

### WHAT IS THE C-130J SUPER HERCULES?

The Indian Air Force (IAF) successfully landed two of its C-130J-30 'Super Hercules' military transport aircraft at a rudimentary and unfeasible airstrip in Uttarakhand.



#### About C-130J Super Hercules:

- It is a four-engine turboprop military transport aircraft.
- It is the latest production version of the C-130 Hercules. It replaced, in production, the previous C-130H.
- The C-130J Super Hercules made its first flight in 1996.
- It is the US Air Force's principal tactical cargo and personnel transport aircraft.
- It was developed by Lockheed Martin, a US security and aerospace company.
- It primarily performs the tactical portion of the airlift mission, is capable of operating from rough, dirt strips, and is the prime transport for airdropping troops and equipment into hostile areas.
- The largest operators are the US Air Force, US Marine Corps, Australia, Canada, India, Italy, and the United Kingdom.

#### Features:

- It has reduced crew requirements. A minimal crew of three men is required to operate this aircraft, including two pilots and one loadmaster.
- It has a payload capacity of 19 tonnes.
- It is powered by four Rolls-Royce AE 2100D3 turboprop engines.
- It has digital avionics, including a Head-Up Display (HUD) for each pilot.
- Range: 6,852 km (no payload)
- Speed: 644 km/hr
- Endurance: 20+ hours
- It is capable of short takeoffs and landings from unprepared runways.

## NEW PAMBAN BRIDGE

The new Pamban Bridge is likely to be inaugurated by the Prime Minister in a few months.



### About the New Pamban Bridge:

- It is India's first vertical-lift railway sea bridge.
- It connects Rameswaram on Pamban Island to Mandapam on the mainland in Tamil Nadu.
- **Bridge Length:**
- The total length of the bridge is **078 km**.
- It will have 99 spans with 18.3-meter-long girders. The navigational span will be 63 metres.
- It will **replace the iconic Pamban Bridge, India's first sea bridge**, which opened in 1914.
- The **new bridge is being built parallel to the old Pamban Bridge by Rail Vikas Nigam Limited.**

### Features:

- The most unique feature of the new Pamban Bridge is its **vertical lift facility**. It will **help boats pass under the bridge smoothly**.
- While the **old bridge has the 'Scherzer' rolling lift technology**, in which the **bridge opens up horizontally** to let ships pass through, the **new bridge will lift vertically upwards, remaining parallel to the deck**. It will be **done using sensors** at each end.
- The vertical lift span **will have electromechanical control interlocked with the train control system**.
- To **allow for shipping traffic to pass** under the vertical lift section of the bridge, **rail traffic would be stopped**. The navigational span would move up vertically to create enough height for boats to pass.
- It will **allow a full horizontal length of 72.5 metres for navigation**.
- While the new Pamban Bridge is **3 metres higher than the old bridge**, it also has a navigational air clearance of 22 metres above mean sea level.
- It has been **designed for a double railway line and future electrification as well**.

## WHAT IS COSMIC VINE?

A team of researchers recently identified an extensive galaxy structure named "Cosmic Vine".



### Why in the News?

- According to the study, the Cosmic Vine was **spotted after poring over data collected by the James Webb Space Telescope (JWST)**, humanity's most powerful tool for peering into the far reaches of space and time.

### About Cosmic Vine:

- It is a massive "vine-like structure" that **encompasses 20 galaxies and stretches for over 13 light years.**
- It's also **very ancient.** The researchers pegged it **at redshift 3.44**, meaning it's situated in the **early universe.** (Redshift refers to the way light stretches as it travels longer distances through time, with **higher redshifts indicating an object is older**).
- A redshift of **3.44** would mean light from the Cosmic Vine has been traveling for between **11 and 12 billion years** before reaching JWST. To provide context, **current methods estimate the universe's age at 13.7 billion years.**
- It **harbours two of the most massive galaxies** ever discovered at such a high redshift—**Galaxy A and Galaxy E**, both in a **quiescent state**, indicating a **reduced rate of star formation.**
- Researchers believe that the **Vine might serve as the precursor to a galaxy cluster**, providing **insights into the formation** of such clusters and the **emergence of massive galaxies** within them.

### What is a Light Year?

- A light-year is a **measurement of distance** and not time (as the name might imply).
- It is the **distance a beam of light travels in a single Earth year**, which equates to approximately **6 trillion miles (9.7 trillion kilometres).**
- It is used to measure the vast distances of space.

## WHAT IS SEA BUCKTHORN?

Sea buckthorn fruit from Ladakh has been recently awarded a GI tag.



### About Sea Buckthorn:

- Sea buckthorn (*Hippophae rhamnoides*) is a plant **found throughout Europe and Asia.**
- In India, it is **found above the tree line in the Himalayan region**, generally in dry areas **such as the cold deserts of Ladakh and Spiti.**
- It is naturally **distributed over 11,500 hectares in the Ladakh region.**
- It **produces small orange or yellow-coloured berries** that are **sour in taste** but **rich in vitamins**, especially vitamin C.
- The shrub **can withstand extreme temperatures** ranging from minus 43 degrees Celsius to 40 degrees Celsius and is **considered drought-resistant.** These two characteristics make the shrub an **ideal plant species to establish in cold deserts.**
- It has been used traditionally for a variety of purposes. Every part of the plant—fruit, leaf, twig, root, and thorns—has been **traditionally used as medicine, nutritional supplement, fuel, and fence.**
- Therefore, it is popularly known as the ‘Wonder Plant’, ‘Ladakh Gold’, ‘Golden Bush’, or ‘Gold Mine’ of cold deserts.

### What is a Geographical Indication Tag?

- It is a sign used on products that have a specific geographical origin and possess qualities or a reputation **that are due to that origin.**
- This is typically used for agricultural products, foodstuffs, wine and spirit drinks, **handicrafts, and industrial products.**
- A geographical indication right **enables those who have the right to use the indication to prevent its use by a third party** whose product does not conform to the applicable standards.

- Geographical indications are covered as a component of intellectual property rights (IPRs) under the Paris Convention for the Protection of Industrial Property.
- At the international level, GI is governed by the World Trade Organisation's (WTO's) Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS).
- In India, Geographical Indications registration is administered by the Geographical Indications of Goods (Registration and Protection) Act, 1999.
- This GI tag is valid for 10 years, following which it can be renewed.
- The first product in India to be accorded the GI tag was Darjeeling tea in the year 2004-05.

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## ICC SUSPENDS SRI LANKA CRICKET

### Why in news?

- Recently, the International Cricket Council (ICC), cricket's world governing body, **suspended Sri Lanka Cricket (SLC) over government interference.**
- The ICC stated that SLC has seriously violated its responsibilities as a member.
- This is especially in terms of managing its affairs independently and preventing government interference in the governance, regulation, and administration of cricket in Sri Lanka.

### The International Cricket Council (ICC)

- **About**
  - The ICC is the global governing body for cricket.
  - Representing 108 members, the ICC governs and administrates the game and works with members to grow the sport.
  - National cricket boards from various countries are members of the ICC, and the organization plays a crucial role in shaping the future of international cricket.
- **Function**
  - It is responsible for overseeing and regulating international cricket matches and tournaments, including formats such as Test matches, One Day Internationals (ODIs), and Twenty20 Internationals (T20Is).
  - The ICC is also responsible for the staging of all ICC Events including Cricket World Cup.

- It presides over the ICC Code of Conduct, playing conditions, the Decision Review System and other ICC regulations.
- The ICC also appoints all match officials that officiate at all sanctioned international matches.
- Through the Anti-Corruption Unit it coordinates action against corruption and match fixing.

## Impact of Suspension

- According to the ICC Memorandum & Articles of Association, if a member's membership is suspended:
  - The member loses all its rights during the suspension.
  - This includes the right to receive ICC revenues, participate in ICC-sanctioned events, and attend or vote at meetings.
  - The Board of Directors can decide otherwise, but this is at their absolute discretion.
  - The suspension lasts for the specified period determined by the Board of Directors.
- When Zimbabwe was de-recognised, all cricketing activity in the country was shut down and funds frozen.
- When Sri Lanka was partially sanctioned in 2014-15, ICC had placed the funds due to the island nation in an escrow.

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## IMMUNISATION AGAINST MEASLES IN INDIA: 11L CHILDREN IN INDIA MISSED 1ST MEASLES SHOT IN '22

- According to a report by the World Health Organization (WHO) and US Centres for Disease Control and Prevention (CDC), an estimated 11 lakh children in India missed their crucial first dose of measles vaccine in 2022.
- This puts India among 10 countries with the highest number of children who did not receive the first shot.

## About Measles:

- Measles is a highly contagious infectious disease caused by **measles virus** (paramyxovirus family).



- It is an **airborne disease** (transmission through small particles suspended in the air) which spreads easily from one person to another through the coughs and sneezes of infected people, affecting the nose, throat and lungs.
- There are **no specific treatments for measles**, only measures to help alleviate the symptoms such as over-the-counter painkillers and fever reducers.
- Getting the measles **vaccine** is the best way to protect against the virus. However, poor health services; low awareness; misinformation, mistrust and complacency leading to **vaccine hesitancy** are all contributing factors to inadequate immunisation rates.

## Measles in India:

- **Prevalence:**
  - According to the latest measles surveillance data released by the WHO, **India stood fourth** (in 194 countries) in the number of measles cases registered (between July 2018 and June 2019).
  - **India (39,299 cases)** bagged the fourth spot after Madagascar, Ukraine and Philippines.
  - However, India had the **lowest measles incidence rate** per million (29.68) in the top 10 countries.
- **Initiatives:**
  - India has set a goal of **eliminating measles and controlling rubella by 2023** as part of a worldwide drive (if a country reduces rubella cases by 95% compared to 2008, it has achieved rubella control).
  - **Mission Indradhanush** has been launched by the Government of India (in 2014), to drive towards 90% full immunisation coverage of India and sustain the same by year 2020.
  - Under the mission, vaccination is being provided **against eight vaccine-preventable diseases** (**measles** is one among them) in selected states and districts respectively.
  - India has launched the world's largest **Measles-Rubella (MR) immunisation campaign**, with 410 million children and adolescents aged 9 months to 15 years receiving vaccination.
- **Challenge:** Children under the age of one are the most vulnerable and this is the same age bracket where **vaccination rates are the lowest**.

## NEST INITIATIVE

Recently, the Indian Green Building Council (IGBC) launched a rating and certification initiative called 'Nest'.



### About the NEST initiative:

- It is to **promote sustainable and eco-friendly construction** in the domestic housing sector.
- It would pave the way for individual house owners and the residential sector to adopt green building features in a big way to **help bring down electricity consumption and** water usage and create a healthy living space.

### Key Facts about the Indian Green Building Council

- It is **part of the Confederation of Indian Industry (CII)** and was formed in 2001.
- It is India's **Premier certification body**.
- The council offers a wide array of services, which include developing new green building rating programmes, certification services, and green building training programmes.
- The council also organises the Green Building Congress, its annual flagship event on green buildings.
- It is also among the five countries that are on the board of the World Green Building Council, discussing global issues at COP and similar global platforms.
- The rating is based on **six environmental categories**, which include sustainable station facility, health, hygiene and sanitation, energy efficiency, water efficiency, smart and green initiatives and innovation and development.
- **Headquarters:** Hyderabad.

## CENTRAL ADOPTION RESOURCE AUTHORITY



Recently, the Supreme Court questioned the “great delay” plaguing India’s adoption regulation body, the Central Adoption Resource Authority.



## About the Central Adoption Resource Authority:

- It is a **statutory body** of the **Ministry of Women & Child Development**, Government of India.
- It is designated as the Central Authority to deal with inter-country adoptions in accordance with the provisions of the **Hague Convention on Inter-country Adoption**, 1993, ratified by the Government of India in 2003.
- **Function:**
- It is the nodal body regulating the adoption of **“orphaned, surrendered and abandoned children” in India.**
- It monitors and regulates bodies such as the State Adoption Resource Agency (SARA), Specialised Adoption Agency (SAA), the Authorised Foreign Adoption Agency (AFAA), Child Welfare Committees (CWCs), and District Child Protective Units (DPU)s).
- In India, a child can be placed with a family under the Hindu Adoption and Maintenance Act, 1956; the Guardians and Wards Act, 1890; and the Juvenile Justice Act, 2000.
- The mandatory registration of Child Care Institutions (CCIs) and linking to CARA has been provided in the Juvenile Justice (Care and Protection of Children) Act, 2015.

## Hague Convention on Inter-country Adoption

- The Convention provides safeguards **for children and families involved in adoptions** between participating countries and also works to prevent the abduction, sale, or trafficking of children.
- This section contains resources about the Convention for professionals involved in intercountry adoption.

## Objectives:

- To protect children and their families against illegal or ill-prepared Inter-Country adoptions.
- To prevent the abduction, sale, or trafficking of children.
- The Convention establishes minimum standards but does not intend to serve as a uniform law of adoption.