

The image shows the entrance of a Coal India building. The archway above the entrance is dark red and features the words "COAL" and "INDIA" in large, white, 3D block letters. Between them is the Coal India logo, which consists of a diamond shape with a triangle inside, and the words "Coal India" in Hindi and English. The entrance itself is a large, arched doorway with a glass door. The building is illuminated by warm, yellow lights, and the overall scene is captured at night.

COAL INDIA

CIIL engages Accenture Solutions as consultant for digitisation of mines

Kapil Sikka

7 Mines Identified in India



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GS by Kapil Sikka (<https://t.me/kapillive>)



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Why in News?

- Coal India Ltd (CIL) has engaged Accenture Solutions Private Ltd as consultant, for digitalisation of mine process in **seven of its select opencast mines** for accelerated performance and enhancing output.
- The seven identified mines are **Kusmunda, Gevra, Dipka of South Eastern Coalfields Ltd (SECL) and Nigahi, Jayant, Dudhichua, Khadia of Northern Coalfields Ltd (NCL).**
- These high yielding mines accounted for **nearly 32 per cent** or 188 mt of CIL's total coal output of 596 mt during FY21.

How the new initiative of digitalisation will help?

- This is a first of its kind initiative by the company utilising digitalisation to ramp up coal output.
- The move would help address the road blocks and take corrective measures. The objective is to extract higher volumes of coal at lower costs.
- The consultant would lead and support the implementation of digitalisation and process excellence while assuring an increased coal output of 100 million tonnes (mt) from the identified mines.

- Its aim is to fit together and use the available data analytic techniques to raise mine productivity and efficiency from planning, project monitoring, operations till despatch, through effective system management and dynamic monitoring,
- Among many measures, the HEMM deployed in these mines would be fitted with digital sensors to monitor the efficiency of their performance at every level.



नॉदर्न कोलफील्ड्स लिमिटेड

Northern Coalfields Limited

एक मिनी रत्ना कंपनी (A mini ratna Company)

भारत सरकार का उपक्रम (A Govt. of India Undertaking)



Mine Sector in India

- The total geographical area of India is around 328 million hectares out of which mining lease (other than fuel, atomic and minor minerals) constitutes around 0.14%, barely 20% of it is mined.
- The Indian subsoils are rich in onshore and offshore crude oil and gas, coal, iron ore, copper, bauxite, etc.

Mine Sector in India

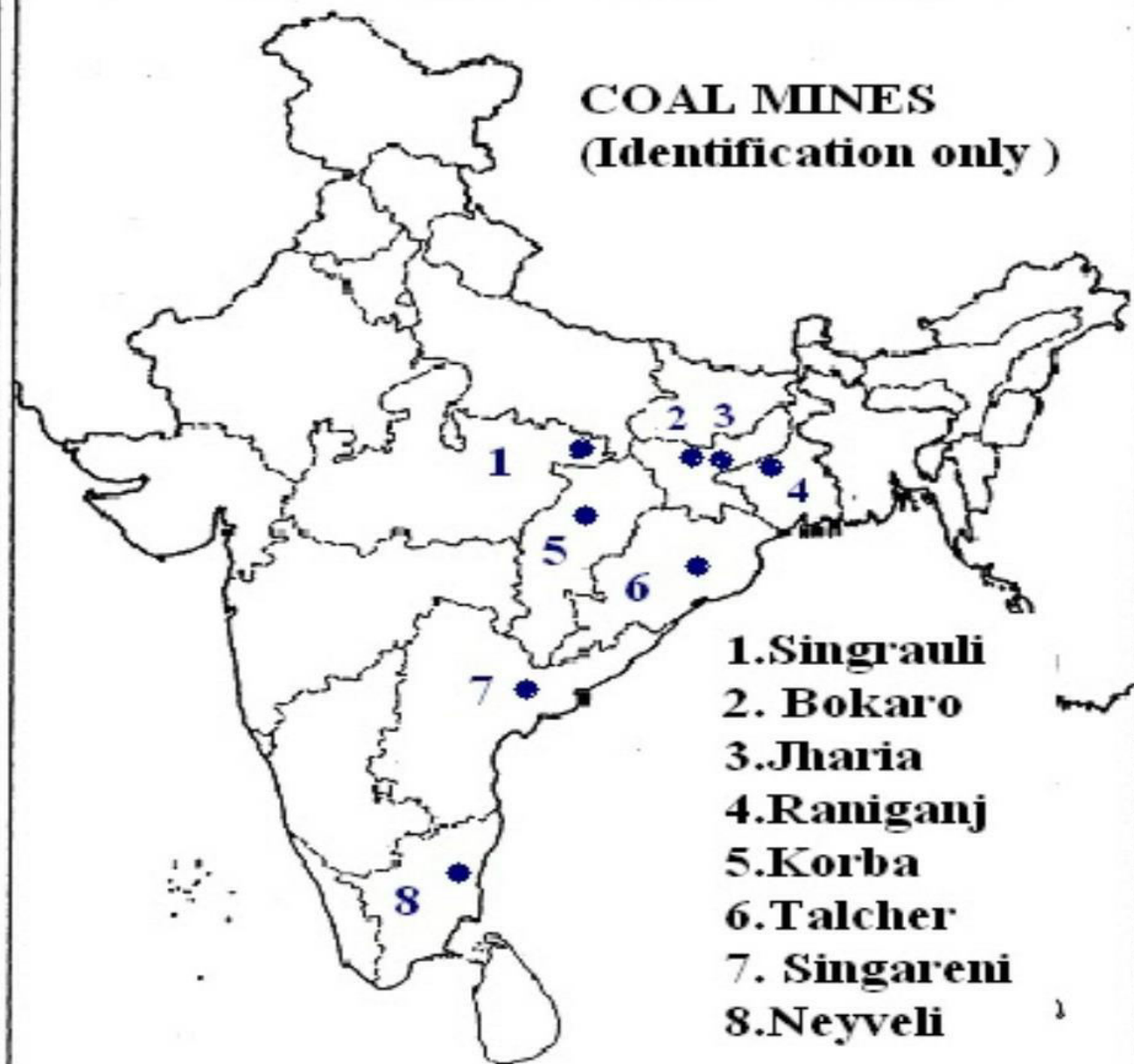
- India has large reserves of iron ore, bauxite, chromium, manganese ore, baryte, rare earth and mineral salts.
- India produces as many as 95 minerals, which includes 4 fuel, 10 metallic, 23 non-metallic, 3 atomic and 55 minor minerals (including building and other materials).

What is Open-Cast Mines?

- Open-pit mining, also known as mega-mining, open-cast or open cut mining, is a surface mining technique of extracting rock or minerals from the earth by their removal from an open-air pit, sometimes known as a borrow.
- This form of mining differs from extractive methods that require tunnelling into the earth, such as long wall mining.
- Open-pit mines are used when deposits of commercially useful ore or rocks are found near the surface.



COAL MINES
(Identification only)



- 1. Singrauli
- 2. Bokaro
- 3. Jharia
- 4. Raniganj
- 5. Korba
- 6. Talcher
- 7. Singareni
- 8. Neyveli

About 7-identified mines:

- These can be categorized into two groups:
 - **Mines operated under South Eastern Coalfields Limited (SECL)**
 - **Mines operated under Northern Coalfields Limited (NCL)**
- Both SECL and NCL are subsidiary of Coal India Limited (CIL).

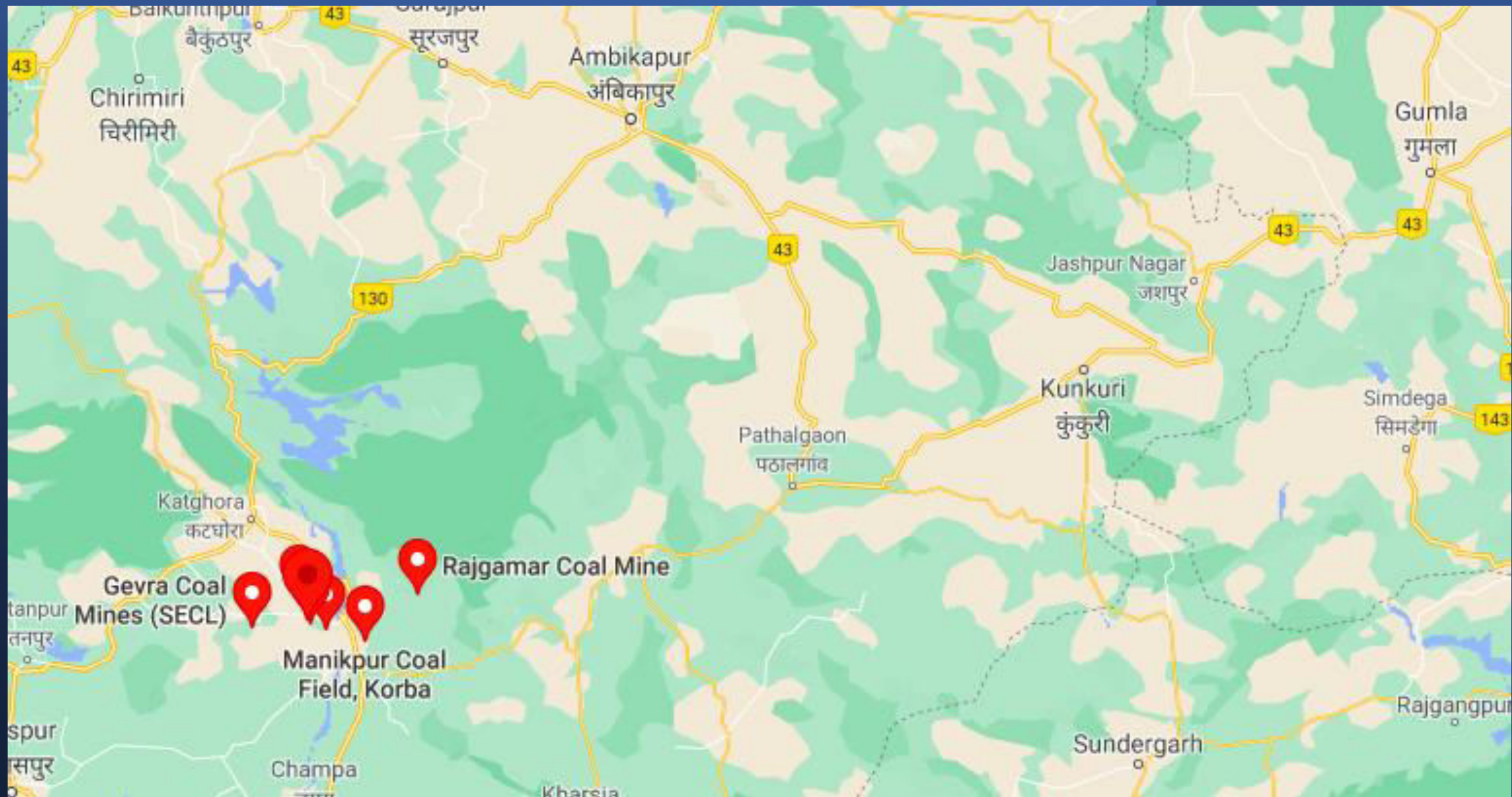
Mines operated under South Eastern Coalfields Limited (SECL):

- There are three mines operated under SECL which are the parts of **Korba Coalfields in Chhattisgarh**.
- in the basin of the **Hasdeo River**, Korba Coalfield is located in Korba district in the Indian state of Chhattisgarh **a tributary of the Mahanadi**.
- Korba Coalfield covers an area of about 530 square kilometres (200 sq mi).
- Though coal has been mined in **Korba coalfields since 1941**, large scale production could be initiated only on completion of the Champa-Korba rail link in 1955.

Three mines under SECL are:

1. Kusmunda Coal Mine:

- The Kusmunda coal mine is an open cast mine complex, operated by **South Eastern Coalfields Limited**, a subsidiary of Coal India, with a capacity of 62.5 million tonnes-per-annum (MTPA) in **Korba, Chhattisgarh, India**.
- **Opened in 1977.**
- The company has rapidly scaled-up capacity since 2009, when the mine produced 10 million tonnes per year, and in 2016 when it sought approval from 18 mtpa to 26 mtpa.



Three mines under SECL are:

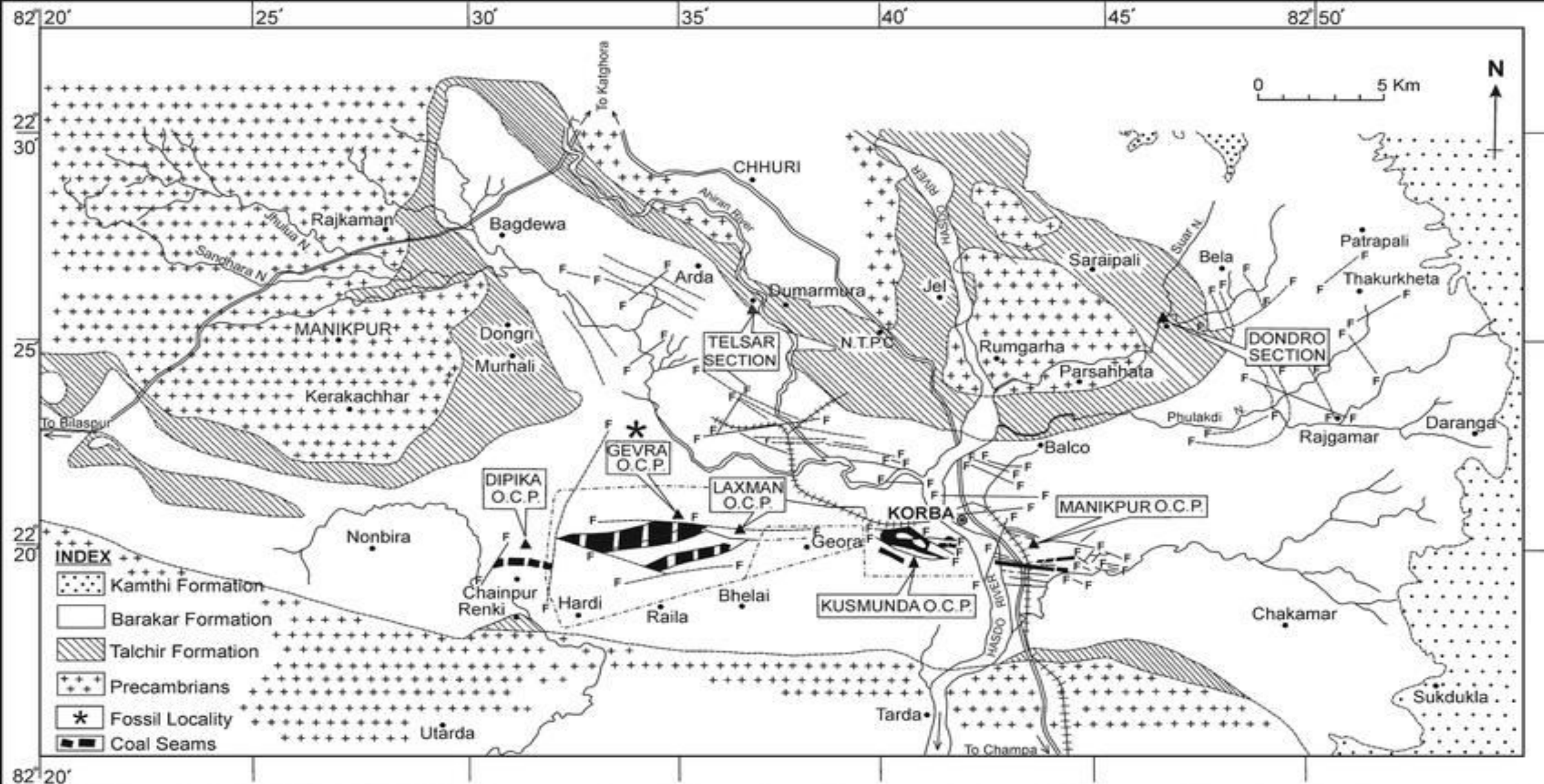
2. Gevra Coal Mine:

- It is an opencast mine complex with a capacity of 41 million tonnes-per-annum (MTPA).
- **Opened in 1981.**
- The company proposed to expand production to 50 million tonnes in 2016, but the project has since been withdrawn.

Three mines under SECL are:

3. Dipka Coal Mine:

- It is an open cast mine complex with a capacity of 35 million tonnes-per-annum (MTPA)
- South Eastern Coalfields Limited proposed to expand production from 31 to 35 million tonnes in 2018. In September 2018, the mine closed for one month after the **Lilagar river flooded the pit**. After it resumed operation, in February 2020, SECL received permission to expand the life of the mine an additional thirty years



Mines operated under Northern Coalfields Limited (NCL):

1. Dudhichua Opencast Coal Mine:

- It is one of the largest coal mine of NCL with a sanctioned capacity of 20 Million Tonnes.
- The Dudhichua Coal mine was started in 1982 and the coal production began from 1987.
- It is located in **Sonbhadra district of Uttar Pradesh, India.**

Mines operated under Northern Coalfields Limited (NCL):

2. Jayant coal mine:

- Located in Singrauli, Madhya Pradesh state, India.
- The project has a current expansion plan to 25 million tonnes per annum.
- The mine lies on the near the Amlohir coal mine and Nigahi coal mine.

3. Nigahi Opencast Coal Mine:

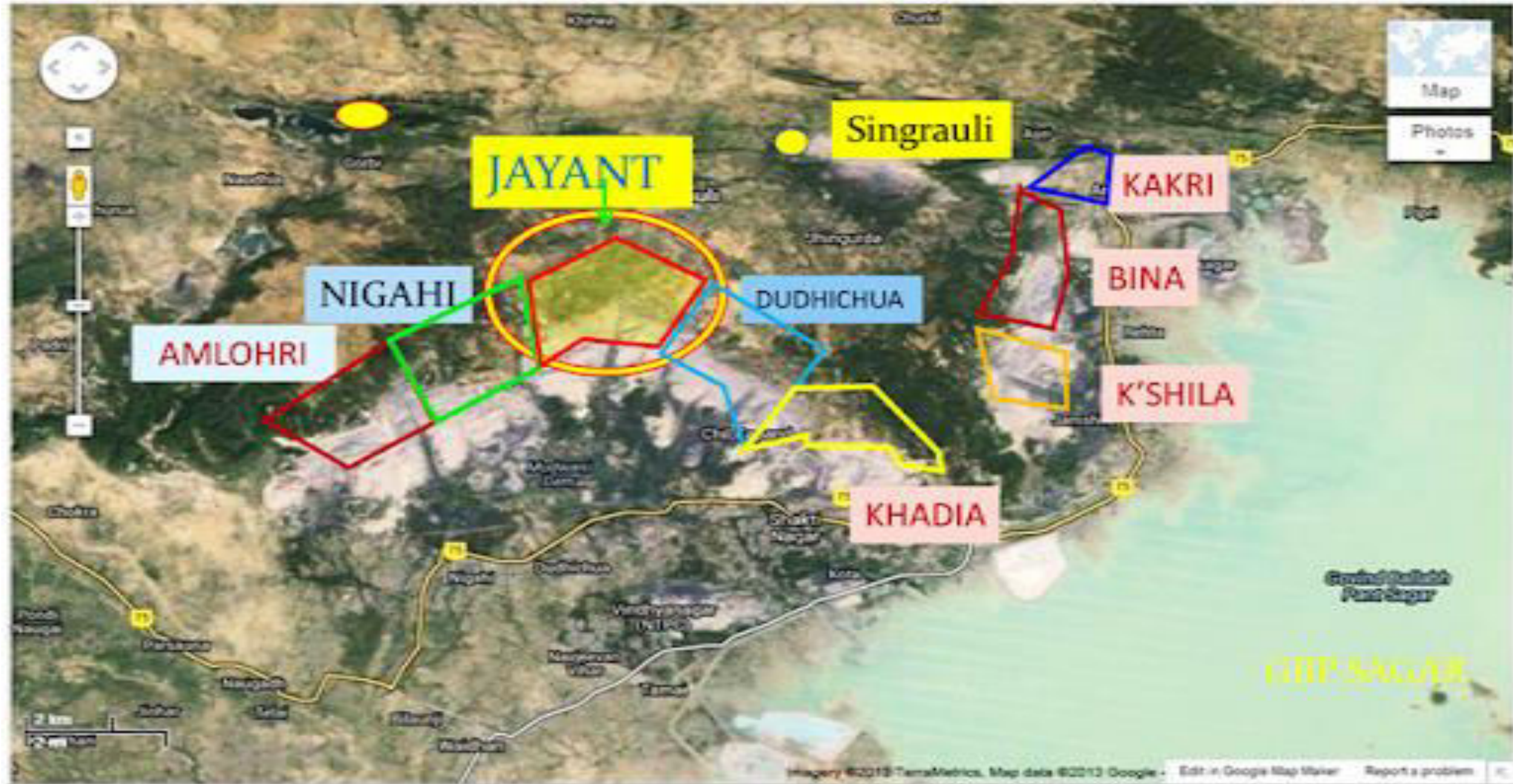
- It is located in **Singrauli, Madhya Pradesh state, India.**
- The mine lies on the western side of the existing Jayant Opencast Mine and eastern side of Amlohri Opencast Mine. The mine is linked to 4,760MW Vindhyachal power station of NTPC.
- As per the Central Pollution Control Board's Comprehensive Environmental Pollution Index (CEPI), the Singrauli Area (including Sonebhadra area) is classified as a **Critically Polluted Area.**

3. Nigahi Opencast Coal Mine:

- Threat to the wildlife: The Nigahi Coal Mine falls in the corridor of Kaimur Wildlife Sanctuary, Chandraprabha Wildlife Sanctuary in Uttar Pradesh, Sanjay Dubri Wildlife Sanctuary, Sanjay National Park in Madhya Pradesh and Tamoripingla Wildlife Sanctuary, Semarsot Wildlife Sanctuary, Palamau Wildlife Sanctuary in Chhattisgarh.

4. Khadia Coal Mine:

- It is located in **Sonbhadra (Uttar Pradesh) and Sidhi (Madhya Pradesh), India.**





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