



Daily Current Affairs Prelims Quiz 22-10-2024 (Online Prelims Test)

1) Consider the following statements with respect to Public Land Protection Cell (PLPC)

1. These cells receive complaints on encroachments of rural common lands and resolve such disputes and restore the resources to the gram sabha.
2. It aids in reducing the financial burden of the citizens by allowing them to access legal recourse at a much cheaper cost.
3. They are headed by the district collector.

How many of the statements given above are correct?

- a. Only one
- b. Only two
- c. All three
- d. None of the above

Answer : c

Public Land Protection Cell (PLPC)



- **Common lands** are natural resources that are used collectively by a community, such as forests, pastures, ponds and 'wastelands'.
- **Significance of common lands** – They act as a resource base for non-cash, non-market economies that provides fodder, fuelwood, water, oils, fish and medicinal herbs.
- A wide variety of fruits and vegetables to the local communities.
- Various studies estimate that common lands contribute between 12 and 23% to *rural household incomes*.
- They also *capture carbon*, act as repositories of biodiversity, and relics of indigenous knowledge.
- **Issues** – India's common lands have been *steadily declining*.
- Grazing lands alone faced a 31% loss in total area between 2005 and 2015.
- The pressures from rapid industrialisation, over-utilisation, and more perceivable 'productive' land uses like agriculture, infrastructure and extraction are driving the *change in the landscape*.
- India's clean energy transition is the latest addition to the mix.
- Common lands are also *vulnerable to encroachments* and private expropriation as tenure is less likely to be legally recognised in common lands than in private lands.
- Fuzzy boundaries that lead to costly and incomplete enforcement and overlapping land and property laws compound this issue.
- **Measures** – In the case titled *Jagpal Singh & Ors vs State of Punjab & Ors*, the court recognised the socio-economic importance of common lands and directed state governments to prepare schemes for speedy removal of encroachments.
- The lands were then to be restored to the gram panchayat for the common use of the village.
- It also served as an inflection point for lower courts to develop jurisprudence over common lands in the country.
- **Only in two states** – Common lands cover 36% and 37% of the total land area of Rajasthan

and Madhya Pradesh respectively.

- To ensure dignity, security and livelihoods for millions of rural people.
- Since the state courts have been inundated with public interest litigations over their encroachments.
- In *Jagpal Singh judgement*, the Rajasthan High Court in 2019 and the Madhya Pradesh High Court in 2021 directed the respective state governments to establish permanent institutions known as public land protection cells (PLPCs).
- **Public Land Protection Cell (PLPC)** – These cells receive complaints on encroachments of rural common lands, follow the due process of law to resolve such disputes and restore the resources to the gram sabha or gram panchayat.
- PLPCs have been constituted in each district of the **two states** (Rajasthan and Madhya Pradesh) and are *headed by the district collector*.
- These institutions are a welcome intervention when more than two-thirds of India's court litigations relate to land or property and most land conflicts relate to common lands.
- At a PLPC, *communities can defend their common lands* by making a *direct representation* and avoid navigating through the complex land legislations.
- This **reduces** the need to engage professional legal assistance or pay **court fees** and thus allows a larger section of the population to access legal recourse at a much cheaper cost.
- By institutionalising *an alternative mechanism for dispute resolution*, lengthy and costly court battles can be avoided and the judicial workload can be lowered.
- At present, *the high courts only entertain cases where PLPCs do not intervene*, which assumes the role of a watchdog allows the judicial processes to monitor conduct and ensure accountability of these cells.

Land is a subject that comes under the purview of the states

- Common lands are legally classified as a subset of 'government lands', unless the ownership of a governmental department (such as the forest department) is already established.
- To achieve responsive governance of common resources, the effectiveness of a top-down rule of law approach, which puts encroachments at the centre stage, needs to be evaluated.

2) Consider the following statements with respect to Satellite Spectrum

1. Unlike terrestrial spectrum, satellite spectrum has no national territorial limits.
2. It is internationally coordinated by the International Telecommunication Union.
3. The spectrum is non-exclusive and can be shared by multiple satellite operators in the same geographical area.

How many of the statements given above are correct?

- a. Only one
- b. Only two
- c. All three
- d. None of the above

Answer : c

Spectrum for Satellite Communication (SATCOM)

- Satellite spectrum refers to a special range of radio frequencies used by satellites to communicate, enabling high-speed internet access even in remote areas where ground-based networks are less reliable.
- It operates between 1.5 and 51.5 gigahertz (GHz) and this spectrum is essential for delivering fast broadband services.
- Spectrum for SATCOM is part of the first schedule of The Telecommunications Act, 2023

("Assignment of spectrum through administrative process").

- Under Section 4(4) of the Act, telecom spectrum shall be assigned through auction "except for entries listed in the First Schedule for which assignment shall be done by administrative process".
- "Administrative process" under the Act "means assignment of spectrum without holding an auction", and "'auction' means a bid process for assignment of spectrum".
- Unlike terrestrial spectrum, satellite spectrum has **no national territorial limits**.
- It's **internationally coordinated by the ITU (International Telecommunication Union)**.
- The spectrum is non-exclusive and can be shared by multiple satellite operators in the same geographical area.
- **Administrative Allocation vs. Auction** - Most countries prefer administrative allocation over auctions.
- India has recently clarified it will use administrative allocation under The Telecommunications Act, 2023.
- **The reasons for Auctions being less suitable** - The international nature of satellite spectrum makes national auctions impractical.
- The spectrum is shared rather than exclusive.
- Technical coordination needs to happen at an international level
- **Benefits** - SATCPM services use an array of satellites in orbit to provide connectivity on the ground.
- They do not require wires to transmit data, and are an alternative to ground-based communication, called terrestrial networks, such as cable, fibre, or digital subscriber line (DSL).
- Wider coverage and a more resilient network.
- **Potential market in India** - Expected to grow from 2.3 Billion USD to 20 Billion USD by 2028.
- Could serve 290.4 Million users which are currently unconnected households in India.

3) Which of the following places are situated in the union territory of Ladakh?

1. Depsang Plains
2. Demchok Region
3. Galwan Valley
4. Pangong Tso
5. Daulat Beg Oldie

Select the correct answer using the code given below:

- a. Only two
- b. Only three
- c. Only four
- d. All five

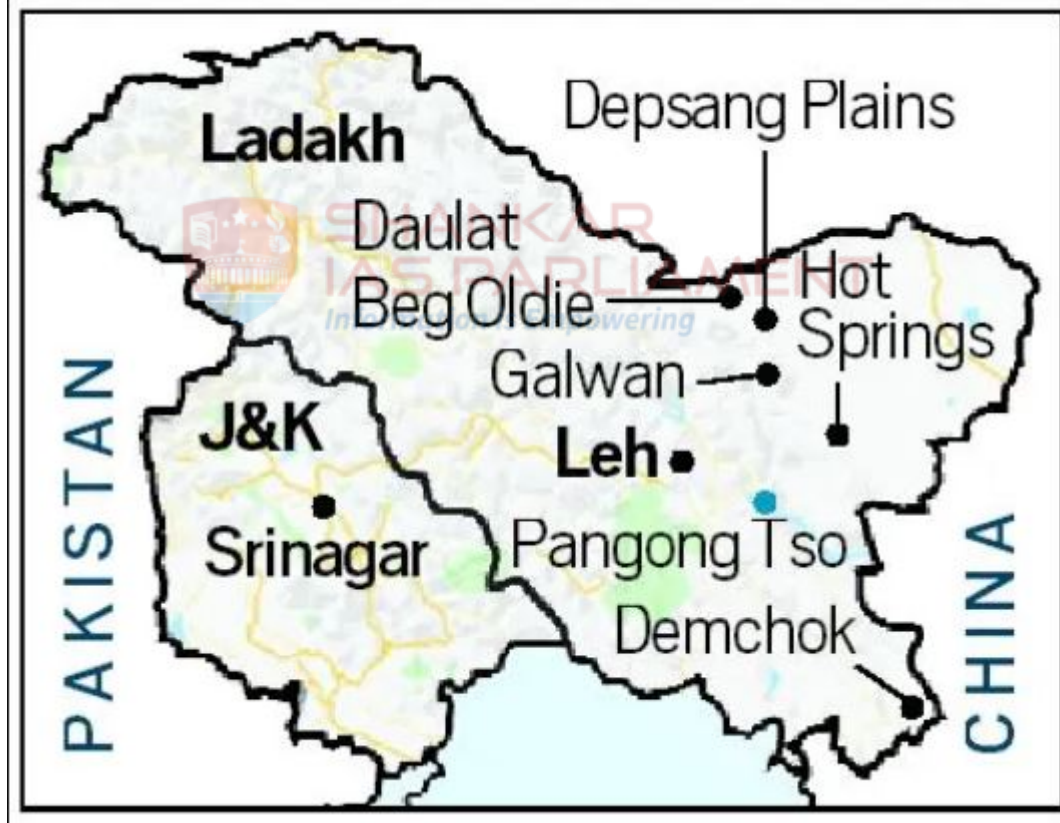
Answer : d

India China Border Agreement

- The India-China border agreement is a significant step towards resolving the military standoff along the Line of Actual Control (LAC) in eastern Ladakh.
- The key points of the agreement include:
- **Restoration of patrolling rights** - India and China have agreed to restore patrolling rights to each other in the Depsang Plains and Demchok region.
- This means that Indian troops can patrol up to patrolling point (PP) 10 to 13 in the Depsang Plains, and in Charding Nullah of Demchok.
- **No changes at other friction points** - The situation at the other friction points in Galwan Valley and Pangong Tso, where disengagement of troops was achieved two years ago with the

creation of buffer zones will remain the same.

- **Patrolling coordination** - Patrolling in the agreed areas will be carried out along the LAC as it was perceived before 2020, at a frequency of twice a month.
- The two sides will exchange patrol programs and coordinate to avoid any clashes.
- **Confidence-building measures** - India and China will continue with confidence-building measures to reduce the trust deficit, including CO/Commander level meetings on a monthly basis.
- **Hope for diplomatic ties** - The agreement has rekindled hopes of early restoration of diplomatic and bilateral political ties.
- The Depsang Plains and Charding Nullah are significant areas because they were previously inaccessible to Indian troops due to Chinese restrictions.
- The agreement to restore patrolling rights in these areas is a major breakthrough.
- Overall, the India-China border agreement is a positive development that could lead to further de-escalation and de-militarization along the LAC.
- The places situated in the union territory of Ladakh are:
 1. Depsang Plains
 2. Demchok Region
 3. Galwan Valley
 4. Pangong Tso
 5. Daulat Beg Oldie



4) *Caenorhabditis Elegans*, sometimes seen in the news recently, is associated with?

- a. A free-living transparent nematode that lives in temperate soil environments.
- b. An amphibian that has the ability to retain juvenile or larval traits as adults.
- c. An exotic seaweed species native to Indo-Pacific Ocean.
- d. A substance extracted from seaweeds for thickening or emulsifying agent in food products.

Answer : a

Caenorhabditis Elegans

- *Caenorhabditis elegans* is a *microscopic roundworm* that has revolutionized biological research.
- This 1mm-long organism has become one of the most important model organisms in scientific history, leading to multiple Nobel Prize-winning discoveries.
- **Characteristics:**
 - Free-living nematode (roundworm)
 - Length: Approximately 1 millimeter
 - Lifecycle – 3-5 days from egg to adult
 - Transparent body
 - Primarily hermaphroditic with rare males
- **Historical Significance** – First multicellular organism to have:
 - Complete genome sequenced
 - Entire neural wiring mapped
 - Cell lineage traced from fertilized egg to adult
- **Nobel Prize Contributions:**
- **Nobel Prize in Physiology/Medicine, 2002** – Discoveries in genetic regulation and understanding organ development and cell death
- **Nobel Prize, 2006** – RNA interference discovery and gene silencing by double-stranded RNA.
- **Nobel Prize in Chemistry, 2008** – Green Fluorescent Protein (GFP) research and development of vital research tools.
- **Scientific Importance:**
- **Genome Features:**
 - 97 million base pairs.
 - Approximately 20,000 genes.
 - 40% genes have human homologs.
 - 12 linear chromosomes.
- **Research Applications:**
 - Aging research
 - Neurobiology
 - Disease modelling
 - Drug screening
- **Recent Discoveries:**
- **Transgenerational Learning:**
 - Drug screening
 - Can inherit learned behaviours up to 4 generations
 - Involves small RNA (sRNA) mechanisms
 - Relevant to understanding epigenetic inheritance
- **Neurological Studies:**
 - Complete neural map (connectome)
 - 302 neurons
 - Approximately 7000 synaptic connections
 - Model for neural circuit studies
- **Medical Applications**
- **Disease Research**
 - Alzheimer's disease
 - Parkinson's disease
 - Cancer
 - Aging processes
 - Developmental disorders
- **Drug Development**

- Rapid screening of compounds
- Testing drug effects
- Understanding drug resistance
- **Shared Characteristics with Humans**
- **Biological Processes**
 - Cell division
 - Cell death (apoptosis)
 - Neural signalling
 - Aging mechanisms
- **Genetic Similarities**
 - Many conserved genes
 - Similar protein functions
 - Comparable cellular pathways

5) Consider the following statements:

1. Egypt is the first African country to officially declare 'malaria-free' by the World Health Organization (WHO).
2. India is not malaria free, but it has made significant progress in reducing the burden of malaria.

Which of the statements given above is/are correct?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

Answer : c



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Malaria

Egypt recently became the 2nd country in 2024 to be declared 'malaria-free'.

- Malaria is a life-threatening disease caused by a parasite that is spread to humans by the bite of infected mosquitoes.
- Malaria is as old as Egyptian civilization itself, but the disease that plagued the pharaohs now belongs to its history and not its future.
- Egypt was officially declared 'malaria-free' by the World Health Organization (WHO) recently.
- Egypt is the 5th African nation to receive 'malaria-free' certification from the World Health Organization, bringing the total number of certified **malaria-free countries and territories to 44**.
- In 2024, the country became the second country in the world, following **Cabo Verde**, to be officially declared malaria-free this year.
- Egypt is the **3rd country within the WHO Eastern Mediterranean Region** to receive malaria-free certification, achieving this milestone in the region after 14 years.
- India is not malaria free, but it has made significant progress in reducing the burden of malaria.
- WHO declares a nation as a 'malaria-free' upon receiving valid proof that the Anopheles mosquito-borne native malaria transmission chain has been broken for at least the previous three years on a national level.
- A country must also demonstrate the capacity to prevent the re-establishment of transmission.
- In June 2024, the WHO confirmed that there was no local transmission of malaria in Egypt, with all identified cases being imported from endemic countries.
- **Measures taken by Egypt** - Egypt's robust surveillance system was instrumental in early case detection, facilitated by collaboration with relevant stakeholders.

- In 2016, Egypt established a *High Committee for Integrated Vector Management* to enhance coordination among ministries in fighting vector-borne diseases.
- To prevent malaria's return, Egypt maintains strict surveillance, cross-border partnerships, and robust vector control.
- Egypt provides free access to essential health services for migrants, regardless of their legal status.



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