The SLS rocket, the most powerful ever built, will also be tested for its future capability to carry out more ambitious missions.

ISRO'S RISAT-2 SATELLITE MAKES RE-ENTRY INTO EARTH'S ATMOSPHERE

Priority: Medium



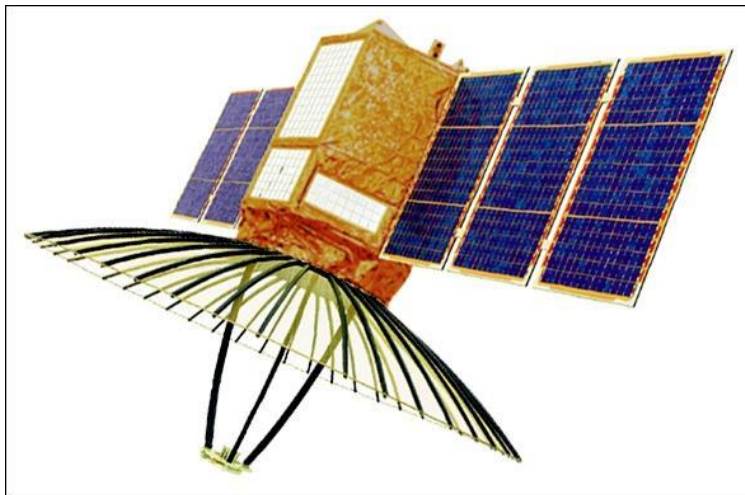
Primary Source: The Hindu

Prepp Prelims Booster: RITSAT-2

Prepp Mains Booster:Awareness in the fields of IT, Space, Computers, Robotics, Nano-technology, Bio-technology and issues relating to Intellectual Property Rights.

Context:

Recently ISRO informed that its RISAT-2 satellite, launched in 2009, has made an uncontrolled re-entry into the Earth's atmosphere in the Indian Ocean near Jakarta on October 30.

**What ISRO has informed on RISAT 2 ?**

- According to ISRO's statement, the RISAT-2 satellite, which only weighed around 300 kg, had undergone an uncontrolled re-entry into Earth's atmosphere at the anticipated impact point in the Indian Ocean near Jakarta on October 30, 2022, at 00:06 UTC.
- ISRO informed that though the initial designed life of the satellite was 4 years, due to proper maintenance of satellite orbit and mission planning by the spacecraft operations team in ISRO and by economical usage of fuel, RISAT-2 provided very useful payload data for the last 13 years.
- Since there was no fuel in the satellite at re-entry, no contamination or fuel-related explosion had occurred upon re-entry.
- Studies on the RE-Entry of RISAT 2, proved that no fragments have impacted on Earth because the components created by aero-thermal fragmentation would not have survived re-entry heating.
- Since one month, the re-entry has been under observation by the Indian System for Safe and Sustainable Space Operations Management (IS4OM) facility in ISTRAC, Bengaluru, with analysis by VSSC and ISTRAC teams using Multi Object Tracking Radar (MOTR) at SDSC, Sriharikota.
- According to ISRO, MOTR regularly tracked RISAT-2, and the results were used for additional analysis and orbit determination.

What is the RISAT 2 satellite?

- RISAT-2, or Radar Imaging Satellite-2 was India's radar imaging reconnaissance satellite which was part of India's RISAT programme.
- It was built by Indian Space Research Organisation (ISRO) and successfully launched aboard a PSLV-CA launch vehicle in April 2009 from the Satish Dhawan Space Centre.
- It is designed to monitor India's borders and as part of anti-infiltration and anti-terrorist operations.
- The satellite has a mass of 300 kg.
- The principal sensor of RISAT-2 was an X-band synthetic-aperture radar (SAR) from Israel Aerospace Industries (IAI).

Background:

- RISAT-2 was built at an accelerated pace in response to the 2008 Mumbai attacks.

- It is India's first dedicated reconnaissance satellite.
- It is the first of the RISAT series to reach orbit.
- The images RISAT 2 satellites were used to plan the surgical strike in 2016 and the air strike on a Jaish camp in Pakistan's Balakot in 2019.

What is RISAT?

- **RISAT (Radar Imaging Satellite)** is a series of Indian radar imaging reconnaissance satellites built by ISRO.
- It provides all-weather surveillance using synthetic aperture radars (SAR).
- The RISAT series are the first all-weather Earth observation satellites from ISRO.

Satellites of RISAT Series**RISAT 2**

- It was launched successfully on April 20, 2009 by a PSLV rocket. The 300-kg satellite was built by ISRO using a X-band SAR manufactured by IAI.
- This satellite was fast tracked in the aftermath of the 2008 Mumbai attacks.
- The satellite will be used for border surveillance, to deter insurgent infiltration and for anti-terrorist operations.

RISAT 1

- It was an indigenously developed radar imaging satellite successfully launched by a PSLV-XL rocket on April 26, 2012 .
- Characteristic of RISAT-1 include:
- 160 x 4 Mbit/s data handling system
- 50 NmS reaction wheels
- SAR antenna deployment mechanism
- Phased array antenna with dual polarization

RISAT 2B

- It is an indigenously developed Synthetic Aperture Radar (SAR) imaging satellite operating in X Band with 3.6 m radial rib antenna.
- It was launched by PSLV C46 (Core Alone) in May 2019.
- The satellite has the capability to operate in different modes including Very High Resolution RADAR imaging modes of 1m × 0.5m resolution and 0.5m × 0.3m resolution.
- it can image during day / night / all weather conditions.

RISAT 2BR1

- It is the fourth satellite in the RISAT series and built by ISRO.
- It was launched in December 2019 on board a PSLV rocket.
- The satellite has resolution of 0.35 meters by which two objects separated by distance of 0.35 meters can be distinctly identified.
- The mission life is planned to be 5 years.
- It is the 50th launch of PSLV and 75th launch from Satish Dhawan Space Centre.

INDIA RANKS AT 8TH ON CLIMATE CHANGE PERFORMANCE, CLIMBS TWO SPOTS: CCPI 2023

Priority: Medium**Primary Source:** Indian Express**Prepp Prelims Booster:** Environment, Climate Change, CCPI**Prepp Mains Booster:** Conservation, environmental pollution, and degradation; Climate Change.**Context:**

India moved up two spots to eighth rank out of 63 nations in the recently released Climate Change Performance Index (CCPI) 2023 due to its low emissions and growing use of renewable energy.

What is the Climate Change Performance Index (CCPI)?

- It is a rating system created by the Germanwatch, a non-profit organization (NGO) with headquarters in Bonn, Germany.
- An updated version is annually given during the UN Climate Change Conference. It was first published in 2005.
- By evaluating and comparing the climate protection achievements of 63 countries and the European Union (EU), which together account for more than 90% of the world's greenhouse gas (GHG) emissions, the index seeks to increase openness in international climate policy.



CCPI 2023: RANKING

1 -	23 SPAIN	45 CZECH REPUBLIC
2 -	24 GREECE	46 BELARUS
3 -	25 LATVIA	47 TURKEY
4 DENMARK	26 INDONESIA	48 ALGERIA
5 SWEDEN	27 COLOMBIA	49 ARGENTINA
6 CHILE	28 FRANCE	50 JAPAN
7 MOROCCO	29 ITALY	51 CHINA
8 INDIA	30 CROATIA	52 UNITED STATES
9 ESTONIA	31 MEXICO	53 HUNGARY
10 NORWAY	32 AUSTRIA	54 POLAND
11 UNITED KINGDOM	33 NEW ZEALAND	55 AUSTRALIA
12 PHILIPPINES	34 SLOVAK REPUBLIC	56 MALAYSIA
13 NETHERLANDS	35 CYPRUS	57 CHINESE TAIPEI
14 PORTUGAL	36 BULGARIA	58 CANADA
15 FINLAND	37 IRELAND	59 RUSSIAN FEDERATION
16 GERMANY	38 BRAZIL	60 KOREA
17 LUXEMBOURG	39 BELGIUM	61 KAZAKHSTAN
18 MALTA	40 VIETNAM	62 SAUDI ARABIA
19 EUROPEAN UNION	41 SLOVENIA	63 ISLAMIC REPUBLIC OF IRAN
20 EGYPT	42 THAILAND	
21 LITHUANIA	43 ROMANIA	
22 SWITZERLAND	44 SOUTH AFRICA	

#CCPI2023

What are the Highlights of the CCPI 2023?

- Germanwatch, the New Climate Institute, and the Climate Action Network have ranked countries according to how well they are doing in reducing their emissions by half by 2030, which is essential for attaining the 1.5-degree Celsius target and averting catastrophic climate change.
- No country performed well enough across the board to receive a very high overall rating, leaving the top three slots vacant in the report. Sweden, Chile, and Denmark are the next three countries in order.
- Due to plans for additional coal-fired power plants, China, the world's top polluter, slid 13 spots to tie for 51st place this year in the CCPI and received a very poor grade overall.
- The United States moved up three spots to take 52nd. Iran (63rd), Saudi Arabia (62nd), and Kazakhstan (61st) were the three countries with the worst performers.

Performance of India: CCPI 2023

- India received excellent scores for GHG emissions and energy use, but only fair marks for climate policy and renewable energy.
- With emissions projected to be in line with a well-below 2-degree Celsius scenario, India will likely reach its 2030 emissions goals.

The actions taken by India:

- India has revised its Nationally Determined Contribution (NDC), which is a country strategy to keep the increase in global temperature well below 2 degrees Celsius, ideally to 1.5 degrees Celsius in conformity with the Paris Agreement, since the last CCPI.
- India also declared a net-zero objective for 2070, which means striking a balance between the GHGs released into the atmosphere and those removed.

Challenges for India:

- India faces a number of difficulties because it produces 90% of the world's coal and has aspirations to boost oil and gas production by more than 5% by 2030.
- The required temperature of 1.5 degrees Celsius cannot be met by this.
- The 2030 aim is not on pace with the renewable energy roadmap.

Climate Change Performance Index 2023 – Rating table

Rank	Rank change	Country	Score**	Categories
1*	-	-	-	
2	-	-	-	
3	-	-	-	
4	0 -	Denmark	79.61	
5	0 -	Sweden	73.28	
6	3 ▲	Chile	69.54	
7	1 ▲	Morocco	67.44	
8	2 ▲	India ▲	67.35	
9	23 ▲	Estonia	65.14	
10	-4 ▼	Norway ▲	64.47	
11	-4 ▼	United Kingdom ▲	63.07	
12	11 ▲	Philippines	62.75	
13	6 ▲	Netherlands	62.24	
14	2 ▲	Portugal	61.55	
15	-1 ▼	Finland	61.24	
16	-3 ▼	Germany ▲	61.11	
17	1 ▲	Luxembourg	60.76	
18	-6 ▼	Malta	60.42	
19	3 ▲	European Union (27)	59.96	
20	1 ▲	Egypt	59.37	

What are the initiatives taken by India to mitigate climate change?

- National Action Plan on Climate change:** Unveiled In 2008 by the Prime Minister's Council on Climate Change, It works to educate members of the public, various government organizations, scientists, industry, and communities about the threat posed by climate change and the solutions to combat it.
- National Adaptation Fund for Climate Change:** India established the National Adaptation Fund for Climate Change (NAFCC) with corpus of \$200 million to support efforts at adaptation that can decrease the adverse effects of climate change.
- National Solar Mission:** One of the eight Mission under NAPCC, inaugurated as the Jawaharlal Nehru National Solar Mission on 11 January 2010 with an aim to generate 20 GW of solar power by 2022. This was later increased to 100 GW in the 2015 Union budget of India.
- National Action Programme to Combat Desertification:** India has developed a 20-year comprehensive National Action Programme to address the problem of desertification within the nation (NAP) with objective to Management, prevention, and mitigation of drought by using a community-based approach to development.
- Reforms in the transportation sector:** With the Faster Adoption and Manufacturing of (Hybrid &) Electric Vehicles Scheme (FAME), India is aiming to hasten the adoption of e-mobility and hybrid vehicles to reduce GHG emission.

- **Promoting Electric vehicles in India:** India has pledged their support for the global EV30@30 initiative, which seeks to have at least 30% of new vehicle sales be electric by 2030.
- **Industries' Contribution to the Low-Carbon Transition:** India's public and private sectors are already making significant contributions to addressing the climate crisis, made possible by rising investor and customer awareness as well as expanding regulatory and transparency requirements.
- **Promotion of Green hydrogen as an Energy alternative:** India launched the National Hydrogen Mission in 2022 with the intention to promote Green Hydrogen as an energy alternative and reduce fossil fuel consumption.
- **Other Initiatives:** Various other initiatives like the UJALA scheme, National Biofuel Policy, National Air Quality Scheme, National Mission for Clean Ganga, and others, etc.

Way Forward

- There is a need for a reasonable and equitable energy transition, as well as for rooftop photovoltaic capacity and decentralized renewable energy.
- A system for carbon pricing, improved capability at the subnational level, and specific action plans to reach the goals.

SARAS 3 TELESCOPE THROWS LIGHT ON THE NATURE OF EARLY STARS AND GALAXIES

Priority: Medium



Primary Source: The Hindu

Prepp Prelims Booster: SARAS 3

Prepp Mains Booster: Awareness in the field of Space

Context:

- Recently, scientists have determined the properties of radio luminous galaxies formed just 200 million years post the Big Bang, a period known as the Cosmic Dawn thus providing an insight to the properties of the earliest radio loud galaxies that are usually powered by supermassive black holes.

About Shaped Antenna measurement of the background Radio Spectrum 3 (SARAS)

- Early in 2020, the **Raman Research Institute's** Shaped Antenna measurement of the background **Radio Spectrum 3 (SARAS)** telescope, which was built indigenously, was installed over Northern Karnataka's Dandiganahalli Lake and Sharavati backwaters.
- Researchers from the Raman Research Institute (RRI), Bengaluru, the Commonwealth Scientific and Industrial Research Organisation (CSIRO), Australia, and associates from the Universities of Cambridge and Tel Aviv collaborated on a ground-breaking study that used data from SARAS 3 to estimate the energy output, luminosity, and masses of the first generation of galaxies that are bright in radio wavelengths.
- Researchers have used data from SARAS 3 to throw light on the energy output, luminosity, and masses of the first generation of galaxies that are bright in radio wavelengths.



Significance:

- The cosmic signal is extremely faint, buried in orders of magnitude brighter radiation from our Galaxy and man-made terrestrial interference. Therefore, even using the most powerful existing radio telescopes, detecting the signal has remained a challenge for astronomers.
- For the **first time, radio studies** of the averaged 21-centimeter line have been able to **shed light on the characteristics of the earliest radio-loud galaxies**, which are often driven by supermassive black holes.
- Less than 3% of the gaseous matter in early galaxies was transformed into stars, according to SARAS 3.

Findings

- The earliest galaxies that were bright in radio emission were also powerful in X-rays, which heated the cosmic gas in and around the early galaxies.
- The findings have been reported in the journal Nature Astronomy.
- The SARAS 3 team utilised the same data in March to refute claims made by the EDGES radio telescope, developed by scientists from Arizona State University (ASU) and MIT, USA, that it had detected an abnormal 21-cm signal from Cosmic Dawn.
- SARAS 3 has decreased current restrictions established by the ARCADE and Long Wavelength Array (LWA) studies in the US by putting an upper limit on excess radio wavelength radiation.

Raman Research Institute

- The Raman Research Institute is an autonomous research institute engaged in research in basic sciences.
- The institute was established in 1948 by Sir C. V. Raman, an Indian physicist and Nobel laureate.
- It underwent a restructuring in 1972 and is now an autonomous aided institute with funding from the Department of Science and Technology of the Government of India.
- **Radio Spectrum:** The Radio spectrum is the part of the electromagnetic spectrum ranging from 1 Hz to 3000 GHz (3 THz).
- In the electromagnetic spectrum, radio waves have the longest wavelengths. They range in size from a football's length to our planet's size. In the late 1880s, Heinrich Hertz demonstrated the existence of radio waves

INVASIVE TREE SPREADING IN MUDUMALAI TIGER RESERVE

Priority: Medium



Primary Source: The Hindu

Prepp Prelims Booster: Invasive species

Prepp Mains Booster: Biodiversity, Conservation

Context:

- Recently, *Senna spectabilis*, an alien tree that is an invasive species, has taken over between 800 and 1,200 hectares of the Mudumalai Tiger Reserve's (MTR) buffer zones in the Nilgiris hill district.
- The invasive plants are still spreading quickly in the buffer zone, therefore the Forest Department is developing a comprehensive plan to stop their spread.

Background

- The species was introduced from South and Central America as an ornamental species and for use as firewood and has become highly invasive in the Sigur plateau in both the core and buffer zones of the MTR.
- Over the past few years, its bright yellow blossoms have become more noticeable across the Tiger Reserve.

What is an invasive species?

- An invasive species is an organism that causes **economic or ecological harm** in a new environment where it is not native.
- It can harm both the **natural resources in an ecosystem** as well as threaten human use of these resources.
- Invasive species are **capable of causing the extinction of native plants and animals**, reducing biodiversity, competing with native organisms for limited resources, and altering habitats.
- Examples: Cogongrass, Feral pigs, European green crabs, Water hyacinth, *lantana camara*, *Wattle* etc...



Senna spectabilis

- Senna spectabilis*, an attractive plant cultivated throughout **tropical America**, is a member of the Fabaceae family.
- It can reach heights of 7 to 18 metres, is evergreen in locations with year-round rain but can turn deciduous in others, and has yellow flowers.
- Spectabilis* has long been a staple in **conventional medicine**.

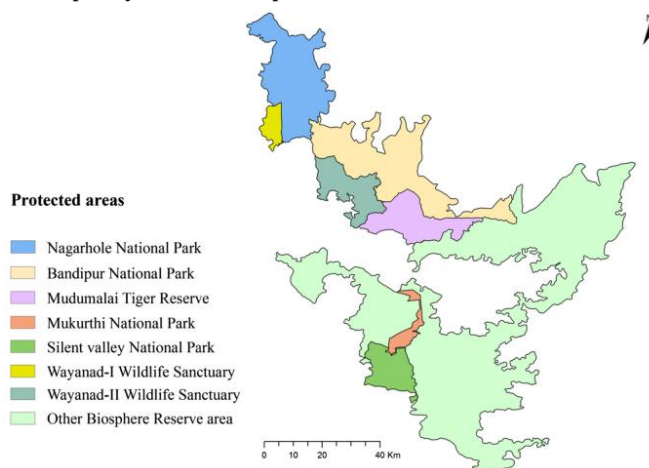
- However, the **Global Compendium of Weeds** classifies it as an **environmental weed**. This species is regarded as an invasive one in locations like Australia, Uganda, and Cuba.

Impact

- Two of the five major invasive weeds that have completely taken over large portions of the Nilgiris are *senna spectabilis* and *lantana camara*.
- Wattle* is the other significant invasive species. Despite being foreign species, eucalyptus and pine are thought to be easier to manage because they do not spread as quickly as the others.
- Conservationists claim that the invasive weed has a **harmful impact on local biodiversity**, pushing out native species and reducing the amount of food available for wildlife.

Steps taken by Forest Department

- The Forest Department is **defining the regions** where the species is spreading, and it is attempting to make sure that tree **removal starts before the issue gets more challenging to handle**.
- The decision of the Tamil Nadu Newsprint and Papers Limited (TNPL) to use wood from the *Senna spectabilis* trees from the MTR for **paper-making is being awaited**.
- The **funds raised from the species' eradication** will be invested in eco-restoration projects to aid in the reintroduction of native species.
- The other significant weed that threatens biodiversity in both the core and buffer zones of the Tiger Reserve, *lantana camara*, was being systematically removed over the course of a 10-year plan being developed by the Forest Department.



Mudumalai Tiger Reserve

- Mudumalai's name translates to "the ancient hill range." **At the tri-junction of three states—Karnataka, Kerala, and Tamil Nadu**—the Mudumalai Tiger Reserve is situated in the Nilgiris District of Tamil Nadu. It spans an area of 321 square kilometres.
- It plays a special role because it is a part of the Nilgiris Biosphere Reserve, the country's first biosphere reserve established in 1986.
- It shares a border with the **Wyanad Wildlife Sanctuary** in Kerala on the west, the **Bandipur Tiger Reserve** in Karnataka on the north, the **Nilgiris North Division** on the south and east, and the Gudalur Forest Division on the south west, all of which together make up a significant conservation landscape for species like the tiger and Asian elephant.

CAMERA TRAPS GIVE HOPE FOR SNOW LEOPARD IN KASHMIR

Priority: Medium



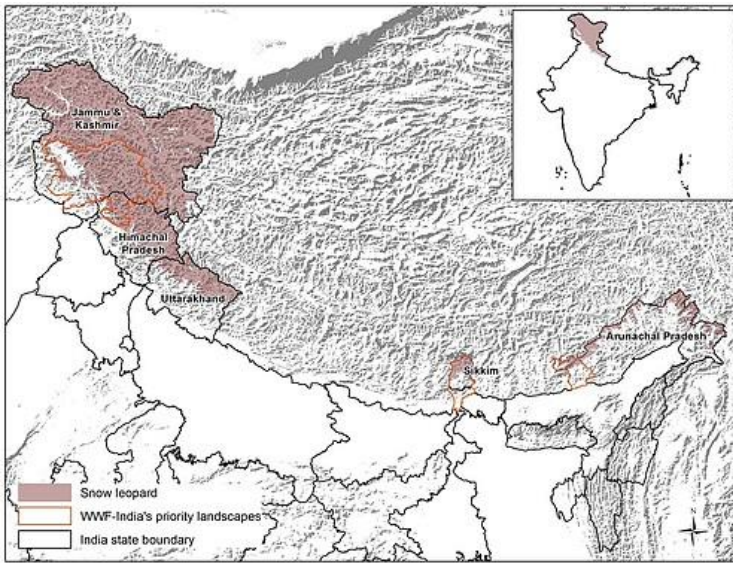
Primary Source: The Hindu

Prepp Prelims Booster: Snow Leopard

Prepp Mains Booster: Conservation; Biodiversity

Context:

- Camera trapping exercises by researchers from Nature Conservation Foundation (India), partnering J&K's Department of Wildlife Protection show the first-ever recording of the snow leopard from the Baltal-Zojila region has renewed the hope for the elusive predator in the higher altitudes of Jammu and Kashmir and Ladakh.
- The Exercise also raised hopes for other important and rare species such as the Asiatic ibex, brown bear, and Kashmir musk deer in the upper reaches of the northernmost part of India.



Significance

- Wildlife specialists claim that the renowned and revered snow leopard is a suitable **indicator species** because it responds fast to disturbances in its environment and because the successful conservation of this species necessitates long-term, systemic solutions to the challenges affecting the quality of habitats.
- In Himachal Pradesh and Uttarakhand, the **Snow Leopard Population Assessment of India (SPAII)** has already been completed.
- In these two States, there are 50 and 100 great cats, respectively, according to estimates.
- As part of the SPAII project, the Department of Wildlife Protection has been conducting surveys with partner NGOs to determine the presence and quantity of snow leopards.
- By extending the protection, conservation, and management measures to the prospective snow leopard habitat using a landscape approach, it is possible to conserve not just the vulnerable snow leopards' long-term survival but also the water supply and biodiversity of India's northern states.
- Major permanent glaciers, which provide the majority of the water for the Himalayan rivers, are also present in snow leopard habitats.

How do snow leopards help the Himalayan ecosystem?

- The Himalayan ecosystem will suffer without the snow leopard, and this will have an adverse effect on the health of the rivers, which are the source of our fresh water.
- Healthy populations of snow leopards indicate good health in the ecosystem that it inhabits.
- The snow leopards are top predators in their area. The ecological balance would be off without the snow leopard.
- For instance, when herbivore populations rise, the vegetation will alter, affecting other creatures as well as the crucial ecosystem services.
- The Himalayan ecology supports the numerous inhabitants with food, medicine, wood for heating and cooking, grass for the cattle, and other essential resources.
- The entire natural ecology in these places as well as the people who depend on it are therefore benefited by safeguarding the snow leopard.

About Snow leopard

- One of the threatened species that can be found in the Himalayas' high, rugged, glaciated slopes is the snow leopard.
- The hilly areas of Central and Southern Asia are home to snow leopards.
- Snow leopard is found only in Central Asia, South Asia, China, and Russian countries.
- In India, their geographical range encompasses a large part of the western Himalayas, including the Union Territories of Jammu and Kashmir and Ladakh, Himachal Pradesh, Uttarakhand and Sikkim and Arunachal Pradesh in the eastern Himalayas.
- In the Himalayas, snow leopards are often found at elevations of 3,000–5,000 metres, preferring steep, rocky terrain with outcrops and ravines.

Snow Leopard - Protection Status

- IUCN- Vulnerable
- Wildlife (Protection) Act of 1972 - Schedule I
- Appendix I of the Convention on International Trade in Endangered Species (CITES), Appendix I of the Convention on Migratory Species (CMS).
- **Hemis National Park, Gangotri National Park, Khangchendzonga National park and Great Himalayan National Park** are some protected areas where snow leopards are known to be found.

Major Threats to snow leopards

- Habitat loss.
- Poaching
- Increasing Man- animal conflict.
- Climate change

Initiatives by the government to conserve the Snow leopard

- The snow leopard has been designated as a flagship species for the high-altitude Himalayas by the Indian government.
- Currently, the MoEFCC is conducting the Snow Leopard Population Assessment in India (SPAII).
- Project Snow Leopard was started by India in 2009 to conserve the elusive and threatened species.
- In India, there are 500 or more snow leopards, according to unofficial estimates.
- At an elevation of around 3,000 meters, the icy wilderness of Ladakh and Jammu and Kashmir in the Himalayan area is home to about 60% of the country's snow leopards.

- The remaining ones can be located in Arunachal Pradesh, Sikkim, Uttarakhand, and Himachal Pradesh.

ANTARCTIC OZONE LAYER HOLE KEEPS SHRINKING IN 2022: NASA, NOAA

Priority: Low



Primary Source: Down to Earth

Prepp Prelims Booster: Antarctic ozone Layer

Prepp Mains Booster: Environmental Conservation and Issues Climate Change, Ozone Depletion. GS1 - Climatology.

Context:

- According to the yearly report from the United States National Aeronautics and Space Administration (NASA) and the National Oceanic and Atmospheric Administration (NOAA), the hole in the ozone layer became smaller in 2022, continuing the pattern of the previous two decades.

The recovery of the Ozone layer

- The scientists stated on October 26, 2022 that the recovery of the ozone layer was due to the Montreal Protocol's 1989 restriction on the discharge of dangerous, ozone-depleting compounds known as chlorofluorocarbons.
- The ozone layer shields Earth's life from the Sun's UV radiation. Ozone depleting chemicals (ODS) emitted by aerosols harm the stratospheric ozone layer.
- For the past several decades, chemical processes involving chlorine and bromine (made from human-generated substances) have caused ozone in the southern polar area to be swiftly and severely depleted during the spring in the Southern Hemisphere.
- The ozone hole is the name given to this deficient area. Above Antarctica, the most severe depletion occurs.
- According to NASA and NOAA, the Antarctic ozone hole has been diminishing since the early 2000s, and its yearly average size was 23.2 million square kilometres from September 7, 2022 to October 13, 2022.
- According to the organisations, the depleted area of the ozone layer above the South Pole was slightly lower than the extent of 23.3 million square kilometres during the same period in 2021.
- However, it was far smaller than the greatest size of the hole recorded in 2006.
- NOAA and NASA researchers use satellite instrumentation onboard the Aura, Suomi-NPP, and NOAA-20 satellites to detect and quantify the expansion and breakdown of the ozone hole.
- This year, satellite scans revealed that the ozone hole area peaked at 26.4 million square kilometres on October 5, but is already diminishing.
- According to a NASA research published in January 2018, the decrease in chlorine caused by the ban on chlorine-containing man-made substances known as chlorofluorocarbons has resulted in approximately 20% less ozone depletion over the Antarctic winter than there was in 2005.
- This was one of the earliest concrete pieces of evidence of the ozone hole's recovery as a result of the chemical ban.
- According to NOAA, the 2022 Antarctic index has declined 26% from high readings in the 1990s, with recovery of the Antarctic ozone layer expected around 2070.

What is the Ozone layer?

- The ozone layer is part of the stratosphere, the second layer of the Earth's atmosphere.
- The ozone layer is the consequence of chemical processes in the atmosphere that are triggered by sunlight. When sunlight strikes oxygen molecules, a chemical process occurs.
- The oxygen molecules disintegrated into single oxygen atoms. Now, these single oxygen atoms mix with oxygen molecules (O₂ molecules), resulting in the production of O₃ molecules. The ozone layer is a layer of O₃ molecules.
- Ozone is effective in trapping a form of radiation known as ultraviolet radiation, or UV light, which may penetrate organisms' protective layers, such as skin, damaging DNA molecules in plants and animals.
- It is the result of sunlight reacting with oxygen molecules. Ozone is a greenhouse gas, and its molecules, like those of other greenhouse gases, have the ability to trap and store heat.
- The ozone layer is located at the highest point in the atmosphere. As a result, before sunlight reaches the earth's surface, it must first travel through the powerful ozone layer.



What is Ozone layer Depletion?

- The depletion of stratospheric ozone by free radicals such as chlorine and bromine when they reach the upper atmosphere is known as ozone depletion.
- Ozone Depleting Substances are free radicals such as chlorine and bromine that cause ozone depletion (ODS). ODSs
- The creation of complicated CFCs (Chloro-Fluorocarbons) and HCFCs was the reason (Hydro-Chloro-Fluorocarbons). Refrigerators, air conditioners, fire extinguishers, foam, and aerosol propellants all discharged them into the environment.
- The usage of methyl bromide for soil and building fumigation also contributed to the ozone layer depletion.
- The Montreal Protocol examines and regulates the manufacture and import of ozone-depleting compounds.

Ozone-depleting substances (ODSs)

- Chlorofluorocarbons (CFCs)
- Halon
- Carbon tetrachloride (CCL₄)
- Methyl chloroform (CH₃CCl₃)
- Hydro-Bromo-fluorocarbons
- Hydro-chloro-fluorocarbons
- Methyl bromide

- Bromo chloromethane



What is the Montreal Protocol?

- The Montreal Protocol is an international environmental treaty that aims to restrict the production and use of ozone-depleting chemicals, sometimes known as ODFs.
- It is critical because the ozone layer must be preserved in order to keep the Sun's dangerous UV radiation from reaching the Earth.
- The Montreal Protocol is the world's first international convention, having been accepted by 197 parties, including 196 UN member states plus the EU, or every country on the planet.
- The Protocol of Montreal was signed in 1987 and went into effect in January 1989.
- It is a time-bound procedure in which industrialised and developing countries phase down the use of dangerous Ozone-depleting compounds on distinct timelines.
- All members have a special obligation to oversee the ODS trade, phase out groups of ODS, publish yearly statistics, and control the import and export of depletion.
- Though developed and developing nations contribute equally, their obligations differ. The Montreal Protocol did not require developing nations to reduce ODS if they had a strong domestic need.
- The Montreal Protocol can be updated or adjusted in response to changes in the economy, technological improvements, and the application of scientific methodology. By far, the Montreal Protocol has been revised or amended nine times.
- The Meeting of the Parties governs the Protocol. The Ozone Secretariat assists these parties. The Ozone Secretariat is situated at the UNEP headquarters in Nairobi.
- The Kigali Amendment to the Montreal Protocol intends to reduce HFC (hydrofluorocarbon) production and use in order to phase out hydrocarbons. On October 15, 2016, all countries accepted this amendment. However, it went into effect on January 1, 2019.
- As a result, the Montreal Protocol intends to reduce HFC use by 80% by 2047.

Conclusion

The ozone layer is the protective coating of air in the stratosphere, or blanket that shields the planet's organisms. The ozone layer, which lies 15 miles above the Earth's surface, protects life on the planet by absorbing the sun's most powerful UV rays. When the ozone layer thins (depletes), more UV radiation reaches Earth than is typically detected, raising the global temperature and increasing the risk of sunburn and skin cancer.

THE NEW HYBRID VARIANT OF MUSTARD

Priority: Medium



Primary Source: The Hindu

Prepp Prelims Booster:

Prepp Mains Booster: Science and Technology: Awareness in the fields of Biotechnology.

Why in the news?

- Recently, the **Genetic Engineering Appraisal Committee (GEAC)**, India's apex regulator of genetically modified plants and food products, has approved the environmental release of **Dhara Mustard Hybrid-11 (DMH-11)**, a genetically engineered mustard variant.
- If approved for commercial cultivation, it would be the first genetically modified food crop available to Indian farmers.

What is the Genetic Engineering Appraisal Committee (GEAC)?

- It is in charge of assessing the environmental impact of activities involving the large-scale use of hazardous microorganisms and recombinants in research and industrial production.
- The committee is also in charge of evaluating proposals for the release of genetically engineered (GE) organisms and products into the environment, including experimental field trials.
- GEAC is chaired by the Special Secretary/Additional Secretary of MoEF&CC and co-chaired by a representative from the Department of Biotechnology (DBT).



What is DMH-11?

- DMH-11 is a mustard hybrid developed by researchers at the University of Delhi's Centre for Genetic Manipulation of Crop Plants.
- The efforts to develop hybrid mustard for decades began with DMH-1, a hybrid variant developed without the use of transgenic technology.
- DMH-1 was approved for commercial release in northwest India in 2005-2006, but scientists have stated that this technology is not bankable enough to consistently produce hybrid mustard.
- While India has many mustard varieties, it is a self-pollinating plant, making it difficult for plant breeders to cross different mustard varieties and induce desirable traits.
- The mustard plant's genes are to be manipulated by being able to turn off this self-pollinating trait to allow such crossings and then restoring the trait to allow seed production. **DMH-11 is a hybrid of two varieties: Varuna and Early Heera-2.**

- Such a cross would not have occurred naturally, and it was achieved through the introduction of genes from two soil bacterium known as barnase and barstar.
- Barnase in Varuna causes temporary sterility, preventing it from naturally self-pollinating.
- Barstar in Heera inhibits the action of barnase, allowing seeds to be produced.
- As a result, DMH-11 (where 11 refers to the number of generations after which desirable traits manifest) not only has higher yield but is also fertile. DMH-11 is a transgenic crop because it contains foreign genes from another species.

What are Genetically Modified (GM) Crops?

- **GM crops** are plants whose genes have been artificially modified, usually by inserting genetic material from another organism, to give them new properties such as increased yield, herbicide tolerance, disease or drought resistance, or improved nutritional value.
- Golden rice is most likely the most well-known GM rice variety. Golden rice is made by combining genes from a plant - both daffodils and maize have been used - and a soil bacterium to create a grain rich in Vitamin A.
- Previously, India approved the commercial cultivation of only one GM crop, Bt cotton, but GEAC has recommended that GM Mustard be approved for commercial use.

What is Hybrid Mustard?

- Hybridisation is the process of crossing two genetically dissimilar plant varieties, which can even be from the same species.
- The **first-generation (F1)** offspring of such crosses typically have higher yields than either parent can provide individually.
- Because mustard flowers have both female (pistil) and male (stamen) reproductive organs, the plants are mostly self-pollinating.
- The eggs of one plant cannot be fertilized by the pollen grains of another, the possibility of developing hybrids is limited, unlike in cotton, maize, or tomato, where this can be accomplished through simple emasculation or physical removal of anthers.

Are Hybrid Mustard Varieties Superior?

- Trials conducted over three years by the Indian Council of Agricultural Research (ICAR) show that DMH-11 has 28% higher yields than its parent Varuna and is 37% better than zonal checks, or local varieties considered best in different agro-climatic zones.
- These trials lasted three years and took place in eight different locations. DMH-11, rather than being an end in itself, indicates the success of the barnase-barstar system, which can be used as a platform technology to develop newer hybrids.
- Better hybrids, according to scientists, are required to meet India's rising edible-oil import bill.

Mustard in India

- During the Rabi winter season, mustard (Brassica juncea) is grown on 6-7 million hectares primarily in Rajasthan, Haryana, Punjab, and Madhya Pradesh.
- India imports between 55 and 60% of its domestic edible-oil requirement.
- According to the National Academy of Agricultural Sciences, approximately 13.3 million tonnes of edible oil were imported in 2020-21 at a cost of Rs. 1,17,000 crore.
- This is primarily due to low productivity — around 1-1.3 tonnes/hectare, that has been stagnant for more than two decades.

- In Canada, China, and Europe, hybrid mustard and rapeseed are the most common types of oil seeds. The only way to boost India's productivity is to grow more mustard hybrids.

Why are transgenic mustards controversial?

- Transgenic mustards are controversial for two reasons:
 - One is the use of genes that are not native to the species, and
 - The preparation of mustard hybrids necessitates the use of another gene, known as the bar gene, which makes it resistant to the herbicide glufosinate-ammonium.
- Activists claim that the GM mustard has not been evaluated as a herbicide-tolerant crop, posing potential risks.
- It is claimed that GM mustard plants may discourage bees from pollinating the plant, which could result in environmental disasters. The Swadeshi Jagran Manch, an affiliate of the Rashtriya Swam Sevak Sangh that has consistently opposed GM crops, has also supported activist groups.

Current Status of GM mustard

- The GEAC has previously approved the environmental release of GM mustard. The apex body cleared it in 2017, but the process was halted after a case was filed in the Supreme Court.
- Despite the fact that the GEAC is a body under the government, the Environment Ministry has not officially supported GM mustard.
- The first transgenic food crop, Bt Brinjal, was also approved by the GEAC in 2009 but was put on hold by the then-UPA government due to the need for additional testing.
- Currently, Bt-cotton is the only transgenic crop grown in India. The GEAC approval only allows DMH-11 to be grown in ICAR-supervised fields.
- The Indian Agricultural Research Institute has stated that the crop will be commercially available in "three seasons" now that large quantities can be grown for testing.
- While India has many mustard varieties, the plant is self-pollinating, making it difficult for plant breeders to cross different mustard varieties and induce desirable traits.
- The **Indian Council of Agricultural Research (ICAR)** conducted three-year trials that show DMH-11 has 28% higher yields than its parent Varuna and is 37% better than zonal checks, or local varieties considered best in different agro-climatic zones.

INDIA ABSTAINS ON IVORY TRADE VOTE IN CITES: THANKS TO NAMIBIA FOR CHEETAHS?

Priority: Medium



Primary Source: Indian Express

Prepp Prelims Booster:

Prepp Mains Booster: Bilateral, Regional and Global Groupings and Agreements involving India and/or affecting India's interests; GS 3 - Wildlife Conservation, Environmental Pollution and Degradation.

Context:

India recently voted against the ivory trade at the 19th Conference of the Parties (CoP19) of the Convention on International Trade in Endangered Species of Fauna and Flora (CITES) in Panama City in accordance with Namibia's request when it agreed to transfer cheetahs.

News Summary:

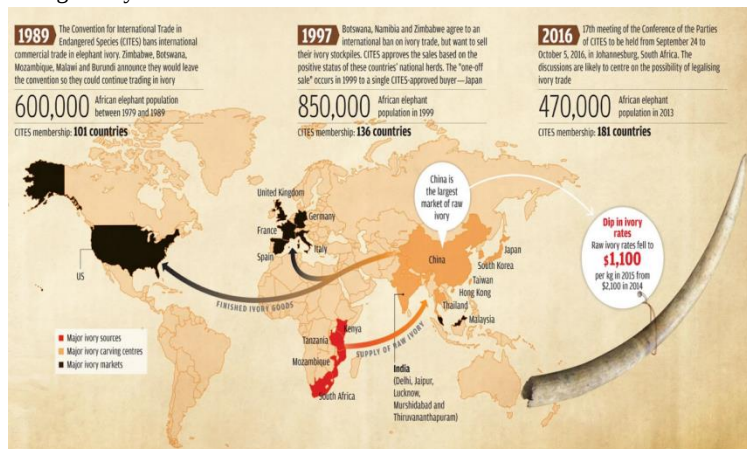
- At the 19th meeting of the CITES Conference of the Parties (CoP19) in Panama City, a proposal to permit a regularized form of controlled

commerce in ivory from Namibia, Botswana, South Africa, and Zimbabwe was defeated 83-15.

- India abstained, departing from its previous position, in line with Namibia's demands when it agreed to transfer cheetahs this summer.
- Under that agreement signed in July, India and Namibia committed to promoting "sustainable utilisation and management of biodiversity" by supporting each other "at international forums including meetings" of the CITES.

Status of Ivory Trade:

- 1989 saw the inclusion of all African elephant populations in CITES Appendix I, which resulted in a global ban on the commerce in ivory.
- In 1997, the populations of Namibia, Botswana, and Zimbabwe were moved to Appendix II; in 2000, the population of South Africa was moved there.
- Trade is strictly prohibited in species listed in CITES Appendix I, but it is permitted in species listed in Appendix II.
- Along with Zimbabwe, Botswana, South Africa, and Namibia, CITES permitted one-time sales of ivory gathered from elephant deaths from natural causes and poacher seizures in 1999 and 2008.
- Then, at the CoP17 (2016) and CoP18 (2018), Namibia's proposal to allow a regular form of regulated ivory trading by delisting the elephant populations of the four countries from CITES Appendix II was rejected (2019).
- The proposal was advanced by Zimbabwe at CoP19, but it was again rejected.
- The governments of Namibia and other southern African nations claim that their elephant populations have recovered and that, if sold on a global scale, the stockpiled ivory can provide urgently needed funds for elephant conservation.
- The argument put out by opponents of the trade is that any supply raises demand, and that significant increases in elephant poaching were seen globally after the CITES allowed one-time sales in 1999 and 2008.

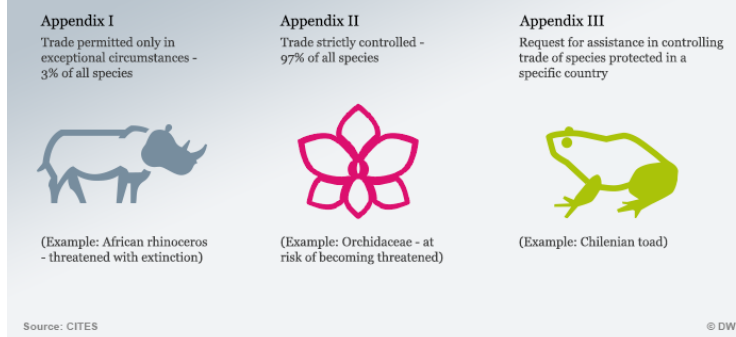


What is India's Stand?

- For more than three decades, India has been a strong opponent of the global ivory trade.
- In actuality, India created the recognizable CITES elephant emblem in 1981.
- Since joining the CITES in 1976, this is the first time India has not voted against a request to restart the ivory trade.
- Namibia voted against India's proposal at the same CoP19, which was also defeated, to permit the sustainable commercial use of Dalbergia sissoo, or North Indian rosewood.

- In accordance with a negotiated agreement, India and Namibia agreed to help one another in international forums like CITES in order to promote the sustainable exploitation and management of biodiversity.
- Despite the absence of the word "ivory," Namibia sought India's support for its long-standing plan to enable trade in ivory.

Classification of species under CITES



What is CITES?

- CITES is an international agreement (Secretariat - Geneva, Switzerland) between nations to guarantee that transnational trade in wild animals and plants does not endanger the survival of the species. It is also referred to as the Washington Convention.
- Members of the International Union for Conservation of Nature (IUCN) met to develop it in 1963.
- In Washington, D.C., the convention was made available for signature in 1973, and on July 1st, 1975, CITES came into effect.
- CITES is one of the conservation treaties with the greatest number of members, having 184 Parties as of today (India since 1976).
- CITES does not supersede national law, even though it is legally binding on the Parties (meaning they must implement the Convention).
- Instead, it creates a framework that each Party must adhere to (upon which their domestic law must be enacted).
- Based on the risk of extinction, CITES divides plant and animal species into three groups (Appendices).
- The Convention mandates that nations enact permits to govern both the ownership of live animal specimens and the trading of all designated specimens of wild animals and plants.

PLACES IN NEWS

NEW DOCKS, UPGRADES SPEEDBOATS FOR PANGONG TSO PATROL

- In order to patrol the Pangong Tso Lake in Eastern Ladakh, the Army has installed new landing docks and speed boats in a manner similar to that of the Chinese. The lake is located at a height of about 14,000 feet.
- This is a component of an overarching capability improvement and infrastructure-building initiative India has undertaken since the 2020 standoff in Eastern Ladakh to fill gaps and keep up with Chinese construction along the Line of Actual Control (LAC).



WHY HAS FRANCE ENDED ITS MILITARY OPERATION IN SAHEL

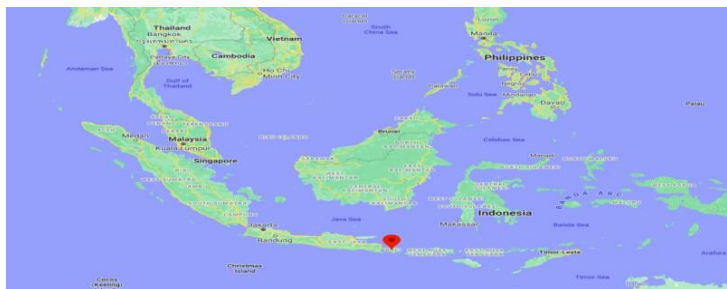
- Recently On November 9, French President Emmanuel Macron announced the end of the decade-long Operation Barkhane in Africa. French President, Mr. Macron said that, "Our military support for African countries will continue, but according to new principles that we have defined with them"

THE SAHEL REGION INCLUDES 10 COUNTRIES THAT VARY DEMOGRAPHICALLY.



BALI G-20 SUMMIT

- The leaders of the world's most advanced economies, the G-20, have gathered at Bali's Nusa Dua resort for the 17th summit of the G20, presided by Indonesia which is scheduled to take place on 15-16 November 2022.
- While the focus of the Summit will be on post-pandemic recovery and dealing with energy and food security impacted by the Russian war in Ukraine, much interest will be on the bilateral summits which will be on the sidelines.



NORTH KOREA'S ICBM, WITH RANGE TO STRIKE ENTIRE US, LANDS IN JAPAN'S WATER

- Following questions over past claims, North Korea announced that it had successfully test-fired its enormous new Hwasong-17 intercontinental ballistic missile (ICBM), which observers suggested may have been its first successful launch.

Approximate path of North Korean missile



INDONESIA QUAKE TOLL JUMPS TO 268, RESCUE WORKERS HUNT FOR SURVIVORS

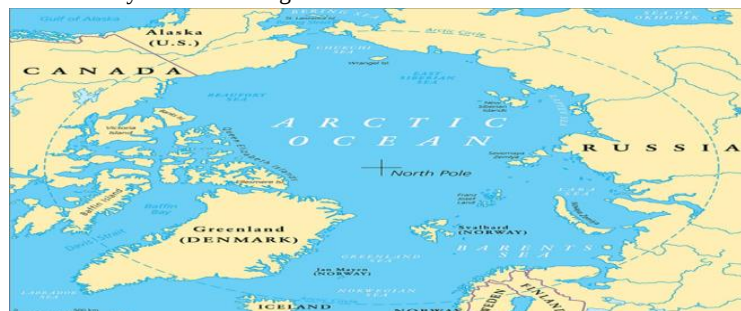
- Recently, a 5.6 magnitude quake struck a mountainous region on 21st November, causing landslides that buried entire villages near the West Java town of Cianjur.
- The epicenter of the shallow 5.6-magnitude quake was near the town of Cianjur where most of the victims were killed, hundreds were injured and dozens feared trapped as buildings collapsed and landslides were triggered.

West Java earthquake



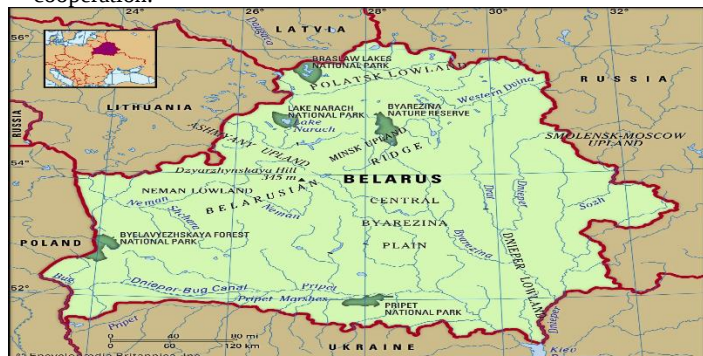
RUSSIA'S NUCLEAR ICEBREAKERS AND MILITARISATION OF THE ARCTIC

- Recently, President Putin presided over the flag-raising ceremony and dock launch for two nuclear-powered icebreakers- Yakutia, that will ensure year-round navigation in the Western Arctic.



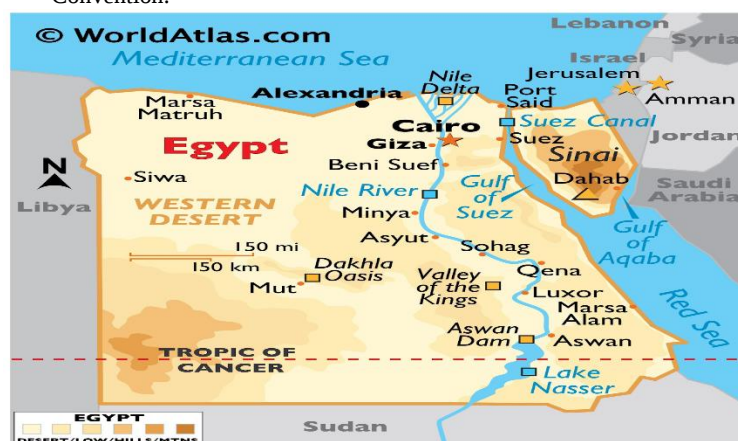
BELARUS

- The 11th Session of the India-Belarus Inter-Governmental Commission on Trade, Economic, Scientific, Technological and Cultural Cooperation was held on November 10, 2022 in New Delhi.
- India and Belarus reiterated their strong desire to further broaden their cooperation.



EGYPT

- The Sharm el-Sheikh Climate Change Conference (COP 27) conference took place from 6-20 November 2022.
- The countries came together to take action towards achieving the world's collective climate goals as agreed under the Paris Agreement and the Convention.



CENTRAL AFRICAN REPUBLIC

- Central African Republic Minister for Economy Lea Doumta Lea Doumta, led a group on a two-day visit to India.
- Landlocked in the heart of Africa, the Central African Republic is seeking Indian investors to mine its abundant natural resources ranging from oil, uranium and lithium to gold, diamonds, iron ore and copper.

