First Greenfield Refinery-Cum-Petrochemical Complex

Prelims: *Current events of national and international importance | Energy*

Why in News?

Recently, the prime minister inaugurated India's 1st greenfield integrated refinery-cum-petrochemical complex at Pachpadra, Rajasthan.

- **Greenfield refinery –** It is an oil or chemical processing facility built entirely from scratch on a previously undeveloped, "clean" site.
- **Petrochemical complex** – Large facility converting petroleum and natural gas into high-value chemical products.
- The facility combines crude oil refining and chemical manufacturing into a single site to improve operational efficiency and profitability
- **Developed by –** HPCL and the Government of Rajasthan.
- **Capacity –**
  - 9 million metric tons per annum (MMTPA) crude oil process.
  - 2.4 MMTPA petrochemical production.
- **Nelson Complexity Index –** 17.0 (among the most sophisticated globally).

  Nelson Complexity Index (NCI) is a scoring system used to measure the sophistication and technological advancement of an oil refinery

- **Petrochemical Yield –** >26% (benchmark efficiency).
- **Energy Security –** Reduces dependence on imported petrochemicals; strengthens supply chains.
- **Industrial Growth –** Anchors downstream industries (plastic parks, textiles, automotive components, packaging, agriculture films).
- **Diversification –** Shifts Rajasthan's economy beyond agriculture and mining towards industrial resilience.

Reference

[Economic Times | Greenfield refinery]