Prelim Bits 10-04-2024 | UPSC Daily Current Affairs

Chital (Spotted Deer)

Abundant Chital population has become an expensive and an invasive problem for the Andaman Union Territory's authorities.

- **Scientific Name –** Cervus axis; Axis axis
- Chital is an herbivorous, Asiatic deer, belonging to the family Cervidae.
- It lives in grasslands and forests in India and Sri Lanka in herds.
- Its spotted coat is reddish brown above and white below.
- The male chital are larger and heavier than female chitals.
- The male chital alone carry three-tined antlers.
- **State Animal –** It is the state animal of Telangana.
- **Conservation Status –**
    1. **IUCN –** Least Concern
    2. **CITES –** Not Listed

- **Problem in Andaman –** Chital were introduced to the Andaman and Nicobar Islands for game hunting in the early 1900s by the British.
- The Chital multiplied in an unchecked environment and in the absence of large predators had now become a problem for authorities.
- The chital is predominantly found in the Netaji Subhash Chandra Bose Island, which lies east of Port Blair.
- To deal with the invasive species, the department has been seeking solutions, to either rehabilitate the chital or relocate them elsewhere.
- Under the Wildlife Protection Act, 1972, an officer of the rank of Chief Wildlife Warden can permit translocation for the purpose of scientific management.
- The law mandates that such translocation should cause minimum trauma to animals.

Quick Facts
Andaman & Nicobar Islands

• Andaman and Nicobar Islands, union territory, India, consists of two groups of islands at the southeastern edge of the Bay of Bengal.
• The Andaman and Nicobar Islands, form an arc stretching southward between Myanmar and the island of Sumatra, Indonesia.
• The arc constitutes the boundary between the Bay of Bengal to the west and the Andaman Sea to the east.
• Port Blair (on South Andaman Island) is the territorial capital.
• The Andamans were visited by the navy of the English East India Company in 1789, and in 1872 they were linked administratively by the British to the Nicobar Islands.
• The two sets of islands became a union territory of the Republic of India in 1956.

References

1. The Indian Express – Abundant chital cost authorities dearly
2. Britannica – Chital (Spotted Deer)

Higgs Boson

Peter Higgs, who proposed existence of Higgs boson particle, has died at 94.

- The particle that we now call the Higgs boson first appeared in a scientific paper written by Peter Higgs in 1964.
- **Higgs Boson –** The Higgs boson is the fundamental force-carrying particle of the Higgs field, which is responsible for granting other particles their mass.
- **God's Particle –** Known as 'God's Particle', it was first discovered by the ATLAS and CMS detectors in 2012.
- Every particle can be represented by a wave in quantum field, similar to a ripple on the surface of a vast ocean.
- **Force Carriers –** When particles interact with one another, they exchange force carriers.
- These force carriers are particles and can also be described as waves in their respective fields.
- **Properties –** The Higgs boson has mass but is chargeless.
- It has a mass of 125 billion electron volts.
- It has zero spin, making it the only elementary particle with no spin.
- **Mass –** The mass of the subatomic particle depends on the particle's interaction with the Higgs boson.
- The stronger the interaction the more the mass it has.
- Photons (particles of light) have no mass because they don't interact with Higgs bosons.

The Higgs boson has a mass of 125 billion electron volts which is 130 times more massive than a proton.

- A Higgs boson's mass is greater than that of protons or neutrons because a Higgs boson can interact with another Higgs boson.
- **W and Z Boson –** The W boson is a fundamental particle.

- Together with the Z boson, it is responsible for the weak force, one of four fundamental forces that govern the behaviour of matter in our universe.
- Particles of matter can interact by exchanging these bosons, but only over short distances.
- **Higgs Boson Decay –** The Large Hadron Collider (LHC) created a Higgs boson by accelerating billions of highly energetic protons into a head-on collision.
- When a Higgs boson is created in LHC, it has a brief interaction with virtual particles that crates a Z boson a photon.
- The Z boson is also unstable and decays to two muons some 3% of the time.

Quick Facts
Large Hadron Collider (LHC)
• **Hadrons –** A hadron is a subatomic particle that contains quarks, antiquarks, and gluons. • The LHC typically uses protons, which are made up of quarks and gluons. • The LHC, built by the European Organisation for Nuclear Research (CERN), conducts experiments with highly energized particles. • It energizes the protons by accelerating them through a narrow circular pipe. • The LHC consists of 9 detectors, including CMS, ALICE, LHC-B and ATLAS, located over different points on the beam pipe and study particle interactions in different ways. • **Working –** The LHC collides two beams of protons together at the highest energies ever achieved in a laboratory. • **Large –** It is the world's largest science experiment (27km long circular pipe). • **Hadron –** The particles used here are Hadrons. • **Collider –** It accelerates 2 beams of particles in opposite directions and smashes them head on.
The European Organisation for Nuclear Research (CERN)
• It is an intergovernmental organization that operates the largest particle physics laboratory in the world. • Established in 1954, it is based in a northwestern suburb of Geneva, on the France–Switzerland border. • The CERN convention was signed in 1953 by the 12 founding state. • India was granted Observer status to the CERN Council in 2002. • CERN has 22 member states. • India, Turkey, Pakistan, Ukraine are Associate members.

References

1. The Hindu – Peter Higgs has died at 94
2. BBC – Peter Higgs, physicist who theorized Higgs boson, dies aged 94
3. CERN – What is higgs boson?

Clean Economy Investor Forum (CEIF)

Indo-Pacific Economic Framework for Prosperity (IPEF) to organise Clean Economy Investor Forum in Singapore.

Indo-Pacific Economic Framework for Prosperity (IPEF)

• **Led by –** Indo-Pacific Economic Framework for Prosperity (IPEF) is USA led alternative to China's economic statecraft in the region.
• **Launched in –** The Indo-Pacific Economic Framework for Prosperity (IPEF) was launched in May 2022.
• **Partners –** It currently includes 14 partners, namely, Australia, Brunei Darussalam, Fiji, India, Indonesia, Japan, the Republic of Korea, Malaysia, New Zealand, Philippines, Singapore, Thailand, United States and Vietnam.
• The 14 IPEF partners represent 40 % of global GDP and 28 % of global goods and services trade.
• **Objective –** IPEF provides a platform for countries in the region to collaborate on advancing resilient, sustainable, and inclusive economic growth, and aims to contribute to cooperation, stability and prosperity in the region.
• **Pillars –** The IPEF comprises four pillars of cooperation namely: Trade, Supply Chain, Clean Economy and Fair Economy.
• The IPEF is flexible as IPEF partners are not required to join all four pillars.
• **Trade Tariff –** IPEF proposal completely removes the tariff element of typical trade deals.
• **India –** India has joined 3 pillars expect the trade pillar.
• The Department of Commerce is the nodal agency for the IPEF engagements.

- **CEIF –** The IPEF Clean Economy Investor Forum (CEIF) is one of the initiatives under the IPEF.
- It brings together the region's top investors,
- **Aim –** The Forum aims to mobilize investments into sustainable infrastructure, climate technology and renewable energy projects.
- The IPEF plans to conduct the CEIF on an annual basis, with the inaugural forum taking place in Singapore in June 2024.
- **India –** The IPEF Clean Economy Investor Forum is managed by Invest India, India's National Investment Promotion Agency.
- The Forum will have opportunity for the Indian industry in the two tracks such as the Climate Tech Track and the Infrastructure Track.

References

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2. Business Standard – IPEF to organise clean economy investor forum
3. IPEF – About IPEF Clean Economy Investor Forum 2024

Subhas Chandra Bose

Kangana Ranaut, in a recent interview, claimed that Subhas Chandra Bose, not Jawaharlal Nehru, was the first prime minister of independent India.

- **Birth –** Subhas Chandra Bose was born on 23rd January 1897 in Cuttack, Orissa.
- **Civil Service –** In 1920 he passed the civil service examination, but in April 1921, after hearing of the nationalist turmoils in India, he resigned his candidacy.
- **Noncooperation Movement –** Bose joined the noncooperation movement started by Mohandas K. Gandhi, and worked under the guidance of Chitta Ranjan Das, a politician in Bengal.
- **Civil Disobedience –** When the civil disobedience movement was started in 1930,

Bose was already in detention for his associations with an underground revolutionary group, the Bengal Volunteers.

- **Mayor –** He was elected mayor of Calcutta while in prison.

While in exile, he wrote 'The Indian Struggle, 1920-1934' and pleaded India's cause with European leaders.

- **President –** In 1938 he was elected president of the Indian National Congress and formed a national planning committee, which formulated a policy of broad industrialization.
- However, he resigned from the post due to the lack of support from Gandhi.
- **Forward Bloc –** He later founded the Forward Bloc in 1940 to rally radical elements together.
- On January 26, 1941, he escaped from his Calcutta residence and reached Germany.
- **Azad Hind Radio –** He and other Indians who had gathered in Berlin made regular broadcasts from the German-sponsored Azad Hind Radio.
- He later assumed leadership of the Indian Independence Movement in East Asia and proceeded with Japanese aid and influence.
- **Azad Hind Fauj –** On October 21, 1943, Bose proclaimed the establishment of a provisional independent Indian government, and his so-called Indian National Army (Azad Hind Fauj) in Singapore.
- **Portfolios –** Bose was the Head of State of this provisional government, and held the foreign affairs and war portfolios.
- The government claimed authority over all Indian civilian & military personnel in Britain's Southeast Asian colonies (Burma, Singapore, & Malaya) which had fallen into Japanese hands during World War II.
- **Recognised by –** Diplomatically, Bose's government was recognised by the Axis powers and their satellites: Germany, Japan, and Italy, as well as Nazi and Japanese puppet states.
- Japanese puppet states included Croatia, China, Thailand, Burma, Manchuria, and the Philippines.
- Immediately after its formation, the Azad Hind government declared war on Britain and the United States.
- With the defeat of Japan in the World War II, Bose's fortunes ended.
- He died on August 18, 1945 in Taipei, Taiwan from a flight accident.



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2. Britannica – Subhas Chandra Bose

Other Important Topics

Neptis philyra

A rare butterfly species named Neptis philyra has been discovered for the first time in Tale Valley Wildlife Sanctuary in Arunachal Pradesh.

• Neptis philyra is a rare species of butterfly commonly known as the ***long-streak sailor, Common Sailer,*** belongs to the ***Nymphalidae family.***

• **Distribution -** The species was known to be found across various regions of east Asia, including eastern Siberia, Korea, Japan, central and southwest China.

• **Appearance** - The butterfly has serrated wings with rich brownish-black on the upper side and yellow brown on the underside.

• **Distinction –** The species' fore wing white cell streak forms "hockey stick" markings with spots in space.

Tale Valley Wildlife Sanctuary

• Tale Valley Reserved Forest and Tale Wildlife sanctuary is situated in the in ***Lower Subansiri district of Arunachal Pradesh.***

• **Rivers -** Pange, Sipu, Karing and Subansiri rivers flowing through the Sanctuary.

• **Forest -** It comprises sub-tropical and alpine forests.

• It is home to highly endangered species like

• ***clouded leopard.***

• ***Pleioblastus simone*** is a bamboo variety *only found in Talley Valley.*

KUSH

Sierra-leone (West African country) has recently declared a national emergency following the craze behind the psychoactive drug, KUSH.

• It is a ***narcotic drug*** first appeared in Sierra Leone ***in 2018***.

• It is made from a variety of toxic substances including human bones.

• The drug gives a ***hypnotic high*** that can last several hours.

• Sierra Leone ***does not have an official death toll*** linked to "kush" abuse but the illnesses linked to Kush rose by 4,000% between 2020 and 2023.

Sierra Leone currently has only one functioning drug rehabilitation centre in Freetown, the capital of the country.

Changpa Tribes

The leaders of the Leh Apex Body (LAB) recently decided to call off the Pashmina March as the Ladakh Lieutenant Governor's administration stepped up measures to block the march from going forward.

• **Pashmina March –** It was to highlight the plight of the Changpa tribes who are losing their land due to Chinese incursion in the north and our own corporates in the south.

• **Changpa Tribe** is a small nomadic pastoral tribe living found mainly in the ***Changtang plateau of southeastern Ladakh.***

• **Distribution –** They were distributed across the Tibetan Plateau in India, China and Nepal.

• They are high-altitude pastoralists herding livestock such as yaks, sheep, and goats, and moving with their animals to different grazing grounds throughout the year.

• **Religion -** All Changpa families profess ***Tibetan Buddhism*** as their religion.

• The Changpa can be identified by their conical yak-skin tents called ***reboo.***

• The Changpa who live nomadic lives are known as ***Phalpa***, while those who have settled down in fixed locations are called ***Fangpa.***

• The ruling aristocracy is known as the ***Nono.***

Shakti (festival of music and dance)

Sangeet Natak Akademi is organizing the festival under the title 'Shakti a festival of music and dance' during the holy Navaratri at 7 different Shaktipeeths.

• The festival is organized under the series of Temple Festivals, Kala Pravah.

• **Organized by** - Sangeet Natak Akademi, Ministry of Culture.

7 Sakthipeeths	
Kamakhya Temple	Assam
Mahalakshmi Temple	Maharashtra
Jwalamukhi Temple	Himachal Pradesh
Tripura Sundari	Tripura
Ambaji Temple	Gujarat
Jai Durga Shaktipeeth	Jharkhand
Maa Harsidhi Temple	Madhya Pradesh

Global Hepatitis Report, 2024

The World Health Organisation recently flagged that Hepatitis is the 2nd leading infectious cause of death globally, with 1.3 million deaths per year.

• The report was released by the ***World Health Organization.***

• **Findings -** This report presents the latest estimates on the disease burden and the coverage of essential viral hepatitis services from **187 countries** across the world.

• The report also pointed out disparities in pricing, service delivery, and funding.

• The disease increased from 1.1 million in 2019 to 1.3 million in 2022, of these, **83%** were caused by hepatitis B, and **17%** by hepatitis C.

• Half the burden of chronic hepatitis B and C infections is among people 30–54 years old, with ***12% among children*** under 18 years of age and ***Men account for 58% of all cases***.

• ***Every day, 3,500 people are dying globally*** due to hepatitis B and C infections.

• Bangladesh, China, Ethiopia, India, Indonesia, Nigeria, Pakistan, the Philippines, Russia, and Vietnam collectively shoulder nearly 2/3rd of the global burden of hepatitis B and C.

Shogunate

• A shogunate is a ***form of government in Japan*** where a shogun, or military dictator and landowner held power from 1192 to 1867, ended to Meiji Restoration.

• It is also known ***as bakufu and shogunshoku.***

• The shogunate system was characterized by a feudal hierarchy, with the shogun at the top and regional lords, known as ***daimyo,*** holding authority over their respective territories.

• The shogun's officials were known as the ***bakufu,*** which translates to "tent government".

• The tent symbolized the shogun's role as the military's field commander, but also denoted that the office was meant to be temporary.

C-Dome

Israel for the 1st time deployed the C-Dome, against a "suspicious" target that entered the country's airspace near the southern city of Eilat recently.

• The C-Dome is a naval version of the land-based shorter-range Iron Dome air defence system of Israel.

• It is used to shield against rocket and missile attacks.

• It was first unveiled in 2014, and declared operational in 2022.

National Pharmaceutical Pricing Authority (NPPA)

NPPA revises ceiling prices of over 800 scheduled drug formulations recently.

• The National Pharmaceutical Pricing Authority (NPPA) is an independent regulator responsible for fixing and regulating the prices of pharmaceutical products in the country.

• It was established in **1997** and operates under the ***Ministry of Chemicals and Fertilizers.***

• The organization regularly monitors the prices of pharmaceutical products and takes necessary actions to control any unjustified price hikes.

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