

Huge deposits of Uranium found in Rajasthan

July 1, 2022

In news- Recently, huge reserves of uranium were found at Rohil (Khandela Tehsil) in Sikar district Rajasthan.

About Uranium-

- Uranium was discovered in 1789 by Martin Klaproth, a German chemist, in the **mineral called pitchblende**.
- It was **named after the planet Uranus**, which had been discovered eight years earlier.
- **It has a melting point of 1132°C and** has a silvery grey metallic appearance.
- **It occurs naturally in low concentrations in soil, rock and sea water** and is commercially extracted from uranium-bearing minerals.
- **Uranium is used for generating electricity and also for nuclear energy**, medicines, defence equipment and photography, among others.
- Depleted uranium is also used as a shield against radiation in medical processes using radiation therapy and also while transporting radioactive materials.
- Its high density makes it effective in halting radiation and useful as counterweights in aircraft and industrial machinery.
- **The U-235 nucleus is 'fissile', that of U-238 is said to be 'fertile'** which means that it can capture one of the neutrons which are flying about in the core of the reactor and become (indirectly) plutonium-239, which is fissile.

Uranium Deposits in the World and India-

- **The largest producers of uranium in the world are**

Kazakhstan, Canada and Australia, while this mineral has also been found in Niger, Russia, Namibia, Uzbekistan, the US and Ukraine.

- **In India, after Jharkhand and Andhra Pradesh, Rajasthan is the third state** where uranium has been found.
- Uranium deposit is also found in **Gogi village of Yadgir district, Karnataka.**
- Jaduguda in Singhbhum Thrust Belt (in the state of Jharkhand, formerly part of Bihar) is the first uranium deposit to be discovered in the country in 1951.



- The uranium mining in India made an exciting beginning with the formation of Uranium Corporation of India Ltd. in 1967 under the Department of Atomic Energy
- According to initial estimates, there may be **around 12 million tonnes of uranium deposits in Rajasthan.**
- **Currently, excavation of uranium is going on at Jaduguda in Jharkhand as well as Andhra Pradesh.**
- Two agencies, viz., Atomic Minerals Directorate for Exploration and Research (AMD) and Uranium Corporation of India Limited (UCIL) under the Department of Atomic Energy are engaged in the exploration and mining of uranium, respectively for its exclusive use as fuel in the nuclear power stations owned by Government of India.