Prelim Bits 27-08-2022 | UPSC Daily Current Affairs

Zorawar

The Indian Army is prioritising the procurement of the indigenous Indian light tank named 'Zorawar' for deployment in the mountains.

> *Zorawar Singh Kahluria was the famed military general of Dogra King Gulab Singh of Jammu and was adept at mountain warfare.*

- The Armoured Fighting Vehicle-Indian Light Tank (AFV-ILT) 'Zorawar' will be deployed to outmanoeuvre the movement of Chinese forces during the standoff in eastern Ladakh.
- It will be designed to operate from **High Altitude Area**, the marginal terrain to the Island territories and will be highly transportable for rapid deployment to meet any operational situation.
- It will have equal firepower as the present tank, including missile firing. The power to weight ratio will make it very agile.

Other Procurements

- The Indian Army intends to procure a new-generation **'Future Tank'** platform namely FRCV (Future Ready Combat Vehicle), in a phased manner. The expected induction timeline is by 2030.
- It will come along with performance-based logistics, transfer of technology, engineering support package and other maintenance and training requirements.
- Futuristic Infantry Combat Vehicle (**FICV**) will replace BMP-II.
- Also, Light Armoured Multi-Purpose Vehicle (**LAMV**) with enhanced mobility and protection for Recce Platoon are to replace the existing modified Maruti Gypsy.

Swarm Drone Systems

- Indian Army has inducted indigenously produced Swarm Drones Systems aiming to employ them in both **offensive and defensive** operations.
- These drones will provide a decisive edge to the tactical commanders employing them.
- Swarm Drones being inducted into the Mechanised Forces will provide an edge to Indian Army in meeting future security challenges.
- **Make-II case** - The Indian Army has also initiated a Make-II case, Autonomous Surveillance and Armed Drone Swarm (A-SADS) which includes a version for the High Altitude Area.

Reference

1. https://www.thehindu.com/todays-paper/tp-national/army-speeds-up-procurement-of-light-tank-zorawar-for-lac/article65816373.ece
2. https://theprint.in/defence/eye-on-china-threat-army-launches-project-zorawar-to-deploy-light-tanks-for-mountain-warfare/1101241/
3. https://www.newindianexpress.com/nation/2022/aug/27/zorawar-light-tanks-swarm-drones-andficvs-indian-army-to-up-its-tech-gamealong-lac-2491941.html

Critical Infrastructure

The Department for Promotion of Industry and Internal Trade (DPIIT) reviews 40 critical Infrastructure Projects across India.

- Critical infrastructure is the body of systems, networks and assets that are so essential that their continued operation is required to ensure the security of a given nation, its economy, and public's health and/or safety.

Critical Infrastructure Sectors		
Chemical Sector	Dams Sector	Financial Services Sector
Commercial Facilities Sector	Defense Industrial Base Sector	Food and Agriculture Sector
Communications Sector	Emergency Services Sector	Government Facilities Sector
Critical Manufacturing Sector	Energy Sector	Healthcare and Public Health Sector
Identifying Critical Infrastructure During COVID-19	Information Technology Sector	Nuclear Reactors, Materials, and Waste Sector
Sector-Specific Agencies	Transportation Systems Sector	Water and Wastewater Systems Sector

National Critical Information Infrastructure Protection Centre

- In 2014, this Centre was created by the Government of India under the Section 70A of the Information Technology Act, 2000.
- It is designated as the National Nodal Agency in respect of Critical Information Infrastructure Protection.
- **Vision** - To facilitate safe, secure and resilient Information Infrastructure for Critical Sectors of the Nation.
- National Critical Information Infrastructure Protection Centre has identified the following as 'Critical Sectors'
    1. Power & Energy
    2. Banking, Financial Services & Insurance
    3. Telecom
    4. Transport
    5. Government
    6. Strategic & Public Enterprises

Reference

1. https://pib.gov.in/PressReleasePage.aspx?PRID=1854736
2. https://nciipc.gov.in/
3. https://www.cisa.gov/critical-infrastructure-sectors

Bhitarkanika National Park

- **Odisha's Bhitarkanika** is located in the estuary of Brahmani, Baitarani, Dhamra, and Mahanadi river systems.
- It is the second-largest mangrove forest in India after the Sundarbans.
- Its proximity to Bay of Bengal makes the soil of the area enriched with salts.

> *Bhitarkanika includes Bhitarkanika Wildlife Sanctuary, Gahirmatha Marine Sanctuary and Bhitarkanika National Park.*

- **Bhitarkanika National Park** is carved out of the core area of the Bhitarkanika Wildlife sanctuary.
- It is the breeding place for the 'endangered' saltwater crocodiles.
- It is known for a successful saltwater crocodile conservation programme.
- The Gahirmatha Beach, which forms the boundary of the sanctuary in the east, is the largest colony of the Olive Ridley Sea Turtles.
- **Related Links** - Indian Crocodile Conservation Project, Three important Crocodilias in India

Reference

1. https://www.downtoearth.org.in/news/wildlife-biodiversity/has-odisha-s-bhitarkanika-reached-a-saturation-point-for-its-estuarine-crocodiles-experts-say-yes-84242
2. https://www.bhitarkanika.in/about-bhitarkanika.html
3. https://www.newindianexpress.com/states/odisha/2022/may/01/odishas-bhitarkanika-national-park-to-remain-closed-from-may-1-244850html
4. https://www.villageresort.in/bhitarkanika/bhitarkanika-national-park

CSA6 Gene

The newly identified gene 'CSA6' from the fungus Candida albicans could be clue to treat the fungal infection 'Candidiasis' in immuno-compromised patients.

> *Candidiasis is a fungal infection that may affect ICU patients, cancer patients, and those on immunosuppressive therapy.*

- A set of six ***c**hromosome **st**a**b**ility* (*CSA*) genes have been identified to be most important for maintaining genome integrity of the *C. albicans*.
- While five of these *CSA* genes are known to be important for cell division in other species, the sixth *CSA* gene, named *CSA6* encoded for a protein that is essential for viability in *C. albicans*.
- The CSA6 gene is a critical regulator of cell cycle progression wherein both over

expression and deletion of Csa6 can lead to the reduced growth of *C. albicans* cells.
- This gene is the novel regulator of chromosome stability.
- Small molecule modulators that alter expression levels of the Csa6 gene offer potential avenues for treatment with no side effects in humans.

Reference

1. https://pib.gov.in/PressReleasePage.aspx?PRID=1854357
2. https://www.livemint.com/science/health/newly-identified-gene-could-be-clue-to-treatment-of-fungal-infection-in-immuno-compromised-patients-11661433250483.html
3. https://www.timesnownews.com/health/meet-csa6-newly-identified-gene-that-could-be-key-to-treating-fungal-infection-in-immune-compromised-patients-article-93776203

African Rhinoceros

A report compiled by the IUCN, Species Survival Commission (SSC), African and Asian Rhino specialist groups and TRAFFIC noted that Rhino poaching rates in Africa declined from 3.9% (2018) to 2.3% (2021).

- There are two African rhino species,
    1. Black Rhino and
    2. White Rhino.
- They have both increased in number in recent years thanks to successful conservation efforts, especially in South Africa.
- The most notable difference between white and black rhinos is their lips. While the Black rhinos have hooked upper lip, the White Rhino has a square lip.
- **Threat** - Huge surge in poaching to meet demand for illegal rhino horn

White Rhino

- White rhinos (*Ceratotherium simum*) are the second largest land mammal after the elephant.
- White rhinos are also known as the square-lipped rhinoceros due to their square (not pointed) upper lip.
- Two genetically different subspecies exist, the northern and southern white rhino and are found in two different regions in Africa.
- **Habitat** - Long and short grass savanna areas in grasslands.

Protection Status	
IUCN Red List	Near Threatened
CITES	Appendix I & II

Black Rhino

- Black rhinos (*Diceros bicornis*) are the smaller of the two African Rhinos. Black rhinos are browsers rather than grazers.
- They have two horns, and occasionally a third, small posterior horn.
- **Habitat** - Semi-Desert Savannah, Woodlands, Forests, Wetlands.

Protection Status	
IUCN Red List	Critically Endangered
CITES	Appendix I

Reference

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2. https://wwf.panda.org/discover/knowledge_hub/endangered_species/rhinoceros/african_rhinos/
3. https://www.worldwildlife.org/species/black-rhino

