

India

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Coal Sector (India): Past Five Years

- The Coal Demand in India in 2017-18 was 908 Mt and increased to 1052 Mt by 2020-21. It is expected to be in the range of 1.3 - 1.5 billions tonnes by 2030.
- Coal India Limited (CIL) is at the forefront of the nation's coal production. CIL alone produces around 83% of the country's entire coal output.

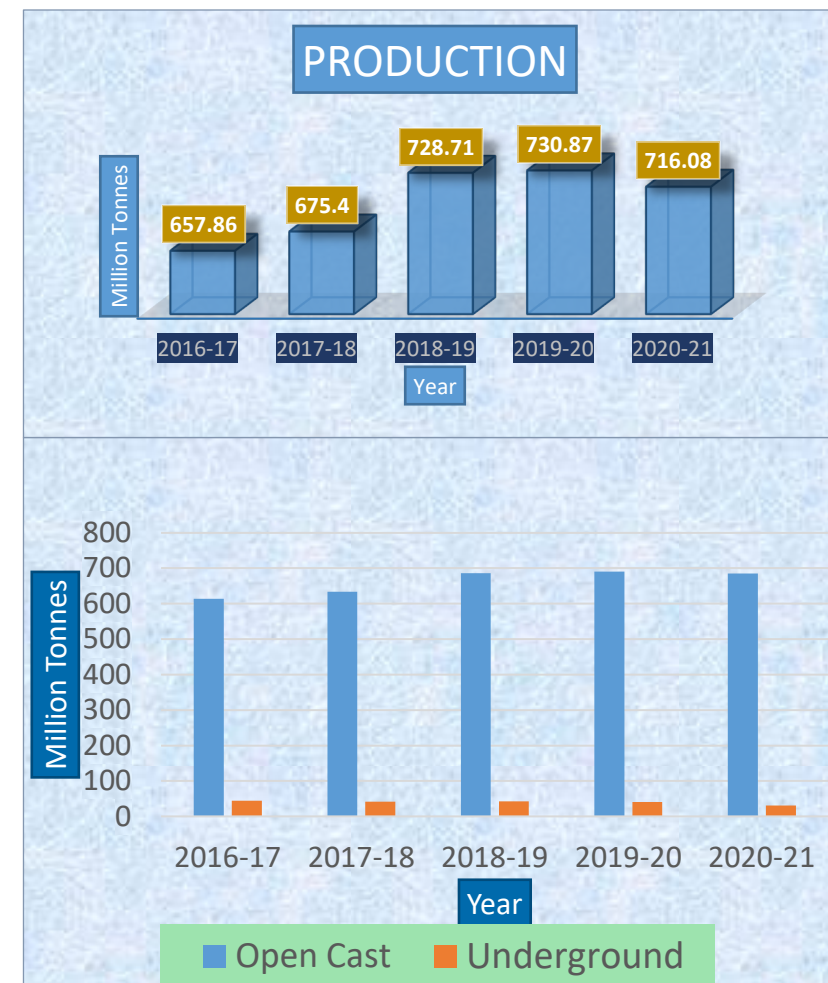


Source: CCO Report

Coal Production Trends over the Past Five Years

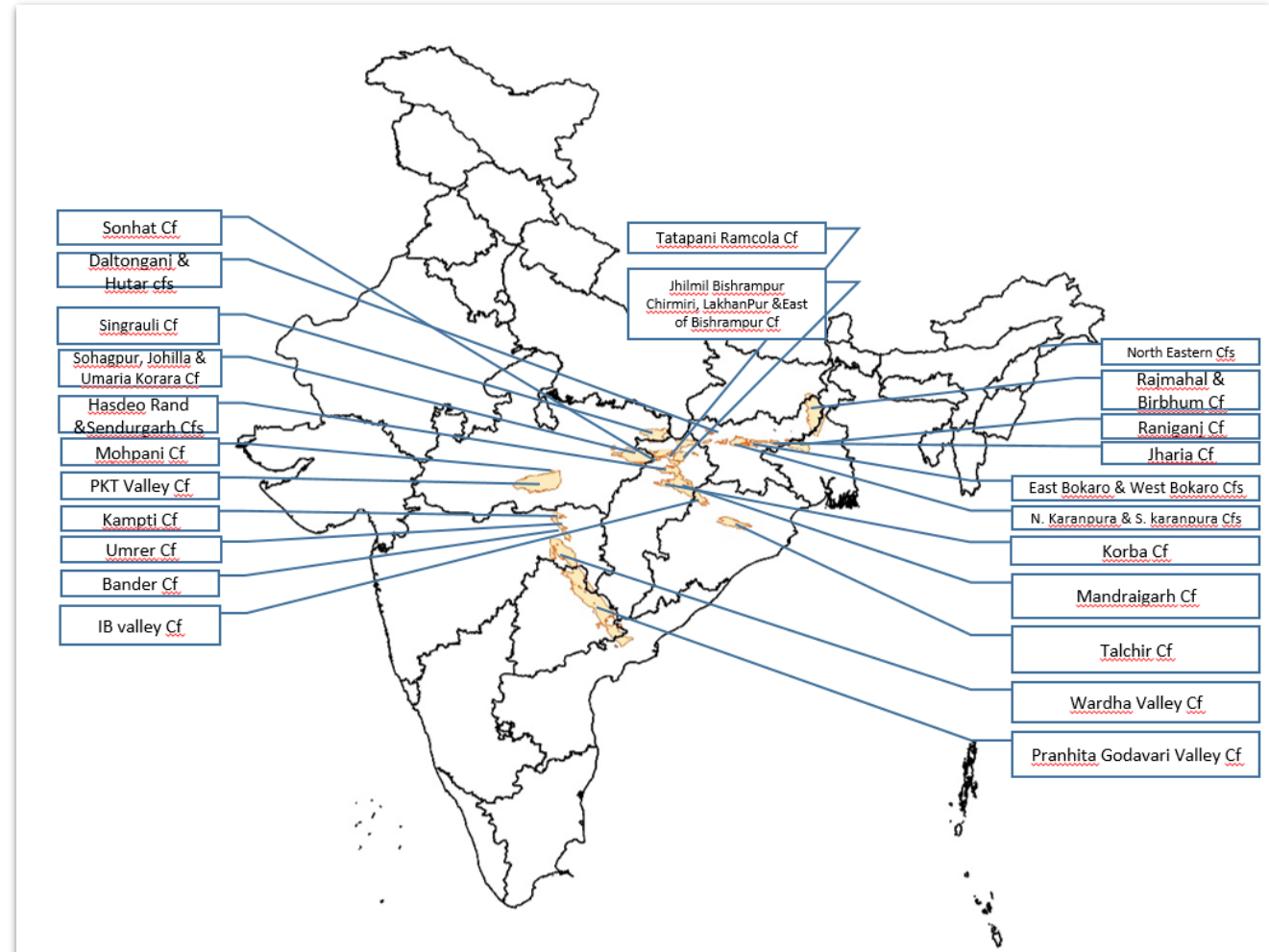
■ Coal Production (India):

Year	Open Cast (Mt)	Underground (Mt)	Total (Mt)	Total (Coal India Limited) (Mt)
2016-17	613.51	44.35	657.86	554.13
2017-18	633.56	41.83	675.40	567.36
2018-19	686.21	42.50	728.71	606.88
2019-20	690.39	40.48	730.87	602.12
2020-21	684.86	31.22	716.08	596.30



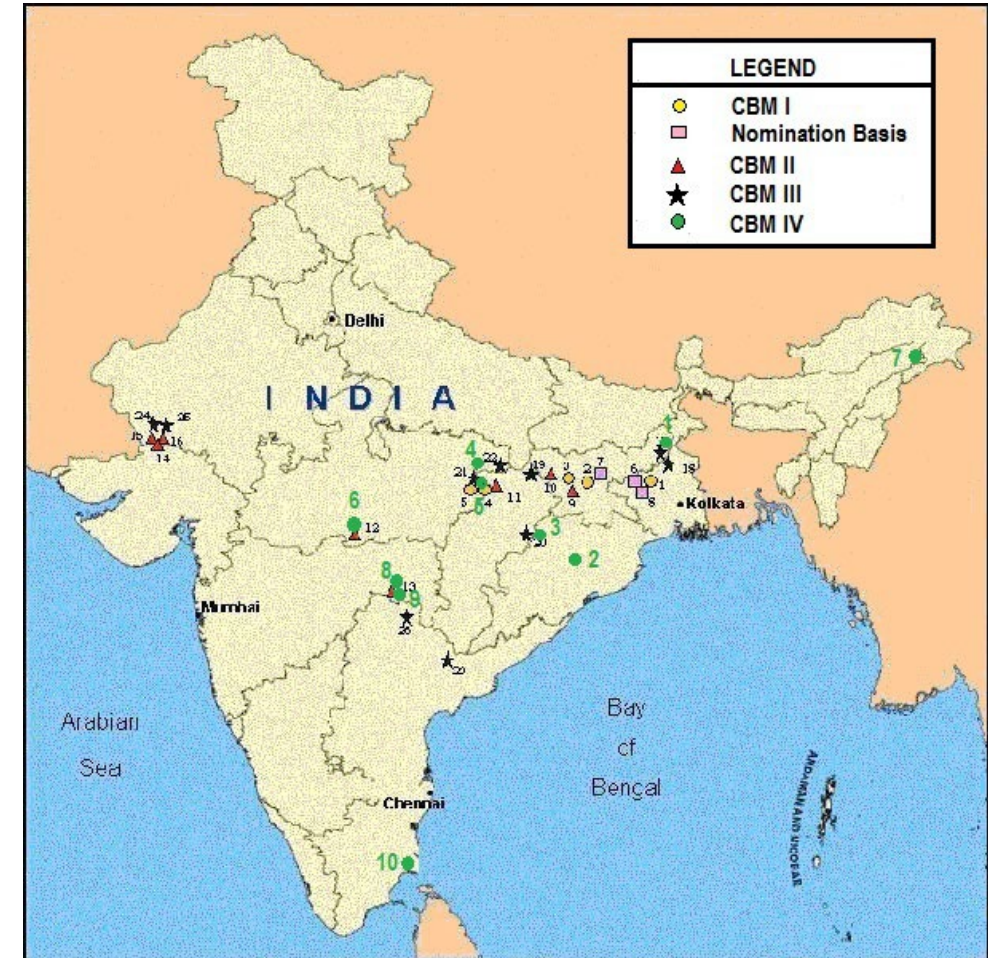
Coal Bearing Areas in India

Total No. of Coal bearing Basins	7	<ol style="list-style-type: none"> 1. Damodar Koyel valley 2. Deogarh 3. Rajmahal 4. Mahanadi valley 5. Son valley 6. Godavari 7. Assam-Arakan
No. of Cfs	62	43 Gondwana Cf, 19 Tertiary Cfs
Total Coalfield Area (Sq. Km)	66,916	Gondwana Coal: 65,573 Tertiary Coal : 1,343
Total Prognosticated Coal bearing area (Sq. Km)	32,761	Gondwana Cfs: 31,846 Tertiary Cfs : 915



CBM Development in India

- CBM Policy was formulated in 1997 in India.
- Directorate General of Hydrocarbons (DGH) is the nodal agency for CBM development in India under the Ministry of Petroleum & Natural Gas.
- Prognosticated Resource: 1.7 TCM.
- Established GIP: 297 BCM.
- Current production around 1.8 MMSCMD (Million Metric Standard Cubic Meter Per Day).
- Presently 5 Blocks are under Production and 3 Blocks are under Development Phase.

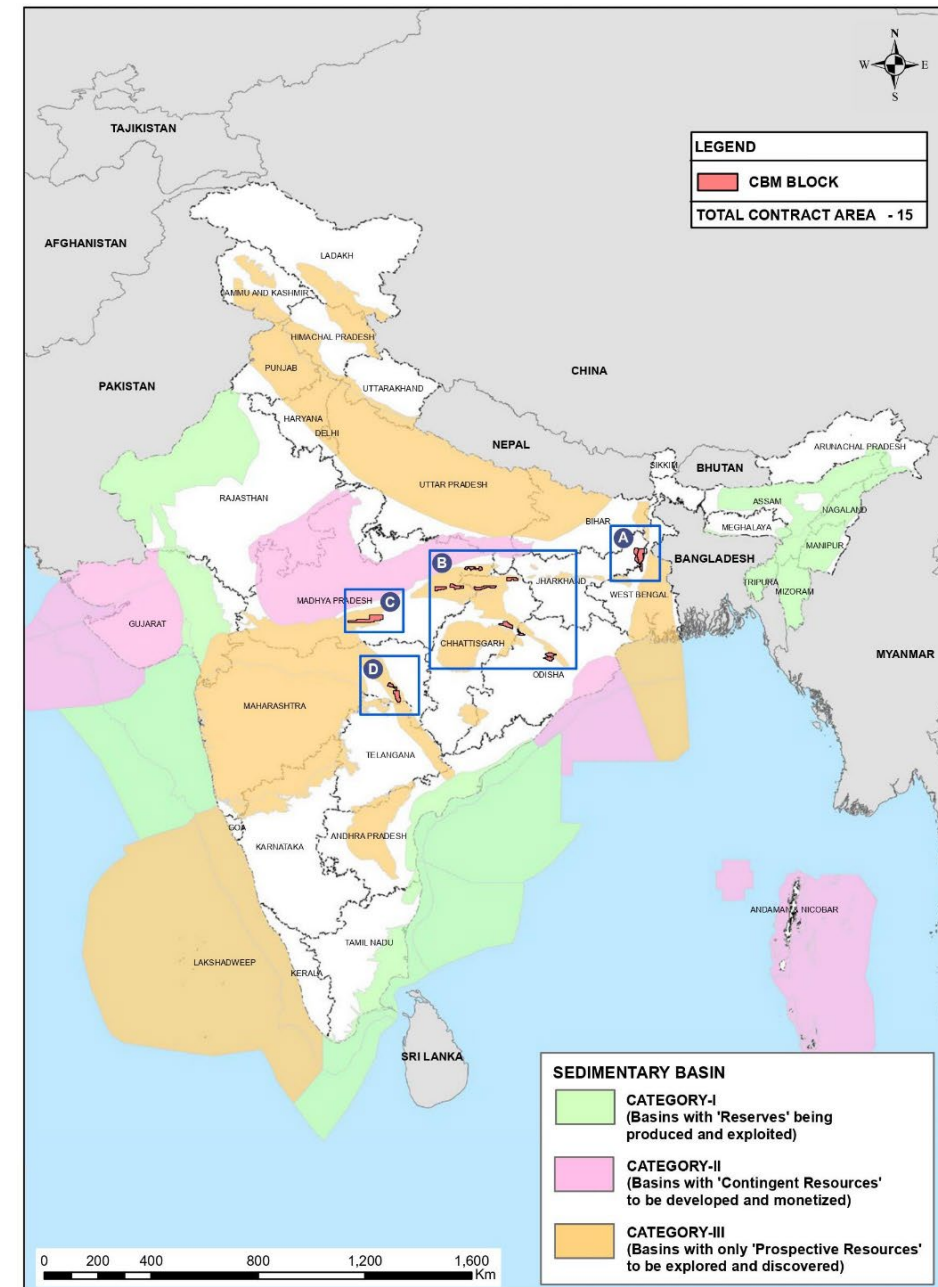


CBM Development in India

Special CBM Round 2021

- Under special CBM Round 2021, recently DGH (MoPN&G) has published Notice Inviting Offer (NIO) for Exploration & Development of 15 CBM Blocks.

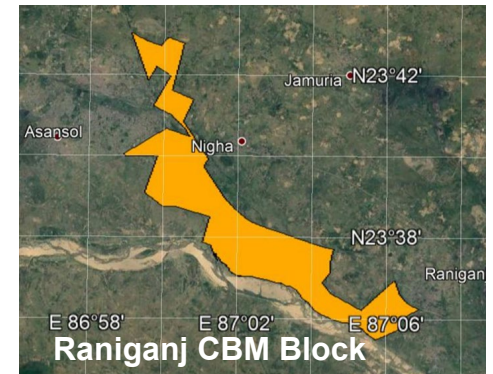
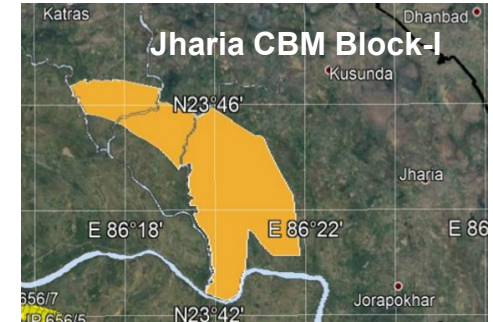
SL. NO.	BLOCK NAME	STATE	AREA (SQ.KM.)
1	BP-ONHP(CBM)-2021/1	Jharkhand	564
2	BP-ONHP(CBM)-2021/2	Jharkhand	991
3	BP-ONHP(CBM)-2021/3	West Bengal	197
4	PG-ONHP(CBM)-2021/1	Maharashtra	331
5	PG-ONHP(CBM)-2021/2	Maharashtra	709
6	SP-ONHP(CBM)-2021/1	Madhya Pradesh	1771
7	SR-ONHP(CBM)-2021/1	Madhya Pradesh	272
8	SR-ONHP(CBM)-2021/2	Madhya Pradesh	222
9	SR-ONHP(CBM)-2021/3	Chhattisgarh	408
10	SR-ONHP(CBM)-2021/4	Madhya Pradesh	418
11	SR-ONHP(CBM)-2021/5	Madhya Pradesh	515
12	SR-ONHP(CBM)-2021/6	Chhattisgarh	585
13	SR-ONHP(CBM)-2021/7	Chhattisgarh	590
14	SR-ONHP(CBM)-2021/8	Odisha	191
15	SR-ONHP(CBM)-2021/9	Odisha	693
Total Area			8458



CBM/CMM Development in CIL Leasehold Areas

CBM/CMM Projects:

- A CBM/CMM block (Jharia) is being developed by a selected developer in the Jharia Coalfield under BCCL leasehold area.
- Efforts have been made for the development of two more CBM blocks in the Raniganj Coalfield and Sohagpur Coalfield, respectively.
- Another CBM block in the East Bokaro Coalfield has been delineated.
- Efforts have been made three times for the Pre-Drainage of Methane from the Moonidih UG mine (BCCL) through suitable Technology Provider.



CBM/CMM Development in CIL Leasehold Areas

CBM/CMM Projects:

- CBM-specific studies are being carried out in suitable boreholes drilled under Promotional Regional Exploration (PRE) funding for creating data/resource base.
- CBM studies have been carried out in 111 boreholes of 20 CFs to date for CBM.
- As per preliminary studies, only the Jharia CF, Raniganj Cf, East Bokaro, West Bokaro, North Karanpura, and Sohagpur CFs have good CBM potential.
- Rest of the Cfs have gas content in the range of 0.1 – 3.0 m³/ton.

S. No.	Coalfield	No. of Boreholes taken up for PRE Studies	Gas Content Range (m ³ /t)	Depth Range of Sampling (m)
1	Raniganj	10	0.08-15.22	212.00-997.00
2	Jharia	15	0.11-23.89	167.000-1202.00
3	East Bokaro	3	0.73-9.62	107.00-473.00
4	West Bokaro	2	0.61-5.27	128.00-473.00
5	Ramgarh	2	0.20-0.58	83.00-383.00
6	North Karanpura	7	0.23-7.13	173.00-721.00
7	South Karanpura	5	0.10-0.64	56.00-1173.00
8	Rajmahal-Birbhum	3	0.10-1.08	262.00-533.00
9	Talcher	6	0.11-1.75	41.00-489.00
10	Ib-River	5	0.22-2.98	117.00-506.00
11	Mand-Raigarh	14	0.05-0.63	35.00-735.00
12	Korba	2	1.08-4.57	155.00-416.00
13	Tatapani-Ramkola	5	0.17-0.74	259.00-752.00
14	Sohagpur	9	0.41-3.50	202.00-745.00
15	Singrauli	6	0.11-2.31	217.00-487.00
16	Pench-Kanhan-Tawa-Mohpani	1	0.20-0.34	300.00-340.00
17	Kamptee-Katol-Bokhara	6	0.10-0.75	227.00-527.00
18	Bander-Nand	3	0.03-3.52	261.00-393.00
19	Wardha Valley	5	0.45-0.87	314.00-409.00
20	Goadavari Valley	2	1.37-2.97	215.00-386.00

Development of CBM/CMM: India Perspective

- In partial modification of Coal Mine Regulation Act (CMR), 2011, the Govt. of India issued revised CMR Act, 2017, which includes Chapter-XVI “Extraction of Methane from Working Coal Mines or Abandoned Mine”.
- The Policy framework for Early Monetization of CBM was issued in April 2017 by GoI which provides marketing and pricing freedom to sell CBM at Arm’s Length Price in domestic market.
- In partial modification of CBM Policy’1997, MoP&NG issued a revised notification on 8 May 2018 regarding consolidated terms & conditions for grant of exploration and exploitation rights to Coal India Limited (CIL) and its subsidiaries from coal bearing areas for which they possess mining lease for coal as it is deemed lease under the ORD Act and PNG Rules, and grant of PML for CBM development.
- Under Special CBM Bid Round-2021, in case of blocks falling in Category-II & III Basins, there will be no revenue sharing with Govt. except in the case of windfall gain.
- Exemption from custom duty will be provided on imports required for Petroleum Operations as per Govt policy.

Ways Ahead

- India is continuously making efforts to extract CMM/CBM from its coal mining areas to combat climate change issues.
- India is targeted to produce 1 BT of coal by 2024-25, pre-drainage of methane from gassy mines will contribute to achieve this target and enhance mine safety.
- Comprehensive study for assessing CBM potentiality to delineate future CBM blocks within CIL areas is underway at CMPDI.
- GAIL is laying gas-pipeline under URJA Ganga Project, which will provide infrastructure to evacuate CBM/CMM Produce for optimum utilization.

Ways Ahead

- CIL is diversifying its business into various sectors, such as solar power and new and renewable energy resources (Non-Conventional) to achieve country's vision of net zero emission.
- Keeping in view the technical challenges likely to be faced in CBM/CMM development within CIL Areas, transfer of technology from Global Methane Initiative (GMI) partner countries would be desired.
- India is taking all efforts to make coal mining sustainable to environmental, social and economic dimensions.

Thank You

धन्यवाद