CURRENT AFFAIRS

10th August 2022

SKYLIGHT EXERCISE

SYLLABUS: GS PAPER-III (INTERNAL SECURITY)

CONTEXT: The Indian Army recently conducted **"Skylight Mega-Exercise"**, to enhance its space domain capabilities. It was the first of its kind large-scale exercise.

ABOUT SKYLIGHT EXERCISE

- This exercise, conducted by the Indian Army, was the first of its kind large-scale exercise to boost its space domain capabilities.

- The aim of the exercise was **to test operational readiness of satellite communication assets and training of personnel manning these.**

- This was a pan-India exercise covering the **islands of Andaman and Lakshadweep** to the high reaches of the northern borders.

- All satellite communication assets of the Indian Army were activated during this exercise.

RATIONALE BEHIND THIS EXERCISE

- The idea was to validate and showcase the resilience of its communication capabilities in case terrestrial connectivity is disrupted in future conflicts. **Space- based communications will prove to be decisive in a conflict as terrestrial systems are bound to get disrupted.**

- India wants to leverage space capabilities for supporting a variety of military operations.

- Complex aerospace technology has begun impacting military operations and communications, in particular. Hence, it is important to build and refine technical competence in this field.

- The northern borders with China are a primary area of concern because of the challenges related to topography.

- This exercise also assumes significance against the backdrop of China's long standing thrust on **"informatized" and "intelligentized" warfare.**

- China is leagues ahead in space, cyberspace, robotics, lethal autonomous weapon systems, artificial intelligence warfare.

- Keeping this in mind, the Indian army is also pursuing "Quantum Computing and Communications" for much better and secure C4I2SR systems for wars of future. C4I2SR stands for **command, control, communication, computers, intelligence, information, surveillance and reconnaissance.**

SPACE COMMUNICATION BY INDIAN ARMY

- The Indian Army uses the services of a number of ISRO satellites that connect hundreds of communication terminals of various types.

- These include static terminals, transportable vehicle mounted terminals, man- portable and small form factor man-pack terminals.

- Unlike the Indian Air Force and the Navy, the Army currently does not have a dedicated satellite.

INDIAN ARMY SATELLITE BY 2025

- The army is on course to get its own satellite by December 2025.

- The **Defense Acquisition Council,** the top weapons procurement body of the government, gave the go ahead for the **Indian Army's satellite GSAT-7B in March 2022.** The GSAT-7 series of advanced satellites built by ISRO is designed **to provide communication capabilities to users over vast expanses including oceans.**

- The satellite has been designed as an **indigenous multiband satellite with advanced security features.**

- It will support tactical communication requirements for not only troops deployed on the ground, but also for remotely piloted aircraft, air defense weapons and other mission-critical and fire support platforms.

WATER MANAGEMENT IN INDIA

SYLLABUS: GS PAPER-I & III (ENVIRONMENTAL CONSERVATION/AGRICULTURE)

CONTEXT: India has just **4% of the world's water resource**, **supporting 1% of its population.** It is a key determinant of health security and economic growth in India. Over 50% of agriculture is still rain-fed.

EVOLUTION OF WATER MANAGEMENT IN INDIA

- **Till the 1980s:** Water management was confined to the **issue of irrigation projects**. Therefore, the focus was on building large dams and canals. However, the drought of the late 1980s, proved that these big projects were insufficient.

- **Post-1980s Period: Focus was on decentralization:** e.g., rainwater harvesting **(building ponds, digging tanks, and setting up check-dams on streams);** slogans like "Rain is decentralized, so is the demand for water. So, capture the rain when and where it falls".

- **The mid-2000s:** Focus remain on rainwater harvesting and '**ground water' was given importance.** Therefore, MGNREGA was linked with the augmentation of groundwater, and rainwater harvesting efforts.

- **Post-2010s:** A series of urban droughts brought in focus the **issues related to distribution bottleneck and lack of reuse and treatment of sewage water.** So, the focus came on Piped drinking water (Jal Jeevan Mission) and treatment of used water (Swachh Bharath Mission).

WHAT SHOULD BE DONE?

- **Reengineering of on-site local treatment systems:** It means waste to be collected from each household, transported, and treated in that area.

- **Focus on Reuse:** The urban-industrial wastewater and sewage must be treated, recycled, and reused. If it is treated for reuse, then it will prevent water loss and pollution of our rivers. E.g., in Singapore, almost all the water is treated and reused.

- **Minimize wastages:** E.g., investing in water-efficient irrigation ('per drop more crop'), household appliances, and changes in our diets. Focus on traditional water storing structures: e.g., Baolis (Rajasthan, Gujarat), tanks, Ponds (Talabs), Check dams (called Bandha in the Mewar region), etc.

1. **Paar system (western Rajasthan):** It is a common place where the rainwater flows from the agar (catchment) and in the process percolates into the sandysoil.

2. **Pat System (Bundelkhand region):** This system was devised according to the peculiarities of the terrain to divert water from swift-flowing hill streams intoirrigation channels called pats.

3. **Sponge cities:** The treated sewage and wastewater must be diverted to sponges (wetlands, ponds, rain gardens) to recharge the groundwater in the cities and make us water-secure. E.g., done in Beijing (China).

4. **Jal Jeevan Mission success story:** Each of the 5,644 residents of Pimpalghar Ranjnoli village, situated in the industrial belt of Thane (Maharashtra) has to access to 55 litres of water every day. The villagers used funds under the Jal Jeevan Mission (JJM) to ensure that all 842 families in the village get tap water connections. The village has effectively ensured that residents pay the user charges for tap water.

- Maharashtra is one of the leading states in the country in implementing the JJM (71 percent of households in Maharashtra have access to a tap connection; the national average is just under 52 per cent).

PRELIMS FACTS

PORTULACA OLERACEA

- Scientists integrated **two metabolic pathways to produce a novel**

  type of photosynthesis that enables the weed to withstand drought while remaining highly productive.

- A common weed and succulent—**Portulaca oleracea, commonly known**

  as purslane, offers important clues about creating drought-tolerant crops in a world beset by climate change.

PURSLANE
(Portulaca oleracea)
A delicious "weed" packed with vitamins & omega 3's!
DIYNatural.com

- Purslane has the evolutionary adaptations that help it to be both highly productive and drought tolerant, an unlikely combination for a plant.

- Other uses: **Portulaca oleracea has been used as a folk medicine in many countries, acting as a febrifuge, antiseptic, and vermifuge.**
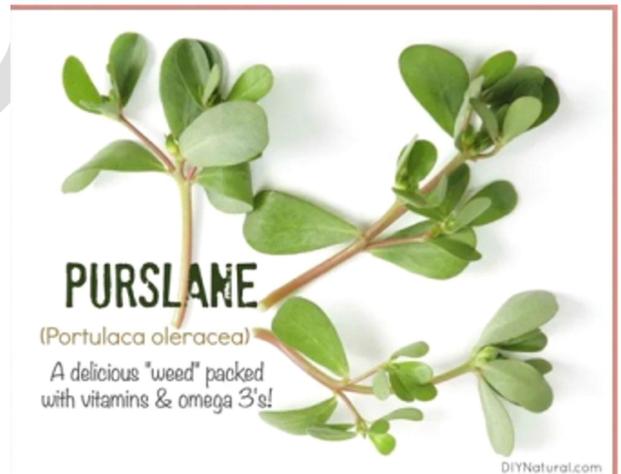
TETRAPOD BASED SEA WALL FOR REDUCING COASTAL EROSION

- Under the government's Coastal conservation project, a tetrapod-based seawall has been implemented in **Kerela's Ernakulam district.**

- **Benefits:** The conventional seawall of Chellanam failed to check sea ingress which resulted in massive ruin and destruction. Now, due to the tetrapod-based seawall, stretches that were most vulnerable to sea erosion have remained by and large safe.

- **Other solution:** Beach nourishment (reducing the depth of the sea along the shore) offers a permanent solution.

PARVAZ MARKET LINKAGE SCHEME

- The government of **Jammu & Kashmir launched the "PARVAZ Market**
- **Linkage Scheme".**
- This is an innovative Market Linkage scheme, that has tremendous potential **to uplift the economic conditions of farmers across Jammu and Kashmir.**
- Under the scheme, the government will provide a s**ubsidy of 25% on freight charges, in a bid to carry perishable fruits through Air Cargo.** The subsidy will be provided to farmers through the **Direct Benefit Transfer mode.**

INDIA KI UDAAN INITIATIVE

- This initiative seeks to celebrate the **unwavering & undying spirit of India and its achievements in the last 75 years.**
- It aims **to take citizens to the rich culture & heritage of India, by means of its rich archives and featuring artistic illustrations.**
- It is bein**g implemented by Google Arts and Culture, in association with the Ministry of Culture.**