**Carbon Border Adjustment Mechanism (CBAM)**

**In news:**

* Recently, European Union introduced new legislation, Fit for 55, to cut its GHG emissions by 55 per cent by 2030 and to net-zero by 2050.

#### **Implications of Fit for 55**

* **Legal backing:** It turns the EU’s announcement into law, protecting it from the winds of political change.
* It opens new markets for Indian industry, for example for electric vehicles.
* **CBAM:** However, it also introduces a potentially adverse policy called the **carbon border adjustment mechanism (CBAM).**
* CBAM is meant**to discourage consumers from buying carbon-intensive products** and encourage producers to**invest in cleaner technologies.**

#### **What is CBAM?**

* The EU has had a carbon emission trading system since 2005.
* With Fit for 55, the EU’s carbon price is likely to go up.
* High carbon price will make the **EU’s domestic products more expensive** than imports from countries that do not have such rules.
* The new CBAM is meant**to level the playing field** between domestic and imported products.
* CBAM will require foreign producers**to pay for the carbon emitted while manufacturing their products.**
* The adjustment will be**applied to energy-intensive products** that are widely traded by the EU, such as iron and steel, aluminium, cement, fertiliser, and electricity.

#### **Why CBAM is a cause for concern for India?**

* India is Europe’s third-largest trading partner, and it**does not have its own carbon tax or cap.**
* So, CBAM should be a cause for concern for it.
* A UNCTAD study predicts that India will lose $1-1.7 billion in exports of**energy-intensive products** such as steel and aluminium.
* India’s goods trade with the EU was**$74 billion in 2020.**

**UNCTAD**

* United Nations Conference on Trade and Development (UNCTAD) was established in 1964 to promote development-friendly integration of developing countries into the world economy.
* UNCTAD is a **permanent intergovernmental body headquartered at Geneva in Switzerland.**
* Some of the reports published by it are:
	+ Trade and Development Report
	+ World Investment Report
	+ The Least Developed Countries Report
	+ Information and Economy Report
	+ Technology and Innovation Report
	+ Commodities and Development Report

**Census of India**

**In news:**

* The Ministry of Home Affairs has informed that it was decided as a matter of policy not to enumerate caste-wise population other than SCs and STs in Census.

**Census**

* The census provides information on size, distribution and socio-economic, demographic and other characteristics of the country's population.
* **'Rig-Veda' reveals** that some kind of population count was maintained during 800-600 BC in India.
* **Arthashastr by 'Kautilya' written in the 3rd Century BC** prescribed the collection of population statistics as a measure of state policy for taxation.
* During the regime of the **Mughal king Akbar, the administrative report 'Ain-e-Akbari'** included comprehensive data pertaining to population, industry, wealth and many other characteristics.
* A systematic and modern population census, in its present form was conducted non synchronously between 1865 and 1872 in different parts of the country.
* However, **the first synchronous census in India was held in 1881**. Since then, censuses have been undertaken uninterruptedly once every ten years.
* India's last census was carried out in**2011 when the country's population stood at 121 crore**. The Indian Census is one of the largest administrative exercises undertaken in the world.

#### **Census of India**

* The decennial Census of India has been conducted 15 times, as of 2011.
* While it has been undertaken every 10 years, beginning in 1872 under British Viceroy Lord Mayo, the first complete census was taken in 1881.
* Post-1949, it has been conducted by the Registrar General and Census Commissioner of India under the Ministry of Home Affairs, Government of India.
* All the censuses since 1951 were conducted under the 1948 Census of India Act.
* The last census was held in 2011, whilst the next was scheduled to be held in 2021.

#### **What kind of caste data is published in the Census?**

* Every Census in independent India from 1951 to 2011 has published data on Scheduled Castes and Scheduled Tribes, but not on other castes.
* Before that, every Census until 1931 had data on caste.
* However, in 1941, caste-based data was collected but not published.

#### **Why is there a demand for caste census?**

* In the absence of such a census, there is no proper estimate for the population of OBCs, various groups within the OBCs, and others.
* The Mandal Commission estimated the OBC population at 52%, some other estimates have been based on National Sample Survey data.
* Some political parties make their own estimates in states and Lok Sabha and Assembly seats during elections.

#### **Need for caste census**

* There is a central list of OBCs and a State-specific list of OBCs.
* Some states do not have a list of OBCs; some States have a list of OBCs and a sub-set called Most Backward Classes.
* There are certain open-ended categories in the lists such as orphans and destitute children.
* Names of some castes are found in both the list of Scheduled Castes and the list of OBCs.
* Scheduled Castes converted to Christianity or Islam are also treated differently in different States.
* The status of a migrant from one State to another and the status of children of inter-caste marriage, in terms of caste classification, are also vexed questions.”

**Ordinance Factory**

**In news:**

* The Minister of State for Defence has introduced the Essential Defence Services Bill in the Lok Sabha.

**Essential Defence Services:**

* It includes any service in any **establishment or undertaking dealing with production of goods or equipment required for defence** related purposes or any **establishment of the armed forces** or connected with them or defence.
* It also includes services that, **if ceased, would affect the safety of the establishment engaged in such services** or its employees.
* In addition, the **government may declare any service as an essential defence service if** its cessation would affect the:
	+ - Production of defence equipment or goods.
		- Operation or maintenance of industrial establishments or units engaged in such production.
		- Repair or maintenance of products connected with defence.

#### **Essential Defence Services Bill**

* Essentially, the bill is aimed at preventing the staff of the government-owned ordnance factories from going on strike.
* Around 70,000 people work with the 41 ordnance factories around the country.
* It is aimed to provide for the maintenance of essential defence services so as to secure the security of the nation and the life and property of the public at large and for matters connected therewith or incidental thereto.

**Highlights of the Bill:**

* It is meant to “provide for the maintenance of essential defence services so as **to secure the security of nation and the life and property of public at large and for matters connected therewith or incidental thereto”.**
* The Bill empowers the government to declare services mentioned in it as **essential defence services.**
* It also **prohibits strike and lockouts in “any industrial establishment or unit engaged in essential defence services”.**

#### **Why need such a bill?**

* Indian Ordnance Factories is the oldest and largest industrial setup that functions under the Department of Defence Production of the Ministry of Defence.
* The ordnance factories form an integrated base for indigenous production of defence hardware and equipment, with the primary objective of self-reliance in equipping the armed forces with state-of-the-art battlefield equipment.
* It is essential that an uninterrupted supply of ordnance items to the armed forces be maintained for the defence preparedness of the country and the ordnance factories continue to function without any disruptions.

#### **Ordnance Factory Board (OFB)**

* OFB consisting of the Indian Ordnance Factories is a government agency under the control of the department of defence production (DDP).
* It is engaged in research, development, production, testing, marketing and logistics of a product range in the areas of air, land and sea systems.
* OFB comprises 41 ordnance factories, nine training institutes, three regional marketing centres and four regional controllers of safety, which are spread all across the country.

**Rudreswara Temple**

**In news:**

* India’s nomination of Rudreswara Temple, (also known as the Ramappa Temple) at Palampet, Mulugu district, near Warangal in the state of Telangana has been inscribed on UNESCO’s World Heritage list. This would be the 39th site in India.

**About Rudreswara (Ramappa) Temple:**

* The Rudreswara temple was**constructed in 1213 AD during the reign of the Kakatiya Empire by Recherla Rudra,** a general of Kakatiya king Ganapati Deva.
* The presiding deity here is**Ramalingeswara Swamy.**
* It is also known as the **Ramappa temple, after the sculptor** who executed the work in the temple for 40 years.
* The temple stands on a **6 feet high star-shaped platform** with walls, pillars and ceilings adorned with**intricate carvings** that attest to the unique skill of the Kakatiya sculptors.
* The foundation is built with the **“sandbox technique”,** the flooring is granite and the pillars are basalt.
* The **lower part of the temple is red sandstone** while the **white gopuram** is built with light bricks that reportedly float on water.
* An inscription dates the temple to **1135 Samvat-Saka on the eight-day of Magha** (12th January, 1214).
* The distinct style of Kakatiyas for the gateways to temple complexes, unique only to this region, confirm the**highly evolved proportions of aesthetics in temple** and town gateways in South India.
* European merchants and travellers were mesmerized by the beauty of the temple and one such traveller had remarked that the temple was the**"brightest star in the galaxy of medieval temples of the Deccan".**

**Sandbox Technique:**

* The technique involved filling the pit — **dug up for laying the foundation** — with a mixture of **sand-lime, jaggery (for binding) and karakkaya** (black myrobalan fruit) before the buildings were constructed on these ‘sandboxes’.
* The sandbox in the foundation acts as a **cushion in case of earthquakes.**
* Most of the vibrations caused by earthquakes lose their strength while passing through the sand by the time they reach the actual foundation of the building.

#### **Its architecture**

* The temple, known for its exquisite craftsmanship and delicate relief work, is savvy blend of technical know-how and materials of its time.
* The foundation is built with the “sandbox technique”, the flooring is granite and the pillars basalt.
* The lower part of the temple is red sandstone while the white gopuram is built with light bricks that reportedly float on water.
* The temple complexes of Kakatiyas have a distinct style, technology and decoration exhibiting the influence of the Kakatiyan sculptor.
* The temple stands on a 6 feet high star-shaped platform with walls, pillars and ceilings adorned with intricate carvings that attest to the unique skill of the Kakatiyan sculptors.
* European merchants and travelers were mesmerized by the beauty of the temple and one such traveler had remarked that the temple was the “brightest star in the galaxy of medieval temples of the Deccan”.

#### **UNESCO World Heritage Sites**

* A World Heritage Site is a landmark or area, selected by the UN Educational, Scientific and Cultural Organization (UNESCO) for having cultural, historical, scientific or other forms of significance, which is legally protected by international treaties.
* The sites are judged to be important for the collective and preservative interests of humanity.
* To be selected, a WHS must be an already-classified landmark, unique in some respect as a geographically and historically identifiable place having special cultural or physical significance (such as an ancient ruin or historical structure, building, city, complex, desert, forest, island, lake, monument, mountain, or wilderness area).
* It may signify a remarkable accomplishment of humanity, and serve as evidence of our intellectual history on the planet.
* The sites are intended for practical conservation for posterity, which otherwise would be subject to risk from human or animal trespassing, unmonitored/uncontrolled/unrestricted access, or threat from local administrative negligence.
* The list is maintained by the international World Heritage Program administered by the UNESCO World Heritage Committee, composed of 21 “states parties” that are elected by their General Assembly.

**UNESCO World Heritage Committee**

* The World Heritage Committee selects the sites to be listed as UNESCO World Heritage Sites, including the World Heritage List and the List of World Heritage in Danger.
* It monitors the state of conservation of the World Heritage properties, defines the use of the World Heritage Fund and allocates financial assistance upon requests from States Parties.
* It is composed of 21 states parties that are elected by the General Assembly of States Parties for a four-year term.
* India is **NOT** a member of this Committee.

**Exoplanets**

**In news:**

* Scientists for the first time have spotted a Moon-forming region around an exo-planet beyond our solar system.

**Exoplanet**

* An exoplanet or extrasolar planet is a planet outside the Solar System. The first confirmation of detection of exoplanets occurred in 1992.
* Exoplanets are very hard to see directly with telescopes. They are **hidden by the bright glare of the stars** they orbit. So, astronomers use other ways to detect and study exoplanets such as looking at the effects these planets have on the stars they orbit.

#### **What is the new finding?**

* The researchers have detected a disc of swirling material accumulating around one of two newborn planets.
* They were seen orbiting a young star called PDS 70, located a relatively close 370 light-years from Earth.
* It is called a circumplanetary disc, and it is from these those moons are born.
* The discovery offers a deeper understanding of the formation of planets and moons.

#### **Focus of the finding:**

* In our solar system, the impressive rings of Saturn, a planet around which more than 80 moons orbit, represent a relic of a primordial moon-forming disc.
* The orange-colored star PDS 70, roughly the same mass as our Sun, is about 5 million years old– a blink of the eye in cosmic time.
* The two planets are even younger. Both planets are similar (although larger) to Jupiter, a gas giant.
* It was around one of the two planets, called PDS 70c, that a Moon-forming disc was observed.

#### **Observing birth of a moon: Core Accretion**

* Stars burst to life within clouds of interstellar gas and dust scattered throughout galaxies.
* Leftover material spinning around a new star then coalesces into planets, and circumplanetary discs surrounding some planets similarly yield moons.
* The dominant mechanism thought to underpin planet formation is called “core accretion”.
* In this scenario, small dust grains, coated in ice, gradually grow to larger and larger sizes through successive collisions with other grains.
* This continues until the grains have grown to a size of a planetary core, at which point the young planet has a strong enough gravitational potential to accrete gas which will form its atmosphere.
* Some nascent planets attract a disc of material around them, with the same process that gives rise to planets around a star leading to the formation of moons around planets.
* The disc around PDS 70c, with a diameter about equal to the distance of the Earth to the sun, possesses enough mass to produce up to three moons the size of Earth’s moon.

**Instrument Used:**

* **They used the Atacama Large Millimeter/submillimeter Array (ALMA) observatory in Chile's Atacama desert. It is the most complex astronomical observatory ever built on Earth.**
* **Teams from North America, East Asia, and Europe merged projects to develop this breakthrough scientific instrument.**
* **It uses 66 high-precision dish antennas of two sizes: 54 of them are 12 meters across and 12 of them are 7 meters across.**

**Other Moon Forming Regions:**

* **No circumplanetary discs had been found** until now because all the known **exoplanets** resided in “mature” – fully developed – solar systems, **except the two infant gas planets orbiting PDS 70.**
* In our solar system, the impressive **rings of**[Saturn](https://www.drishtiias.com/daily-updates/daily-news-analysis/saturn-planet-with-most-moons)**,** a planet around which more than 80 moons orbit, **represent a relic of a primordial moon-forming disc.**

# Special Economic Zones

**In news:**

* Special Economic Zones (SEZs) across the country has touched new heights in terms of performance in Exports, Investment and Employment.

#### **What are SEZs?**

* A Special Economic Zone (SEZ) is an area in which the business and trade laws are different from the rest of the country.
* SEZs are located within a country’s national borders, and their aims include increasing trade balance, employment, increased investment, job creation and effective administration.
* To encourage businesses to set up in the zone, financial policies are introduced.
* These policies typically encompass investing, taxation, trading, quotas, customs and labour regulations.
* Additionally, companies may be offered tax holidays, where upon establishing themselves in a zone, they are granted a period of lower taxation.

#### **SEZs in India**

* The SEZ policy in India first came into inception on April 1, 2000.
* The prime objective was to enhance foreign investment and provide an internationally competitive and hassle-free environment for exports.
* The idea was to promote exports from the country and realizing the need for that a level playing field must be made available to the domestic enterprises and manufacturers to be competitive globally.
* Subsequently, the SEZ Act 2005, was enacted to provides the umbrella legal framework, covering all important legal and regulatory aspects of SEZ development as well as for units operating in SEZs.

#### **Who can set up SEZs? Can foreign companies set up SEZs?**

* Any private/public/joint sector or state government or its agencies can set up an SEZ.
* Yes, a foreign agency can set up SEZs in India.

#### **What is the role of state governments in establishing SEZs?**

* State governments will have a very important role to play in the establishment of SEZs.
* A representative of the state government, who is a member of the inter-ministerial committee on private SEZ, is consulted while considering the proposal.
* Before recommending any proposals to the ministry of commerce and industry (department of commerce), the states must satisfy themselves that they are in a position to supply basic inputs like water, electricity, etc.

#### **Are SEZ’s controlled by the government?**

* In all SEZs, the statutory functions are controlled by the government.
* The government also controls the operation and maintenance function in the central government-controlled SEZs. The rest of the operations and maintenance are privatized.

#### **Are SEZs exempt from labour laws?**

* Normal labour laws are applicable to SEZs, which are enforced by the respective state governments.
* The state governments have been requested to simplify the procedures/returns and for the introduction of a single-window clearance mechanism by delegating appropriate powers to development commissioners of SEZs.

#### **Who monitors the functioning of the units in SEZ?**

* The performance of the SEZ units is monitored by a unit approval committee consisting of a development commissioner, custom and representative of the state government on an annual basis.

#### **What are the special features for business units that come to the zone?**

* Business units that set up establishments in an SEZ would be entitled to a package of incentives and a simplified operating environment.
* Besides, no license is required for imports, including second-hand machinery.

#### **How do SEZs help a country’s economy?**

* SEZs play a key role in rapid economic development of a country.
* In the early 1990s, it helped China and there were hopes that the establishment in India of similar export-processing zones could offer similar benefits – provided, however, that the zones offered attractive enough concessions.
* Traditionally the biggest deterrents to foreign investment in India have been high tariffs and taxes, red tape and strict labour laws.
* To date, these restrictions have ensured that India has been unable to compete with China’s massively successful light-industrial export machine.

# Antimicrobial Resistance

**Context:**

* The Union Government of India, aware about the challenges posed by antimicrobial resistance (AMR) in the country.

### **What is Antimicrobial Resistance?**

* Anti microbial resistance is the **resistance acquired** by any microorganism (bacteria, viruses, fungi, parasite, etc.) against antimicrobial drugs (such as antibiotics, antifungals, antivirals, antimalarials, and anthelmintics) that are used to treat infections.
* As a result, standard treatments become ineffective, infections persist and may spread to others.
* Microorganisms that develop antimicrobial resistance are sometimes referred to as “superbugs”.
* Antimicrobial resistance is now regarded as a major threat to public health across the globe.
* Some bacteria due to the presence of resistance genes are intrinsically resistant and therefore survive on being exposed to antibiotics.
* Bacteria can also acquire resistance. This can happen in two ways:
	+ By sharing and transferring resistance genes present in the rest of the population, or
	+ By genetic mutations that help the bacteria survive antibiotic exposure.

**Reasons for Spread of Antimicrobial Resistance:**

* The misuse of antimicrobials in medicine and inappropriate use in agriculture.
* Contamination around pharmaceutical manufacturing sites where untreated waste releases large amounts of active antimicrobials into the environment.

**AMR in India:**

* India, with its combination of large population, rising incomes that facilitate purchase of antibiotics, high burden of infectious diseases and easy over-the-counter access to antibiotics, is an important locus for the generation of resistance genes.
* The multi-drug resistance determinant, New Delhi Metallo-beta-lactamase-1 (NDM-1), emerged from this region to spread globally.
* Africa, Europe and other parts of Asia have also been affected by multi-drug resistant typhoid originating from South Asia.
* In India, over 56,000 newborn deaths each year due to sepsis are caused by organisms that are resistant to first line antibiotics.
* India has undertaken many activities like Mission Indradhanush — to address low vaccination coverage — strengthened micro-planning and additional mechanisms to improve monitoring and accountability.
* The Ministry of Health & Family Welfare (MoHFW) identified AMR as one of the top 10 priorities for the ministry’s collaborative work with the World Health Organisation (WHO).

**Steps taken to address AMR Issue**

* **National programme on AMR containment**
	+ Launched during 12th FYP in 2012-17.
	+ Under this programme, AMR Surveillance Network has been strengthened by establishing labs in State Medical College.
	+ 30 sites in 24 states have been included in this network till 30th March 2021.
* **National Action Plan on Antimicrobial Resistance (NAP-AMR**) focusing on One Health approach was launched on 19th April 2017 with the aim of involving various stakeholder ministries/departments.
	+ **Delhi Declaration on AMR– an inter-ministerial consensus** was signed by the ministers of the concerned ministries pledging their support in AMR containment.
	+ In the line with NAP-AMR three states have launched their state action plan
		- Kerala has launched KARSAP
		- Madhya Pradesh has launched MP-SAPCAR
		- Delhi has launched SAPCARD
* **AMR Surveillance Network:  I**CMR has established AMR surveillance and research network (AMRSN) in 2013, to generate evidence and capture trends and patterns of drug resistant infections in the country. This network comprises 30 tertiary care hospitals, both private and government.
* **AMR Research & International Collaboration:**ICMR has taken initiatives to develop new drugs /medicines through international collaborations in order to strengthen medical research in AMR.
	+ ICMR along with Research Council of Norway (RCN) initiated a joint call for research in antimicrobial resistance in 2017.
	+ ICMR along with the Federal Ministry of Education and Research (BMBF), Germany has a joint Indo-German collaboration for research on AMR.
* **Initiatives to control overuse or misuse of antibiotics:**
	+ ICMR has initiated antibiotic stewardship program (AMSP) on a pilot project basis in 20 tertiary care hospitals across India to control misuse and overuse of antibiotics in hospital wards and ICUs.
	+ On the recommendations of ICMR, DCGI has banned 40 fixed dose combinations (FDCs) which were found inappropriate.
	+ ICMR worked in collaboration with  Indian Council of Agriculture Research, Department of Animal Husbandry, Dairy and Fisheries and the DCGI to ban use of Colistin as growth promoter in animal feed in poultry.

**Guidelines issued**

* National Guidelines for Infection Prevention and Control in Healthcare Facilitieshave been released by MoHFW in Jan 2020.
* ICMR has developed evidence based treatment guidelines for treatment of ten syndromes of infections. It aims to rationalize the usage of antibiotics on Essential Medicines Formulary (EMF) and to establish consistency in the treatment of various infectious conditions.
* Further, ICMR has also issued the Treatment Guidelines for Antimicrobial Use in Common Syndromes” in 2019.

**Information Education & Communication (IEC) Activities**

* Media material has been developed to create awareness among various stakeholders regarding AMR and appropriate use of antibiotics.
	+ The key priority areas include zoonotic diseases (emerging and re-emerging), food safety and antibiotic resistance.
	+ **Program for Strengthening Inter-sectoral Coordination for Prevention and Control of Zoonotic Diseases**’ was launched in the 12th Five-year plan (2012-17) which is still continuing as “National One Health Program for Prevention and Control of Zoonoses” in 15th Finance Commission (2021-26) period.
		- This scheme aims to operationalize “One Health” Mechanisms for prevention and control of Zoonoses by strengthening inter-sectoral coordination among all stakeholders.
		- In this regard, the National Institute of One Health is being established at Nagpur  which will house the BSL IV laboratory.
* ICMR has undertaken a project on an **“Integrated One Health Surveillance Network for Antimicrobial Resistance”** in collaboration with Indian Council of Agriculture research (ICAR) to assess the preparedness of Indian Veterinary laboratories to participate in integrated AMR surveillance network.
	+ ICMR has also created a veterinary standard operating procedure (Vet-SOPs) for enabling comparison of antimicrobial resistance patterns in animals and humans.

# Space Tech capital of the east”

**Context:**

* NESAC (North Eastern Space Applications Centre) has enabled the States to address issues and challenges of the North Eastern region with the support of space technology.

**More in the news:**

* Union Minister of Culture, Tourism and Development of North East Region informed that **between 2014 and 2021, the assets of NESAC almost tripled** from Rs 41.6 crores to Rs 112 crores.
* Activities of NESAC are **focused on the practical applications of space technology in agriculture, and allied fields like silk farming where it can help in early detection of diseases, etc**
* Shillong is called the **‘**Scotland of the East**’** due to its scenic beauty.
* The Center has helped preserve forests by assessing forest fires and protecting endangered wildlife such as rhinos by studying the changing land cover.
* It is also noteworthy that NESAC has used **satellite communication for telemedicine, and tele-education and about 1000 programs are conducted each year.**
* **NESAC has helped to address the unpredictability of mother nature through:**
	+ Weather prediction, and forecasting thunderstorms,
	+ Lightning, and
	+ Providing early flood warning and provides urban planning support and States can leverage on this to assess traffic congestion, property encroachments, and the mapping of utilities and assets.
* Recently, with support from (North Eastern Council) NEC, NESAC **has released the North Eastern Spatial Data Repository (NeSDR) with about 950 datasets.**
	+ **These datasets are related to:**
		- Infrastructure,
		- Land and water resources,
		- Assets & utilities,
		- Terrain,
		- Disaster management supports inputs and
		- Action plan inputs to empower developmental planning and monitoring activities in the NE region.
	+ **All the States are to take advantage of these data sets by signing MoUs with NESAC**for specific activities such as detecting encroachments, and epidemic planning.
* The use of the facility of NESAC **for promotion of culture and tourism** as well, which has lots of potential in the region.

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| **North Eastern Space Applications Centre (NE-SAC):*** It is a joint initiative of the **Department of Space (DOS)** and **North Eastern Council (NEC)** to provide developmental support to the North Eastern Region (NER) using space science and technology.
	+ The North Eastern Council (NEC) is a **society registered under the Meghalaya Societies Registration Act, 1983.**
* It came into being on **5th of September, 2000.**
* **It is located at Shillong, Meghalaya.**
* The centre has the mandate to develop high technology infrastructure support to play the catalytic role in holistic development of NER of India by providing space science and technology support.
* **The centre has taken up research and development projects under:**
	+ Earth Observation Applications Mission,
	+ ISRO Geo-sphere Biosphere Programme,
	+ Satellite Communications,
	+ Disaster Management Support and Space Science Programmes.
* **The major objectives of the Centre are:**
	+ **To provide an operational remote sensing and geographic information system aided natural resource information base**to support activities on development / management of natural resources and infrastructure planning in the region.
	+ **To provide operational satellite communication applications services** in the region in education, health care, disaster management support, and developmental communication.
	+ **To take up research in the space and atmospheric science area** and establish an instrumentation hub and network with various academic institutions of NER.
	+ **To enable single window delivery** of all possible space based support for disaster management.
	+ **To set up a regional level infrastructure for capacity building** in the field of geospatial technology.
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# UNESCO World Heritage listing

**Context:**

* Recently, the English city of Liverpool has been removed from UNESCO’s list of world heritage sites.

**Background:**

* **This move came after the United Nations’ cultural agency found new buildings, including a football stadium, that undermined the attractiveness of its Victorian docks.**
* **UNESCO stated that Liverpool should be removed from the international cultural organisation’s list after the vote in China by members of its World Heritage Committee.**
* **According to the Liverpool mayor, the decision was “incomprehensible”.**
* **The only other sites stripped previously of the title are:**
* **A wildlife sanctuary in Oman in 2007 after poaching and habitat loss, and**
* **The Dresden Elbe Valley in Germany in 2009 when a four-** **lane motorway bridge was built over the river.**

**Reason behind revocation of heritage status:**

* **The UK ranks eighth in the worldwide list of UNESCO World Heritage sites.**
	+ But instead of its previous 32 distinguished sites, there are now only 31.
* UNESCO threatened to revoke Liverpool’s World Heritage status **because of “substantial” building interventions.**
* A UNESCO commission report in June stated that
	+ **Large-scale infrastructure projects, including the Liverpool Waters residential and office complex as well as the Bramley-Moore Dock Stadium, would mean a loss of the character of the “maritime mercantile city” of Liverpool.**
* The UN body is currently debating which landscapes, monuments or places should be added to the list of World Heritage Sites in the future, and also removing sites that, in its opinion, no longer deserve the title.
* **Lack of lobbying** from the UK government.
* **A diplomatic failure:**
	+ The British government did not work hard enough to avert losing Liverpool’s listing.

**Is UNESCO selection EURO centric?**

* The distinction of being a UNESCO World Heritage Site has a positive PR effect as well as an energizing influence on tourism — all good incentives for applying for the title.
* Since the founding of the Convention Concerning the Protection of the World Cultural and Natural Heritage on November 16, 1972, many countries have recognized this attractiveness
* Apparently, some countries benefit more than others, and Europe is home to the largest number of World Heritage Sites.

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| **About the English city of Liverpool:*** Liverpool was named a World Heritage Site in 2004, **joining cultural landmarks such as the Great Wall of China and the Taj Mahal.**
* The city of Liverpool bears witness to the**development of one of the world’s major trading centres in the 18th and 19th centuries.**
* Liverpool played an **important role in the growth of the British Empire**and became the major port for the mass movement of people, e.g. slaves and emigrants from northern Europe to America.
* Liverpool **was a pioneer in the development of modern dock technology, transport systems and port management.**
* The listed sites feature a great number of significant commercial, civic and public buildings, including **St George’s Plateau.**

**Criteria for selection in the list of World Heritage sites (Cultural and Natural):*** The site should **represent a masterpiece of human creative genius;**
* Site exhibit an **important interchange of human values, over a span of time or within a cultural area of the world**, on developments in architecture or technology, monumental arts, town-planning or landscape design;
* The site should**bear a unique or at least exceptional testimony** to a cultural tradition or to a civilization which is living or which has disappeared;
* The site**should be an outstanding example of a type of building, architectural or technological ensemble or landscape** that illustrates
	+ Significant stage(s) in human history;
* The site should be an **outstanding example of** a
	+ **Traditional human settlement,**
	+ **Land-use, or sea-use** which is representative of a culture (or cultures), or human interaction with the environment especially when it has become vulnerable under the impact of irreversible change;
* The site should be **directly or tangibly associated with events or living traditions**, with ideas, or with beliefs, with artistic and literary works of outstanding universal significance. (The Committee considers that this criterion should preferably be used in conjunction with other criteria);
* The site **should contain superlative natural phenomena or areas of exceptional natural beauty and aesthetic importance;**
* The site **should be outstanding examples representing major stages of earth's history**, including the record of life, significant on-going geological processes in the development of landforms, or significant geomorphic or physiographic features;
* The site **should be outstanding examples representing significant ongoing ecological and biological processes**in the evolution and development of terrestrial, freshwater, coastal and marine ecosystems and communities of plants and animals;
* The site should **contain the most important and significant natural habitats for in-situ conservation of biological diversity,**including those containing threatened species of outstanding universal value from the point of view of science or conservation.
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