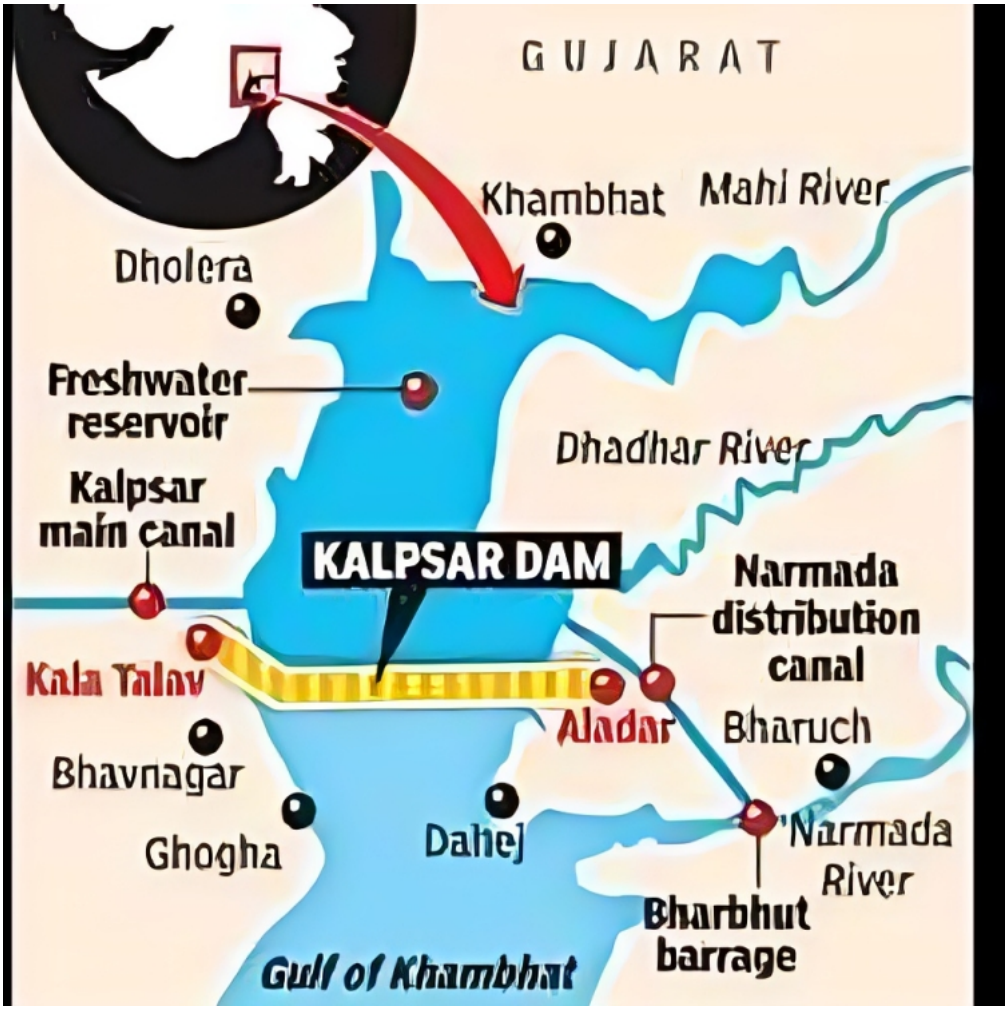
Kalpasar Project

Prelims: *Current events of national and international importance*

Why in News?

India and the Netherlands have recently signed a Letter of Intent for technical cooperation on the proposed Kalpasar Project.

- **Kalpasar Project** – It is a multipurpose initiative of the Gujarat government that plans to build a massive dam across the Gulf of Khambhat, creating Asia's largest freshwater reservoir.
- **Aim** – To provide water for *irrigation, industrial and domestic use* in the water-stressed Saurashtra region of Gujarat.
- **Collaboration** – Between the Gujarat State Government & the Netherlands Engineering Consultants (NEDECO) Company.
- **Origin** – It can be traced back to 1955, when a Dutch company, NEDECO, suggested a dam across the Gulf of Khambhat during land reclamation studies in Saurashtra.
- **2022 Pre-Feasibility Report** – It highlighted potential to rejuvenate local channels, recharge groundwater, and replenish more than 60 existing dams with fresh water.
- **Geographic Suitability** – The Gulf of Khambhat has a very high tidal range of approximately 13 meters & also velocity often crossing more than 3m/s, making the Gulf ideal for dam construction.



Features

- **Dam & reservoir infrastructure** – A dam across the Gulf of Khambhat is proposed to harness the waters of 7 rivers flowing into the sea.
- **Freshwater storage & irrigation** – Reservoir capacity has approximately 7,800 million cubic meters, among the largest freshwater reservoirs globally.
- It will provide irrigation water to nine districts of Saurashtra, covering a total of around 10.54 lakh hectares of land.
- **River integration & water diversion**
  - **Major rivers** feeding the reservoir – Sabarmati, Mahi, Dhadhar, Narmada.
  - **Minor rivers** – Wadhwan Bhogavo, Limbdi Bhogavo, Sukhbhadar, Utavli, Keri, Ghelo, Kalubhar.
  - **Diversion canal** – Planned at Bhadbhut barrage on Narmada to channel surplus water into the reservoir.
- **Benefits**
- It is expected to improve groundwater conditions in the surrounding districts, protect tidal-affected areas, and reduce salinity in the coastal region.
- It suggests land reclamation of approximately 1.76 lakh hectares.
- It is expected to generate 1,500 MW of wind energy and 1,000 MW of solar energy.
- The creation of the freshwater reservoir will replace marine fisheries with freshwater fish.
- It also aims to boost development and tourism in the region.

Reference

[Indian Express | Kalpasar project improve socio-economic conditions of Gujarat's Saurashtra]