SAND MINING IN INDIA

**Background**

**Apprehensions to Illegal Sand Mining in India**

- Sand forms 25% of the total minerals of Gujarat.
- Sand is the fourth most mined minor mineral (source: Indian Bureau of Mines).
- Cases of illegal mining of minor minerals including sand were reached more than 19,000 in 2015-16 (source: Ministry of Mines).
- Increasing urbanization and infrastructure development can further spike the demand of sand and illegal mining activities. As sand is the main ingredient in making concrete and cement.
- Instances of illegal sand mining constitute 10-12 percent.
- There are about 1200 legal sand mines in Gujarat, located mostly on riverbeds.

**Mineral Act**

Mines and Minerals (Development and Regulation) Act, 1957 (MMDR)

- Sand is a minor mineral under the MMDR.
- State government under this Act is empowered to prevent illegal mining and related activities.

**Government**

- Government has amended the Environment Impact Assessment (EIA) Notification 2006. It prescribes for:
  - Mandatory Environmental impact clearance for small-scale sand mines.
  - District-level Expert Appraisal Committee (DEAC) to assess the environmental impact of mines.
  - District Environment Impact Assessment Authority (DEIAA) to prepare a District Survey Report for granting clearances for the district.

- Ministry of Mines and IBM has developed Mining Surveillance System to use the space technology to check illegal mining.

**Steps Taken to Prevent Illegal Sand Mining**

**Ministry of Environment, Forest and Climate Change**

- Issued Sustainable Sand Mining Management Guidelines, 2016 which prescribes bar coding, remote sensing and other uses of technology for stringent monitoring of sand mining.
- It prescribes environment clearances for mine lease areas for sand and minor minerals:
  - up to 5 hectare area at the District level.
  - up to 50 hectares area at State level.
  - more than 50 hectares area at Central level.

**Why in News**

- Gujarat government for the first time is planning to deploy drones to crack down illegal sand mining in and around the river beds of Sabarmati, Tapi and Narmada.
- It will help to reach areas of riverbed that are inaccessible.
- Now raids would be smarter and more effective.
- Under this plan, the government will conduct a 24x7 surveillance operation.

**Why Illegal Sand Mining?**

- It will protect raid parties from attacks too.
- It will help solve the problem of sand scarcity.

**IMPACTS**

- **Biodiversity**: Impacts on related ecosystems (for example, fisheries).
- **Water Supply**: Through lowering of the water table and pollution.
- **Infrastructures**: Damage to bridges, river embankments and coastal infrastructures.
- **Landscape**: Coastal erosion, changes in deltaic structures, quarries, pollution of rivers.
- **Land Losses**: Both inland and coastal through erosion.
- **Hydrological Functions**: Change in water flows, flood regulation and marine currents.
- **Extreme Events**: Decline of protection against extreme events (flood, drought, storm surge).
- **Climate**: Directly through transport emissions.

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