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2019: THE YEAR IN RETROSPECT FOR MINING SECTOR

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Globally, coal prices reduced by over 30 percent in the last twelve months amidst general support for renewables.

For the mining sector, 2019 will go down as 'the year of epiphany'.

Earlier in 2019, the government unveiled the forward-looking National Mineral Policy. One can only hope that future legislation will carry forward its spirit.

This year finally saw some coal blocks getting successfully auctioned after the false starts during the last couple of years. This sets the stage for the auction of commercial coal blocks from 2020.

However, 2019 also showed the pitfalls that hide within our policies, acts and rules. A state government cancelled a PSU's lease earlier, invoking a certain ambivalent word in the MMDR (Amendment) Act, 2015.

While the central government amended the problematic clause, this should not have happened in the first place. One of the most important mining-law changes brought about by the government in 2015 set the stage for expiry of mining leases in 2020.

Odisha is the theatre in which this will play out in 2020. The auctions will be hyper-competitive. We saw a record number of bids recently, with some players submitting multiple bids, which led to cancellation of the process.

The market structure of Odisha iron ore market is all set to change in favour of captive players who have a higher headroom to pay. Merchant miners will get marginalized. This is in stark contrast to coal which is moving in the direction of commercial mining and for good reason.

The success of getting these mines quickly into production would be the acid test of the mining sector reforms unleashed in 2015.

In the short run, it will be revealed whether the 'expiry clause' was a piece of overzealous regulation or a well-judged one. In the long run, it remains to be seen whether the raw material advantage of the eastern states, sustains in the face of aggressive bidding in an environment of supply insecurity.

One wonders whether the mineral-rich states realize in the first place that unbridled aggression in the auction can potentially have the same effect as the ill-conceived freight equalization policy of the past. Coal and iron ore would be prime casualties.

Even before we know it, imports would become competitive in the high growth coastal states and local production would plummet. We saw this getting played out in 2018-19 when primary aluminium's growth in India was impacted significantly by aluminium-scrap imports.

For individual companies, 2019 will prove to be the inflection point for rediscovery. A large steel maker which used to buy 100 percent of iron ore from the merchant miners, has embarked on the path to becoming a captive miner ever since Category C mines were auctioned in Karnataka.

In 2019, it extended its dominance in Karnataka and is looking to establish its mining presence in Odisha. A large coal mining contractor is exploring iron ore. Hit by Goan lease cancellations, some players are looking to get a sizable Odisha footprint.

A global steel firm's entry into India through acquisitions of an 'IBC' asset will be interesting as it is one of the few global steel players who prefer captive mines over merchant supply.

Existing players, especially public sector miners continue to struggle with regulatory, legal, land and clearance related issues that delay mine operationalization and capacity expansion.

This has resulted in them not being able to meet their targets. On the other hand, a greater degree of nationalization is visible around the country. For instance, greater state-control over sand mining is clearly visible in multiple states.

A large number of coal mines have been allocated to coal PSUs and other state mineral development corporations (SMDCs) for development. While this step will provide an avenue to the state to get some additional revenue, some of these SMDCs may not have the bandwidth to develop mines unless they augment their institutional capacity sufficiently.

Auction of minor mineral blocks is progressing at a fair pace, especially in some states like Gujarat and Chhattisgarh. Several other mineral rich states are yet to show an equivalent amount of movement on this account even though they have potential reserves. Given that tax revenues are not healthy this year, these states should work towards maximizing other sources of revenues, such as from minerals.

Globally, coal prices reduced by over 30 percent in the last twelve months amidst general support for renewables. Financiers seems to be withdrawing from the fossil fuel. Iron ore price rallied till July and then lost steam as the US-China trade rhetoric picked up pace. Hopefully, with the US-China trade deal done, the price will rally. Overall, 2019 wasn't a great year for metals. Given that regulations and policy in the energy and mineral space is still evolving in India and clearance related

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challenges exist, it is unlikely that global miners would be attracted to invest in Indiaany time soon.

The biggest NCLT case negotiated various legal challenges and finally got resolved in the closing months of 2019.

However, several smaller steel players continue to remain stressed and amidst their respective resolution process, either within or outside NCLT.

The weakening of the auto and construction sector demand will only delay these companies from turning a corner.This clouds the outlook for the mineral sector in India. Broadly speaking, 2019 provided one last window of opportunity before the transition of 2020.

In a few months from now we will know whether 2019 was well utilised by the government and companies alike, to prepare for the challenge ahead. Otherwise, one can only hope that the Government takes corrective action – like it did by amending IBC or mining laws in the recent past.

FOCUS MORE ON MINING SECTOR TO REGAIN ITS 3% SHARE IN GDP: CII

As the country aims to become a $5 trillion economy, the policy makers need to focus more on the mining sector with concerted efforts to regain its 3 per cent share in the GDP by 2024-25, says a study.

It is critical for India to build a globally competitive mining sector," said Mr Chandrajit Banerjee, Director-General, Confederation of Indian Industry (CII), referring to the CII Research report 'Towards A Globally Competitive Minerals and Mining Industry' released today at the CII Mining Summit. "The industry is key to ensuring the country's energy and raw material security," he added.

The CII report points out that the mining sector in India is highly under-developed relative to its enormous potential. Not only is the country endowed with vast resources across a range of minerals, it also has the domestic capacity to absorb significantly higher mineral production, as evident from our substantial mineral imports.

The mining sector's contribution to GDP has declined since 2011-12. The report identifies twelve areas which must be addressed in order to develop and re-energise the Indian mining industry.

Boosting exploration, particularly for non-bulk minerals, by ensuring attractive incentives to explorers is vital. Over the last few years, exploration by private players has come to a near standstill. Interventions such as introducing a seamless transition from exploration to mining license, permitting sale of license at any stage and allowing private companies to proactively approach the government for exploration areas will help overturn this trend.

Easing, expediting and simplifying the process of obtaining environmental and forest clearances is another key lever of driving competitiveness. While the report fully appreciates the need to ensure that all companies undertake sustainable mining, it recommends that the process be made significantly more efficient.

Streamlining the auction process will also lead to greater efficiency and more effective outcomes. The report suggests shifting from a two-stage ascending forward online electronic auction to a single-stage sealed bid, to dampen aggressive bidding. Further, the process must not be annulled, or multiple rounds introduced, if the number of bidders is less than three.

Mining companies in India are subject to much higher financial levies than other mining geographies, as a result of high royalty rates, multiplicity of levies and double taxation. Royalty rates should be reduced in line with international benchmarks. Accordingly, implementation of the Royalties Study Group must be fast-tracked.

A short-term albeit important issue the government needs to address immediately is in relation to mining leases expiring in 2020. In order to minimise disruption in supply, CII suggests that seamless transfer of clearances be mandated, provided operating parameters remain the same.

The report recognises that the mining industry has been viewed as causing environmental damage and being responsible for displacing local communities. To overcome this negative perception, the report suggests that industry voluntarily adopt responsible mining practises to build trust with stakeholders.

Finally, the report emphasises that the government must ensure that policy interventions should take cognizance of emerging global trends in mining, such as smart mines, deep sea mining and the changing composition of the mining workforce.

Mining is a critical and fundamental sector, particularly as India races to achieve the target of a USD 5 trillion economy. The government must expeditiously implement the interventions suggested in the CII report to realise the industry's full potential.

WITH MINING LEASES RENEWED AHEAD OF DEADLINE, NMDC SET FOR A PROMISING 2020

Opportunities to foray into coal with two coal blocks in Jharkhand. With iron ore prices set to firm up from January 2020 and both steel production and prices starting to move up from November, the country's largest iron ore mining company NMDC Ltd has a lot going for it to cash in on the expected buoyancy.

focus has been on iron ore mining, has also received a shot in the arm with the Union Coal Ministry allocating two coal blocks — the Rhone and Tokisud North — both located in Hazaribagh district of Jharkhand, its iron ore mining leases in Chhattisgarh have been renewed three months ahead of the scheduled expiry

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and it has secured nod from the government for expansion of the Kumaraswamy mines in Karnataka from 7 MTPA to 10 MTPA.

In a major development, the Chhattisgarh government has extended the mining lease of four mines of the Bialdila iron ore projects, in December, which were due for extension in March 2020.

NMDC operates three iron ore complexes in the country, with two of them in the Dhantewada district of Chhattisgarh sharing a major portion of company's total output and one is located in Karnataka's Donimalai project.

Of the 33 million tonnes per annum (MTPA)production, two complexes in Chhattisgarh in Bacheli and Kirandul under Bailadila projects contributed 24 MTPA in 2018-19, shows the significance of the lease renewal ahead of time for NMDC.

Of the five mines in the Bailadila sector, lease of four mines with an installed capacity of 29 MTPA has now been extended and one mining lease received extension in 2017 itself.

According to a research report by Emkay Global, "The Government is of the view that there is a risk of domestic demand for iron ore outstripping local supplies after March 2020 with imports still not a viable alternative, given the high landed cost of imports."

It further stated, "The approval of production increases (for Kumaraswamy) comes despite only two years of lease still remaining for this mine. This implies an immediate need to boost production in FY 2021 to counter a possible shortage as 60 MT of ore production in Odisha goes under the hammer."

Opportunities

The allocation of the coal mines with extractible coal reserves of 191 million tonnes at Rhone coal block and 52 mt of thermal coal at Tokisud, will enable the iron ore mining major to diversify into coal production as well. The allocation of coal mine augurs well for the mining company as the coal produced could be used for captive consumption for its diversification projects, including steel.

Emkay has factored 2/3 MT incremental production sales in FY 2021-22, considering the expansion of mining plan.

In yet another important move, NMDC as also signed up with the Andhra Pradesh government for supply of iron ore for the proposed greenfield integrated steel plant in YSR Kadapa district, where a the linkage will be for a 5 MT of iron ore per annum in the first phase.

It also expects a favourable development for Donimalai mines paving way for production.

During the first half of this fiscal, NMDC logged sales of 5,505 crore, up 13 per cent over same period last year and profit after tax of 1,883 crore, up 17 per cent.

RETURN TO THE RAT HOLE

Coal mining has been reopened in the Indian state of Meghalaya, but it isn't clear that government protections will improve life for workers or help the environment.

Coal miners in the mineral-rich northeastern Indian state of Meghalaya have something to celebrate. Over the summer, the Supreme Court of India passed an order to reopen mining in their state.

A ban, put forward in 2014 over environmental concerns, had "almost marked our graves," Balious Swer, who until recently served as the president of the Jaintia Coal Miners and Dealers Association, told me in October. "We had to figure out other ways to support our families." For his part, Swer did manage to pick up government and other contracts during the five-year ban, but he says that it's the laborers, many of them local Nepalis, who suffered the most. Some resorted to desperate measures, he says, even suicide or selling their children. Corroborating his claims was a sudden—almost quadruple—jump in the 2015 national crime statistics for human trafficking, mostly of minor girls, in the neighboring state of Assam. Until then, children trafficked from Nepal and Bangladesh to work in the mines used to be widely reported.

Still, it isn't clear that miners' lives will be much better with the ban lifted. The Supreme Court's reversal came a mere eight months after a tragic accident in a mine in Ksan, in East Jaintia Hills, claimed the lives of at least 16. They were working in an illegally operating rat-hole mine—a practice involving very narrow tunnels connecting to deeper pits—when water from a nearby stream rushed in. The mine owner, Jrin Chullet, was arrested days later but was released on bail after a few months.

In its judgment, the Supreme Court remarked on the tragedy, noting that it had come despite the order banning illegal mining in the state. It also argued that Meghalaya had around $60 million in unused funds for environmental protection and restoration related to mining. The court hoped that by reopening mining officially—this time under the laws of the central government rather than state edicts—tragedy and waste could be avoided.

In the uneven terrain of Meghalaya, situated more than 6,400 feet above sea level at its highest point, coal has traditionally been mined by digging pits hundreds of meters deep and then cutting horizontally to reach the coal seams.

Under British administration of India's northeastern frontier, mining was a cottage industry. And even after Meghalaya attained full statehood in 1972, administration of the tiny state came under the Sixth Schedule of the Indian Constitution, which guarantees land ownership rights to indigenous communities. Given that the coal-mining land was under private and community ownership, India's national overseer, Coal India, never regulated mining in Meghalaya as it does elsewhere in the country.

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The traditional mining methods, including rat-hole mining, used in the state are extremely labor-intensive. Mechanical cranes came into use only in the last few years to lift extracted coal out of the pit. It is these practices—and the related danger and environmental damage—that had initially led to the mining ban. The ruling was the first time a national judicial authority had weighed in on a state's mining practices.

Although Swer was initially happy about the recent judgment lifting the ban, he later admitted that it didn't do much for mine owners because of one caveat: Mine owners in Meghalaya would now be expected to follow the national rules on resource extraction. "We'll have to apply for a mining lease from the state government," he noted, "which will put it up with the Ministry of Environment. This will be a first time for us." Justine Dkhar, the joint secretary of the Jaintia Coal Mine Owners and Dealers Association, which has actively lobbied the state government on coal, is displeased with the imposition of central mining laws on protected land. "If we have to apply for a mining lease and submit a mining plan, then the time and money spent on the bureaucratic process will far outweigh the production," he told me in October. "I haven't understood how the court recognized tribal ownership yet brought in agencies like Coal India Limited to auction our coal."

Foreign Policy reached out to Vincent Pala, a mine owner and Meghalaya's representative in the union assembly, but has yet to receive a response to a set of queries. A member of the Jaintia Coal Mine Owners and Dealers Association, Pala is said to own a large portion of the mines in the state.

INDIA: STEEL COMPANIES RAMP UP IRON ORE BUYING ON FEAR OF SUPPLY DISRUPTIONS

Steel manufacturers and other end user industries have accelerated iron ore buying as they dread marked disruption in supplies after the end of lease tenure of merchant mines by March 31, 2020.

Almost all leading integrated steel makers and secondary producers have intensified iron ore sourcing to avert raw material crunch and ensure uninterrupted plant operations. They are looking to build up stocks for three to six months. Steel companies are weighing options to stash the ore in stockyards by availing land on lease. The Odisha government has previously allowed storage permits for both end user industries and merchant ore producers whose validity runs till March 2022.

The grant of storage licenses for the merchant miners was warranted by the huge inventory of minerals within lease area. The disposal and sale of this stockpile was needed to facilitate smooth transition of ownership of mines and also to avert any obstruction in their production after take over by the new bidders following auctions.

"We are now witnessing brisk buying from steel players and secondary steel producers. Merchant miners have not gone for any significant hike in prices of lumpy ore or fines of late as we need to liquidate the piled up ore. An uptick in domestic steel demand and the impending expiry of lease tenure has spurred intense buying of iron ore", said a leading merchant miner.

Industry sources have estimated the accumulated ore at mine lease heads of merchant mines in Odisha at around 70 million tonnes (mt). However, a bulk of the inventory is made up by baser grade fines which hardly have any uptake in the domestic market. Steel manufacturers opt for lifting higher grade ore as inferior material escalates their costs of operations. Export markets too have been unkind to Odisha's inferior iron ore as China's steel mills driven by environment concerns have preferred to source superior ore or iron ore pellets.

Supply disruptions of iron ore seem ineluctable as the Union government is yet to take a firm call on extending environment and forestry clearances. Even if the two key milestones are negotiated, the new leaseholders still have a bumpy ride to cover before they could lay hands on the mines. A host of approvals like Mining Plan endorsed by Indian Bureau of Mines (IBM) and Consent to Establish & Consent to Operate granted by the State Pollution Control Board (SPCB) need to be obtained.

Odisha has 21 iron ore and manganese mines whose lease validity ceases by March 31, 2020. Of the lapsable mines, one mine whose current incumbent is RP Sao is reserved in favour of a state PSU. The rest 20 mines have been concomitantly notified for online auctions. The state steel & mines department has set January 3 as deadline for submitting technical and financial bids in respect of these 20 blocks. Letters of Intent (LoI) are scheduled to be awarded in the first week of February 2020.

Frenzied buying of iron ore is not expected to shoot up prices at least till the merchant mines are operative.

"Despite aggressive buying from steel industries, merchant miners are unlikely to up prices. Over the last 30 days, iron ore prices in Odisha have only marginally rose by Rs 200-300 per tonne. But any further hike seems improbable till March 2020 as the miners are bent on clearing the accumulated ore", said an official with a steel company.

As their lease validity heads for expiry by March 2020, merchant miners for the past two months are producing 100 per cent of the mandated limits under environment clearance (EC) compated to 60-70 per cent earlier.

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Odisha is the country's biggest iron ore producer. In last fiscal, the state produced 114 mt, contributing more than 50 per cent to the nationwide output. In FY20, Odisha's iron ore production is expected to grow 20 per cent as production quickens from merchant mines.

MINING LEASE EXPIRY IN 2020 THROWS UP RISKS AND OPPORTUNITIES

Fresh leases will create new opportunities for miners to bring in global best practices

The Indian mining industry is staring at a major churn as leases for merchant mines expire after a gap of 50 years in 2020.

The move will impact a total of 334 mines. Of these, 48 working mine leases contribute significantly to the production of iron, chromite and manganese ores.

Most of the working mines whose lease will expire are in Odisha (24), Jharkhand (6) and Karnataka (6). Many non-operative mines are in Goa (184), which has a blanket ban on mining.

The merchant mining leases for the ones with 50-70 mtpa (million tonne per annum) production accounting for 25-35 percent of the total iron ore output are set to expire in March 2020, which will put pressure on non-integrated steel plants.

The demand curve for iron ore

A good 60-70 percent steel producers in India have no captive mines and are dependent on merchant miners for minerals. Considering the capacity that will go off the grid in light of the lease expiry and bidding, significant price pressure is building up for the Indian steel industry, where export competitiveness remains low due to a host of factors, including logistical bottlenecks and pricey raw material. If the price of inputs shoots up temporarily, it could open the door to higher imports of steel products.

The onus is on the government to run the process transparently and efficiently. India's total iron ore mining output for FY19 stood at 220 mt and the demand is expected to go up by 5-8 percent in FY20.

Govt's stand on mine closure

The government is set to auction the mines in January-March 2020, and is also planning to bunch up clearances and award of the leases to minimise disruption in the production. The auction winners may just get to stick on with the approved mining plan and environmental clearance of the previous mine operators for two years till a new company secures clearances. This will help avert a disruption in mining operations during transition.

If new operators are not able to bring mine production to full throttle in a short duration, an increase in imports of iron ore cannot be avoided, potentially worsening the current account deficit.

Bidding to decide the fate of mining sector

Even after 2020, total capacity of operative merchant mines will be 100 mtpa, supplemented by public companies with a capacity of 80 mtpa. Over and above merchant leases, captive mines in Odisha, Jharkhand, Karnataka and Chhattisgarh will run a capacity of 99 mtpa, which puts the total available iron ore capacity at nearly 200 mtpa even after older merchant mines face underbidding. To push output, some of the virgin iron ore blocks that were won through competitive auctions are expected to start mining operations after 2020.

The global mining industry is plagued by declining mining productivity over the past couple of decades. Merchant mines changing hands after 50 years will create fresh opportunities for miners to bring in global best practices, benchmark costs and become cost-competitive to remain relevant in the new world

BIDDING FOR EMAMI CEMENT TO COMMENCE MID-JAN, ULTRATECH AHEAD IN RACE

Emami Group has decided to monetise its cement assets to pare debt and aims to become debt-free at the group level by the end of the current fiscal year

Bidding for the acquisition of Emami Cement is likely to commence by mid-January this year with Aditya Birla Group firm UltraTech Cement leading the race at an offer price of Rs 6,500-7,000 crore in an all-cash deal.

Emami Group has decided to monetise its cement assets to pare debt and is aiming to become debt-free at the group level by the end of the current fiscal year.

Although several cement firms, including Shree Cement, Dalmia Bharat Cement, Nuvoco and other investors had shown initial interest, sources said that UltraTech and Ambuja Cements Ltd, part of the LafargeHolcim Group, are likely to eventually put in their bids.

Emami Cement, part of the diversified Emami Group, has appointed Arpwood Capital as the deal adviser.

"The bidding is likely to commence in mid-January," a source close to the development said.

Although Emami had initially sought a valuation of Rs 8,500-9,000 crore for a full-fledged sale of its eight- million-tonne-per-annum (mtpa) cement assets, spread across east India, chances are that the group may eventually settle for a Rs 7,000-7,500 crore deal, the source said.

The person reasoned that the valuation is based on calculating $110 per tonne for the installed capacity of Emami Cement and also includes a 10 per cent premium considering the stretch and reach of this company. It effectively translates into a valuation of around Rs 7,000 crore.

The bidding will encompass all the assets and mining leases.

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Emami Cement declined to comment on the development.

While Emami Cement has a 2.5-mtpa integrated manufacturing plant at Risda in Chhattisgarh and another 2.5 mtpa plant in Panagarh, West Bengal, its unit in Jajpur in Odisha is yet to be commissioned.

A brownfield expansion at its plant in Bhabua in Bihar to increase capacity by another 1.2 mtpa from the current 1.8 mtpa is still underway.

Trial production at the Jajpur unit, however, commenced in December 2018.

Buyer sources said although the Panagarh plant has a 2.5 mtpa installed capacity, Emami Cement has approvals for producing only 2 mtpa.

On the other hand, its Risda plant has installed Waste Heat Recovery System (WHRS) where the waste from the plant is recycled to generate power. A captive 30-Mw power plant is also installed in this plant and the company sources nearly all of its electrical energy requirement for this unit internally.

However, Emami Cement has no coal linkages and depend entirely on sourcing coal from the market.

Apart from these assets, the company also has mining leases in Chhattisgarh, Rajasthan and Andhra Pradesh.

Emami Cement had a total debt of Rs 2,246.76 crore as on 31 March, 2018, consisting of Rs 2,093.86 crore as secured term loan from banks and financial institutions and Rs 152.90 crore working capital borrowings from the banks.

UltraTech has been on an acquisition mode since the past few years especially in tier 2 and tier 3 markets.

Towards the end of 2019, UltraTech decided to expand its grinding capacity by 0.6 mtpa in Bihar and West Bengal respectively. Additionally, it decided to open a 2.2 mtpa grinding unit in Odisha.

In 2018, after a heated legal contest with Dalmia Cement, the Aditya Birla company took over the stressed assets of Binani Cement in Rajasthan and the year before, in 2017, it acquired a total of 21.2 mtpa cement capacity from Jaiprakash Associates.

HOW BELLARY WENT FROM BOOM TO BUST

- Between 2006 and 2011, Bellary saw a massive boom, until the Supreme Court banned mining in the district in 2011, when the illegalities and environmental degradation came to light
- The dusty city in Karnataka is a symbol of how the collapse of a crony capitalist enterprise can destroy progress
- In the overlapping Andhra-Karnataka cultural region where the city of Bellary is located, there is a proverbial expression in Telugu. Roughly translated, it means: “Life has become like the Bellary bus stand." This is often deployed when an individual’s life is perceived to be in tatters, wasted and utterly disorganized. However, the metaphor of a rickety bus stand, today, like in the past, symbolizes the entire city’s dilapidated existence.

- But, for a very short period, Bellary had developed ambition. It wanted to magically transform itself into a metropolis somewhere between 2006 and 2011. The city wanted to recreate the spectacle and splendour of the “forgotten Vijayanagar empire", rather quickly, just like the bunch of men who dreamed its transformation had become princes, overnight. But when those men, led by mining baron and politician G. Janardhan Reddy, bit the dust, the city’s dream, too, was over.
- As we stand at the cusp of 2020, when an uncertain economic prognosis stymies quality expansion of the urban, Bellary stands as a symbol of what can go horribly wrong in any corner of India. It was a dream that was lost long before many tier-II towns awoke to one. The dream that slipped into a delusion was built by, and around, one person and his cabal. That in short was nothing but a crony capitalist enterprise—political power met mining windfall to create a city.
- **Reddy Republic**
- In a catchy epithet that the media coined over a decade ago, Bellary was not merely a city or a district, but was a “Reddy Republic". When the first Bharatiya Janata Party government was formed in Karnataka and south India, in 2008, Reddy was the infrastructure and tourism minister, his older brother was Bellary’s MP, his younger brother was the city’s first mayor, and his closest friend was health minister. The Reddys helped instal that government, and were known to control it. This concentration of political power was what made their gargantuan ambition for the city plausible.
- In early 2009, in no less a place than the upper House of the Karnataka legislature, Reddy had said “Bellary belongs to us." Ironically, for a man who so daringly staked claim to the city, the Supreme Court banned his very entry into it in 2015. He had been in jail since 2011 for over three years after being charged with illegal mining. When he was given bail, one of the conditions was that he should stay away from the city.
- Before we come to what Reddy and his men dreamt for the city, let us capture its present ruin. As you approach Bellary city from Anantapur in Andhra Pradesh, the change is

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unmissable. The city is about 25km from the interstate border and you will know the transition when it happens. You leave behind smooth roads, lush green irrigated lands and acres of gently swaying sunflower fields with windmills at the far edges, looking like art installations.

- As you drive on the Bellary-Krishnapatnam Port road, the throttling of the city's dream is apparent. If the stalled expansion of the state highway kicks up more dust to what already exists, the switch that keeps happening between torn and semi-torn surface cuts down the speed drastically. Then, you start seeing installations of a different kind—half-complete concrete pillars with spiky rods that look like rusty crowns. People no longer remember the projects for which these pillars sprang up.
- Sanganna, a villager from Joladarashi, quipped: "We don't know why these pillars were put up, but it is useful to paste posters, our cattle also rub their backs against them, and of course our dogs have a new post to mark their territory." Further down, there is a stand-alone underpass at the intersection with no functionality. It is filled with what is known in Karnataka as "Bellary jaali" (*prosopis juliflora*).
- There are also proverbial Bellary bus stands en route. When we are almost entering the city, in Kakkabevinahalli, this reporter comes across a higher primary school. The black granite plaque outside reads: "Renovation of Primary School Compound Wall & Sanitation Facilities Sponsored by BMW". The date is 20 December 2011, just before the embers of the city's ambition died out. The luxury car brand finds its name etched in the unlikeliest of places.
- The city centre and its outer edges are undistinguishable. There are ill-maintained double-lane roads that partially crisscross the 81 sq. km of the city. There are also cattle at every short distance that refuse to end their siesta. Locals reveal that it was in 2008-09 that Reddy, as district in-charge minister, decided to expand certain existing roads to double-lane ones, and also create a couple of new roads. This was about hastily dressing up a sleepy town as a city. It had anyway been upgraded just then from a city municipal council to a corporation.
- **All roads lead to...**
- The locals whisper that most of these double-lane roads actually led you to Reddy and his associates' newly acquired properties. They suspect that the focus was on inflating the city's real estate fortunes than altruistically build infrastructure. "New roads should have led to new businesses, nothing of the sort happened. There was only an artificial increase in the price of land that refuses to come down even today despite the absence of development. Everything was sudden and unplanned. The Reddy brothers had captured the administration. Nobody could raise their voice," said Manohar, an accountant at a hotel.
- The stillborn nature of the city is most apparent in the government sports complex that has in its horizon the Bellary fort. Journalist Narasimha Murthy explained that during Reddy's time, large parts of the stadium was broken down with the plan to upgrade it to "international standards". But he could not rebuild in time. The unused basketball court where the hoop and board are outside the boundary wall is just another example of an entangled mess visible elsewhere in the city.
- There are many other educational, charitable and residential projects of the Reddys in the vicinity of the sports complex that have been nearly abandoned, or are functioning at sub-optimal level. "It is not just the Reddy projects that have slowed down, government projects too have not taken off. The waste segregation unit is not operational. The new bus stand is inaugurated but is incomplete. Drinking water reaches your tap once in a fortnight despite the Tungabhadra reservoir being 60km away. Every part of the city is permanently under construction. No, that would be an inaccurate assessment because everything has gone under," says Murthy.
- **The mining dream**
- Over a decade ago, a lot was envisioned for the city. D.L. Ramesh Gopal, former president of the Bellary District Chamber of Commerce and Industry, explains that the economy of the entire district was always driven by iron ore mining. When there was a sudden spurt in demand over a decade ago, people made a lot of money. Demand in China went up not just for iron ore but also for iron fines, something that one had to pay to dispose of.
- "The local mining industry made so much money in three years that it would have taken them 150 years to earn that in the normal course. Suddenly there were six helicopters and five Gulfstream jets flying into the city. Just imagine the impression it made and the expectation it created," he recalls.
- Obviously, when the boom came there was unexpected focus on Bellary city. There was pressure on it to expand and deliver. People had money in their hands, even the most ordinary in the chain made a decent packet. For instance, a driver of a truck laden with ore would make anywhere between 10,000 and 20,000 for a single trip to the port. There were nearly 5,000 trucks operational in the district. Occupancy in hotels was at 100%.
- People brought land at fancy prices. The market rate for real estate in the city went up to 2,500-3,000 per sq. ft. There were nearly 32 sponge iron industries around the city, which gave employment and ran shifts round the clock. All of this collapsed like a pack of cards in July 2011 when the Supreme Court banned nearly all mining in the district when shocking illegalities and environmental degradation came to light
- **The resistance**

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- When Reddy was trying to bulldoze the city's expansion, a lot of people may have succumbed to his designs out of fear or favour, but there were some like lawyer-activist Mallikarjuna Reddy, who could not be bought. He inspired a popular movement, and also launched a legal battle against Reddy.
- It all started when Reddy planned to set up an airport by acquiring big acres of irrigated land in the Tungabhadra catchment area. The Airports Authority of India said 600 acres was enough, but Reddy wanted 1,700 acres first, but had later settled for 1,213 acres. The villages of Chaganuru and Sirivara, 15km from the city, were the ground zero of resistance.
- The activists were not opposed to an airport per se but didn't want irrigated land to be acquired. They also argued that there were already two airports in the vicinity, one the Jindal Steel airport 25km away from Bellary city, and an airport in the cantonment with about 230 acres. Finally, three years of resistance yielded positive results in the high court.
- Once Mallikarjuna Reddy and friends tasted success with their struggle, they put forward an alternate development plan for the city: "The health and environment costs of mining were very high. In a parallel move we tried to get the local government hospital to function better. The hospital serves three surrounding districts, but is woefully ill-equipped. Why was improving the hospital not Reddy's priority? Wouldn't it have served more people than the airport?" he asks.
- **In conclusion**
- Talking of deplorable health and hygiene issues in the city, local journalists have a delightful anecdote. Apparently, corporation commissioner Tushara Mani M.V. was recently down with dengue fever. When reporters asked her what would happen to common folk if the commissioner herself could be affected by dengue, she reportedly said it was not a Bellary mosquito that bit her but one from neighbouring Davanagere. This may have been said in jest, but indicates how bad the situation is.
- Local journalist M. Ahiraj says the city still has great potential, and to be fair to the Reddys they had more ideas than any other politicians before them. He admits though that their means, methods and speed became an issue.
- "But still, not all is lost. The Supreme Court monitored reclamation and rehabilitation fund to alleviate areas ravaged by mining has nearly 20,000 crore in it. But, the authorities have not been able to present a plan that would convince the SC on its spending. That should tell us something about the state of affairs," says Ahiraj. There is also the District Mining Fund and one is not sure how effectively it is being utilized. If it had been, we would have known. Despite all the bad news, Bellary remains hopeful.
- Sugata Srinivasaraju is a senior journalist and author.

GEMSTONE INDUSTRY HAS HUGE POTENTIAL IN ODISHA: R.K. SHARMA

Odisha Government will soon carry out a comprehensive mapping of all mineral resources with focus on gemstone deposits in the State, Additional Chief Secretary of Steel and Mines department RK Sharma said here on Friday.

Speaking at a workshop on 'Gemstones in Odisha - Exploration and Exploitation Strategy' he said new technology and policy guidelines can shape the unorganised gemstone sector which has the potential to add substantial revenue and boost local economy.

Sharma said the state will be a model in the country to have the comprehensive mineral mapping which will be an aeromagnetic survey.

"We want to locate the areas where the gemstones are available so that funds can be mobilised for exploration and mining," he said.

The Government plans to rope in international agencies along with eminent geoscientists for mapping natural resources with an objective to start mining of all minerals available in the State.

"We will encourage investment in exploration and mining of gemstones. Once we explore the locations, mining will start. We will also go for their processing to add more revenue. We would like the locals, instead of smugglers, to gain from gemstones which are available in their localities through legitimate busniess.," Sharma said.

The workshop was organised by Odisha Mineral Exploration Corporation Limited (OMECL), a newly-formed State PSU, to explore new technologies and discuss policy matters.

OMC and OMECL Managing Director R Vineel Krishna said gemstone sector has huge employment potential. Exploration and exploitation of gemstones will be upscaled in the State, he added.

Describing the possibilities, GM (Exploration) OMECL Sailendra Sinha said the existing policy is being fine-tuned to check revenue loss in the unorganised sector.

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Experts from countries like Zambia, Columbia, Mozambique and Madagascar, where large scale gemstone mining is being carried out, participated.

9 mines auction in March

Director of Mines Deepak Kumar Mohanty said after the auction process of 20 mines for which tenders have already been floated this month, the State will auction nine virgin mines, including seven iron ore, one manganese and another iron ore and manganese in March.

MINING INDUSTRY RETHINKS RENEWABLES

The mining industry has a bad image due to the mining conditions in some countries. It makes sense to improve the model by showing a commitment to sustainable energy options and contribute to saving the world climate change.

The mining industry is a highly energy-intensive sector. It is said that almost 11 percent of total energy consumption in the world is by mining. Traditionally, the industry has been powered by fossil fuels, which are environmentally harmful and costly too. But in recent years, there has been a willingness to try out more energy-efficient and renewable sources of energy within the mining industry.

A report by the **International Energy Agency** says that the global renewable energy capacity will see a growth of 50 percent between 2019 and 20124. This will mainly be fueled by solar and wind power.

The urgency to change the way mining is heavily dependent on fossil fuels is because of the rapid climate change and the need to cut down carbon emissions by 2050.

The nearly 50 percent growth in the adoption of renewable energy technology will be seen mainly in the Asia Pacific region of China, India, and Australia. Latin America is consciously trying to move away from fossil fuel dependency to cut its fuel imports.

A report by the consultancy firm **THEnergy** states that 2019 has seen many mining companies committing to shift to renewable sources in their projects.

“The year 2019 has been identified as the tipping point. The business case for partly substituting expensive fuel like diesel, heavy fuel oil (HFO), or gas by solar and wind had been positive on paper for years. However, actual projects have evolved slowly,” the report states. “[Yet] in 2019, almost a dozen new projects have been officially announced and at the same time many more projects are under development and on the verge of being announced.”

A global tracker firm of mining projects says that the world has seen almost 1.2 gigawatts of capacity installed across 41 sites in the last few years, and a further 714 megawatts is in the pipeline.

Before 2010, barely 11 megawatts of solar and wind energy based energy projects were set up in the mining sector. The last few years have seen a significant increase in interest in such projects.

Another report by the Columbia Center on Sustainable Investment (CCSI) reveals that in the above 11 percent consumption of energy by the mining sector, 62 percent comes from burning oil, gas, and coal. The electric grid contributes another 35 percent. All this adds up to the carbon emissions of mining companies. This consumption of energy is expected to go up to 36 percent in the next two decades as the demand for minerals grows.

The warning bells about climate calamities, increased need for energy, the mandated elimination of carbon footprints and a need to appear socially committed to change have all contributed to the urgency to adopt sustainable technologies. The renewed interest in sustainable energy fuels is also due to the cost factor. Fossil fuels make up anywhere between 15 to 40 percent of mining costs.

Transport of fossil fuels in remote areas where mining takes place is a massive factor in this cost. Tapping into the wind and photovoltaic solar power makes sense as these are abundantly available in and around mining areas.

Also, the fall in prices of commercial renewable project setups has added to the attraction. Added to this is the carbon pricing advantage that these companies want to use.

Experts opine that at the moment energy-efficient fuels are being used only above ground, the below-ground mining is still using gas and diesel.

The mining industry has a bad image due to the mining conditions in some countries. It makes sense to improve the model by showing a commitment to sustainable energy options and contribute to saving the world climate change.

Down the supply change, industries utilizing the mining minerals like Apple and other technology behemoths are also insisting on a sustainable method of extraction. Moreover, a commitment to renewable energy by the mining companies enables them to charge a premium for their products.

RINL CAN BREATHE EASY AS CENTRE ALLOTS COAL MINE IN JHARKHAND

Rashtriya Ispat Nigam Limited (RINL), the corporate entity of Visakhapatnam Steel Plant (VSP) can breathe it easy with the Centre’s decision to allot it a coal mine in Jharkhand, though the long-pending demand to get captive iron ore mines to achieve raw material security is yet to be fulfilled.

The India’s first shore-based steel plant needs 1.6 kg of iron ore to produce a kg of steel. Similarly, for producing a kg of steel, it needs 550 grams of coal. In the absence of captive mines, the PSU

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still depends on domestic and overseas supply of the raw material, which leads to expensive production cost among the major steelmakers in the country.

The Ministry of Coal on Saturday announced the allotment of two coal mines at Rohne and Rabodih respectively to the National Mineral Development Corporation (NMDC) and the RINL. The two mines can generate 10 million tonne per annum. The NMDC is on verge of completing the work on commissioning a three million tonne integrated steel plant at Nagarnar in Bastar district of Chhattisgarh. The NMDC, which is also under the purview of the Ministry of Steel, has a long-term agreement with the RINL for supply of iron ore from its Bailadilla mines in Chhattisgarh.

'Dependence on imports to go down'

"The decision to allot coal block at Robodih will reduce the dependence of RINL on the imports. According to the Ministry of Coal, the two mines in their lifetime will generate around 7,000 crore revenue for the Jharkhand Government, besides royalties and other applicable taxes. Both the NMDC and the RINL will establish their washing units for cleaning the coal," an official of RINL told The Hindu.

The RINL's dream to lay hand over the iron mines in Odisha has been shattered even as it invested 361 crore in the Bird Group of Companies in 2010 to achieve a strategic control over the Orissa Minerals Development Company (OMDC), which has coal blocks in Keonjhar with a reserve of 200 million tonne. It is facing a rough weather due to cases pending in Supreme Court over the payment of penalties for its alleged involvement in unauthorised mining by the OMDC.

Joint venture

The RINL's plan to enter into a joint venture with the Andhra Pradesh Mining Development Corporation (APMDC) to explore low-grade iron ore in an estimated 900 hectares at Kukunoor of West Godavari district is awaiting clearance by the Niti Aayog and the Ministry of Mines.

ODISHA ENVIRONMENT CONGRESS TO DELIBERATE ON MINING AND ENVIRONMENT

The 10th edition of Odisha Environment Congress (OEC) will be held at Regional Museum of Natural History (RMNH), Acharya Vihar, Bhubaneswar, Odisha on 20th to 22nd December 2019. The theme for the programme is "Environment and Mining".

Dhiren Kumar Raim Chairman of OEC said, "Mining bears lot of meaning in the context of Odisha. The OEC is going to discuss, debate and deliberate on different aspects of mining and find out workable solutions to the issues bothering us."

Mining, in spite of its significant contribution to the State's economy, has also many detrimental effects on the environment. These are manifested in erosion and contamination, loss of biodiversity, water and air pollution, which adversely impact human health and well-being. Erosion is linked to exposed hillsides, mine dumps, tailings dams and the resultant situation of drainages, creeks and rivers that impact surrounding areas significantly. In forest areas, mining can cause destruction and disturbance of the eco-systems and habitats and in farming areas it can destroy the cultivable and grazing lands. The usage of large amounts of water for mine drainage, mine cooling and other mining processes, leads to contamination of surface and ground water, he added

Sudarshan Das, Secretary of OEC said, "The three-day long conference will include dialogues and deliberations on the main theme as well as sub-themes.

He said that there will be two special sessions. While the mining industries will be speaking about how they are doing their job in a responsible way, the affected people in the mining areas will speak their case ij the second session.

As a prelude to Odisha Environment Congress 2019, there will be a workshop on "Mining in Keonjhar and it's impact on Environment", December 8, at Sahid Sadan, Keonjhar.

NALCO JV KABIL BEGINS HUNT FOR LITHIUM IN LATIN AMERICA, EYES ACQUISITION

The firm is mandated to scout for and secure 12 mineral assets in which the country lacks ample reserves and has to bank on importsKhanij Bidesh India Ltd (KABIL), a joint venture (JV) company floated by National Aluminium Company (Nalco), Mineral Exploration Corporation Ltd (MECL) and Hindustan Copper Ltd (HCL) has begun the hunt for lithium in Argentina, Brazil and Chile -- collectively called the ABC countries.

"The hunt for lithium is to fructify efforts for a possible acquisition. KABIL is mandated to scout for and secure 12 mineral assets overseas where the country lacks ample reserves and has to bank on imports," said a source familiar with the development.

Nalco owns 40 per cent stake in KABIL, while MECL and HCL have 30 per cent ownership each in the company.

The JV company has the mandate for acquisition, exploration, and processing of strategic minerals abroad for commercial use and for supplying to meet the domestic requirement. The objective of setting up KABIL is to ensure a consistent supply of critical and strategic minerals to the Indian domestic market.

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While KABIL would ensure mineral security of the nation, it would also help in realising the overall objective of import substitution.

Twelve strategic minerals have been identified and the initial focus will be on lithium and cobalt. Preliminary due-diligence of identified assets shall be initiated soon. Earlier in February 2019, the central government's planning think tank NITI Aayog had cleared the proposal to form the JV company by the three CPSEs (central public sector enterprises) to acquire minerals that are not available in India. It may be noted that KABIL will be among a handful of companies in the country for the acquisition of mineral assets abroad.

KABIL would carry out identification, acquisition, exploration, development, mining, and processing of strategic minerals overseas for commercial use and meeting the country's requirement of these minerals. The sourcing of these minerals or metals is to be done by creating trading opportunities, G2G (government-to-government) collaborations with the producing countries or strategic acquisitions or investments in the exploration and mining assets of these minerals in the source countries.

The new company will help in building partnerships with other mineral-rich countries like Australia and those in Africa and South America, where Indian expertise in exploration and mineral processing will be mutually beneficial bringing about new economic opportunities.

KAPPATAGUDDA SANCTUARY UNDER GOLD MINING PRESSURE

Wildlife clearance pending for activity involving diversion of nearly 40 hectares of forests

Kappatagudda Wildlife Sanctuary, which was recently notified by Yediyurappa government, is already facing untold pressure from mining companies for gold extraction in the protected area. Presently, scrutiny is on for an online application filed for wildlife clearance to carry out gold mining which will involve diversion of nearly 40 hectares of pristine forests, if permitted.

Ramgad Mineral & Mining Ltd had in fact, carried out gold prospecting as far back as 2001-03 and obtained mining license for 39.7 hectares region in May 2008. In this process, the company had opposed against the formation of either the conservation reserve or a sanctuary, as it said both will halt its ambition of gold mining in the verdant biodiversity rich forests. Further, the company claimed that mining area involved only the periphery of the forest.

As per forest officials, the mining area falls in the Shirahatti range of the sanctuary. As far as the processing of the application is concerned, Gadag officials said, the online application was received only a week back. The processing of the application may not take much time as studies and field inspection has already been done last year, they said.Kappatagudda was declared a sanctuary on May 16, this year under the Wildlife Protection Act, 1972 following protests from ecologists and religious mutts. Earlier, it had been declared as a conservation reserve which had been withdrawn and then re-notified.

The state government took the decision when it notified Kappatagudda as a sanctuary, recognising its ecological importance, said Praveen Bhargav of Wildlife First. "Permission for mining should be rejected as per Section 29 of Wildlife Protection Act, 1972. Although there are some precedents in India for land diversion in protected areas, but the same is not present for mining," he added.

Former forest officials and retired PCCFs have called for rejection of application of gold mining in Kappatagudda. They say earlier, their applications were rejected and the High Court ave not entertained Baldota's proposal for mining in these forests. He has been bringing pressure from every quarter to carry gold mining in Sahayadri of North Karnataka. It should be rejected outright as per existing guidelines and WPA."

Chief Wildlife Warden Sanjai Mohan said, "Online applications filed for forest/wildlife clearances are sent from APCCF to the concerned DCF of the area. In any case, all procedures will follow and the application will be scrutinised on whether it is to be rejected or permitted. As per WPA, mining is not permitted in PA."

Presently, the new sanctuary encompasses an area of 24,415.73 hectares across Gadak, Mundargi and Shirahatti taluks in Gadag district. The protected area has unique floral, faunal, geomorphological and ecological importance where its wildlife has to be protected and conserved, the 2019 sanctuary notification states.

KIOCL SIGNS PACT WITH KARNATAKA GOVT FOR MINERAL EXPLORATION

"Work agreement had been entered into between KIOCL Ltd and Dept of Mines & Geology, Govt of Karnataka...for carrying out mineral exploration by KIOCL Ltd for manganese and iron ores in nine identified blocks in Bellary and Chitradurga districts of Karnataka at a total estimated cost of Rs 81.53 crore plus GST," the state-owned firm said in a BSE filing.

Bengaluru-based public sector undertaking KIOCL on Monday said it has entered into a pact with Karnataka government for mineral exploration in nine manganese and iron ore blocks in the state at an estimated cost of Rs 81.53 crore.

"Work agreement had been entered into between KIOCL Ltd and Dept of Mines & Geology, Govt of Karnataka...for carrying out mineral exploration by KIOCL Ltd for manganese and iron ores in nine identified blocks in Bellary and Chitradurga districts of Karnataka at a total

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estimated cost of Rs 81.53 crore plus GST," the state-owned firm said in a BSE filing.

KIOCL Limited -- formerly known as Kudremukh Iron Ore Co Ltd -- is a company under the steel ministry. The company has experience in operating iron ore mining, beneficiation and iron-oxide pelletisation in the country.

It has 3.5 million tonne per annum (MTPA) iron-oxide pellet plant to manufacture pig iron at Mangaluru, Karnataka.

AN OPPORTUNITY FOR AUSTRALIA AND INDIA TO SYNERGIES FURTHER

A shift in the global economy, politics and governance has brought major disruption to the world. Hence, there is a growing demand from nations to address the changing power dynamics driven by restructured norms, rules, institutions and strategic collaborations. The impending visit of Australian Prime Minister Scott Morrison to India in January 2020 is driven by this hope and optimism to address the dynamics, which are at play in reforming such structures that asks for geopolitical and economic repositioning. Can Australia and India find the obvious synergies that exist between them and more importantly make them work?

PM Morrison will visit India in January 2020 and will deliver the inaugural address at the Raisina Dialogue (a dialogue on foreign policy and strategic affairs). He will also be accompanied by a business delegation involving senior executives from sectors that are of significance between Australia and India. Australia's release of the India Economic Strategy 2035 (IES) report last year, authored by Peter Varghese AO, Former Secretary of the Department of Foreign Affairs and Trade and Former High Commissioner of Australia to India, has set a target for India to become one of Australia's top three export markets, to make India the third-largest destination in Asia for Australian outward investment. This would also help bring India into the inner circle of Australia's strategic partnerships. India's reciprocal Australia Economic Strategy (AES) authored by Former Secretary (East), Government of India and retired ambassador Anil Wadhwa will be officially released in December-January 2020, and will cover the opportunities across emerging areas such as mining, resources, education, medical and water technologies, space technology and manufacturing which have major relevance in the future aspirational plans of Indian companies and investments.

When strategy meets action

The future of India – Australia ties can be seen via an eight-point vision, marking the important sectors, opportunities and concerns between the two states to take the relationship to the next step.

Firstly, this type of a blueprint to enhance trade opportunities between India and another country has never been attempted before. The release of the India Economic Strategy 2035 (IES) last year and Australia Economic strategy (AES) is a way forward towards building a strong knowledge resource, that could enhance our understanding of each other across different sectors, help businesses strategies, explore and expand in the Indian or Australian market with ease.

Second, Australia is a natural partner in every area of India's priority: energy and resources, agribusiness, education and skills, infrastructure, finance and health. Just as India has core strengths for Australia: IT, manufacturing, engineering, textiles, agriculture and finance. However, there are many new emerging areas of cooperation that can be explored between both nations. For example, India has been a partner of Australia's national resources in coal, gold, copper etc., however with the international exploration programme (under Khanij Bidesh India Ltd.) the objective is to ensure a consistent supply of critical and strategic minerals like lithium, nickel, cobalt etc. to the Indian domestic market. The growing significance of these minerals is demonstrated in their use in the manufacture of mobile phones and computers, flat-screen monitors, wind turbines, electric cars, solar panels, rechargeable batteries, space and defense-industry technology and products.

Third, Australia is a recognized global leader in Mining Equipment and Technology Services (METS). India lags behind other mining countries across all stages of mining—geoscience, exploration, development, production and reclamation. Australian METS sector has a number of comparative advantages, which if utilised properly can offer a range of solutions to the mining industry in India.

Fourth, the discourse on higher education has been limited to the number of Indian students enrolling in Australian Universities. The emphasis on vocational training in India is important to create a globally-ready skilled workforce. There is a need for re-skilling, upskilling and deep-skilling. The Ministry of Human Resource Development (MHRD) has released Education Quality Upgradation and Inclusion Programme (EQUIP) to transform higher education in India through joint collaborations in Science, Technology, Engineering and Mathematics (STEM) and creating institutes of excellence and global competence within the country.

Fifth, Australian superannuation funds are among the world's largest with respect to volume, and do not have much exposure to Indian markets as they have with other international economies. The funds can look at investing in Indian infrastructure projects such as industrial corridors, ports, smart cities, airports and railway projects.

Sixth, India already looks to Australia as a model in sports for achieving results. The Indian Government has made improving sports outcomes a priority. There is a growing interest in sports science and sports technology.

Seventh, a report by NITI Aayog claims that twenty one cities in India including Delhi, Bengaluru, Chennai and Hyderabad - will run out of groundwater by 2020, affecting around 100 million people. The report also says that 40 per cent of India's population will have no access to drinking water by 2030. The newly created

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Ministry of Jal Shakti (waterpower) is primarily to oversee water resource management. Australia is a good example of how effective management can save a country on the brink of water stress. From 1997 to 2009, Australia faced the worst drought in the country's recorded history. Despite the dire situation, Australia reduced water demand per capita by almost 50 percent by implementing a slew of policies and programs. So cleaning of water, preservation of water can be areas to collaborate in specifically during the times of climate change taking center stage in global policy discourse.

Eighth, India and Australia can combine complementary skills and expertise to develop new innovations, by leveraging Australian expertise in areas such as agri-tech, health-tech, water management, food processing and food storage, sports technology, energy efficiency and renewables, with Indian expertise including in data analytics, biotech, and mobile applications.

Ninth, greater maritime cooperation, and a stronger alignment on regional Indo-Pacific architecture has featured heavily in recent Australian strategic discourse, especially since the release of the 2013 defense white paper, the 2017 foreign policy white paper and the renewed Quad dialogue involving India, Japan, US and Australia. During Morrison's visit, Australia and India are expected to sign logistics services agreement to simplify interoperability and enable military platforms to receive support and supplies across bases in both nations, reiterating the need to facilitate stronger strategic ties driven by congruence and issue based alignment.

From potential to delivery

With India's recent pullout from the Regional Comprehensive Economic Partnership agreement (RCEP), there is an opportunity for Australia to negotiate a bilateral comprehensive economic partnership agreement (CECA) that is mutually beneficial, addresses each other's concerns and provides market access. Both governments began negotiating CECA in 2011 and the talks have progressed in spurts, held up primarily because of two sticking points: India's demand on free movement of professionals versus Australia's demand for enhanced agriculture market access in India. An equal balance between goods, services and investment within the Free Trade (FTA) ambit can provide a new push to this relationship.

According to the Joint Study Group (JSG) report, the welfare gain from the FTA could be in the range of 0.15 and 1.14 per cent of GDP for India and 0.23 and 1.17 per cent for Australia. Hence, curating a deal that addresses and acknowledges the needs of Australia and India, which are at different levels of development, will be of prime importance. India is exporting only 10% of its GDP and is heavily dependent on domestic consumption. Australia's support in building India's export led growth strategy, and India's need to create globally competitive goods and enhancing its global supply chain is a symbiotic dimension that can be explored. Manufacturing in India, in a cost-competitive environment, could be the key for Australian companies to expand their footprints to other parts of the world. 'Designed in Australia - Made in India' can be the new focus area for this partnership.

The visit of Morrison is an opportunity to reflect positions and perceptions, which could facilitate stronger strategic, economic and people-to-people ties between Canberra and New Delhi. Australia could also initiate an annual leaders' meeting between the two Prime Ministers. Both governments can convey their long-term vision for this relationship led by mutual obligation, timelines and tangibles. The word "engagement" is crucial which should become a permanent national project for both countries.

NATASHA JHA BHASKAR : Observer Research Foundation

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