Social Progress Index (SPI) for States and Districts

❖ Context

➢ Social Progress Index (SPI) for States and Districts made by the Institute for Competitiveness and Social Progress Imperative was released.

❖ Key Highlights

- SPI is a comprehensive tool that can serve as a holistic measure of a country's social progress at the national and sub-national levels.
- The index assesses states and districts based on 12 components across three critical dimensions of social progress.
  - Basic Human Needs
  - Foundations of Wellbeing.
  - Opportunity
- Based on the SPI scores, states and districts have been ranked under six tiers of social progress. The tiers are
  - Tier 1: Very High Social Progress
  - Tier 2: High Social Progress
  - Tier 3: Upper Middle Social Progress
  - Tier 4: Lower Middle Social Progress
  - Tier 5: Low Social Progress
  - Tier 6: Very Low Social Progress

❖ Key Outcomes:

- Puducherry has the highest SPI score of 65.99 in the country.
- Lakshadweep and Goa closely follow it with scores of 65.89 and 65.53, respectively.
- Jharkhand and Bihar scored the lowest, 43.95 and 44.47, respectively.
- For the dimension of Basic Human Needs, Goa, Puducherry, Lakshadweep, and Chandigarh are the top four states.
- For the Foundations of Wellbeing Mizoram, Himachal Pradesh, Ladakh, and Goa have emerged as the best performing states.
- For the Opportunity dimension, Tamil Nadu has achieved the highest component score of 72.00.
- For Health and Wellness, Rajasthan has the highest component score of 73.74.
- For Environmental Quality, the top three states belong to the northeast region, namely, Mizoram, Nagaland, and Meghalaya.

Carbon Markets

❖ Context

➢ Recently, the Parliament passed the **Energy Conservation (Amendment) Bill, 2022.**

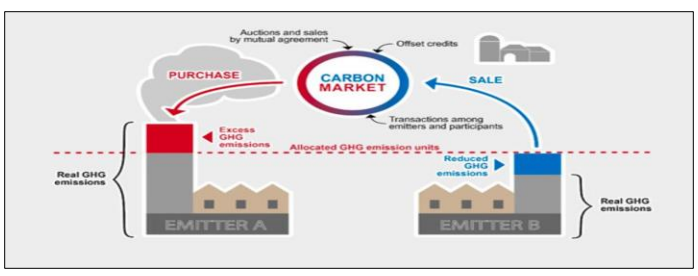
➢ The Bill **amends the Energy Conservation Act, 2001**, to empower the **Government to establish carbon markets** in India and specify a carbon credit trading scheme.

Key Highlights

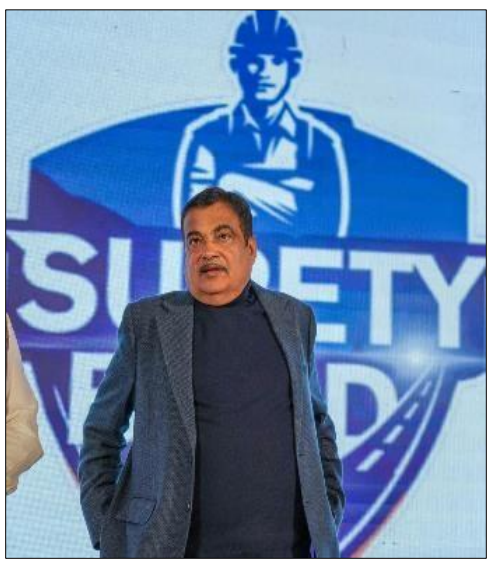
- A **United Nations Development Program** release this year noted that interest in carbon markets is growing globally.
- The **World Bank** estimates that **trading in carbon credits** could **reduce the cost of implementing NDCs** by more than half — by as much as $250 billion by 2030.

Carbon Markets

- **Background**
  - Global greenhouse gas (GHG) emissions need to be reduced by 25 to 50% over this decade, in order to **keep global warming within 2°C,** ideally no more than 1.5°C.
  - Nearly **170 countries have submitted their nationally determined contributions (NDCs)** so far as part of the 2015 Paris Agreement, which they have agreed to update every five years.
  - NDCs are climate commitments by countries setting targets to achieve net-zero emissions.
  - India, for instance, is working on a long-term roadmap to **achieve its target of net zero emissions by 2070.**
  - In order to meet their NDCs, one **mitigation strategy** is becoming popular with several countries— carbon markets.
- **About**
  - **The Paris Agreement** provides for the use of international carbon markets by countries to fulfil their NDCs.
  - Carbon markets are **essentially a tool for putting a price on carbon emissions.**
  - They **establish trading systems** where carbon credits or allowances can be bought and sold.
- **Carbon Credit**
  - A carbon credit is a kind of **tradable permit** that, as per United Nations standards, **equals one tonne of carbon dioxide removed,** reduced, or sequestered from the atmosphere.
- **Types of Carbon Markets**
  - **Voluntary markets**
    - In a voluntary market, a corporation looking to compensate for its unavoidable GHG emissions purchases carbon credits from an entity engaged in projects that reduce, remove, capture, or avoid emissions.
  - **Compliance Markets**
    - They are set up by **policies at the national, regional,** and/or **international level**— are officially regulated.
    - They mostly operate under a principle called 'cap-and-trade", mostly popular in the European Union (EU).



Surety Bond Insurance



❖ **Context**

➢ Union Minister for Road Transport and Highways launched one of India's first-ever **Surety Bond Insurance product from Bajaj Allianz.**

❖ **Key Features of the Bond:**

- Surety Bond Insurance will act as a **security arrangement** for infrastructure projects and will insulate the contractor as well as the principal.
- It is a risk transfer tool for the Principal and shields the Principal from the losses that may arise in case the contractor **fails to perform their contractual obligation**.
- The product gives the principal a contract of guarantee that contractual terms and other business deals will be concluded in accordance with the mutually agreed terms.
- In case the contractor doesn't fulfil the contractual terms, **the Principal can raise a claim on** the surety bond and recover the losses they have incurred.
- Unlike a bank guarantee, the Surety Bond Insurance **does not require large collateral from** the contractor thus freeing up significant funds for the contractor, which they can utilize for the growth of the business.
- The product will also help in reducing the contractors' debts to a large extent thus addressing their financial worries.
- The product will **facilitate the growth of upcoming infrastructure** projects in the country.

LAUNCH OF 'ARNALA'

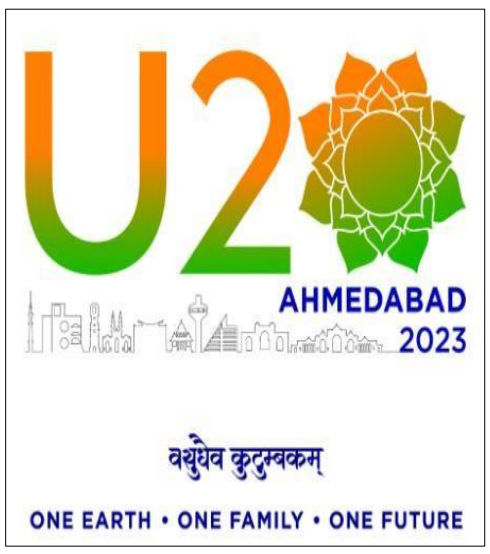
❖ **Context**

➢ 'Arnala', the first of 08 x ASW SWC Project, being built by GRSE for Indian Navy was launched on 20 Dec 22 at, **Kattupalli, Chennai.**

❖ **Key Highlights:**

- Arnala to signifies the strategic maritime importance accorded to the island of Arnala (located about 13 Km north of Vasai, Maharashtra) by the great Maratha warrior, Chhatrapati Shivaji Maharaj.
- Arnala class of ships will replace the Abhay class Ships of Indian Navy.
- They are designed to undertake **anti-submarine operations** in coastal waters and Low Intensity Maritime Operations (LIMO) including subsurface surveillance in littoral waters.
- The **77.6m ASW SWC (Anti-Submarine Warfare ,Shallow Water Craft)** ships have a displacement of 900 tons with a maximum speed of 25 knots and endurance of 1800 NM.
- The ASW SWC ships will have over **80% indigenous content**, ensuring that large scale defence production is executed by Indian manufacturing units thereby generating employment and capability build up within the country.
- Launch of this ship reinforces our resolve towards completely indigenous shipbuilding as part of **'Aatmanirbhar Bharat'.**

Urban-20 (U20)Event Under G20 Presidency of India



❖ **Context**

➢ Under the G20 presidency of India from December 01, 2022 to November 30, 2023, the Ministry of Housing and Urban Affairs is organizing Urban 20 event.

❖ **Key Highlights**

- To organize Urban 20 event, **Gujarat CM unveiled logo**, website, and social media handles of Urban-20.
- Urban-20 (U20), one of the Engagement Groups of G20, provides a platform for cities from G20 countries to facilitate discussions on various important issues of urban development.
- It covers issues such **as climate change, social inclusion, sustainable mobility, affordable housing, and financing of urban infrastructure**.
- Bearing in mind the importance of cities as growth centers of development, the U20 strives **to enhance the profile of cities on the global stage.**
- Under the G20 presidency of India, Ahmedabad, a UNESCO World Heritage city, will host **the U20 cycle.**
- Besides G20 countries, the Mayors and representatives of **C40 (Climate 40),** UCLG (United Cities and Local Governments) member cities, and **Observer Cities** will participate in these events and enrich the discussions.
- Ahmedabad will showcase its unique **urban development** and **climate change initiatives** and rich culture and heritage to the participants. Resonating with India's G20 theme of - One Earth, One Family, and One Future'.

News in Between the Lines

Five Agricultural Products of Kerala

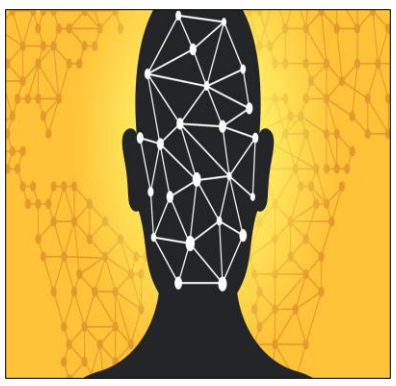
❖ Context

➢ Recently, **Five agricultural products of Kerala** have been granted **Geographical Indication (GI) status.**

Products

- **Attappady Attukombu Avara (Beans)**
  - It is cultivated in the Attappady region of Palakkad.
  - It is curved **like a goat's horn** as its name indicates.
  - Its higher **anthocyanin content** compared to other dolichos beans imparts violet colour in the stem and fruits.
  - Anthocyanin is helpful against cardiovascular diseases along with its antidiabetic properties.
  - Other than this, calcium, protein, and fibre content are also high.
  - The higher phenolic content of Attappady Attukombu Avara imparts resistance against pests and diseases, making the crop suitable for organic cultivation.
- **Attappady Thuvara (Red Gram)**
  - It is having seeds with white coat.
  - Compared to other red grams, Attappady Thuvara seeds are bigger and have higher seed weight.
- **Onattukara Ellu (Sesame)**
  - Onattukara Ellu and its oil are famous for its unique health benefits.
  - Relatively higher antioxidant content in Onattukara Ellu helps in fighting the free radicals, which destroy the body cells.
- **Kanthalloor-Vattavada Veluthulli (Garlic)**
  - Compared to the garlic produced in other areas, this garlic contains higher amounts of sulphides, flavonoids, proteins and also rich in essential oil.
  - It is rich in allicin, which is effective against microbial infections, blood sugar, cancer, etc.
- **Kodungalloor Pottuvellari (Snap Melon)**
  - It is cultivated in Kodungalloor and parts of Ernakulam is consumed as juice and in other forms.
  - This snap melon, which is harvested in summer, is an excellent for quenching thirst.
  - It contains **high amount of Vitamin C.**

Deep Fake



❖ Context

➢ The **Cyberspace Administration of China**, the country's cyberspace watchdog, is **rolling out new regulations,** to be effective from January 10, **to restrict the use of deep synthesis technology** and curb disinformation.

❖ Key Highlights

- Deep synthesis is defined as the use of technologies, including deep learning and augmented reality, to generate text, images, audio and video to create virtual scenes.
- One of the most notorious applications of the technology is deepfakes, where synthetic media is used to **swap the face or voice of one person for another**.

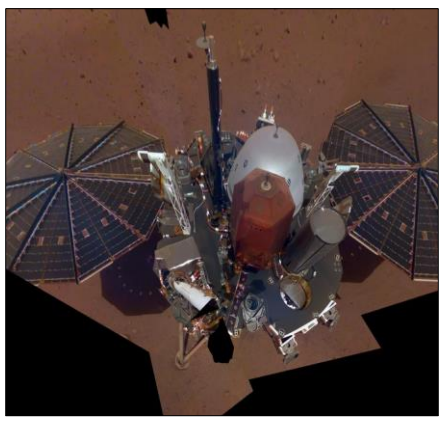
❖ Deep Fakes

- The term deepfake **originated in 2017,** when an anonymous Reddit user called himself "Deepfakes."
- Deepfakes are a **compilation of artificial images and audio** put together with machine-learning algorithms to spread misinformation.
- It **replaces a real person's appearance, voice, or both** with similar artificial likenesses or voices.
- It **can create people who do not exist** and it can fake real people saying and doing things they did not say or do.

❖ Concerns

- Deepfake technology is now being used for nefarious purposes like scams and hoaxes, celebrity pornography, election manipulation, social engineering, automated disinformation attacks, identity theft and financial fraud.

NASA's InSight Mars lander



❖ Context

➢ Recently, In a tweet **NASA's InSight Mars lander** account struck a sombre note and said the robot currently on Mars will be signing off soon, ending its nearly **four-year-long journey** to study the red planet's early evolution.

❖ InSight Lander

- InSight — whose name is actually short for **Interior Exploration Using Seismic Investigations, Geodesy and Heat Transport**.
- It was **dispatched there in 2018** to help study the planet's "inner space," meaning its crust, mantle and core.
- **Objective**
  - To **understand how rocky planets formed and evolved**, and study the interior structure and geological processes of Mars through its various layers, such as the core, the mantle and the crust.
  - To figure out just **how tectonically active Mars is today**, and how often meteorites impact it. This included measuring marsquakes, and more than 1,300 quakes have been detected.
- **Contribution**
  - InSight didn't just become the first to detect quakes on another planet — it went on to **measure more than 1,300 seismic events.**
  - Its findings gave scientists **new insights into the composition and structure of the planet's layers.**
  - It **carried the first-ever magnetometer instrument to the surface of Mars** (so it could detect magnetic signals) and collected the most comprehensive weather data of any mission sent there.

Fog

❖ Context

➢ For two consecutive mornings, dense fog has enveloped northwestern India, including Delhi, Punjab, Haryana, parts of Uttar Pradesh, and parts of Rajasthan.

❖ Fog Formation

- Fog forms like clouds do, when **water vapour condenses.**
- The **presence of moisture and a fall in the temperature** are key factors for the formation of fog.
- With the land **surface cooling down at nigh**t, **the air close to the surface also cools down.**
- Since cooler air cannot hold as much moisture as warm air, the water vapour in the air condenses to form fog.
- Fog begins to **form in the early hours of the morning** when the temperature is at its lowest.
- Fog can have "high spatial variability", and its intensity can depend on factors like humidity, wind, and temperature,
- Areas near water bodies, for instance, may see denser fog because of the higher humidity.

Green Steel

❖ Context

➢ Union Minister of Steel told Rajya Sabha that the government was considering mandating the use of "green steel" in government project.

❖ Key Highlights

- He informed emissions from the steel industry have been brought down by 15% between 2005 and 2022.
- Energy consumption per tonne of steel produced has come down as well as emission intensity in terms of CO2.
- Centre targets an additional 10% reduction in emissions by 2030.
- India has now become the second largest steel producer in the world.

❖ What is green steel?

- Green steel is the manufacturing of steel without the use of fossil fuels.

- This new phenomenon is about producing steel by using low-carbon energy sources such as hydrogen, coal gasification, or electricity instead of the traditional carbonintensive manufacturing route of coal-fired plants.

Why is green steel the need of the hour?

- The iron ore and steel industry globally accounts for around 8 percent of total CO2 emissions on annual basis, whereas in India, it contributes 12 percent to the total CO2 emissions.
- In view of commitments made at the climate change conference, the Indian steel industry needs to reduce its emissions substantially by 2030 and hit net-zero carbon emissions by 2070.

NHRC

❖ **Context**

➢ National Human Rights Commission (NHRC) has informed the Bihar government that it would probe the case of deaths due to spurious liquor in the State.

❖ **About the Organisation**

- The National Human Rights Commission (NHRC) of India is a statutory body established on 12 October, 1993.
- It is in conformity with the Paris Principles, adopted at the first international workshop on national institutions for the promotion and protection of human rights held in Paris in October 1991.

❖ **The Functions Of The Commission**

- As stated in Section 12 of the Act, enquiry into complaints of violation of human rights or negligence in the prevention of such violation by a public servant.
- The Commission also studies treaties and international instruments on human rights and make recommendations for their effective implementation to the Government.

❖ **The Commission Consist Of**

a) Chairperson who has been a [Chief Justice of India or a Judge] of the Supreme Court
b) one Member who is, or has been, a Judge of the Supreme Court;
c) one Member who is, or has been the Chief Justice of a High Court;
d) three Members, out of which at least one shall be a woman, to be appointed from amongst persons having knowledge of, or practical experience in, matters relating to human rights.

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