CURRENT AFFAIRS: 09.06.2026

One Liner Facts:

In News – World Oceans Day (NOA): Observed on June 8, 2026, with the theme "*Reimagine: Beyond the world we know, a new relationship with our ocean*," urges action against anthropogenic pressures on marine ecosystems. Proposed by Canada at the 1992 Earth Summit, it was recognised by the UNGA in 2008.

Pyroprocessing

Recently, pyroprocessing has gained attention due to its wide use in cement-making, metallurgy and nuclear power, with cement-making being its largest application.

Pyroprocessing

- **About:** Pyroprocessing is a method of **changing a solid material physically or chemically using high temperature**. It is a dry process and is **highly energy intensive.**
- **Use in Cement-Making:** In cement-making, finely ground limestone, clay and iron are fed into a rotary kiln, where **limestone loses carbon dioxide** as the temperature rises to around 900°C. At about 1,450°C, the mixture partly melts to form marble-sized clinker nodules, which are later ground to produce cement.
- **Use in Metallurgy:** In metallurgy, pyroprocessing is **used to extract metals from ores** through multiple stages, including roasting, where sulphide ores are heated in air to convert them into metal oxides.
  - Other stages include **smelting,** which melts ore to separate metal from waste impurities called **slag, and calcining,** where limestone is heated to produce lime.
- **Use in Nuclear Industry:** In the nuclear industry, pyroprocessing refers to the **reprocessing of spent nuclear fuel** using techniques developed in the 1980s and 1990s.
  - The used fuel is broken into pieces and placed in a high-temperature salt bath, usually made of lithium and potassium chlorides at 500°C or more, after which an **electric current separates elements** based on their electrochemical properties.
  - The separated elements of interest are recovered in different streams, and this process has been studied in Japan, South Korea and the U.S. as part of advanced **fast reactor programmes.**

42nd Anniversary of Operation Bluestar

Recently, **pro-Khalistan** slogans were raised inside the **Golden Temple complex** in Amritsar during the 42nd anniversary of **Operation Bluestar**.

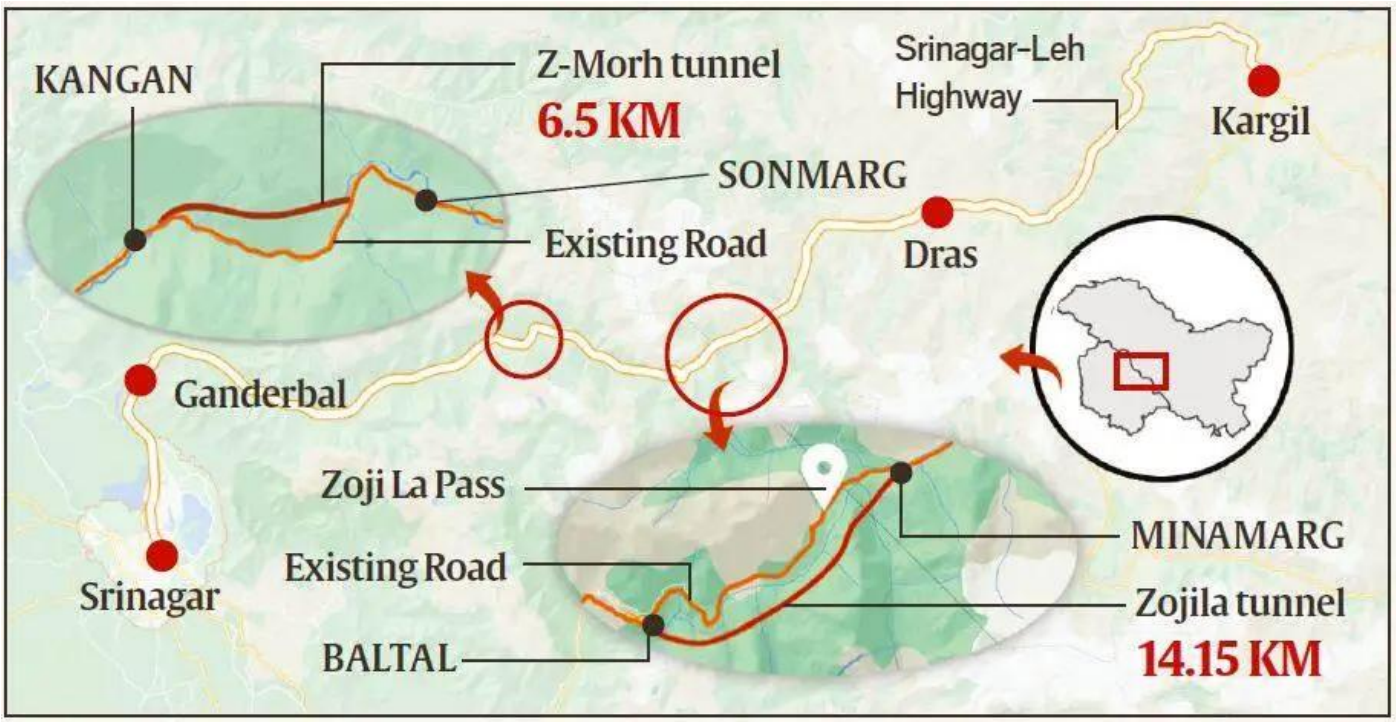
- **About:** Operation Bluestar was carried out by the **Indian Army in June 1984** at the Golden Temple complex in Amritsar to remove armed militants led by **Jarnail Singh Bhindranwale,** amid the rise of the **Khalistan separatist movement.**
- **Background:** The Khalistan demand emerged after Partition, when Punjab was divided and many culturally and religiously significant Sikh sites, including **Lahore and Nankana Sahib, went to Pakistan**, creating a sense of political and historical grievance among sections of Sikhs.
    - Discontent over issues such as river water sharing, demands for greater autonomy, and alleged support from Pakistan helped intensify separatist sentiments, while the **reorganisation of Punjab** in 1966 did not fully resolve these tensions.
- **Rise of Bhindranwale: Jarnail Singh Bhindranwale** emerged as a powerful religious-political figure who gained support among sections of Sikh youth, used aggressive rhetoric, and later moved into the **Akal Takht** inside the Golden Temple complex to evade arrest.
- **Launch of Operation:** The operation began after curfew, communication restrictions and media censorship were imposed in Punjab; the Army entered the Golden Temple complex on the night of 5th June 1984.
- **Key Features of the Operation:** The Army first tried to **neutralise militant defensive positions**, but heavy resistance from inside the complex led to the use of **Vijayanta tanks** against the Akal Takht, where Bhindranwale and his strongest defences were located.
- **Outcome:** Bhindranwale was found dead inside the damaged Akal Takht, and by 10th June the remaining militants had either surrendered or been killed.
- **Impact:** It deeply hurt Sikh sentiments and had major political and social consequences. Later in 1984, Prime Minister **Indira Gandhi** was assassinated by her Sikh bodyguards, followed by **anti-Sikh riots** in several parts of India.

Zojila Tunnel

Recently, the strategic **Zojila** Tunnel between Kashmir and Kargil moved closer to completion with its final breakthrough, marking a major milestone in all-weather connectivity to Ladakh.

- **About:** The Zojila Tunnel is a **high-altitude road tunnel** connecting Jammu & Kashmir with Ladakh and is expected to provide all-weather connectivity between **Kashmir, Kargil and Ladakh.** It is located near **Zojila Pass**, which connects the Kashmir Valley with Drass, Kargil and Ladakh.
- **Key Features:** It is around **13.14 km to 14.15 km long** and is projected to be among the **world's longest single-tube, bi-directional road tunnels** at an altitude of about **11,578 feet.**
- **Need:** The existing Kashmir-Ladakh highway remains closed for nearly five to six months in winter due to **heavy snowfall, avalanches and landslides**, cutting off Ladakh and restricting civilian and military movement.
- **Part of Strategic Corridors:** Zojila is **one of three key corridors to Ladakh,** along with the **Rohtang route through Himachal Pradesh** and the **Shinku La tunnel route** connecting Himachal with **Ladakh's Zanskar Valley.**
- **Military Mobility:** The tunnel will enhance the movement of military vehicles and logistics to forward areas, especially during emergencies along the Line of Control (LoC) and Line of Actual Control (LAC).

- During the 1999 Kargil War, the Kashmir–Kargil highway became vulnerable to Pakistani shelling, creating difficulties in transporting troops and material.



Majorana 2 Quantum Chip

- **Context (LS):** Majorana 2 is **Microsoft's** experimental quantum processor based on topological qubits.
- Majorana 2 achieves an average **quantum coherence** time of 20 seconds (up to 1 minute), compared to milliseconds in most conventional quantum processors.
- Improved qubit stability could accelerate the development of **fault-tolerant quantum computers**.

***Qubits**: The basic unit of quantum information that can exist in 0, 1, or both states simultaneously.*
***Topological Qubits:** Special qubits that store information in the **topological (shape-based) properties** of quantum states, making them more resistant to errors.*
***Quantum Coherence:** The period during which a qubit maintains its quantum state and can perform quantum computations.*
***Fault-Tolerant Quantum Computer:** A quantum computer capable of detecting and correcting errors while performing large-scale computations.*

Bharat Audyogik Vikas Yojna (BHAVYA)

- **Context (NOA):** Union Cabinet approved **Bharat Audyogik Vikas Yojna** (**BHAVYA**) with a total outlay of **₹33,660 crore**.
- **Objective:** The scheme aims to make India a global manufacturing hub by developing **100 plug-and-play industrial parks**.
- **Park Size:** The parks will range **from 100 to 1,000 acres**, with a **minimum of 25 acres** in the Northeast and hilly regions.
- **Land Bank:** BHAVYA targets bringing **~34,000 acres of land** into immediate industrial readiness.
- **Selection:** Projects are selected through challenge mode using **four criteria**: PM GatiShakti principles, underground utility corridors, green energy infrastructure, and Ease of Doing Business reforms.
- **Timeline:** The programme runs for **six years across two phases** from FY 2026-27 to FY 2031-32, with the first phase covering **50 industrial parks**.
- **Funding:** Central Government will provide **up to ₹1 crore per acre** for core infrastructure and fund up to **25%** of **external connectivity costs**.
- **Nodal Agency:** The **National Industrial Corridor Development Corporation** (**NICDC**) under the **Ministry of Commerce and Industry** (MoCI) serves as the nodal agency.
- **SPV Model:** Each park will be managed by a dedicated **Special Purpose Vehicle** (**SPV**) responsible for planning, development, and execution.
- **Connectivity:** Alignment with the **PM GatiShakti National Master Plan** ensures seamless multimodal connectivity across all parks.

Plug-and-Play Industrial Infrastructure *refers to* ***ready-to-use industrial parks or zones*** *where core infrastructure, essential utilities, and key regulatory approvals are arranged in advance.*