

What is Rat-hole mining?

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Despite the **2014 ban by the National Green Tribunal**, rat-hole coal mining continues unabated in East Jaintia Hills, Meghalaya, with **26,000 abandoned mines** still active.



[Ref: ET]

About Rat-Hole Mining:

- **Rat-hole mining** involves the extraction of coal from narrow, horizontal seams using small, narrow pits that are typically large enough for only one person.
- This method is predominantly used in Meghalaya due to the **thin coal seams**, which are often less than 2 meters thick.

Types of Rat-Hole Mining:

- **Side-Cutting Procedure:** Miners dig narrow tunnels on the hill slopes until they encounter a coal seam.
- **Box-Cutting:** A technique where a vertical pit is dug through a rectangular opening, ranging from 10 to 100 square meters, reaching depths of 100 to 400 feet. Once coal seams are located, rat-hole-sized tunnels are horizontally dug for extraction.

Concerns Associated with Rat-Hole Mining:

- **Environmental Impact:** Leads to **land degradation, deforestation, soil erosion**, and **water pollution**. The creation of Acid Mine Drainage (AMD) results in acidification of rivers and significant ecological damage, harming water quality and biodiversity.
- **Safety Hazards:** The mines lack essential safety measures like **proper ventilation, structural support**, and **safety gear**, making the mining process extremely perilous.
- **Health Risks:** Miners, including children, face severe health risks due to inadequate safety protocols.
- **Economic and Social Issues:** Despite legal bans, mining persists due to economic dependency of the local population on mining activities, and the lack of alternative livelihoods. **Child labor** is notably prevalent, highlighting the socio-economic desperation.

