

Geo-polymer aggregate

November 14, 2020

In news

Recently, NTPC limited developed Geo-polymer aggregate from fly ash

Key highlights

- According to NTPC, the recently developed aggregates are extremely environment friendly and do not require any cement for application in concrete where the fly ash based Geopolymer mortar acts as the binding agent.
- They are commonly used in civil engineering projects to stabilise terrain

Fly ash production in India and its utilization

- Around 258 million tonne of ash is produced by the coal fired thermal power plants in the country
- Out of this around 78 per cent of the ash is utilised and the balance remains unutilised which remains in ash dykes.
- NTPC is planning to explore alternate ways to utilise the remaining ash which includes the current research project to generate aggregates using more than 90 per cent ash.

Significance

- The Geo-polymer aggregates will help in reducing carbon emission and has great potential for the reduction of water consumption
- The aggregate developed by NTPC from fly ash will help in meeting the demand to a great extent and also will reduce the impact on the environment caused by natural aggregates which require quarrying of natural stone