Dozer Push Mining Trial

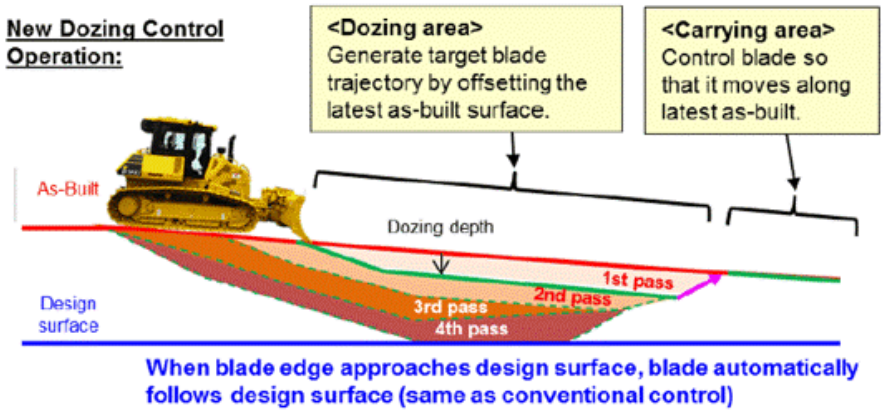
Why in News?

Recently, India has successfully conducted the 1st trial blast of the Dozer Push Mining Method.

- **Dozer Push Mining** – It is a cutting-edge *technological solution that integrates advanced digital technologies* to revolutionise coal extraction processes.
- It is a viable *alternative to the conventional truck-shovel mining technique* or shovel-dumper and *dragline methods*.

> ***Truck-Shovel (TS) systems*** *are the most common mining system used to remove the upper and thinner overburdens found within a deposit.* ***Dragline methods*** *remove the much deeper overburdens.*

- **Trial in** – Parsa East and Kete Basen (PEKB) Coal Mine in Chhattisgarh by Adani Natural Resources.
- **Developed by** – Dhanbad based CSIR-Central Institute of Mining and Fuel Research (CSIR-CIMFR).
- **Objective** – To ensure the vibration and flyrock which are controlled within safe limits.
- **Key technical innovation** - *Automated drilling process* with unmanned operations.
- Precise *cast/throw blasting techniques* for optimal material displacement.
- *Automated dozer* for efficient material movement.
- Integration of advanced digital technology for operational oversight.
- **Trial** – It involved drilling of 108 holes using automated drill machine, followed bycast/throw blasting using 60 tons of bulk emulsion explosives.
- The blasted material will be pushed in decoaled area using specially designed, large-sized automated dozer machine.



- **Benefits** – *Faster coal recovery rates*, accelerating project timelines.
- *Reduced weather-related production delays*, ensuring consistent output.
- Enhanced dragline machine utilisation, maximising equipment efficiency.
- 7-*10% reduction in operational costs* and lower unit production costs, improving competitiveness in the market.

Reference

PIB| 1st Trial Blast of Dozer Push Mining Method in India

