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INDIAN METALS & MINING: READY TO CAPITALISE

The overall global economy is gradually moving ahead with steady growth forecasts. Growth in major industrial economies witnessed a recovery with their GDP growth rates expected to remain strong in 2018 and 2019. The US's GDP growth is forecast at 2.3% in 2019, slightly moderating thereafter. GDP in developing Asia has seen strong expansion to around 6% plus, due to both domestic and external demand. The EU region may slow down in the coming years. Growth in China which accelerated on account of robust consumption and still rising exports, is likely to moderate to 6.6% in 2018.

In India, growth is emerging from the recent slowdown in 2017 to 7.3% in FY 19, further rising to 7.6% in FY 20. However a fall in central government's capital expenditure in FY 18 and fall in investment poses a challenge for future growth.

Mining and metal companies are seeing a cyclical upside as demand improves and commodity prices see an uptick. While the positive sentiment is slowly reflected in rising production volumes and capacity utilization rates, investments in expansion activities have not yet been committed in a big way. For most metals and min-

erals, there is an encouraging sentiment underlying this growth with expectations it will last a while. Base metals and steel are expected to witness robust growth, but outlook for a few commodities such as coal is slightly negative due to the threat from alternate energy and green technologies.

Macro-issues

In case of India, the government is focused on tackling long-term macro issues such as tax reforms, creating an enabling infrastructure and resolving the NPA conundrum to enable the industry and stakeholders to plan forward for a brighter future. The broad economic indicators supported by a normal forecasted monsoon, point towards a sustained recovery in the urban and rural areas.

Despite robust IIP growth and a rising PMI for several months now, the Indian economy is still at the cross-roads with growth opportunity being challenged by oil prices, rising inflation, policy implementation issues and challenges on monetary front coupled with global economic protectionist measures widening the trade deficit. Managing these issues will determine the direction and pace of growth for all sectors in India and especially for the mining sector, which is still seen as struggling even after passing of the MMDR Act and enabling legislation.

Stakeholders need to be aware that growth in the mining and metals industry still lags behind the country's overall economic growth primarily due to infrastructure bottlenecks, land acquisition and environment challenges, governance issues and mining bans that are in force, financial distress and potential access to growth capital.

A healthier metals industry will set sight on growth and development. Most players will pursue brown field expansions at economic costs. This itself will kickstart a wave of capital expenditure with a multiplier effect on the economy.

India has immense growth potential for demand for metals. The supply side response will now improve with a healthier metals



industry - not only catering to domestic demand but also strengthen its position further as a formidable global player.

Data and sentiment point to surge in demand: The Indian economy is expected to maintain its high growth trajectory, with rising urbanisation, a flourishing service sector and concrete steps to address infrastructure bottlenecks. Further, rapid growth in user industries such as infrastructure, power, construction and automobiles and policy

measures to safeguard Indian players is expected to drive growth in the Indian mining and metals industry. The government planned to spend US\$1 trillion on infrastructure development during the Twelfth Five Year Plan. This, coupled with favourable growth from end user industries and infrastructure growth, are expected to translate into sustained demand growth for steel, zinc, aluminum and copper for a long period of time. Key trends, current events around the world have been analysed as relevant for the key metals and minerals. The risks, challenges and implications for the Indian players and the opportunities that lie ahead in the Indian context have been highlighted.

Source: Ernst&Young, Indian Chamber of Commerce

Steel

Likely to surpass Japan as second largest producer

India's steel production grew 6.2 per cent YoY to 101mt in 2017 in line with ongoing expansion in steelmaking capacities. National Steel Policy 2017 has projected steel production to reach 255mt by 2030-31, implying a 7.4 per cent annual average growth. Considering the projected expansion plans of Indian companies and project implementation time, this target might be difficult to achieve. However, in the short term, production and capacities will grow and India is expected to surpass Japan to become the

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second largest producer of steel in 2018.

During 2017, steel consumption grew by around 5.2 per cent. Lag in consumption growth was mainly due to implementation of economic policies like demonetisation and GST, which impacted demand for short period of time. Going forward, steel consumption is expected to grow by an average of 6.3 per cent to reach 140mt by 2023, implying steel intensity to increase to 97kgs per capita as compared to 73kgs in 2017. Rapid urban population growth, substantial government investment in infrastructure, expansion of housing and manufacturing sector will aid steel consumption growth in India.

Challenges

Implementation hurdles slow down progress and adversely impact investment in steel projects: Difficulty in land acquisition for green field projects has been a primary hindrance in new steel projects in India. Examples include POSCO and Arcelor Mittal. Besides land acquisition, obtaining mining leases, approvals, transfer of title, etc. are still cumbersome. The government is working towards streamlining these issues. Government plans to set aside 2.68 million hectares of land across eight states which will provide readymade land parcels for steel plants willing to invest or expand capacities in India.

Access to infrastructure: Infrastructure and logistics, availability and costs also hinder competitiveness of the iron ore and steel industry. As per National Steel policy projections of 300mt capacity base in 2030-31, iron ore requirement will be around 437mt, coking coal 161mt and non-coking coal 136mt to achieve production of 255mt of crude steel. At present there are significant deficiencies in infrastructure to support the material movement of this volume.

Raw material availability: Indian steel industry continues to struggle with uncertainties owing to availability and consistent supply of coking coal and iron ore.

Competition from global trade diversions: India may be a destination for imported steel flows diverted from global trade, consequent to trade protection measures adopted by many importing countries. Particularly, steel imports from South Korea and Japan may surge due to the US imposition of a 25 per cent duty. In the current scenario where steel demand is slowing down in China and exports to the US are restricted, Chinese exports may seek to re-enter a growing Indian market, again directly or indirectly.

Opportunities

Infrastructure growth: Over the next 25 years, India will require around US\$4.5 trillion for infrastructure development in the country. Investment will be required across all sectors ranging from road, airports, shipping, power, logistics and telecom. Steel

consumption for housing construction is also likely to rise due to the "housing for all" initiative.

India is emerging as a global manufacturing hub: Manufacturing contributes around 16 per cent of the country's GDP. Over the year, India's low-cost skilled manpower has attracted a number of manufacturing companies from various industries including petroleum products, machinery and equipment, textiles and leather products. Several companies in these industries have announced expansion plans (including building new manufacturing plants/facilities) to address the growing demand, leading to a higher intake of steel.

Growth in the automobile industry: The automobile industry in India is the world's fourth largest. Higher manufacturing of auto grade steel shall help in import substitution, pushing demand for domestic steel.

Increased capacity expansions and investments in the oil and gas and power industries: Pipeline network for transporting petroleum products is on an expansion path as all major oil companies are looking to increase long distance pipeline for petroleum products in line with the government's aim to increase the pipeline network to around 32,000 km by 2030. Strong domestic growth, coupled with an anticipated recovery in export demand, is expected to drive steel pipe production and steel requirement for infrastructure development in refineries.

Coal

Output touches 676.5mt

India is expected to become the second largest coal producer by 2020 after overtaking the US and Australia. Commercial energy consumption in India has grown by ~700 per cent in the last four decades.

A growing population, expanding economy and urbanisation will continue to drive energy usage with coal being the dominant source in the fuel mix. Government has been focusing on effectively exploiting its 315bt of domestic coal reserves, to achieve an output of 1btpa by 2020 and cut non-coking coal imports to zero.

India's coal output grew 4 per cent YoY to 676.5mt in FY18 . There are ongoing reforms to expand domestic coal output including easing of policies and regulatory processes to acquire land, obtain environmental clearances and procure coal blocks etc., along with a focus on improving infrastructure, to optimise operations and enhance productivity. India approved a plan permitting private companies to bid for coal mines for commercial production, deregulating the coal sector.

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This reform is expected to drive productivity, increase cash inflows to the sector and streamline irregularities in coal supplies and linkages. However, as of now, the consultation with and acceptances from current stakeholders in the incumbent monopolistic situation are still not fully secured. Measures to promote sector output.

Focus on enhancing productivity.

Improving supply availability.

Minimising logistical issues.

Aluminium

Demand to grow faster than GDP

India was the fourth largest aluminum producer and consumer in the world in 2017. Aluminum production grew 17 per cent YoY to 3.2mt in 2017 while consumption grew 9 per cent YoY to 2.4mt. Indian aluminum demand will essentially come from the automotive, construction and packaging sectors. The long-term growth prospects in the construction industry are driven by the country's sizable infrastructure deficit and the government's development plans, which encompass projects ranging from rail and power networks to smart-city infrastructure.

Aluminum exports from India have recorded a sharp rise of 34 per cent YOY during April-January, 2017-18 on expanding domestic production and fall in domestic consumption.

Opportunities

The growth of the electric vehicle (EV) market will have positive consequences for aluminum producers. The Aluminium Association estimates aluminum's consumption will rise by 50kg/vehicle over the next ten years. Apart from current applications - such as in the vehicle's chassis, body and wheels - aluminum will be used in the structures (cases) that carry electric batteries in EVs.

Key constraints:

Steel vs aluminum: Advanced High Strength Steel will most likely maintain its dominance in smaller and lighter vehicles, while aluminum will be the winner in bigger vehicles as it's cost effective. Tesla, for instance, launched its smallest and cheapest model, Tesla Model 3, which is a steel intensive vehicle, after two aluminum intensive models.

Copper

After rallying ~30 per cent in 2017, copper prices dropped 7.3 per cent within the first quarter of 2018 to US\$6,680/t31.

Increase in exchange inventories, potential impact of US-China trade tension and weaker Chinese demand owing to slowdown in property sector activity exerted downward pressure on prices. There continues to remain uncertainty on price movement as supply disruptions from upcoming wage contract negotiations and impact of geopolitical factors may drive prices upwards, whereas incremental supply from new projects and possibility of resumption of operations in Zambia and the Democratic Republic of Congo, is likely to cap price growth.

India's refined copper supply in 2018, will be adversely impacted by the Tamil Nadu state government's decision to shut down Vedanta Sterlite's copper plant at Tuticorin, which accounted for 48 per cent of the country's output. This move came after local protests against the environmental clearance for doubling copper-refining capacity to 800kt led to unfortunate human casualties. As a result, India's refined copper output is now forecast to drop to 540kt in FY19, from 843kt in FY18, which may require the country to import copper.

While Hindalco will see an increased demand, it already operates at 85 per cent capacity utilisation, leaving little scope to ramp up output. With the Indian copper market set to grow at 8-10 per cent in 2019-20, driven by upcoming infrastructure projects and increased rural and railway electrification, there is a simultaneous focus on ramping up mine supply. Hindustan copper is in the process of raising mine capacity from 3.2mtpa to 12mtpa over the next four years, across its captive mines at Madhya Pradesh and Jharkhand.

Given India's mining production is only 0.2 per cent of the global output, there exists a massive opportunity for greenfield exploration and brownfield expansion.

Iron ore

Since 2017 the iron ore market has been characterised by price volatility and the trend will continue in the near term. While growing supply and easing demand have been putting a pressure on prices, China's ongoing steel capacity reduction plan is boosting steel and consequently iron ore prices.

In FY18, the Indian iron ore output grew 9 per cent YoY to exceed 200mt for the first time since FY11, on the back of increased production in Orissa and Karnataka. Orissa maintained a steady increase in output despite a ruling which shut down capacity of around 20mtpa. The Supreme Court imposed a fine of Rs 18,000 crore on miners for illegal mining, the non-payment of which led

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to mine closures and operations resumed only after penalty payment. Karnataka's production rise, on the other hand, was as a result of the SC's relaxations of the mine output cap, increasing it from 30mt to 35mt, on iron ore excavations for Category A and B mines.

Supply growth will, however, slow down after the cancellation of 88 renewed mining leases in Goa, halting iron ore extraction activities in the state. This move comes after the ban to curb illegal mining in October 2012, which was partially lifted in April

2014. Given that most of Goa's production is exported, iron ore exports declined to 15mt in FY18, from 24mt in FY17. Aside from the impact of the ban, exports will remain subdued as global trading environment is not incentivising low-grade iron ore sales. Considering India's exports majorly comprise of low grade iron ore, it is unlikely that an increase in exports will have a major impact on global markets.

Source: Ernst & Young, Indian Chamber of Commerce

MINERAL-RICH INDIA STILL IMPORTS THRICE THE VALUE OF ITS LOCAL PRODUCTION

Trend has shown no sign of abatement since 2013-14; Gold and diamond make up 80% of value of imported minerals

Despite being a repository of an array of minerals, India importing over three times the value of its indigenous production. And, the disturbing trend has shown no sign of abatement since 2013-14.

At the end of 2016-17, the country produced major metallic and non-metallic minerals valued at Rs 474.31 billion. Imports, however, were of the order of Rs 3,458.11 billion. Gold and diamond topped the import chart, accounting for more than 80 per cent of the value of imported minerals. The country also imports ores and concentrates of copper, lead, nickel and zinc and the Platinum Group of Metals.

Provisional figures of the Union mines ministry suggest the country's mineral production, both major and minor, was valued at Rs 1.18 trillion in 2017-18. Though the ministry is yet to collate data on value of minerals imported, an industry source said it could touch Rs 3.5 trillion, thrice the value of the domestic production.

Alongside agriculture and manufacturing, mining is considered as one of the key economic activities due to its multiplier effect on employment and local economy, especially the tribal infested areas. Ironical-

Product) was only 1.36 per cent in 2016-17. Though the country is endowed with rich mineral reserves, much of the wealth below the ground still remains untapped. This has ensued a lopsided scene in mining where imports trounce domestic output in value.

Federation of Indian Mineral Industries (Fimi) blames the situation to severe constraints in exploration, an activity considered to be the lifeline of mining.

"Due to the unhelpful exploration policy and the activity being limited to GSI (Geological Survey of India) and MECL (Mineral Exploration Corporation Ltd), the focus has been on tapping surface deposits like iron ore, bauxite, limestone, manganese and chromite. There has not been enough focus on deep seated minerals, which has resulted in more imports," said R K Sharma, secretary general, Fimi.

The few exploration stories in minerals where the country lacks self-sufficiency -- lead & zinc in Udaipur (Rajasthan), copper in Malanjkhand (Madhya Pradesh) and the Hutti & Bharat gold mines in Karnataka have been chance discoveries based on old working, Sharma felt.

In India, exploration is still a state sponsored activity. Both GSI and MECL undertake exploratory work using taxpayers' money. This is opposed to the practice in leading resource rich countries like Australia, Canada, Brazil, Chile and South Africa. In these countries, private entities better known as junior exploration companies take up the risky venture of mineral exploration by raising funds from venture capital. Such companies make profit out of exploration business by selling mineral concessions to the bigger miners.

Also, exploration being the cornerstone of mining, the tepid spending on the activity in India does not spur unearthing of deep seated deposits. On every square km, the country's exploration spend is a measly \$9 as against \$5580 in Australia and \$5310

Year	Value of Major Minerals Produced	Value of Minerals Imported
2013-14	499.06	3,364.51
2014-15	444.05	3,364.51
2015-16	411.93	3,668.38
2016-17	474.31	3,458.11
2017-18*	607.30	3,500

* Estimated; Values in billion rupees; Source: Mines ministry annual report, Ministry of Commerce & Industry

STEEP TAXES, LOW EXPLORATION SPENDS ERODING INDIA'S MINING ATTRACTIVENESS

For 2016, the institute surveyed 104 jurisdictions where India was ranked 97th, joining the league of unattractive mining nations like Argentina, Venezuela, Afghanistan, Zimbabwe and Mozambique India is witnessing a consistent slide in rankings

in the Global Mining Attractiveness Index. From sinking to the bottom 10 jurisdictions in 2016, the country was out of the

Continued on Page 5...

reckoning in the latest survey for 2017 conducted by Canada-based Fraser Institute.

For 2016, the institute surveyed 104 jurisdictions where India was ranked 97th, joining the league of unattractive mining nations like Argentina, Venezuela, Afghanistan, Zimbabwe and Mozambique. In the 2017 survey, India was out of contention as the number of respondents were less than five. The attractiveness of a mining jurisdiction is rated on factors like existing regulations, taxation levels, quality of infrastructure and the overall policy climate.

Federation of Indian Mineral Industries (Fimi) blames the country's tepid rankings on its unfavourable policies and high taxation rates including new levies introduced post the enactment of the amended Mines and Minerals- Development & Regulation Act (MMDR) Act, 2015. Aside from royalty, miners need to contribute to District Mineral Foundation (DMF) and National Mineral Exploration Trust (NMET) and pay GST at the rate of 18 per cent of royalty.

"All these stipulations are enough to make mining unviable. The initial euphoria in coal waned after some time and in case of non-coal, out of 78 mineral blocks offered, auctions of only 33 could be achieved. The inputs are enough for Fraser Institute to put India among the 10 least attractive jurisdictions in its survey of mining companies", said R K Sharma, secretary general, Fimi. With the country's exploration regime almost nationalised after the formation of NMET which will meet the exploration expenses of PSUs, Fimi feels in such a backdrop, India will continue to be one of the least explored countries in the world. Though the new National Mineral Exploration Policy 2016 solicits private sector participation for deep seated minerals, such a policy may encourage contractual drilling in the name of exploration, Sharma said.

India's exploration expenditure pales into insignificance when compared with other resource rich countries such as Canada and Australia. Canada accounts for 14 per cent of the global mining exploration expenses, Australia ranks next with 13 per cent share. India's share is a minuscule two per cent. For each square km of a potential mining lease, Australia spends \$5580 while Canada incurs \$5310. By contrast, India spends only \$9 per square km.

Unlike India, the taxpayers' money is not used elsewhere on mineral exploration, a risky business venture. The governments of mineral rich countries like US, Canada, Australia, Brazil, South Africa, Chile and Mexico create a congenial ecosystem for exploration by providing the necessary data to the private companies. In these countries, the privately managed entities known as junior exploration companies undertake detailed exploratory work and enjoy leeway to sell or transfer mineral concessions. The junior exploration companies take the lead in greenfield exploration by raising funds from venture capital in stock exchanges. If India were to make exploration an attractive business for the private sector, the policies need to be aligned with the practices in other resource rich nations, Fimi felt.

The other factor denting India's 'Mining Attractiveness' is the steep taxation rate. Mining is the most taxed activity in India compared to anywhere in the world. The effective tax rate (ETR) on mines granted before the new MMDR Act, 2015 is 64 per cent while for mines won through auctions, it stands at 60 per cent. On a comparative note, the ETR for Mongolia at 31.3 per cent is half of India's. Other mineral rich nations also boast of attractive ETR rates- Canada (34 per cent), Chile (37.6 per cent), Indonesia (38.1 per cent), Australia (39.7 per cent) and South Africa (39.7 per cent). Countries competing for mineral sector investments usually offer ETRs in the range of 40-50 per cent.

GOA GOVERNMENT PINS HOPE ON PM MODI TO RESOLVE MINING CRISIS

The mining industry remained shut for nearly 19 months from October 2012 to April 2014, when the apex court finally allowed miners to operate while imposing several riders.

Goa government has pinned its hope on Prime Minister Narendra Modi to resolve the mining crisis in the state and is confident that he will find some solution for it, Health Minister Vishwajit Rane said on Monday. He also said that the opposition Congress should come up with some "constructive solutions" to revive the iron ore mining operations in the state, which gets a large amount of revenue from the sector.

"We are confident that the prime minister can resolve the mining issue in Goa. We should not think that Modi is ignoring the issue. He is well aware of the situation in Goa," Health Minister Vishwajit Rane said, responding to a question. He was addressing a press conference to highlight achievements of the Narendra Modi-led government at the Centre in the last four years.

Rane said a state government delegation had recently visited New Delhi and apprised officials in the Prime Minister's

Office with the issues plaguing the mining industry in Goa. "Only the prime minister will be able to find a solution to this issue," the minister said.

He accused the opposition Congress of trying to instigate the public against the BJP-led government over the issue.

"The Congress is not coming up with any constructive suggestions. They should give in writing to the Chief Minister's Office how the crisis can be resolved. We all know that mining is a crucial economic activity in the state," Rane said.

He lauded Chief Minister Manohar Parrikar for initiating steps to revive the industry when mining had stopped previously in 2012.

"Parrikar is the only chief minister who addressed the issue of mining dependents. No other government thought on these lines and there was never a suggestion from the opposition," he said.

"It was Parrikar's initiative that helped the mining dependents to get financial assistance. He has been trying to do his best," Rane added.

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The mining industry in Goa came to a standstill in March this year after the Supreme Court set aside second renewal of iron ore mining leases granted to 88 companies in 2015. This was the second big blow to the industry, which had faced closure in 2012 too, following the SC directives.

The court had then taken cognisance of the M B Shah

commission report, which claimed there was illegal mining worth Rs 35,000 crore in the state between 2005 and 2012.

The industry remained shut for nearly 19 months from October 2012 to April 2014, when the apex court finally allowed miners to operate while imposing several riders.

MINING INVESTMENT INDIA CONFERENCE IN NEW DELHI

29 June 2018 : Spotlight on India's mining potential at 2nd edition of Mining Investment India Conference in New Delhi Mining Investment India Conference

(www.mininginvestmentindia.com) is set to return to New Delhi from 25-26 July 2018. This is a strategic mining conference that seeks to connect miners, government officials, investors and service providers for new business opportunities and will focus on the role of India within the global mining community. What happened in 2017 More than 80 major mining industry and government leaders from India and beyond attended the inaugural Mining Investment India Conference, held at Sheraton New Delhi. Sponsors at the 2017 event included Mesco Steel and various key mining stakeholders from the government, mining associations and companies such as Coal India were represented. Feedback from the attendees was positive with the right profile of senior level management from the whole mining industry spectrum represented, which resulted in enthusiastic and insightful discussions throughout the 2 days. What to expect for the 2018 edition For 2018, sponsors such as Accenture India, a major global consultancy firm, have already come onboard to support Mining Investment India. Confirmed speakers thus far include a range of miners and investors such as:

- Akshyadeep Mathur, Secretary General, Federation of Min-



- Partha Banerjee, Principal Geologist, Tata Steel
- Kamlesh Thakur, Chairman, Prime Investrade
- Rohit Kakkar, MD, Eternus Capital

Topics that will be addressed at the conference include mining finance and capital allocation, economic growth and sustainability, coal and other renewables and commodities trends. Global locations of Mining Investment Conferences Mining Investment India is part of the global Mining Investment Conference Series which spans across Asia, North and Latin America, Europe and Africa. Within Asia, besides India, Mining Investment Conferences are also held in Singapore and Beijing, China. Attendees from India

have also spoken and exhibited at these conferences held in Singapore, UK, Canada and Nigeria to share their perspectives and insights on the opportunities within the Indian mining industry. In addition, for 2018, we are also launching a new Mining Tech conference Series to focus on the role of technology in mining. Current locations for these MiningTech conferences include Chile, Australia and South Africa.

The full calendar of Mining Investment and MiningTech Conferences can be found at www.spireevents.com ISSUED BY: SPIRE EVENTS SINGAPORE For media enquiries, please contact: Mr Ng Chin Chye Director (Marketing & Public Relations) Tel: +65 6717 6014 Email: chinchye.ng@spire-events.com

INDIA EYES UNEXPLOITED COAL DEPOSITS IN INDONESIAN PAPUA

However, rights activists fear the launch of a new mining industry could deepen tensions in a region where existing extractive projects have damaged the environment and inflamed a long-running armed conflict.

India is looking to get in on the ground floor of coal mining in previously unexploited deposits in Indonesian Papua.

The details of an Indian mining project in Papua are still being negotiated – what India will get in return for financing surveys is said to be a sticking point – but the Indonesian government is keen to explore energy resources in the country's easternmost provinces.

Rights activists fear the launch of a new mining industry could

deepen tensions in a region where existing extractive projects have damaged the environment and inflamed a long-running armed conflict.

As it seeks to diversify its sources of fuel, India is looking to get in on the ground floor of coal mining in previously unexploited deposits in Indonesian Papua.

In exchange for technical support and financing for geological surveys, officials say India is pushing for special privileges, including no-bid contracts on any resulting concessions – a prospect that could run afoul of Indonesia's anti-corruption laws.

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The details of an Indian mining project in Papua are still being negotiated, but Indonesia’s energy ministry welcomes the prospect as part of a greater drive to explore energy resources in the country’s easternmost provinces. In the future, the ministry hopes mining for coking coal will support the domestic steel industry, while also bringing economic benefits to locals.

Rights activists, however, fear the launch of a new mining industry could deepen tensions in a region where existing extractive projects have damaged the environment and inflamed a long-running armed conflict.



New Guinea Island is home to the world’s third-largest rainforest, but is facing intense pressure due to the logging, palm oil and mining industries. Credit:Reuters/Sigit Pamungkas

Indonesia’s new coal frontier

When Indian Prime Minister Narendra Modi visited Jakarta last month, joint efforts to extract and process Indonesia’s fossil fuels, including coal, were on the agenda.

India’s interest in investing in a new coking coal mining concession in Papua can be traced 2017, when officials from the Central Mine Planning & Design Institute (CMPDI) and Central Institute of Mining and Fuel Research (CIMFR), both Indian government institutes, met with Indonesia’s Ministry of Energy and Mineral Resources in Jakarta.

The bilateral plan was announced by then-ministry spokesman Sujatmiko after the first India Indonesia Energy Forum held in Jakarta in April 2017. “The focus is on new territories in Papua,” he said.

To follow up, the Ministry of Energy and Mineral Resources sent a team to India in early May. The current energy ministry spokesman, Agung Pribadi, who was part of the delegation, told Mongabaythat officials from state-owned energy

giant Pertamina, major coal miner PT Adaro Energy, and state-owned electricity firm PLN also joined the meeting.

The Indonesian team presented research outlining the potential for mining high-caloric content coal in West Papua province, and lower-caloric coal in Papua province.

According to the team’s report, only 9.3 million tonnes of reserves have so far been identified. By contrast, Indonesia as a whole expects to export 371 million tonnes of coal this year.

However, the true extent of coal deposits could be larger, said Rita Susilawati, who prepared the report presented during the meeting and is head of coal at the ministry’s Mineral, Coal and Geothermal Resources Centre. “Some areas in Papua are hard to reach due to the lack of infrastructure. We were unable to continue the research,” she explained.

During the visit, Indian and Indonesian officials discussed conducting a geological survey in Papua, Agung said. India would finance the survey using its national budget. With Indonesian President Joko Widodo prioritizing infrastructure investment, the energy ministry has few resources to conduct such surveys.

Indonesia also anticipates benefitting and learning from India’s experience in processing coking coal.

In exchange, India expected privileges from the Indonesian government, including the right to secure the project without a bidding process, Agung said.

Indonesia denied the request, and the talks were put on hold. Approving it would have been too risky, Agung said, since the bidding process is regulated in Indonesia. “We recommend they follow the bidding process or cooperate with a state-owned enterprise,” Agung said. India’s ministry of coal did not respond to an emailed request for comment.

Possible loopholes



A panorama of the Grasberg gold and copper mine in Papua province, which activists point to as a case study of how extractive projects can go wrong. Credit: Richard Jones/Wikimedia Commons

Energy and mining law expert Bisman Bakhtiar said there was still a chance India could get the rights to develop any resulting coal concessions without having to go through an open bidding process.

“It can proceed under the G-to-G (government-to-government) scheme by signing a bilateral agreement,” he said.

This form of agreement would supersede the ministerial regulations requiring competitive bidding, Bisman explained, although he said any such agreements should emphasize that any projects must be carried out according to local laws.

There is precedent in Indonesia for G-to-G schemes bypassing

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the open bidding process, Bisman said. For example, multiple projects have been carried out on the basis of cooperation agreements with the World Bank and Australia. In another instance, Indonesian media mogul Surya Paloh imported crude oil from Angola via a bilateral cooperation agreement with Angola's state-owned oil company Sonangol.

A draft law currently being discussed in the House of Representatives could also smooth the path for India. It says that if there is an agreement between Indonesia and a foreign government to conduct geological studies, the country involved will get priority for the contract.

However, this would still require the country to meet market prices. "We called it 'right to match.' If there are other parties who offer lower prices, then they should follow that price," Bisman said.

Another option would be for India to appoint one of its local companies to work with Indonesian private sector giant Adaro or state-owned coal miner PT Bukit Asam. Such a deal could be conducted as a business-to-business (B-to-B) agreement and would be legal according to Indonesia's Energy Law.

Or, Indonesia could assign a state-owned firm like Bukit Asam to work with India based on a memorandum of understanding (MOU) signed by both countries.

Risk factors

"But all these options have a potential risk," Agung said. "They can be categorised as collusion by the Corruption Eradication Commission (KPK)." He said a conventional bidding process should be prioritised.

Bisman said India needed to consider other risks, such as the social and political situation in Papua. The region is home to an armed separatist movement and has faced decades of conflict around the world's largest and most profitable gold and copper mine, Grasberg, owned by US-based Freeport McMoRan. Despite the presence of the mine, Papua remains Indonesia's poorest province, with some of the worst literacy and infant mortality rates in Asia. Indonesia's National Commission on Human Rights (Komnas HAM), a state-funded body, has characterised Freeport's concession as a "land grab," for which the original stewards of the land, the Amungme and Kamoro indigenous people, were never properly consulted or compensated.

The Indonesian energy ministry's own research says that any project must take into account the impact on Papua's indigenous peoples, and must factor in specific local concepts of land ownership, leadership and livelihood.

Franky Samperante, executive director of rights advocacy group Yayasan Pusaka said he was worried about the plan. "It is way too risky," he said, pointing to the social and environmental fallout of the Grasberg mine.

"There should be communication between the mining company and indigenous Papuans," he said, warning Jakarta to carefully calculate the social, environmental and national security impacts.

Local indigenous people need to be meaningfully involved in the decision-making process, he said, especially since the mining would occur in and near forests where indigenous people live and gather and hunt their food.

GOVERNMENT RELEASES JHARKHAND IRON ORE MINING PLAN, PROPOSES NO-GO ZONES

The Environment ministry has come out with a plan on 'sustainable iron ore mining' in Jharkhand's Saranda and Chaibasa, West Singhbhum district, and has proposed go and no-go zones, biodiversity hotspots and conservation areas to protect the region's rich Sal forest and over 200 elephants. It has also accepted an annual cap of 64 million tonnes per annum in Saranda-Chaibasa, based on the expert report of Indian Council of Forestry Research and Education.

Only those mining leases falling in the eastern boundary of Saranda have been considered for inclusion in two mining zones and mining leases falling in ten villages across Chaibasa will be considered. The remaining leases, the ministry's plan said, will be closed for mining and kept in abeyance for now. Centre will review their status when mineral deposits in the permitted zones are almost exhausted and appropriate technology is available for their extraction to prevent damage to forest



and wildlife.

DNA was the first to report on the draft of the mining plan in April. The report had brought to light that if this plan is finalised, it will affect big-ticket mining projects of giants such as Steel Authority of India (SAIL), a public sector undertaking, Vedanta and JSW Steel Ltd, all of which fall in Ankua forest. In the plan brought out on Friday, the ministry has retained Ankua forest as a no-go mining zone. The Chiria mine in Ankua forest block has India's single largest iron ore deposit, estimated to be about two billion tonnes.

However, the ministry has kept the door open for the big-ticket projects falling in no-go zones. It stated that mining leases in no-go zones and conservation areas "shall be kept in abeyance till the Ministry of Environment, Forest and Climate Change takes a final

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view on the environmental sustainability of mining in the region after further examination." The ministry, though, has allowed SAIL to continue work on Dhobil mines in the no-go zone in an already broken up area.

As per the ministry's plan, out of 79 forest compartments in Saranda, mining will be permitted in 33 forest compartments across the Ghatkuri, Samta, Karampada, Tirilposi, Thalkobad and Kumdi ranges. In Chaibasa, ten out of 18 villages have been considered for mining. The exact forest area allowed to be mined was not clear as per the ministry's plan. The Ministry has proposed two mining zones, two conservation areas and three critical biodiversity hotspots in the region.

Environment ministry officials were not available for comment.

Before commencement of work, the lease holders would have to obtain forest clearance and environmental clearance from Centre separately. In an important addition to the final plan, the ministry has said that leases smaller than 25 hectares would be cancelled.

Spread over an area of 820 sq km, Saranda forest is home to one of the best Sal forests in the world because of its fast regeneration capacity. It is also home to Singhbhum elephant

reserve, the country's first, and sustained around ten tigers until a few decades ago.

In 2014, the Centre had halted clearances for all fresh projects in Saranda region and had asked Jharkhand government to assess the impact of mining in the region. This was done in light of the Justice MB Shah enquiry commission report on illegal mining of iron ore and manganese in Jharkhand.

In the same year, Centre also began the process of identifying inviolate areas in the forest and commissioned two studies; one to fix an annual mining cap and the other for a wildlife management plan. Based on these two expert reports, of the Indian Council of Forestry Research and Education (ICFRE) and a multi-disciplinary expert committee that was examining the wildlife management plan, the ministry prepared the mining plan.

Plan So Far

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In Chaibasa, 10 out of the 18 villages have been considered for mining.

CHINA LAUNCHES USD 200 MILLION MINING VENTURE WITH LARGEST TAJIKISTAN SMELTER

The venture between Tajikistan's state-owned aluminium smelter Talco and Chinese company Tibet Huayu Mining Co. Ltd is expected to produce 1.5 tons of gold and 16,000 tons of antimony annually.

China and Tajikistan embarked on a new \$200 million gold and antimony mining venture today, the Tajik presidential press service said, as Beijing expands its hold over the impoverished Central Asian country's mineral resources.

Today a groundbreaking ceremony was held for a mine that is expected to produce its first gold and antimony in 2020.

The venture between Tajikistan's state-owned aluminium smelter Talco and Chinese company Tibet Huayu Mining Co. Ltd is expected to produce 1.5 tons of gold annually and 16,000 tons of antimony.

China has acquired rights to a number of mineral concessions in Tajikistan in recent years, some in exchange for Chinese

loans and investment in other areas of the economy.

Total deposits at the mine that will be operated by the newly created and jointly owned company Talco Gold are estimated to be 50 tons of gold and 265,000 tons of antimony, according to the presidential press service.

This year another Chinese company TBEA acquired the rights to operate a mine in Tajikistan's northern Sugd region as partial compensation for its construction of a power plant.

The poorest country to emerge from the wreckage of the Soviet Union in 1991, Tajikistan is strongly dependent on Chinese investment for its largely agrarian economy.

Much of the Chinese investment has been facilitated by state-owned Export-Import Bank of China, to which Tajikistan reportedly owes more than \$1.2 billion, equivalent to nearly a fifth of its GDP.

GOA'S SHUTTERED MINES HIGHLIGHT INDIA GROWTH DILEMMA

Environmental demands and rule of law clash with drive for economic expansion

Forty kilometres inland from the south Goa beaches beloved of European backpackers, lies the Codli iron ore mine: two yawning grey-ochre pits that were, until recently, among India's most lucrative mineral resources. But now the mine — controlled by London-listed Vedanta Resources — has the feel of a site being reclaimed by nature. Birdsong floats over the deserted frame of a plant that once treated 15,000 tonnes of ore

each day, while Volvo diggers sit in the mine's central compound. Codli is the biggest of several dozen Goa iron ore mines that halted production in March after India's supreme court ordered an industry shutdown in the state. The judges accused Goa's government of "patently illegal" behaviour in its renewal of mining leases three years before — issued for token payments from miners who had repeatedly broken environmental regulations. The upheaval in Goa is the latest in a string of controversies that

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highlight a key tension surrounding the country's economic development: how to remain a fast-growing main market while protecting the environment and enforcing the rule of law. Goa is India's smallest state but its richest in terms of per capita output. As well as its outsized tourism industry, it holds vast iron ore reserves that yield the bulk of national exports of the mineral. But, as elsewhere in India, the state's mining industry has come under heavy fire, with complaints that it has exploited political connections to flout laws while damaging the health and livelihoods of local farming communities. That has prompted swingeing official action against the sector, prompting debate over whether such moves are in India's broader economic interest. The supreme court's bombshell decision this year was the latest chapter in a legal saga that has gripped Goa for nearly a decade. After activists' complained about illegal mining practices, the government in 2010 commissioned retired judge MB Shah to investigate the claims. The forced shutdown at Codli and other Goan mines is the second in recent years, playing havoc with Indian iron ore exports © Simon Mundy His report two years later sparked outrage, with allegations of systematic illegality in Goa's mining sector as companies were accused of operating without valid licences and ignoring environmental laws. That prompted the supreme court's first ban on mining in the state, which lasted until 2014. The resumption of mining was a relief to thousands of mining workers, and many more in auxiliary industries, such as trucking and barging. This year's renewed suspension, however, has dashed hopes that Goa could restore its reputation as a reliable supplier to steel groups in China and Japan. "We were trying to stress to the market that [the first suspension] was an anomaly," said Ambar Timblo, managing director of Fomento Resources, the state's second-biggest miner after Vedanta-owned Sesa Goa. "And just when we were getting back the credibility in the market, it's shut down again." In its most recent judgment, however, the supreme court homed in on what critics say has been a longstanding problem in India's primary industries: government officials giving mining rights for minimal payment to well-connected tycoons, costing billions to the public. In Goa, "anyone who was powerful was essentially co-opted", said Rahul Basu, research director at the Goa Foundation, an activist group whose lawsuit triggered the apex court's latest ruling. "The classic way of doing this was to say: you buy a truck and we'll guarantee you

"business at a ridiculous rate." While it cited no specific evidence of corruption, the supreme court found that Goa's government had raced to renew mining leases at minimal cost in the days before the 2015 introduction of a national law that would have forced it to hold competitive auctions for such leases.

The state sacrificed maximising revenue for no apparent positive reason, virtually surrendering itself to the commercial and profit making motives of private entrepreneurs," the court wrote. "The real intention... was to satisfy the avariciousness of the mining lease holders." The Goa mining suspension has coincided with the shutdown of India's largest copper smelter in southern Tamil Nadu state, also owned by Vedanta, after police killed 13 people protesting against its pollution record. The supreme court had previously plunged India's coal industry into crisis in 2014, by cancelling more than 200 coal mining licences mostly issued without payment. Ritika Mankar, an economist at Ambit Capital, said India had long suffered from "a serious amount of rent-seeking", with politicians offering favourable treatment to companies in exchange for bribes and campaign contributions that are illegal under India's strict political funding rules. But she added that the supreme court could have found ways to tackle this problem without sweeping shutdowns of entire industries, which "often cause more damage than benefit".

The turbulence in Goa has played havoc with India's exports of iron ore — to which the state's mines have been the biggest contributors owing to their proximity to the coast. National iron ore exports swung from 47.2m tonnes in the 2011-12 financial year to 5.4m in 2015-16, and back to 30.4m the next year as miners again ramped up production. But activists argue that the immediate economic hit pales beside the long-term losses from a mining system where the Goa public purse has sacrificed potential revenue of Rs350bn (\$5.2bn), or nearly \$3,000 per inhabitant, according to the Shah report. The shutdown is set to continue for at least two years, said Neha Panvelkar, deputy director of mines and geology in the state government, noting that it would now have to pursue fresh auctions for mining leases and conduct lengthy processes around environmental clearances. Such an extended suspension would be "a catastrophe for Goa", said Mr Timblo — a sentiment echoed by workers at the Codli mine, who say local communities are now threatened by a sharp increase in unemployment.

INDIAN STATE-OWNED FIRMS MANDATED TO ACQUIRE OVERSEAS LITHIUM AND COBALT ASSETS

The Indian government has mandated all State-owned mineral-based companies to pool their resources to acquire lithium and cobalt assets overseas.

A rough deadline of March 2019 has been set for these companies to complete all formalities, such as leveraging their balance sheets jointly, form joint ventures (JVs), consortiums or any such suitable corporate structures so that process of scouting and acquiring lithium and cobalt assets could get under way next financial year.

"The mandate for these companies is to acquire and source

strategic minerals, lithium and cobalt from abroad," joint secretary of the Mines Ministry, Anil Kumar Nayak, said.

"Joint ventures of government companies will acquire assets overseas and do the mining operations jointly with entitled agencies in host countries. We will also invite Indian private companies to join in the proposed ventures," he added.

The model to be followed would be the JV of State-owned National Aluminium Company Limited, Hindustan Copper Limited and Mineral Exploration Corporation Limited,

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formed last year.

The venture, christened Khanij Bidesh India Limited, has been directed to complete all internal corporate formalities and start acquiring assets overseas in the next financial year.

With India aiming to have at least 30% of vehicles in the country powered by batteries, the government reckons that building domestic electric vehicle (EV) battery manufacturing capacity backed by raw materials – lithium and cobalt – sourcing will hold the key to success of achieving the target and reducing crude oil import bill, a Mines Ministry official said.

Towards this end, government-run Central Electro Chemical Research Institute and the RAASI Group last week signed an agreement to set up the first domestic EV battery manufacturing facility in the country based on indigenous technology developed by government's Council for Scientific Research Institute.

However, the success of building optimal domestic battery manufacturing capacities would hinge of ensuring stable raw material security for these ventures and hence the mandate to government mineral companies to come together and acquire

such raw material assets overseas, the Ministry official said.

The push to government mineral companies comes in wake of offers last year from Chile, Argentina and Bolivia, the so-called 'lithium triangle', that they would prefer a two-tier JV between Indian companies and local partners in return of contracts to buy-back lithium produce at concessional rates.

With Indian government companies spearheading such ventures, it would be easier for the Indian government support through bilateral diplomatic channels with these countries, Ministry officials pointed out.

According to forecast of a government policy advisory body, India's lithium requirement to meet the projected demand for EV batteries by 2030 would be around 60,000 t/y and though this would be just 0.7% of the global reserves, future EV battery manufacturing faced the risk of short term shortages.

Ironically, while the Bolivian government has offered a government-to-government pact for supply of lithium, India does not even have an embassy in La Paz (Sucre) and the Indian embassy in Peru is accredited to Bolivia, even as China made inroads in investing in Bolivian mining industry.

EXPANSION OF URANIUM MINING IN INDIA

SOCIAL CONSENT IS A MAJOR OBSTACLE

The uranium mining projects in India have time and again failed to gain the "social consent" which leads in slowing down approvals and increasing the project costs.

With the high population growth rate, urbanisation and the growing middle-class, the population has led to a higher demand for power generation. This demand in power generation has led to the critical importance of improving new power generation capacity. According to the Central Electricity Authority (CEA) the requirement of energy generating capacity is to increase from the current 43 GW to 640 GW by 2026-27. There is a constant demand for cheaper renewable sources.

The World Nuclear Association has estimated a 25 pc contribution of nuclear power (against current 2 pc) in India's energy basket by the year 2050. India's Nationally Determined Contribution (NDC) to United Nations Framework Convention on Climate Change (UNFCCC) has outlined goals to reduce the carbon emissions intensity of its economy by 33-35 pc by 2030 as well as increase the clean energy electricity capacity to 40 pc of the total installed capacity in the same period. The ruling NDA government is intent on significantly scaling up installed nuclear capacity. India operates 22 nuclear reactors, eight of which are fuelled by indigenous uranium.

The expansion plan of uranium mining in India

Minister of state Jitendra Singh told the parliament in March this year that India is planning a tenfold increase in uranium production over the next 15 years. State company Uranium Corporation of India Ltd (UCIL) has outlined the expansion plans to meet the Department of Atomic Energy's (DAE) vision of achieving self-sufficiency in uranium production.

Jitendra Singh said that UCIL, which is a public service

undertaking with the DAE, has outlined a plan for "massive expansion" leading to a tenfold rise in uranium production by 2031-2032. The plan includes maintenance of sustained supply from existing facilities, capacity expansion of some existing units and construction of new production centres (mines and plants) in different parts of the country, he said.

The expansion is planned in three phases, with the first expected to increase uranium production to 3.5 times existing levels by the "12th year". Completion of projects in the second phase is expected to achieve a sevenfold expansion over current production, with the third phase of projects leading to a tenfold increase over current levels by 2031-32.

The problems with the expansion plan

The uranium mining projects in India have time and again failed to gain the "social consent" which leads in slowing down approvals and increasing the project costs. But the major problem related to the expansion plans are the people living in the mining areas. Mining projects mainly lie in the tribal areas of Odisha, Chhattisgarh and Jharkhand that fall under Schedule V of the Constitution of India giving the communities near the mining areas protection against alienation of their land and resources. People fear being alienated from their land, not gaining any economic benefit from such mining activities and mainly due to health hazards caused by the radiation.

There are also environmental aspects regarding the uranium mining in India. A new Duke University-led study has found widespread uranium contamination in groundwater from aquifers in 16 Indian states. "Nearly a third of all water wells we tested in one state, Rajasthan, contained uranium levels that exceed the

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World Health Organisation and U.S. Environmental Protection Agency's safe drinking water standards," said Avner Vengosh, a professor of geochemistry and water quality at Duke's Nicholas School of the Environment.

"By analysing previous water quality studies, we also identified

aquifers contaminated with similarly high levels of uranium in 26 other districts in north-western India and nine districts in southern or south-eastern India," he added. The new findings are the first to demonstrate the widespread prevalence of uranium in India's groundwater.

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