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Indian Mining & Exploration Updates

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Policy Watch: India's blighted vision about gold mining

Last week, media headlines screamed out information about the 'theft' of 100 kg of gold kept in the CBI vaults. An inhouse has been ordered. That is a far cry from the megaphone enquiry for the Kerala gold smuggling case. But the theft underscores the need for the government to have a central gold depository, and registry, under the RBI or any other special body created for gold. Today, each enforcement authority has its own vaults – the CBI, ED, Income Tax, Customs and possibly many more. This author has argued for the need to have a common vault under a common gold controller. Clearly, someone wants more pockets, so that theft can take place from more places than one.

But gold vaults are not the only areas where the government has bizarre policies. Its policies relating to gold mining are even more bizarre and could even be considered anti-national as they violate a country's core interests. They go against the very concept of both Atma Nirbhar and Make in India. Officially India is estimated to have mined just 1.656 tonnes of gold in India during 2019-20.

terrain. In 1994, India produced around 2 tonnes, and China produced around 3 tonnes. Today, China produces 450 tonnes." India is one-third the size of China. So statistically, it could produce 150 tonnes a year, at least. Clearly the potential for India is huge.

So where does the problem lie? The answer is a lot more complex than people imagine.

Yes, gold mining has been liberalised, at least on paper. Even the Annual report of Ministry of Mines, for the year 2019-20, states that four gold mine sites were recently auctioned. One in 2014-16, 2016-17, 2017-18 and 2018-19 respectively. But search the Internet, and you will not be able to find out how many gold mining licences, and gold prospecting licences have been issued altogether. One problem is that mining is also a state subject. The second problem is that the government does not want people to know how many licences are out with people in India. A third problem here is that government officials do not realise the need to look at gold prospecting and gold mining licences as just one licence (but more on this later).

But why have the gold mining licences not been converted into actual gold production? Geologists will tell you how they have had to fight back tears of sheer frustration and list out

comes under the government of India brings out annual reports -- the last report on gold came out in 2017.

Gold Reserves in India	
Figure in tonnes	
Ore (primary)	50,18,39,632
Metal (Primary)	654.74
Ore (placer)	2,61,21,000
Metal (Placer)	5.86

Note: Industry experts say that placer gold Resource estimates of 26 million tones is unacceptably high. It assumes very high recovery rate of 5.8 grams per tone of ore.

Source: Page 227 of annual report of Ministry of Mines-2019-20 —
(<http://mines.gov.in/writereaddata/UploadFile/Corrected%20AR%20220902020.pdf>).

Then there is the problem of data unreliability (see chart). In some charts, where it shows gold reserves to be high, it assumes a recovery rate of gold that is extremely aggressive. Talk to experts, and they believe it should be a fraction of what the government estimates are recovery rates. Placer is actually a term given to weathered material that has eroded away from the parent rocks. This maybe be in the surrounding soil of an ore body or it may be lying in modern river systems or in old river systems. For example, the diamond kimberlites of South India have been eroded for over millions of years. Geologists still wonder where all those eroded diamond pipes have gone. Have they ended up in the Krishna or Pennar Rivers or on the coast? Do bear in mind that some of the largest diamonds discovered in India were in riverbeds.

Yet another reason is the government's fixation on what mining should be. It believes that mines must be large, deep and must use fanciful and extremely expensive equipment. On the contrary, many of the gold deposits in India are in shallow regions and require local people who understand the land and the terrain to go prospecting under the supervision of knowledgeable geologists. This is where, the government needs to allow such gold mines in association with local farmers. After all, the geologists who are involved in gold mining, understand soil characteristics much better than not-so-literate farmers. Can they be made to work together on shallow mines?

Production of Gold in India

	Production in Kg	No of Mines	Public Sector	Private Sector
2015-16	1,323	5	1,310	13
2016-17	1,595	5	1,579	15
2017-18(P)	1,648	NA	NA	NA
2018-19(P)	1,664	NA	NA	NA
2019-20-E	1,656	NA	NA	NA

Notes: (P) Provisional. ; (E) Estimated Figures ; There are only four underground Mines in the country. Information from government is patchy

Sources: The first three year's data is sourced from Indian Mineral Yearbook, 2017 (Part II), Government of India, Indian Bureau of Mines

(http://ibm.gov.in/writereaddata/files/30202018145720Gold_AR_2017.pdf); The rest has been sourced from Annual report of Ministry of Mines-2019-20 ; MCDR returns

But ask geologists, and they will tell you that India should be mining a lot more gold. This is because the terrain from Australia to China has similar geological features. There is a lot of gold to be found there.

For instance, points out an Australian geologist, "In Australia we produce around 300 tonnes (9.7 million troy ounces) compared to barely 2 tonnes in India. We think India could produce a lot more. In fact," he adds, "look at China. Even China has a similar geological

reasons why India has not been able to mine more gold than the extremely low quantities mined currently.

Let's begin with the sheer paucity of data that the government makes available to prospective gold miners. Even information that should have been out in the public domain is missing. There is little data on India's ranking in gold reserves, or India's mining centres, or prospective gold deposits. The department of mining, which

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Moreover, prospecting for gold calls for immense skill and lots of luck. As FIMI (the Federation of Indian Mineral Industries) points out in its paper dated 9 October 2018, “Strategic minerals / metals as well as precious metals occur usually in exceptionally low concentrations (<1% and in parts per million) in rocks. It is difficult to discover them and much more difficult to define their reserves and resources. The success rate of discovery is 1 in 400 to 1 in 800 prospects.”

The government’s inability to understand the last factor – the slim odds of finding gold -- has led to some rather absurd policies being formulated (we shall dwell on this in another article) as well as its inability to get the whole picture. Add to this its reluctance to appreciate the huge stocks of gold that may be lying underground, and which could do India proud.

But where can gold be found? The government knows the locations. In fact, there is a map in public domain which is quite enlightening (see map). Also, a geologists, is outdated. It was created in 2006. Newer technologies coupled with satellite and drone imaging suggest that there could be many more sites than indicated on the old map. Further, the quantities that can be extracted from each tonne of ore could be much huger than had been earlier estimated.

A particularly good example are the mines in and around Jonnagiri in Andhra Pradesh. This is where both diamonds and gold can be found awfully close to the surface. What makes these mines interesting is that they were originally mined by the Emperor Ashoka some 2300 years ago. India can use the proceeds of these mines in much the same way that Emperor Ashoka did – using them to finance projects crucial for the development of the country/territory.

Agriculture, gold, and diamonds can co-exist even today. But the government has been reluctant to clear pending paperwork. Bureaucrats create hurdles in the



Sources :

https://www.researchgate.net/profile/P_A_Azeez/publication/270280429/figure/fig1/AS:295090288381966@1447366415764/Distribution-map-of-gold-occurrences-in-India-Source.png

Mineral Map of India, GSI, 2006

name of security, accountability and even environment. That is why many of these mines are not functional, though Jonnagiri hopes to begin production in around 18 months and is confident of mining over \$100 million worth gold each year (with costs being around \$40 million). What de-presses geologists is that raising funds for this gold mine has suddenly become exceedingly difficult, because the central government has been sending out the wrong investment signals to potential investors. And the ones who are willing to put up the money are people

that sensible miners would like to keep far away. Say another geologist, “Most of these investors leave a lot to be desired. Their attitudes and the sources of their capital are of concern to me. Most of these investors have a rape and pillage mentality.”

But the government’s fuzzy-headed approach to gold mining, has invited more risk capital than sound long-term investment from the right quarters.

India's mining sector to witness reforms, flurry of activities in 2021

About the prospects for 2021, the Mines secretary said the government is in the process of further reforming the mining sector by amending the MMDR Act to further exploration of deep-seated minerals like gold, diamond, platinum, copper, zinc and lead, with greater participation of the private sector.

The country's mining sector will see "hectic activities" in the new year with the central government's approvals for pending mining reforms expected in January itself and efforts continuing to bolster overall mineral output.

The reforms will pave the way for auctioning of at least 500 mineral blocks, Mines secretary Anil Kumar Jain told PTI and emphasised that calendar year 2021 will be a "bridge year between the past and the future".

On account of market forces, there is a fluctuation in steel prices but the Covid-19 pandemic did not impact the country's mineral production this year, he noted.

While many sectors had to bear the brunt of the pandemic-induced lockdown, Jain said India has "registered in iron ore some of the best export numbers in the last seven-eight months as compared to previous years".

"The year 2021 will see hectic activity on the mining side because the reforms which have been in waiting for some time, they (reforms) are likely to be approved in the month of January which will involve some changes in the MMDR Act (Mines and Minerals (Development and Regulation) Act, 1957) and some changes in the rules all meant to liberate the sector.

"It is going to bring into play a large number of mining blocks so the production in most of the minerals resources will see quantum jump because of these mines which will become available for interested parties in the calendar year 2021," Jain said.

As per official figures, India's iron ore export increased by 70.26 per cent to 29.261 MT in the April-September period of ongoing fiscal

over 17.186 MT in the year-ago period.

"At the outset when it (government) identified essential sectors, for which the lockdown was not imposed, it included the mining sector in that (essential sectors). So that has helped and it kept the people employed and it kept the ore coming.

"India has registered in iron ore some of the best export numbers in the last seven-eight months as compared to previous years. In that sense, the Government of India was very cognizant of the importance of this sector and it has served the nation well," the secretary said.

However, miners' body Federation of Indian Mineral Industries (FIMI) is of the view that 2020 has been very tough and challenging year due to the pandemic and subsequent lockdown.

"(For the) Mining sector, which was already under the phase of slowdown, the impact of Covid-19 proved to be a double whammy," FIMI Secretary General R K Sharma said.

The government declared mining as an 'essential service' and allowed the production and transportation of minerals during the country-wide lockdown, he said.

Despite the adversity, mining companies showed remarkable resilience and continued mining operations to the extent possible, he added.

The government amended the mining law to facilitate enhancing coal production and reducing imports.

It also aims to smoothen transitions of expiring non-captive operating mines to new bidders and deemed validity of statutory clearances for a period of two years.

After implementation of the amended mining law, 28 operative mines (24 iron ore, iron and manganese ore, and chrome ore mines in Odisha, and 4 iron ore mines in Karnataka) that expired on March 31, 2020 have been successfully auctioned.

The government's endeavour is to enhance the mining sector's contribution to the country's GDP, Sharma said.

About the prospects for 2021, he said the government is in the process of further reforming the mining sector by amending the MMDR Act with the objective of exploration of deep-seated minerals like gold, diamond, platinum, copper, zinc and lead, with greater participation of the private sector.

"Initiatives are being taken to ensure early operationalisation of auctioned greenfield mineral blocks (52)," he said.

Rationalisation of taxes in the mining sector is also being considered.

Under the Aatmanirbhar Bharat scheme, the Centre, in May, announced enhancing private investments in the mineral sector and bringing in other reforms.

The mines ministry has proposed legislative amendments to the MMDR Act, 1957 for undertaking structural reforms with the objective of accelerating growth and employment generation.

They are also aimed at resolving legacy issues to move towards an auction only regime for allocation of mineral resources, removing the distinction between captive and non-captive mines, developing a transparent National Mineral Index and clarifying the definition of illegal mining, among others.

Coal India set to diversify into non-coal mining areas in 2021

- ◆ Against all odds, including the slump in coal demand, the government opened up the country's mining sector for private players by auctioning 19 blocks.
- ◆ The coal sector also faced rough weather in 2020 as fuel demand slumped due to sluggish economic activities in the wake of the coronavirus pandemic.

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State-owned Coal India Ltd (CIL) is set to diversify into non-coal mining areas as well as make major investments in clean technology in 2021 after demand for the dry fuel remained muted for most of this year amid the coronavirus pandemic impacting economic activities.

Against all odds, including the slump in coal demand, the government opened up the country's mining sector for private players by auctioning 19 blocks.

Coal demand across the world is projected to fall by around five per cent this year compared to 2019 while various sectoral challenges are expected to persist in 2021, analysts said.

"In 2021, we will try to get Coal India Ltd (CIL) to diversify into non-coal mining-related areas. It (CIL) will make major investments in sectors other than coal mining so that it is well prepared to make the transition away from fossil fuel.

"So, it (CIL) will make investments in renewable energy, get into aluminium and clean coal technology and will do a lot," Coal Secretary Anil Kumar Jain told PTI.

In the coming year, Jain said CIL is also likely to go ahead with its agenda of achieving one billion tonnes of production target by 2023-24.

CIL may also "go ahead with one billion tonnes agenda. It is getting approvals. It is gearing up to keep enhancing its production which was 603 million tonnes last year. It is taking upon itself bigger and bigger target. It will be able to achieve one billion tonnes (production target) in 2023-24," he said.

Noting that CIL has taken upon itself an investment plan of ₹2.5 lakh crore, Jain said that out of the proposed outlay, a significant chunk would be spend on clean coal technologies and diversification.

"The rest of it (the investment will be) to increase coal production," he noted.

About 2020, Jain said that auction of "commercial coal blocks was number one achievement (in the coal sector).

We amended the Act to ease several things".

The auction of coal blocks for commercial mining witnessed "fierce competition" and the 19 blocks that went under the hammer will generate total revenues of around 7,000 crore per annum and create more than 69,000 jobs once they are operationalised.

As many as 38 mines were put on auction, which also marked opening up of the country's coal sector to private players. The bidding also saw participation of players from sectors like pharma, real estate and infrastructure.

A total of 42 companies participated in the auction and 40 of them were private players. As many as 76 bids were received for 23 mines. Some of the large corporate groups that have bagged blocks include Adani Enterprises, Vedanta, Hindalco Industries and Jindal Power.

According to the secretary, the government facilitated the mining plan and made it eco-friendly to promote ease of business.

The coal ministry took initiatives to revisit old laws with an aim to improve efficiency, ease of doing business, and to open up coal sector to improve domestic coal production and reduce imports.

Prior to amendments in the mining law, there was dominance of public sector companies both in exploration and mining of coal.

The Mineral Concession Rule, 1960 was governing many aspects of coal mining and required amendment in furthering the coal sector reforms.

Noting that the creation of a sustainable development cell was another achievement of the coal ministry, Jain said it will ensure CIL and other companies maintain environmental standards as well as that star rating of mines are done.

"Since coal mining is a core activity we do not want there should be any slackening in our endeavour to maintain the highest environment standards," the secretary said.

Sustainable Development Cell aims to

promote environmentally sustainable coal mining and address environmental concerns during the decommissioning or closure of mines. The cell also formulates policy framework for the environmental mitigation measures, including the mine closure fund.

The coal sector also faced rough weather in 2020 as fuel demand slumped due to sluggish economic activities in the wake of the coronavirus pandemic.

A coal ministry official who did not wish to be named said that almost all sectors of the country were hit due to the pandemic and the coal industry was no different. Sale of coal fell as the power sector, a major consumer of the dry fuel, saw a decline amid the lockdown, the official added.

CIL Chairman Pramod Agarwal said the company is planning to produce 650-660 million tonnes of coal this financial year while production of 334 million tonnes was achieved till November.

Regarding coal demand in 2021, Jain said it will depend on many things, including movement of the economy.

Global coal consumption is estimated to have fallen 7 per cent, or over 500 million tonnes, between 2018 and 2020. In 2019, global coal demand decreased 1.8 per cent after two years of growth as power generation from coal weakened globally, including in India.

Analysts opined that there will be a modest rise in demand in 2021 and prices are also expected to firm up.

Coal demand is set to revive by 2021 in India and other Asian nations, including China, which are the major consumers of the fuel, Moody's Investors Service said in a report in October.

Coal use is anticipated to increase 3.8 per cent in 2021. In the medium term (to 2025), India has one of the highest potentials to increase coal consumption as electricity demand rises and more steel and cement are required for infrastructure projects, as per the International Energy Agency said.

Goa's iron ore mining stuck at a crossroad

- ◆ *Three years since iron ore mining was shut down due to a court order, various stakeholders of Goa's mining industry are looking at all possible solutions to resume it.*
- ◆ *Ranging from the extension of mining leases, auctioning of mines, setting up a state-owned mineral corporation or a cooperative, the stakeholders have diverse solutions for the resumption of mining.*
- ◆ *While the mine owners and state government want to extend the mining leases, the central government is in favour of auctions. The farmer associations and activists are determined to set up a cooperative to ensure sustainable mining.*

In less than 100 days, in February 2021, it will be three years since India's apex court stopped iron ore mining in Goa. The state is yet to find a path to resume operations. Various stakeholders involved – the government, mining industry, environmentalists or residents of the mining-affected villages – have proposed a solution for the path ahead for mining in the coastal state. A consensus however, eludes them thus far.

In early 2018, the apex court had quashed 88 mining leases for violation of mining procedures and asked the state government to issue fresh leases instead of renewing existing ones while directing the Goa government to recover about Rs. 350 billion from the miners.

Since then, there have been numerous attempts to restart mining in the state, but now the decision is stuck on whether it should be commercial mining as desired by the central government, extending the existing mining leases till 2037 or setting up a state mineral corporation or a cooperative mining structure as desired by groups of farming associations.

On November 30, Goa's Chief Minister Pramod Sawant said that the central government is in favour of opening the iron ore mine leases of Goa for auctions. He said that he was worried that if an outfit from outside of Goa won the auction, the local employees might get affected. The chief minister also explained that they are trying for a different solution, which could be either extending the existing leases till 2037 or setting up a state mineral corporation.

The central government, however, has made it clear that it is in the favour of auctioning the leases. Both the government of Goa and the government of India are led by the Bharatiya Janata Party.

While the representatives from Goa Mining People's Front, a union for mining dependents, and the state's main opposition party, the Indian National Congress, have stressed that they don't care how the government ensures that

mining is restarted, they just want it to be resumed in the fastest way possible.

The state's truck association representatives, some activists, and farmer associations are in favour of a state mining corporation, while some farmers and activists have a preference for community/cooperative mining. But all are clear about one thing – it can't be business as usual for long.

The policy decision on how iron ore mining resumes in Goa is crucial for the farmer and tribal communities whose lives have been intertwined with the industry and has been seriously impacted by it over the decades.

How integral is mining to Goa's economy?

Mining has been an important part of Goa's economy. The local names involved in mining, Sesa Goa, the Timblos, the Chowgules, the Dempos, the Salgaocars, today own and run a lot of businesses and enterprises in Goa. Ranging from football clubs to schools and colleges to real estate and construction, nearly every industry in Goa has the stamp of the mining families.

The state's political system is not untouched by mining either. It is deeply entwined with the mining industry. Goa's first chief minister, Dayanand Balkrishna Bhandodkar, fondly known as Bhausahab Bhandodkar, was also a wealthy mine owner. According to media reports, investigations have revealed that mining companies donated many a time to BJP as well as Congress in the last 15 years.

But decades of iron ore mining took a toll on the state's local ecology and threw up numerous instances of mining-related laws being violated. The 2013 report of the Justice MB Shah Commission, which was formed to look into illegal mining across India, revealed in its report for Goa a number of illegalities carried out by the mining companies, including mines, being operational even after their leases had expired and mines extracting ore beyond permissible limits.

This caused pollution and accidents, destroyed farming land and water supply of villages in the surrounding area. The report held that

there was a scam of Rs 350 billion in Goa's mining business. This report formed the bedrock of subsequent litigations in the supreme court.

Between, 2012 and 2018, the case saw many ups and downs before the apex court in February 2018 quashed 88 mining leases in violation of the Mines and Minerals (Development and Regulation) Act, 1957 (the MMDR Act), the Forest (Conservation) Act, 1980, the Environment (Protection) Act, 1986.

Later, in August 2019, Vedanta Limited, which is one of the largest mining leaseholders in Goa approached the Bombay High Court demanding a declaration that its mining lease, as per the provisions of the amended MMDR Act 2015, was valid for 50 years and sought extension of mining leases till 2037. But the high court failed to ensure any relief after which the company moved the Supreme Court where the case is still ongoing. The Goa government has also filed a review petition in the SC challenging the 2018 judgement, and both the cases are scheduled for hearing in January-February 2021.

Can a legislative cure be the solution to restart iron ore mining in Goa?

The representatives of the Goa Mineral Ore Export Association are seeking a "legislative cure."

"The situation for the industry, dependents, stakeholders including the state of Goa has and is increasingly getting difficult with delays in the resumption of mining in Goa," Glenn Kalampavara, the general secretary of the association, told Mongabay-India. "In my opinion, a legislative cure to extend the benefit of the maximum tenure of 50 years (till 2037) would be the ideal solution," he said.

The amended MMDR Act, 2015 includes a section that states that all mining leases will be granted for a period of fifty years and notes that on expiry, the lease shall be up for auction.

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However, on December 7, 2020, Gawada Kunbi Velip and Dhangar Federation (GAKUVED), a federation of tribal communities in Goa since 1981, filed an application for intervention in the Vedanta's case. The application said that the petitioner's assertion that the lease would last for 50 years from 1987 was "misplaced both in law and fact." It said that the leases were retrospectively made valid from December 20, 1961, and that they have expired by now. Abiding by the Supreme Court judgement, leaseholders need to apply for fresh leases.

Along with this, Goa Foundation, a non-governmental organisation, whose applications have driven the case in the apex court, believes that the legislative cure is effectively giving huge sums to the miners, which is unfair and unconstitutional.

This is when the central government wants auction, in accordance with the amended MMDR 2015, and is in favour of granting the mining leases through the e-auctioning process. In May 2020, Finance Minister Nirmala Sitharaman announced reforms in the mining sector, including that 500 blocks of minerals across India will be auctioned in a "composite exploration-cum-mining-cum-production regime."

A meeting between Goa's chief minister and the union minister of mines earlier this month also indicated the central government's preference for auctions over "legislative cure."

"If the mines were auctioned, it will change the political scenario of the state," said Rahul Basu of the Goenchi Mati Movement, a movement started by a group of individuals advocating a set of reforms to mining – based on the principles of intergenerational equity and custodianship to the environment.

"Another problem with auctions is, it will leave the industry in the hands of a few again. Zero loss will not be possible to achieve," he told Mongabay-India.

Authorities prefer state mining corporation as the solution

On December 6, Goa Foundation along with representatives from various farming associations in the mining belt called upon the state to set up a mining corporation.

"The mine owners who have been doing illegal mining need to be blacklisted. How can we allow them to come back?" asked Claude Alvares, director of Goa Foundation. "They need to return the loot of Rs. 350 billion, and never be allowed to mine again," he said.

He also questioned why the union mines minister chose to have a meeting with the same illegal mine owners. In an open letter to Union Coal Minister Prahlad Joshi, Alvares asked how only former leaseholders could have been associated with the meeting. "Such a consultation, favouring a few, is not in harmony with the demand for equal treatment guaranteed under Article 14 of the Constitution of India..."

He emphasised that discussions around mining should not be limited to the mining lobby but should also include the mining-affected villages. "Any person from any part of Goa – being an equal owner of the ore – has the right to a say and to express her concerns and demands," he wrote.

Alvares, along with some farmer associations stated that setting up a state-owned mineral corporation is the best idea. "We insist that all mining leases be kept with the Goa Mineral Development Corporation which will employ only professionals and that only the contracts for extraction of ore – with a reasonable profit of 10-15 percent – be tendered for future mining in the state. This would enable village-level cooperatives and even mining employees who can form associations to take up such contracts," he suggested.

He said that all ore extracted by any party in Goa under tender must be handed over to the Corporation which will e-auction it internationally to get the best price. "The corporation will place all the money received from sales – after extraction costs are paid – in the Goa Iron Ore Permanent Fund. Only the real income from the fund will be available for distribution as a citizen's dividend, among every individual in the state as all are equal owners," Alvares added.

Farmer and tribal groups want to set up village cooperatives to control mining

The farmer and tribal groups call for setting up of village cooperatives so that they can control the level and the subsequent impacts from iron ore mining.

Hanumant Parab, a farmer and activist based in Pissurlem, said they prefer community mining. "We want the state government to take ownership of the mine, and allow us villages to run them as cooperatives," he told Mongabay-India.

"We can then do it properly, sustainably, and ensure that other things also prosper – like our cattle rearing, farming, horticulture," he said.

Abhijeet Prabhudesai of Rainbow Warriors, a Goa-based non-profit, said there is no way they want any mining by a state corporation or corporates. "There are two things we can do. One is to have a moratorium on mining for the next 20 years. Let the water and forests restore, and then let the children decide what they want to do," Prabhudesai told Mongabay-India.

He stressed that if at all iron ore mining has to be done then it should be done through an all-inclusive cooperative of the people of the village. "A state corporation would run it like a profit-making industry. They can get even more industry-oriented and anti-people than the corporates. The money will never come to the local economy," he said. In a cooperative, every person of the village becomes an equal shareholder, profits are distributed equally and they can together decide what they want to do," he said.

Ravindra Velip, a 32-year-old activist from Cawrem, a mining-affected village in south Goa is the first person in Goa to register a mining cooperative.

"We have about 260 members, all skilled in mining-related tasks. In 2015, the amendment to the MMDR Act was introduced, according to which, the only way we could obtain leases as a cooperative was through auctions. So now, one way to resolve is to let the government keep the leases, and give us, the cooperative, the raising contracts for the extractions and transport of ore. That way, people of Goa gain maximum benefit from mining, and most importantly, we get to monitor the activity and ensure sustainability," he said.

Mining and Exploration: Socio-Economic Development

The human beings have retained a fascination and curious in exploring minerals for more than 5000 years. The Mining and Agriculture have remained the two basic industries or occupation on which all other human activity eventually depends. The discovery and usage of metals extracted from minerals have caused some of the greatest human migration and even cursed and most times blessed the human mankind. The mining in India has an ancient history extending to the very dawn of human civilization with their usage in ancient civilizations well recorded in Indus and Mohenjo-Daro and many more.

The India is endowed with huge resource of many metallic and non-metallic minerals. Mining sector is an important segment of the Indian economic till date. Since independence, there has been pronounced growth in the mineral production. India produces as many as 87 minerals which include 4 fuels, 10 metallic, 47 non-metallic, 3 atomic and 23 miner minerals.

The Indian mining sector has been a success story in waiting for decades. Despite enjoying an endowment of the top 5 or 6 reserves globally across commodities such as thermal coal, iron ore and chromite the mining industry has remained relatively small and stagnant. In fact over the last decade, the contribution of mining to India's GDP has fallen from 1.2 per cent to 1 per cent.

Mineral Exploration is the lifeline of mining. The process of discovering and defining the geometry of mineable mineral deposits evolves in stages from conceptualization and selection of a target to be explored followed by reconnaissance, prospecting, free feasibility and feasibility studies for mining operations.

Exploration is not always a rewarding exercise. Mineral exploration is viewed as a high risk business because it involves high investment but may fail, at any stage of exploration, to show up the potential of the chosen area to deliver a profitable minable mineral deposit. The level of exploration activity determines the level of mining in a country.

Our country has a land mass of 3.2 million Km² and bestowed upon with spectacular geological-tectonic domains and cratons, shield areas and mobile belts hosting rich

mineral wealth such as iron ore, copper, lead, zinc, gold, silver, diamonds and varieties of building stones reflected in our rich heritage and culture in form of forts and temples.

What's the present status of mineral exploration in India and world practises?

Globally, in countries like Canada Universities, research institutes and industry will plan the research programmes in order to fulfil the need and requirements of industry, for example in Canada several geotranssects were drawn to understand with present technology available to explore new mineral resources and reserves Eg like "Foot Prints" and Lithoprobe. In Australia a exploration program "UNCOVER" utilises to explore, integrate and utilise the current knowledge and explore new mineral resources for future. In Finland

programmes like "Morecovery" (critical minerals and circular economy), "MinExTarget" (Enhanced use of heavy mineral chemistry in Exploration target), NEXT (New Exploration targets) covering critical minerals, information solutions and battery minerals. The new programme MRI Mapping Resource Initiative for suite of critical minerals by USGS (United States Geological Survey), GSC (Geological Survey of Canada) and Australian Geological Survey (AGS).

How Mineral Sector can contribute to achieve Socio-Economic Development

1. Exploration of bulk commodities would focus on discovering the structurally hidden deposits and lower grade deposits, which could be optimally developed.

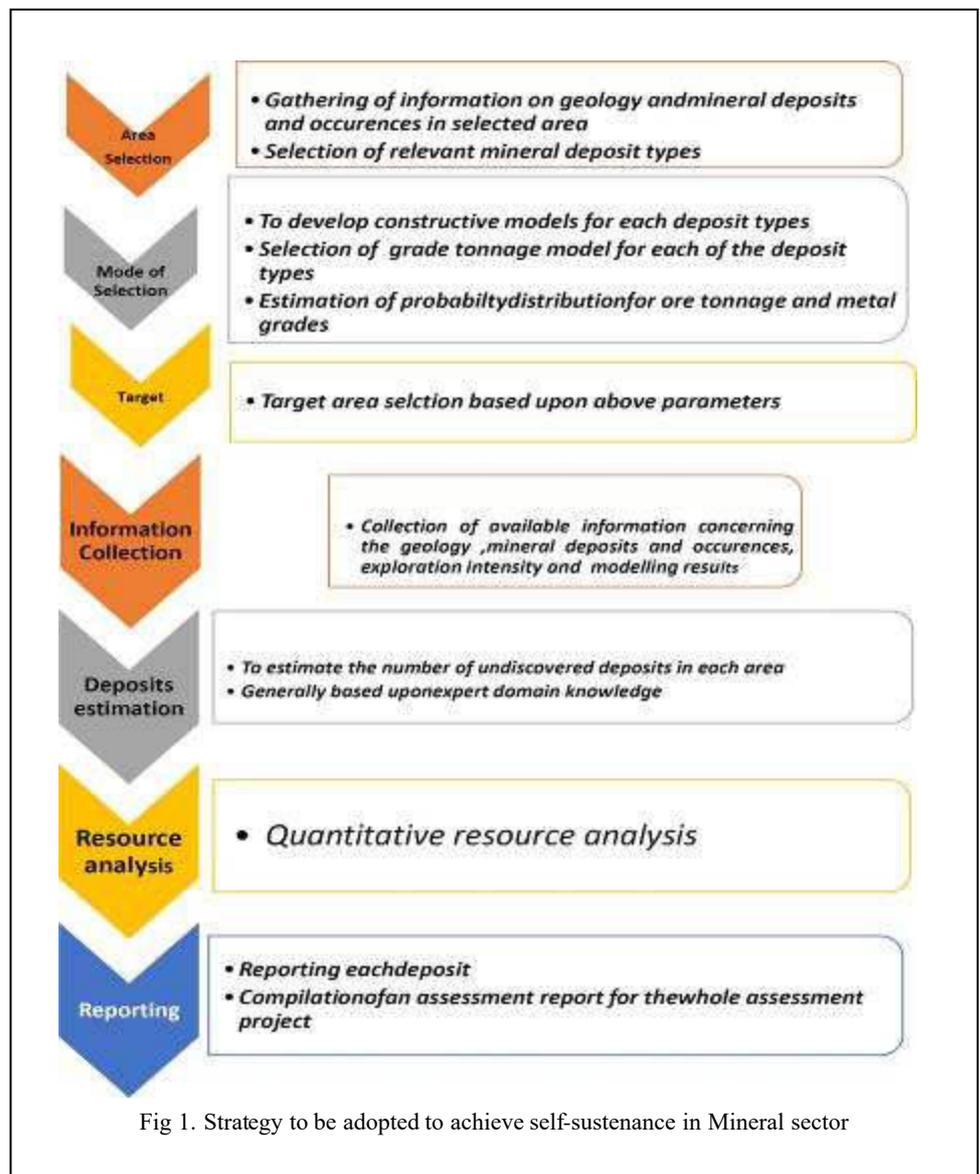


Fig 1. Strategy to be adopted to achieve self-sustenance in Mineral sector

2. At ppm levels all the possible elements in entire periodic table have to analysed so that we may not miss any hidden multi-minerals when we export major minerals like iron ore etc.,
3. The vast multitalented human resource available and thus provide employment opportunity to youth in multidiscipline in multidomains and explore the use the Artificial Intelligence and Machine Learning in predictive surveys with the information in public domain.
4. Develop Artificial Intelligence and

- Machine learning i.e big data base for predictive mineral modelling studies.
2. In case of detailed –developmental exploration, which account for major share of exploration inputs and optimize the quantum of exploration without sacrificing the detailed exploration reliability and accuracies of geometry of ore, reserves and grades.
 6. Review of case histories used in country and other parts of the world with correlation of complexity of ore body with investment needs etc.

6. An Integrated Researching/Study of Geological, Structural, Geochemical, Geophysical, Exploration, Petrological, Mineralogical, Fluid Inclusion, Rock Alteration, Stable Isotope Studies,.etc of the Mineral Deposits: A Tool for Development of New Technology for the Mineral Exploration and Narrow Vein Mining by Deep Crustal Mapping for Locating the Deep seated and Concealed mineral and Associated Ore Mineralization

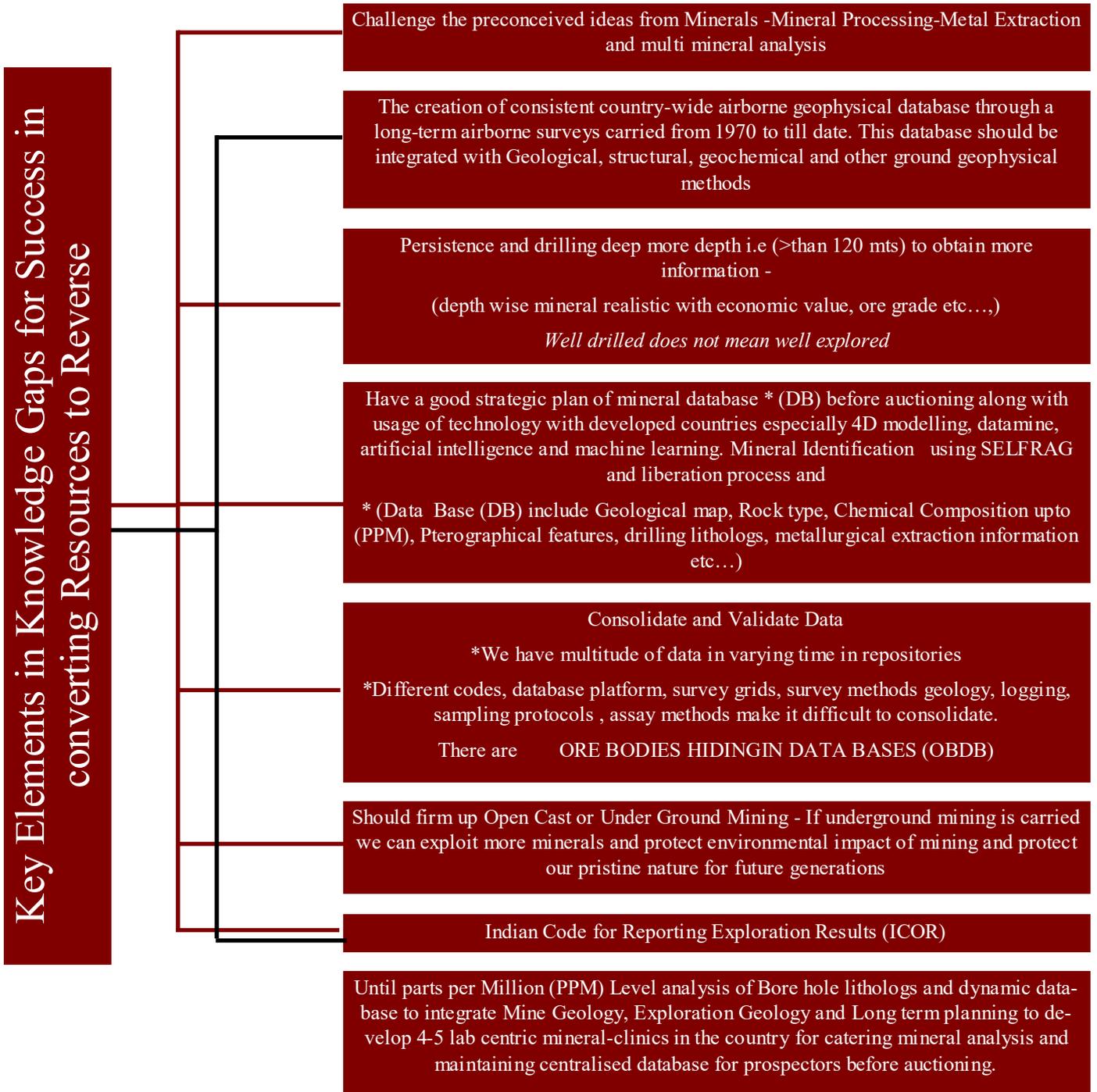


Fig 2 . Key elements in Knowledge gaps to Achieve “Socio-Economic Development”

Continued on Page 9

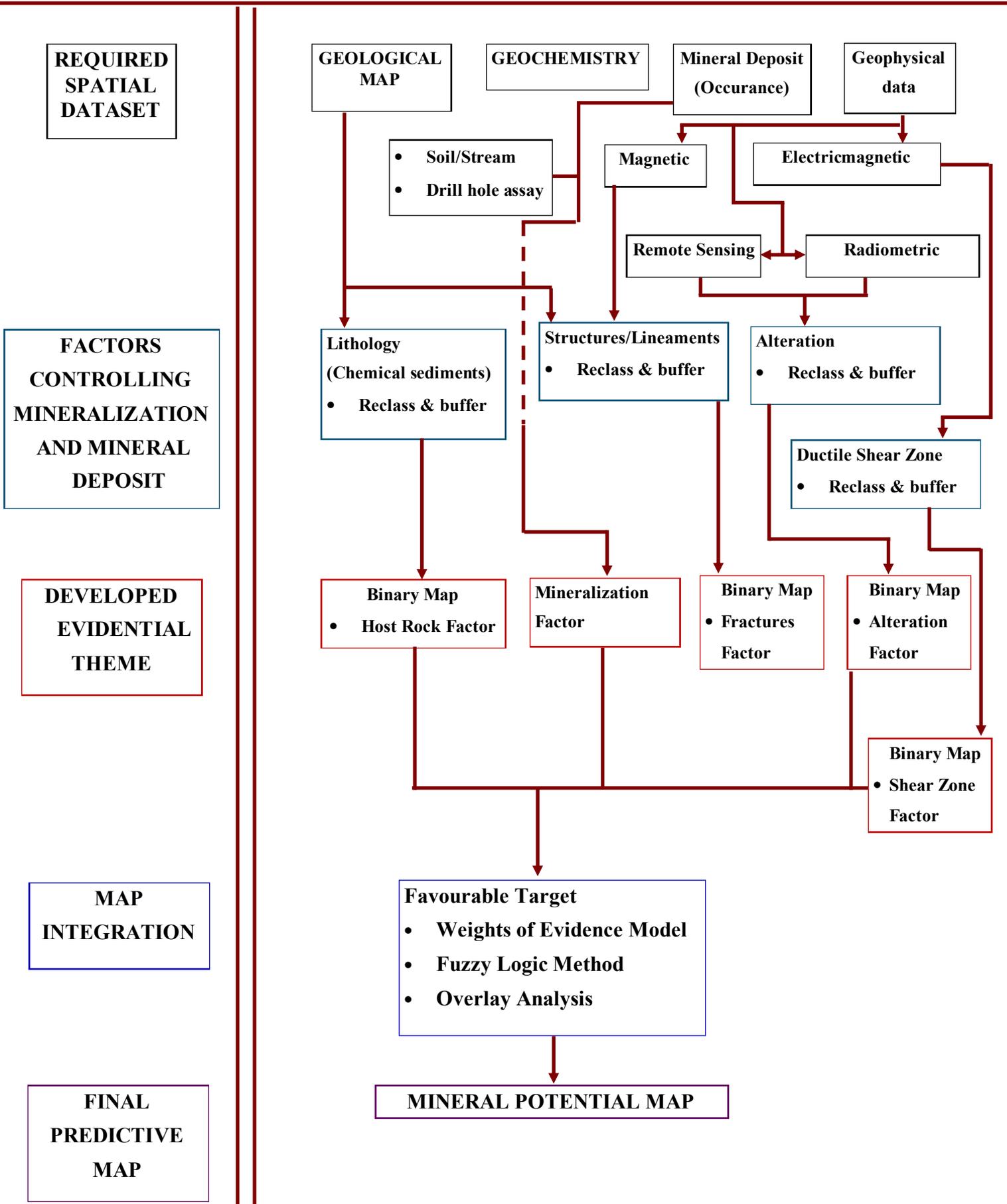


Fig 3 Flow Chart for Mineral targeting

Continued on Page 10

Present Focus :

Still we have left out with large tracts of Deccan traps, Cuddapah basin and vast coast lines for exploration of Cu-Ni-PGE and REE potential. The following few steps may lead to Socio Economic Development.

Battery minerals like Lithium or strategic minerals have to be explored in huge tracts of Graphite and abandoned mica deposits of Nellore Schist belt. US imports Graphite 100% used to make advanced batteries for cell phones, laptops and hybrid and electric cars. India has lot of potential to host graphite in metasedimentary areas of NE India.

REE minerals in Carbonatites including Vanadate's in Ambadongar and adjoining areas.

Discussion:

- If properly tapped, the mining industry could help proper growth for the country over the next decade. In fact, the performance of mining sector will be an important factor for India to achieve 7 per cent plus GDP growth. The mining industry has the potential to create 6 million additional total jobs by 2025, accounting for 12 per cent of the new non-farm job gap. At the same time, the mining industry could contribute an additional USD 125 billion to India's output and USD 47 billion to India's GDP by 2025.
- Mining sector being one of the employment generating sector has deep and wide impact on the upstream and downstream sectors. The structural reforms in mining is to accelerate growth and employment generation in the sector to stimulate economic growth.
- The mineral resources established by Govt and Private agencies should be upgraded by substantial drilling, exploratory mining & feasibility studies to reach a mineable reserves.
- Some of the challenges and opportunities that the gold exploration and mining industries has to give thoughts in the state-of art present day scenario and in

order to address the future challenges of safe, sustainable and eco-friendly gold exploration and mine development.

- Small scale mining and satellite gold mines development should be carried out to the existing mining complex, which will attain the production stage with minimum gestation period from exploration to mining as there are several small, marginal grade and narrow width gold deposits, which cannot be worked independently. This type of development will uplift the socio-economic condition, infrastructure development, skill development and employment opportunities to the rural backward areas.
- Detailed ore beneficiation studies to be carried out on the recovery of the multi metals
- Improved exploration, metallurgical and mining technology enables higher recovery of gold metal from the low grade gold ores and ensures economic viability of low to minimal gold grade ores, which were so far considered non-remunerative in the early part of the century. Under these conditions, it is imperative to have a re-look into the all gold mining centres of the country abandoned due to non-remunerative gold grades. The exploration for mineral all over the world is rejuvenated in the recent years due to remunerative returns. Low grade ores so far considered un-economical have become attractive.
- Geotourism Hub and Geo Industrial park to surround the newly developed revived Kolar Gold Fields (KGF) mine being proposed by the state with the workforce: KGF area is known for its ecological and for social-cultural diversity. The proposal of developing KGF as an educational Geotourism centre forming an integral part of the larger Geo-park theme needs serious considerations. A museum showcasing aspects of ancient to modern mining methods, archaeological aspects and objects would be a desirable attraction to tourists, visual appeal,

educative value, scientific importance, social, cultural significance, tourist and students. There are verdant green forests and semi-tribal settlements, modern horticultural ventures and admirable temples, architecture in and around KGF, Hutti, Gadag, Ramgiri Gold.

- Mines etc. The tourist attraction added can be great. A much smaller mine with its old installations now abandoned closed in Johannesburg in South Africa, etc attracts a large number of tourists.

Gold, the oldest metal known to man, still dominates the world scene. India was renowned for its gold from time immemorial, but presently it is only a minor producer of gold. Govt. & Private agencies are processing in gold exploration in the promising geological terrains. The existing status of regional/preliminary/detailed gold exploration is mainly restricted to search for gold deposits in and around ancient/modern mine workings. So far traditional exploration has been done following surface out crops and old workings.

Hence, It is time to unravel the concealed, deep-seated, blind ore shoots, hidden deposits in virgin areas, by application of sophisticated methodology, equipment and technology. One such method is a conceptual exploration by geological modelling.

Incentives, simplified permitting, ambition needs to be stirred in smart expert businesses to reach out boldly and tirelessly, towards success awaiting enterprising Geologists/Mining Engineers/Metallurgists and Investors. It is wrong to stand still and stagnate when large opportunities are present for making immense progress through new discoveries and massive ore productions.

However, the performance of mining sector is hamstrung by a number of factors such as legislative framework, administrative procedures, highest taxation, inadequate infrastructure facilities

Hence, the big process of prospecting, exploration, developing and establishing new mines in the country should receive serious consideration at all levels of decision making.

About Author



Dr. P.V. SUNDER RAJU

Dr. P.V. Sunder Raju is a Senior Principal Scientist at CSIR-National Geophysical Research Institute. He can be contacted at :

perumala.raju@gmail.com

Dr. PRABHAKAR SANGURMATH

Dr. Prabhakar Sangurmatah is a Executive Director (Retd) at The Hutti Gold Mines Co. Ltd.

Govt looks to acquire forest land for mining in Korba

The intention to acquire the land has been notified under provisions of the Coal Bearing Areas (Acquisition and Development) Act. The law says that if the central government is satisfied that coal is obtainable from a tract of land, it can give notice of its intention to acquire it.

The coal ministry has issued a notification on its intention to acquire 712.072 hectares (ha) and all rights over the land for mining coal in Madanpur South coal block in Korba district of Chhattisgarh, whose government has been considering declaring the rich forest area an elephant reserve.

According to the notification published on December 24, 489.274 ha is protected forest land and 159.327 comprises revenue and other forest land.

The intention to acquire the land has been notified under provisions of the Coal Bearing Areas (Acquisition and Development) Act. The law says that if the central government is satisfied that coal is obtainable from a tract of land, it can give notice of its intention to acquire it.

But diversion of the forest land for non-forest use hasn't taken place yet because the Chhattisgarh government was considering declaring it an elephant reserve.

"We have not started the process of diversion of forest land. I cannot say anything on whether or when it will be diverted. The issue of extending the elephant reserve is still under consideration," said Rakesh Chaturvedi,

principal chief conservator of forests (PCCF) in Chhattisgarh.

"Since the elephant reserve hasn't been notified yet commenting on its boundaries will be premature. The government will take a call," said PVN Rao, PCCF (wildlife) in Chhattisgarh.

Environmental activists and legal researchers have raised several concerns with the intention to acquire large biodiversity rich forest land located in the Hasdeo Arand region-- one of the largest contiguous stretches of very dense forests in central India spanning 170,000 ha which has 22 coal blocks underneath.

"The central government has issued a notification to acquire the same forest land for which a process for diversion is pending, especially because the state government is looking to declare the area as an elephant reserve and the local Gram Sabhas have refused to grant consent," said Kanchi Kohli, legal researcher at the Centre for Policy Research think tank.

"This raises a serious legal question on the validity of the notification issued under the Coal Bearing Areas Act, 1957 which is seeking to acquire government forest land. But more importantly, it highlights the failure of cooperative federalism as both the state and central governments appear to have visualized

a different future for the Hasdeo Arand region where the Madanpur South coal block is located," Kohli said.

Alok Shukla, convenor of the Chhattisgarh Bachao Andolan, a non-government organisation, said the government should consult the local gram sabha (village council).

"I think acquiring forest land like this completely goes against the provisions of Panchayats (Extension to Scheduled Areas) Act. Recently four coal blocks in the Hasdeo region were saved from being auctioned after state government said they have rich, dense forest cover. This block is also in Hasdeo Arand and the catchment of Hasdeo river is located here so why is it being acquired for mining? First there should be detailed consultation with people of the region and state government should oppose this move by the Centre," he said

Asked whether the Centre had considered the impact of mining in an elephant habitat and rich forest area, a senior coal ministry official said on condition of anonymity: "The queries are premature. The notification talks merely of intention to acquire. The objective is precisely to find out the intricacies based on which a decision will be made."

Commercial mining won't unsettle us: Coal India chief

Coal India Ltd (CIL), which had registered a laggard growth in both production and offtake during the beginning of this fiscal, has been witnessing a pick-up in the growth momentum since August-September. The company is hopeful of surpassing last year's production of 602 million tonnes (mt). Pramod Agrawal, Chairman and Managing Director, CIL, said the opening up of the coal sector to commercial mining will not unsettle

CIL's role. Excerpts:

CIL has been witnessing a rise in both coal production and off-take since the month of August-September. Do you think this momentum will sustain? Where do you see closing this year in terms of production and off-take?

The growth momentum was sustained in October with 19 per cent and 25 per cent, respectively and the trend continued in November as well. We are optimistic of surpassing last

year's production of 602 mt going by the way the economic activity is panning out. Our over burden removal (OBR) held on to the growth constancy since the beginning of the fiscal, ending November with a growth of 21 per cent. So, the coal seams are exposed and ready for extraction.

Supplies are dependent on demand upsurge. We have created conducive conditions for our customers to lift increased coal, which did help in improved offtake. But the actual

Continued on Page 12

demand is determined by the market behaviour and if the demand is up we are confident of meeting it and close the year with more sales than year ago.

The demand from power sector still seems to be lacklustre and even in November a fair share of your demand came from the non-power sector. Is this good to offset the lower demand from power sector?

Power sector constitutes nearly 80 per cent of our total offtake. Though non-power sector is showing healthy appetite with increased coal lifting, it would not be feasible for it to fill in the demand vacuum left by the power sector fully. After a 14 per cent spurt in October, power sector growth flattened again in November. But, we expect the demand from power sector to find its tempo soon.

What are your plans to boost sales?

We could achieve a 30-mt volume increase in e-auction booking at 68.3 mt till November, by a perceptive plan of keeping reserve price close to zero during the first six months of the fiscal to boost sales.

Special spot auction for coal importers, introduced in October, saw a booking of five mt in two months. We shall offer increased quantum under auction schemes and there is a strong probability of our auction sales going over 100 mt during this fiscal. We are planning to enhance the non-power sector customer base through linkage auctions.

You had earlier commented that CIL is not likely to be impacted by opening up of the coal sector to private players for commercial mining. Can you please elaborate how?

Key issues that will help us stay ahead of the competition are established infrastructure,

streamlined operations, uniform coal quality, cost efficiency in production and reliable timely delivery of supplies.

We hold close to 53 per cent of the country's entire coal resource base of 329 billion tonnes. We also own high-grade mines with favourable stripping ratio that makes our coal cost highly competitive. Commercial mining will not unsettle CIL's role.

What is your plan to scale up production?

We have devised a transformative plan to engage Mine Developer cum Operators which will help in technology infusion and bring operational efficiency. As many as 15 greenfield projects have been identified for the purpose. We are also fast tracking procurement of higher capacity modernised equipment to ramp up our OC production.

China's ban on Australian coking coal to benefit India's steel producers, says India Ratings and Research

The production cost of India's steel producers using the blast furnace route would remain contained in the near term due to China's ban on Australian coking coal, India Ratings and Research (Ind-Ra) said.

The production cost of India's steel producers using the blast furnace route would remain contained in the near term due to China's ban on Australian coking coal, India Ratings and Research (Ind-Ra) said.

Accordingly, the Chinese move will lead to softer coking coal prices which shall directly support EBITDA per tonne accretion of around Rs 2,600 over FY21 for companies using the blast furnace route.

"Such companies are likely to have reduced cost of steel production by around ₹1,800 per tonne YoY in 2HFY21, supported by the reduced cost of coking coal per tonne of around ₹7,300," Ind-Ra said in a report.

As per Ind-Ra, China's ban has led to negative bias on coking coal prices.

It expects Australia premium hard coking

coal (HCC) CNF prices would be around \$120 per tonne over remaining FY21, except for any weather-related supply disruptions in Australia.

"Despite China's healthy steel production growth of 7% YoY in the first 7MFY21, its coking coal imports have significantly reduced by 12% as against an increase of 14% YoY in FY20, reflecting the country's increased reliance on domestic coking coal.

"Considering the low coking coal imports by China in 7MFY21 and a possible further reduction amid China's ban on Australian coking coal, an excess supply would build-up unless Australian miners reduce their output considerably.

"Hence, Ind-Ra understands coking coal prices would remain soft although other major coking coal importers such as India, Japan and South Korea's production levels have recovered them to pre-covid levels," Ind-Ra added.

Lately, China and Australia were the largest coking coal trade partners in the world.

China's imports and Australia's exports, respectively, form 40% and 65% of the world's overall coking coal trade.

"As Chinese end-users are likely to increase their domestic coal production or import coking coal from countries such as Indonesia, Russia, Canada and the US, Indian buyers would gain more bargaining power with Australian coking coal.

"India and China have been the largest consumers of Australian coking coal, competing with each other and composing 25% and 24% respectively, of Australia's total metallurgical coal exports."

Financing commercial coal mining: Banks to look into multiple factors

Banks would look into factors like demand, prices and transport arrangements on which depended cash flows. Customers to whom supplies would be made and the contracts entered into would also matter as also the historical behaviour of the spot markets and down the line the prospects of the coal exchange, Modi said.

Financing the auctioned coal blocks could be critical because bank finances would be available only after the blocks start operations, SBI Caps executive vice-president Mukul Modi said.

Mine viability, associated cash flows and terms of payment in a supply contract would also be looked for financing coal mining projects, he added.

Banks would look into factors like demand, prices and transport arrangements on which depended cash flows. Customers to whom supplies would be made and the contracts entered into would also matter as also the historical behaviour of the spot markets and down the line the prospects of the coal exchange, Modi said.

In a lease period of 30 years, it will take an

average five years for the 19 blocks, which were taken with premium ranging between 9.5% and 66.5%, to become operational.

The expenses required to be incurred in developing the mines will be high as only land acquisition would cost at least Rs 1 crore a hectare. Thereafter, delay in approvals and subsequent penalties for delay in operation would be detrimental to returns on investment down the line, making operations commercially unviable, RP Ritolia, adviser, Swayambhu Natural Resources, said, adding that only 19 out of 36 blocks could be auctioned since most players couldn't see the viability factor into it.

With 50% of the auctioned blocks being captive and Coal India producing 1 billion tonne by 2024, the demand-supply situation could pose a hurdle to commercial miners for marketing, Ritolia added.

Since 2015, CIL has been producing more

than demand and pushing coal to existing consumers has come up as a challenge, SN Tiwary, CIL's director (marketing) said.

Besides these factors, land acquisition is already a hurdle. Discrepancies in data, lack of standard relief and rehabilitation policy and unidentified land for mandatory afforestation are coming in the way of faster mine development, Himanshu Singh, director, coal – group commercial, Vedanta, said.

Deemed approval for various clearances required, specially for the environment and forest clearance, could be a solution to make mines quickly operational with states allotting land from their land bank for compulsory afforestation. The Centre should come with a standard R&R policy, Singh added.

Mjunction MD and CEO Vinay Verma said 65% of the block winners are not mining players.

Why SBI is under the spotlight to reject a billion-dollar loan to Adani's Australia mine

In early December, three major global financial institutions warned the State Bank of India against extending a loan to the Adani Group's controversial Carmichael coal mine in Australia. The three organisations—BlackRock, the world's largest asset manager; Amundi, Europe's largest asset manager; and Storebrand ASA, a Norwegian financial-services company—all hold investments with SBI. The trio are the latest of several major investors, insurers and banks that reached out to SBI in the wake of media reports that the bank would grant the Adani Group a loan of Rs 5,000 crore—or \$1 billion—to fund the coal project.

Just days before, a group of protesters had assembled in front of the Sydney Cricket Ground to protest the proposed loan. Two protesters even interrupted a match between India and Australia by running into the pitch, holding up placards that read, "State Bank of India No \$1 Billion Adani Loan." A media release by the Galilee Blockade—one of several environmental groups opposing the mine—stated, "Millions of Indian taxpayers who are watching the first game of the Indian cricket tour have a right to know that the State Bank of India is considering handing their taxes to a billionaire's climate wrecking coal mine."

The Adani Group first announced its plans to setup the Carmichael mine in 2010, proposing to build it in the vast untapped coal reserves of the Galilee Basin in Queensland, a state in north-eastern Australia. Although Adani was not the first to propose mining the Galilee, the other companies appeared to depend on the infrastructure that the Indian conglomerate had proposed. This infrastructure included an airfield to transport workers, and a rail line to connect the mine to Adani's Abbot Point coal terminal. According to a Greenpeace report released in 2012, there were nine proposed mines in the Galilee Basin by that year, which would produce a collective total of 330

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million tonnes of coal per year, releasing 705 million tonnes of carbon dioxide.

The Carmichael coal mine would lead the pack. Carmichael is among the world's biggest greenfield coal mine project—coal fields that are previously unexplored. Adani proposed an annual production of 60 million tonnes, which alone would lead to carbon emissions that threaten the country's commit

ments under the Paris Agreement of 2015, an international treaty in which countries resolved to voluntarily reduce greenhouse gas emissions. The mine would also draw 12.5 billion litres of water from Australia's Suttor river every year and threaten the survival of the Great Barrier Reef.

The campaign against Adani has seen participation from numerous environmental and

civil-society groups, which have spearheaded massive protests against the group's mining operations. This included mobilisation on the massive greenhouse emissions it would cause amid a losing battle against climate change, the encroachment of land belonging to the indigenous Wangan and Jagalingou people, and pressurising corporates to stop funding Adani.

Deocha Pachami coal block will generate 1 lakh jobs: Mamata Banerjee

The world's second-largest coal block, with an estimated reserve of 2.1 billion tonnes, was allocated to West Bengal by the Centre in June, 2018

West Bengal chief minister Mamata

Banerjee said that at least one lakh jobs will be created once the Deocha Pachami coal block in Birbhum district operationalises. Banerjee, speaking at an administrative review meeting here, expressed hope that the coal extracted will be sufficient to generate electricity for 100 years.

"One lakh jobs will be created which will

solve the problem of unemployment," she said.

On people fearing that they will lose their lands due to the project, Banerjee said, "As of now, the area earmarked for the coal block is uninhabited and nobody owns any land there, so there is no problem."

The world's second-largest coal block, with an estimated reserve of 2.1 billion tonnes, was allocated to West Bengal by the Centre in

June, 2018.

The coal block has the potential to bring in investments to the tune of Rs 12,000 crore over a period of time.

Spread over 9.7 sq km, the block is located in the southwestern part of Birbhum.

No Bauxite mining in Visakhapatnam Agency, panel exploring other options

Peeved over cancellation of the agreement, RAKIA, which opted for arbitration, sought compensation over an investment of \$44.7 million in the project.

Making it clear that bauxite mining will not be allowed in Visakhapatnam Agency area, officials of the Mining department have said that the committee formed by the State government is exploring options to find a solution to the international arbitration raised by Ras-Al-Khaimah Investment Authority (RAKIA) over the cancellation of the Bauxite Supply Agreement (BSA) entered into between the AP Mineral Development Corporation (APMDC) and

ANRAK Aluminium Limited.

"The State government will not allow bauxite mining within the State. The government policy is to revive the plant in Visakhapatnam district by bringing bauxite, alumina and other raw materials from outside the State," said Principal Secretary (Mines) Gopal Krishna Dwivedi, who is leading the committee of senior officials set up for resolving the issue. Speaking to TNIE, Dwivedi said that the committee will study all the

issues, such as generation of employment, expected revenue to the government with the revival of the plant. The State government cannot go ahead without getting the Centre's approval, he said, adding that the committee will go through all the aspects and suggest options for running the plant.

Bauxite is available in Odisha,

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Chhattisgarh, Jharkhand and some other States and mining can be done in any of these States so as to supply the raw materials required for the plant near Visakhapatnam, if the Centre and State government give the green signal for commencing operations of the company, Gopal Krishna Dwivedi said. With regard to the RAKIA investment of \$44.7 million in the project.

arbitration, sources said that the government was exploring various options to settle the issue.

RAKIA and the Penna Group jointly made investment on the alumina refinery near Makavarapalem based on the MoU signed with the APMDC and clearances given by the Ministry of Mines, Government of India, for supply of bauxite ore from the Agency

areas. The problem arose following the decision of the Andhra Pradesh Cabinet last year to scrap the MoU with Anrak Aluminium Limited (AAL), a joint venture formed by RAKIA and its Indian partner Penna Group, to execute the project. Peeved over cancellation of the agreement, RAKIA, which opted for arbitration, sought compensation over an investment of \$44.7 million in the project.

Government moots raising floor price for iron ore as steel prices shoot up

Nitin Gadkari, Shipping, ports and highways minister, among others has written to the Prime Minister pointing out that a 55 per cent surge in steel prices has raised project costs.

Amid soaring steel prices, the government is mulling raising floor prices for iron ore and bringing in checks to see that high-grade iron ore which is banned from being exported are not being shipped.

Nitin Gadkari, Shipping, ports and highways minister, among others has written to the Prime Minister pointing out that a 55 per cent surge in steel prices has raised project costs. Steel makers were forced to raise prices four times during the October-December quarter.

Companies involved in making steel point out that the domestic iron ore prices have increased by 120 per cent and are now averaging about Rs 8,000 per tonne, causing them severe cost escalation. State-run miner NMDC has increased prices of iron ore twice last month.

Officials held inter-ministry consultations on ways to cool down both iron ore and steel prices as the Commerce Ministry officials said they were in talks with the steel ministry to try to work out a via media.

“Floor prices are being considered as also stricter checks to see that high grade iron ore is not being exported by mis-labelling them as fines as is being alleged,” said officials. Part of the reason for the surge in ore prices is because China has increased its offtake resulting in iron exports from India rising by 73 per cent in April-November as compared to the same period last year.

Analysts say China is stepping up investments in infrastructure projects to beat the pandemic-driven slowdown and has at the same time stopped importing ore from Australia in a bid to punish it and hence India has become its main source. Robust demand from China is driving up prices and “we can

expect the shortage to remain into the next year,” said Saurabh Bhatnagar, Partner and National Leader, Metals & Mining, EY India.

Income of 3 lakh households affected

A study by the Indian Institute of Technology (IIT)-Indian School of Mines, Dhanbad has revealed the closure of the iron ore mining industry in Goa has impacted revenues worth over Rs 3,400 crore with household income level witnessing at least 50-30 per cent drop across talukas.

Mining in Goa came to a halt in March 2018 after the Supreme Court quashed the renewal of 88 mining leases. Post-closure, savings of three lakh households depended on mining in Goa have fallen drastically, It has also resulted in loss of lakhs of direct and indirect employment.

India makes future coal import disclosures mandatory

Importers of coking coal, steam coal and bituminous coal would have to gain a permit ahead of deliveries, the commerce and industry ministry said on Wednesday India has made it mandatory for coal importers to disclose future shipments, in a move seen as tightening screening to curb imports to protect domestic producers. Importers of coking coal, steam coal and bituminous coal would have to gain a permit ahead of deliveries, the commerce and industry ministry said on Wednesday.

“The Coal Import Monitoring System (CIMS) shall require importers to submit advance information in an online system for import of items and obtain an automatic registration number,” it said. India's coal consumption was likely to rise in coming years, but it could vary widely, with 2030 demand seen anywhere between 1.15 billion tonnes and 1.75 billion tonnes. The latest move for greater screening is aimed at pushing economic self-reliance to reduce imports and increase exports of value-added products by Prime Minister Narendra Modi's government, officials had told Reuters in September this year.

Bauxite mining threatens India's lone wolf sanctuary and an interstate river

- *Local communities in the bordering villages of Jharkhand and Chhattisgarh complain that bauxite mining in the region is threatening India's only wolf sanctuary and affecting the Burha river.*
- *They allege the Burha river originating in Chhattisgarh, and flowing through the Palamau tiger reserve in Jharkhand, is drying up due to mining activities. Locals in Chhattisgarh allege that dust pollution is a major concern for them as it becomes difficult for them to grow crops.*
- *The activists working in the area state that the issue is stuck between the administration of the two states even as the villagers and local ecology suffer.*

The quest for bauxite in the bordering areas of Chhattisgarh-Jharkhand poses a threat to the future of the Mahuadanr Wolf Sanctuary, which is India's only protected area for wolves, besides adversely impacting the Burha river.

Bauxite mining started in Jharkhand's Orsa village, approximately 2.5 kilometres from the wolf sanctuary, in 1986 over an area of 309.36 hectares. Initially, the lease was granted till 2006 but was extended in 2017 on about 196 hectares of non-forest land till 2036.

However, in 2018, it was stopped after the authorities issued a draft notification specifying the eco-sensitive zone around the Mahuadanr Wolf sanctuary. In 2019, the final ESZ specifying the extent of the ESZ around the sanctuary was notified by the Indian government's environment ministry. But the locals from Orsa who stood against mining allege that it is continuing in the adjoining Balrampur district of Chhattisgarh and that is a cause of concern.

Spread over an area of 63.256 square kilometres and about 194 km from the state capital Ranchi, the sanctuary is in the Latehar district of Jharkhand. In addition to over 90 wolves, the wolf sanctuary is also home to sloth bears and has a healthy population of leopards as well. Jharkhand's social activist Shashi Panna explained to Mongabay-India that the final ESZ declaration is limited to Jharkhand but mining is continuing in Chhattisgarh in the bauxite mines of Hindalco that are operational over an area of 3,741 ha. "It is Chhattisgarh's prerogative," said Panna while referring that stopping the mining activity in the Chhattisgarh side is not in Jharkhand's control.

Jharkhand-based wildlife expert D.S. Srivastava, who is based in Palamu district, echoed similar views but said, "if a sanctuary falls on the border area of two states, the

centre should take a stand."

BAUXITE MINING A CAUSE OF DISTRESS FOR THE BURHA RIVER

Orsa's resident Wakil Ahmed highlighted that due to mining, the perennial Burha river, which originates from the bauxite-rich area of Chhattisgarh, is also drying up.

The Burha river after entering Jharkhand flows from near the Orsa village and then passes through the middle of the Palamau Tiger Reserve (PTR) and is considered its lifeline. The wolf sanctuary is 64 kilometres away from the PTR and comes under the latter's administration.

Jharkhand's Lohardaga and Gumla districts adjoining Latehar are rich in bauxite deposits. In Lohardaga, Hindalco already has seven out of nine active mines. The district already has the approval of mining for approximately 1.1 million (11 lakh) tonnes of bauxite per year.

Both Jharkhand and Chhattisgarh are mineral-rich states. While Jharkhand has about 40 percent of India's total mineral deposits Chhattisgarh is not too far behind. It has 168 million tonnes of bauxite which is mainly found in Surguja, Jashpur, Kanker and Kabirdham districts. In 2016-17, it contributed about 7.92 percent of bauxite production in India.

Mahalinga, a former official with the PTR who now works in the social forestry department, said both the Orsa mine and Chiro-Kukud mine of Hindalco Industries Limited in Jharkhand which are at a distance of 2.5 km from the wolf sanctuary used to be operational but have been shut down.

"I wrote to the then PCCF (principal chief conservator of forests) (wildlife) RK Singh of Chhattisgarh in 2018 regarding rampant mining and requested that it should be stopped. The whole catchment area of Burha is being destroyed by mining. If the river dries up, PTR will be affected."

On this, Wakil Ahmed said that the Burha

river, which flows from near Orsa, needs to be secured. "If water is not available, how will we live? The river flow is getting reduced. This will affect people living downstream and hand pumps may run dry in future," Ahmed said. Former divisional forest officer (DFO) of Balrampur, Chhattisgarh, Vivekanand Jha, who is now posted elsewhere, said he remembers Mahalinga's letter. "I had asked my field officers to probe the matter. It is still pending as it is a Maoist-affected area. So, that's why the delay," Jha told Mongabay-India.

In addition to the Hindalco's mines in Chhattisgarh, documents reviewed by Mongabay-India reveal that there is a bauxite mine (about 257 hectares) of Indian government's Mineral Exploration Corporation Limited in Serangdag bauxite mine block 1 in Balrampur area. Though the lease area of the mine is in Chhattisgarh, it is within the 10-kilometres distance of the wolf sanctuary in Jharkhand and thus concerns have been raised about its possible impact.

VILLAGERS STILL FACE PROBLEMS EVEN AFTER MINING WAS DISCONTINUED

In Orsa, though the mining has stopped the abandoned pit is still lying open posing a danger to humans as well as animals living nearby.

Local residents Sunita Nagesia and Dulari Devi informed that their cattle died after falling in it and complained that they have to take a detour of two kilometres every day to reach their agriculture field on the other side of the abandoned pit.

Nagesia works as a labourer and also owns a small plot of land. "I have to take a detour due to the pit which falls in my way," she told Mongabay-India.

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Besides the abandoned pit in Orsa, the ongoing mining in Chhattisgarh is affecting people downstream in Jharkhand. The Burha

river leads to a scenic waterfall, Lodh falls, a popular tourist site in Latehar only and it is about 20 kilometres from Orsa. Ahmed noted that the flow of water to the waterfall is getting affected due to the impact of mining in Chhattisgarh.

Dharmasai Nagesia, another resident of the Orsa village, said the flow of the waterfall has reduced due to mining. "The river water has become polluted and wild animals in the forests who used to be regular to the river are not spotted so regularly now. The pit has been left like that but we want it to be levelled into a plain area."

"People here do not want mines. We want

our lands intact where we grow crops like maize and paddy," he said.

DUST POLLUTION IMPACTING AGRICULTURE IN CHHATTISGARH

It is not just the people of Jharkhand who are facing the ill impacts of mining but it is the residents of Chhattisgarh living near the mines as well who are bearing the brunt.

People of the Tatijharia village of Chhattisgarh's Balrampur, which is within five kilometres of Hindalco's bauxite mines, are witnessing a severe problem of dust pollution and finding it difficult to grow crops.

Anil Yadav and Rakesh Singh, of the Tatijharia village, told Mongabay-India that all the three mines of Hindalco near their village are active for more than a decade. "Due to blasting, water sources are drying up. Ideally, our area should

not have been impacted due to mining but there is so much dust that it is becoming impossible to live and earn our livelihood. The dust settles on our crops affecting the yield. The authorities should take note of the difficulty we are facing and provide some solution," Rakesh Singh told Mongabay-India.

On November 20, last month, the residents of the Tatijharia village wrote to the district panchayat complaining that the afforestation work that Hindalco had to carry out is not being done even as the company claim otherwise.

However, Balrampur's collector Shyam Dhawde told Mongabay-India that he is yet to receive a formal complaint from the affected residents. Hindalco is yet to reply to Mongabay-India's queries.

Policy Watch: A colonial outlook has stunted India's gold-mining sector

Basically, there are two types of corruption. There can be good corruption and bad corruption. In China, the state controls all resources. But the private sector could see higher growth if it uses these resources. So, corruption in China is adopted to free the resources from the state and thus accelerate growth. In India, these resources are already with people. But you need the permission of a government official or somebody to utilise them. So, the government officials hold something back in expectation of money. He gets a bribe by stopping something. Thus, this type of corruption impedes growth.

--*YukonHuang Senior Fellow, Asia Program, Carnegie Endowment for International Peace* --- The lines above are summarised from Dr. Huang's talk at this here and elsewhere (view from timeline 18:27 to 22:00).

It is interesting to hear Dr. Huang analyse corruption. It is then that you realise what the Indian government – both politician and bureaucrat – has done. It is then that the full impact of corruption in India becomes clear.

Despite its talk about ease of doing business in this country, India's laws on mining are beginning to resemble a direct copy and paste from the rules the British created. Britain wanted to ensure that no Indian should become a wealth generator. So, among other things, they created a law which empowered provincial governments to refuse to grant of a prospecting licence or even to put up the mining rights for sale by auction. Fast forward to today, and you can see history repeating itself. Graft and power are great incentives for justifying even colonial culture.

World Reserves of Gold	
(By Principal Countries)	
(In tonnes of gold content)	
Country	Reserves
World: Total	54,000
Australia	9,800
Brazil	2,400
Canada	2,200
China	2,000
Ghana	1,000
Indonesia	2,500
Kazakhstan	1,000
Mexico	1,400
Paupa New Guinea	1,300
Peru	2,300
Russia	5,500
South Africa	6,000
Uzbekistan	1,800
USA	3,000
Other Countries	12,000

Note: The data given in the table are clearly, the ministry does not want India to be in this list. India has already discovered higher reserves of almost 708, tonnes, significantly higher than estimated by the government.

Sources: (1) Mineral Commodity Summaries, 2018; (2) Indian Mineral Yearbook, 2017 (Part II), Government of India, Indian Bureau of Mines

(http://ibm.gov.in/writereaddata/files/30202018145720Gold_AR_2017.pdf)

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And nowhere is this curse more devastating than in the gold mining sector. India is not among the leading gold producers in the world (see chart). But that is not because it does not have gold. It is because India has created laws that make the discovery and processing of gold well-nigh impossible.

We tinker with rules

This is because India's policy makers believe that all natural resources belong to the government once the plot has been notified, and not the person who owns that plot of land. And he cannot exploit these discoveries till he gets government permission to do so. And for each clearance there is a price tag – both official and otherwise – that is attached.

The government now wants to close even the little window of opportunity that the private prospector has peeked through till now. It wants to repeal Section 10A(2)(B) of the Mines and Minerals (Development and Regulation) Act of 1957 (as modified till 2015). Earlier, the prospector could reconnaissance, prospect and mine areas that had not been notified by the government. This was allowed on a first come first served basis (FCFS). The finer was the keeper,

A year ago, the industry was riled with press reports that the "Government of India intends to repeal Section 10A(2)(B) from the MMDR Act of 1957". This is what RK Sharma, Secretary General of FIMI (Federation of Indian Mineral Industries) writes through a letter dated 13 July 2020 from to the Secretary Ministry of Mines, New Delhi. The letter also pointed out that the repealing of this provision could affect the creation of some 432,000 jobs!

Obviously, the capriciousness of bureaucrats can be extremely vexing. That is why miners are livid. If the rule is amended, even if a farmer discovers gold dust on his farm which is not a notified area, he would be advised to keep quiet about it, and (if he can) extract the gold slyly for himself from that dust. If he lets anyone know, and if government officials come to learn about it, he could lose both his land and his gold.

The mining industry has been begging the government to continue to allow the FCFS principle in gold (or precious metal) mining.

Such a move would allow geologists to then work out a pact with local farmers and land-owners and then begin identifying the veins that contain gold, and then extract gold. Since geologists also understand soil characteristics much better than most farmers, they could help the farming community grow crops more effectively on these lands, improving agricultural yield as well.

Little stability for mining

The NIMDR Act has undergone several changes. The MMDR Act 1994 was adopted soon after NMP 1993 was announced by the Narasimha Rao Government. The 1994 Act was amended in 2000 when the BJP introduced timelines for grant of RP, PL and ML (Reconnaissance Permit, Prospecting Licence and Mining Licence). However, many state governments took years to process applications particularly to PL and ML, thus deterring the relatively liberalized Mineral Policy of 1993. The Anwarul Hoda commission was set up in 2004 to review NMP 1993 and the 1994 Act. Then a High Level Mineral Policy Committee. That resulted in the New Mineral Policy (NMP) 2008. It is hailed as the most progressive policy by Indians international mineral explorers. But then came the draft MMDR 2010, followed by the draft Act 2011 and finally draft MMDR Act 2012 which was sent to Parliament. But the draft Act 2012 was out of tune with NMP 2008. The policymakers totally junked the good intents of NMP 2008 and adopted the NERP and the Auction route (sheer stupidity!) for granting PL and ML.

This is despite overwhelming opposition from the Mineral Industry. The draft Act was referred to a 22 Member standing committee of the Parliament. The Committee invited some people and Institutions to present comments on 25th June 2012. The Committee was chaired by Kalyan Banerjee from Trinamool Congress. Then, after the new BJP government was formed in 2014, Narendra Singh Tomar became the Minister of Mines. He favoured the auction route favoured by big industrialists, without heeding to the peculiarity of Indian gold sites. The Ministry adopted the draft NIMDR. Then came public consultations in 2014 but only as an eyewash. The NIMDR 2015 was adopted in March 2015. The result was little exploration or mining activity.

The government also wants to make the auction route compulsory for every field in which there is a possibility of gold being found.

Government officials refuse to see the absurdity of such a law. As pointed out earlier, gold mining is a highly risky proposition. The success rate of discovery is just 1 in 400 to 1 in 800 prospects. Second, as pointed out in a subsequent article, most of the identified locations have very little gold, thus unsuitable for large scale mining operations. Yet, the gold can be extracted profitably if one works with the local community.

Moreover, while there are around 206 locations that have been identified, only 15 (inclusive of the five licences given out by the government during the past five years) have deposits of over 2 tonnes. As few as 31 of them have deposits of over 0.5 tonnes but under 2 tonnes. And 91 of them have deposits of less than 0.5 tonnes. Even more locations could be identified with more drilling and surveys, but the

government has not let that happen.

Absurd reasoning

Sadly, bureaucrats fail to realise that nobody would want to pay for a licence when the chances of finding gold is just one in 800? It just does not make sense. Thus, the government has actually shot itself in the foot, by ensuring that no further prospecting takes place. The beneficiaries will be moneybag industrialists who can afford to be reckless with their money for licences and bribes. Other countries will also benefit as they can now sell gold to India. Through these insane laws, the government has ensured that India will never come on the list of countries with gold reserves worth mentioning (see chart).

To add salt to the wounds, the government wants to ban transfer of mining rights to anyone except through an auction. This too is an

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Some illegal mines could be gold as well

(for all mineral excluding atomic and fuel minerals)

No. of illegal mining cases registered

Action taken from April 2012 to September 2015)

States	2010-11	2011-12	2012-13	2013-14	2014-15	2016-16**
Andaman & Nicobar	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.
Andhra Pradesh	13,939	19,913	16,592	7,692	9,379	3,931
Assam	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.
Chhattisgarh	2,017	2,946	3,238	3,996	5,040	2,647
Goa	13	1	0	1	0	2
Gujarat	2,184	3,485	6,023	5,447	5,716	2,280
Harayana	3,446	2,022	3,517	3,589	5,333	2,288
Himachal Pradesh	1,213	1,289	N.R.	N.R.	N.R.	N.R.
Jharkhand	199	364	663	901	1,162	854
Karnataka	6,476	6,691	6,677	8,509	8,464	4,725
Kerala	2,028	3,175	4,550	4,448	4,172	1,459
Madhya Pradesh	4,245	7,147	7,169	6,725	8,173	6,941
Maharashtra#	34,265	40,642	42,918	36,476	32,717	13,292
Mizoram	0	2	16	21	26	N.R.
Odhisa	420	309	314	76	104	39
Punjab	754	314	19	N.R.	N.R.	N.R.
Rajasthan	1,833	1,201	2,861	2,953	2,945	1,423
Tamilnadu	277	123	295	1,078	205	25
Telangana*	N.R.	N.R.	N.R.	N.R.	3,311	3,129
Uttar Pradesh	4,641	4,708	3,266	6,777	10,402	4,857
West Bengal	239	269	479	N.R.	N.R.	575
Grand Total	78,189	94,604	98,597	88,689	97,149	48,467

Note: (a) *Data for Telangana available only after 2015 as it is a newly formed state. Andhra Pradesh data too is only for bifurcated region after that year; (b) nr = return not received; © **Quarter ending September - 2015. #=However the statement given to the Lok Sabha on 9 March 2017 does not give any value either for the amount of illegal mining material seized or the fines collected for some states, especially Maharashtra.

Sources: (1) Indian Bureau of Mines, Government of India; (2) Reply to Lok Sabha, on 23 August 2013, Unstarred Question No. 2391 on illegal mining; (3) Lok Sabha Unstarred Question No. 2329 on 9 May 2016, on illegal mining; (4) Lok Sabha Unstarred Question No. 1503, to be answered on 9th March 2017 on illegal mining.

absurd demand because a farmer may co-opt a geologist, and unable to bear further mining expenses, may bring in another investor to whom majority shares of the mining venture may be sold.

This is the way gold mining grew anywhere in the world – in the legendary gold rush of the US, in Australia and in South Africa. India obviously believes it can march to a different drum! The irony is that Indian geologists are developing more mines in Zambia and Congo and elsewhere than in India.

Finally, on 24 August 2020, as in deference to the objections raised by the mining industry, the Ministry of mines issued a circular seeking public opinion. Yet, in a bizarre move, on 21 December, even before the opinions from the public could be understood and addressed, the

government announced the formation of new venture between two government owned companies -- NMDC Limited and Mineral Exploration Corporation Limited (MECL). They are supposed to collaborate and conduct exploration in mutually agreed projects for iron ore, gold, coal, diamond, and other minerals in various states.

According to media reports, spokespersons for the government said that this would “help to establish resources/ reserves of various minerals / ores and its extraction while identifying unexplored mining areas. This will support the GOI’s ‘Atmanirbhar Bharat Abhiyan’ initiative and extending commitment towards mineral security for the nation.”

Triple folly

That is a laughable claim at best for three reasons.

First, the government claim overlooks the hundreds of crore of rupees that have already been ‘wasted’ by the government since 1970 while drilling in Rajasthan which has around 240 tonnes of gold reserves. Drilling is still going on. Many private parties have lost money too (the market is full of stories about how the Baldota family lost around 100 crore). In all, some Rs. 700 crore of gold prospectors is reported to have gone down the drain.

This time, the government will pour more of taxpayers’ money down a bottomless hole. It should instead be transferring the risk to private (and eminently qualified) private players (more on this later).

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Gold : even government vaults are unsafe

Year of detection	No of cases	Gold missing in Kg	Action Taken
Delhi Customs			
2013-14	4	10.887	FIR lodged. Matter reported to the CBI. Investigation underway.
2014-15	1	1.516	
2015-16	5	11.261	
2016-17 Upto 31 December 2016	47	67.401	
Total	57	91.065	
<p>Source: Reply to Lok Sabha query No. 1630 of 10 March 2017. A total of 1,681.6 Kg were stored in Delhi customs vaults.</p>			
Mumbai Customs-1			
2013-14	1	1.92	FIR lodged; Matter with central Intelligence unit, customs
Trichy Customs			
2015-16	1	39.82	Matter handed over to CBI. Two officers suspended.
2020-Dec: CBI Vault, Chennai	1	103.864	CBI vaults were the target. An enquiry has been ordered
Grand Total	60	236.669	

Note: Despite several representations and please, the government refuses to keep all gold stored under a single authority, with a common central registry which can be accessed online. The need for an independent assayer from a certified refinery to certify the purity of this gold periodically is extremely important. This is because switching gold bars with another gold plated bar is quite easy, and escapes visual detection.

Source: Lok Sabha starred question No. *290 of 5 August 2016. The information about the CBI Vault theft was reported by media on December 12, 2020.

The government thus becomes a dog in the manger – unable to find gold itself and unwilling to permit others from mining these locations. Second, the government claim ignores the increasing incidence of illegal mining – some of it could be for precious metals along banks of rivers or in forest regions (see chart). As pointed out by this author earlier, much of the Naxalite funding comes indirectly from these illegal miners, who do not want roads, schools or police stations in the vicinity. It is easy for them to appoint people to convince (naïve) tribals that outsiders wish to poach their lands.

Both greed and protection of land ownership have thus promoted illegal miners, a menace that appears to have grown even after 2014 when the new government came to power. Unfortunately, however, little data on illegal mining is now available, either because the government does not want it known, or because access to information given out in the Lok Sabha or the Rajya Sabha has become increasingly vexatious to access. But it would be reasonable to assume that the instances of illegal mining have continued to soar even thereafter. It is one of the easiest ways of make money – much of it slush in

nature.

Third, almost every move of the government has resulted in theft, especially when it comes to gold. Watch how, even the the government's megaphones – which earlier highlighted the smuggling of 25 kg of gold in Kerala – suddenly went silent. This was because media discovered the theft of almost 104 kg of gold from the CBI's own vaults.

The fact is that gold has always been stolen – for decades -- from under the very nose of the government. And this does not include theft of gold from temple trusts under government administration ().

These are certainly not steps towards Atma Nirbharta, or Make in India or even ease of doing business. It is quite the opposite of the original war cry of this government – less government; more governance. Both parts of the war cry are belied.

The bureaucrat's ability to play dog in the manger is legendary.

We listen to nobody

It refuses to vest powers relating to gold to an independent regulatory authority. That at least

would create institutional expertise on how to promote and manage the gold business – right from mining to export. Not that government committees have not recommended this.

Take for instance the advice of the erstwhile Planning Commission's document of 4th November 2011, para 6.1. It, like the RBI's KUB Rao Report had recommended the need for a separate regulator for gold. A similar pitch was made in March 2018 by the High-level Committee chaired by Ratan P. Watal, Principal Adviser, NITI Aayog. But is the government even listening?

Someone should alert the government about the potential loss of foreign exchange earning thanks to this myopic and misguided view of its officials. According to data that FIMI and the geologists have compiled for 2016, almost US\$ 2.166 billion was the domestic capital outflow for 26 mineral related deals. The figure is bound to be considerably higher by now. But more on that next week).

The author is consulting editor with FPJ.

- RN Bhaskar

CIL lines up 26,000-crore investment to diversify, mitigate environmental hazard

The diversification would include creating a solar portfolio, setting up coal to liquid projects and surface coal gasification projects. Mechanising transportation and increasing the number of washeries would mitigate environmental pollution.

Caught between the target to be a net zero company and producing 1 billion tonne of coal by 2024, PSU miner Coal India (CIL) has lined up Rs 26,550 crore worth of investments for diversification and environmental hazard mitigation bringing about greater sustainability in operations. The diversification would include creating a solar portfolio, setting up coal to liquid projects and surface coal gasification projects. Mechanising transportation and increasing the number of washeries would mitigate environmental pollution.

CIL, also looking for environment and social governance, has appointed a consultant for better understanding of the needful to manage risks of its operations on environment and people with the consultant helping out in assessing the company's success beyond its finances. Aiming to reduce energy use, mining waste and pollution, CIL aims at wider conservation of natural resources, especially land and forests as it has already planted 100 million trees since inception on 39,840 hectare.

A CIL official said the company, promoting mechanised coal transportation at a cost of Rs 12,500 crore, would move 406 million tonnes of coal a year through piped conveyor belts from 35 mining projects by FY24, helping it to reduce dust pollution. The National Environmental Engineering Institute (Neeri) would assess and quantify the benefits of these projects to the environment.

CIL, looking to power mining operations by 3,000 mw of solar portfolio investing Rs 5,650 crore, would install 14 rooftop and ground mounted solar power projects. It has floated a tender to set up a coal to liquid (methanol) plant at an investment of Rs 6,000 crore in tandem with the government's methanol economy programme for reducing oil imports. The plant would come up at the Dankuni Coal Complex in West Bengal with CIL leasing out land for the project's life assessed to be 25-30 years. The plant would come up on build-own-operate model and produce 6.76 lakh tonne of methanol a year. This would be used for blending with petrol to up to 15% for marketing in West Bengal, Odisha, Jharkhand and Bihar.

Surface coal gasification, converting coal to

syngas and subsequently to chemicals, has prompted CIL to explore possibilities of setting up five plants in ECL, SECL, WCL and CCL areas, for which pre-feasibility and marketability studies are underway. CIL envisions producing 1.3 million metric standard cubic metres of CBM a day from Ranigunj and Jharia coalfields for which it is to invest of `2,400 crore. Tenders have been issued for two projects to engage developers. Another tender for a project at Sohagpur under SECL is on the anvil, a CIL official said.

The company plans to set up eight more washeries — 5 for coking coal in the BCCL area and 3 for non coking coal in the MCL area to wash an additional 47 mts, taking up CIL's washing capacity from present 34.63 mts a year to 81.63 mts a year from 20 washeries.

As mine closure is integral to environmental impact assessment, all opencast mines have been provided with effluent treatment plants. Clean water was made available to 7.78 lakh people around the mining areas during FY20, a CIL official said.

Geological Survey of India set to fast track collection of geoscientific data for mining and mineral sector; Details

With several initiatives, over the next half a decade, the GSI would be able to generate a huge volume of database on quality baseline geoscientific data

Geological Survey of India: Geological Survey of India (GSI) to fast track activities related to mining and mineral sector! The GSI has been conducting surveys and collecting geoscientific data for the past 170 years to prepare geological, geophysical and geochemical maps in high quality. GSI has also been preparing themed maps like land

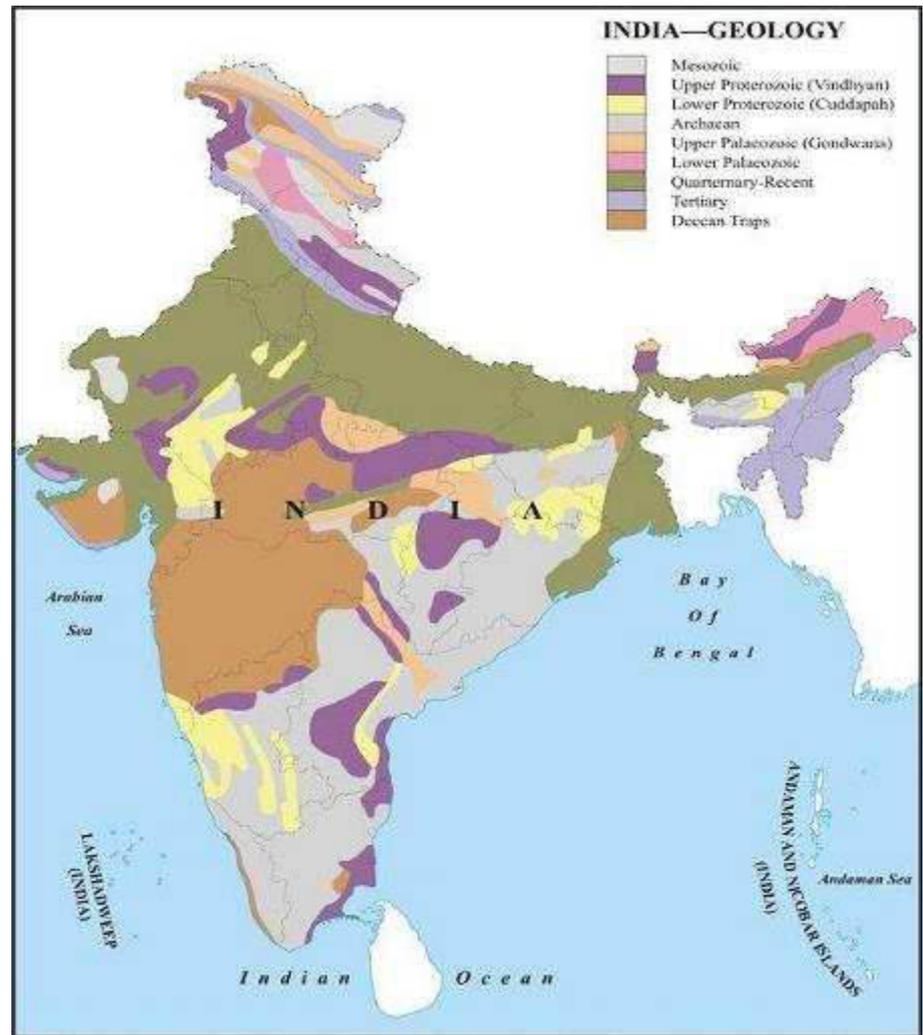
slide susceptibility and geomorphological along with several maps for the marine field. The maps have been based on ground, marine as well as aerial surveys conducted by the organisation. Now, the GSI will fast track collection, fortification as well as dissemination of baseline geoscientific data to meet the challenges posed in the mining and mineral sector, the organisation has said in a statement.

This initiative of the organisation will include several activities.

- The GSI aims to cover by 2024, the 1042 topsheet areas that had been left. These would be mapped under National Geochemical Mapping (NGCM) at a 1:50,000 scale.

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- An area of 17 lakh sq km would be covered under the National Geophysical Mapping (NGPM) at a 1:50,000 scale between 2021 and 2024. This mapping would include the Deccan Traps, parts of Southern Indian Shield, Indo-Gangetic alluvium and alluvial and desert terrains in Gujarat and Rajasthan among others.
- By 2024, the GSI hopes to cover under National Aero Geophysical Mapping (NAGPM), 18 identified geologically potential blocks across an area of 11 lakh sq km.
- Territorial Water (TW) and EEZ would be surveyed under the Marine and Coastal Survey (M&CS), so that Offshore Prospective Area spanning 4.20 lakh sq km could be covered by preliminary mineral exploration. The GSI hopes to complete this by 2025.
- With this, over the next half a decade, the GSI would be able to generate a huge volume of data-base on quality baseline geoscientific data, the organisation said.



Commercial mining: Govt re-invites bids for 4 coal blocks

The government has again invited bids for four coal blocks whose tender process was annulled in the first round of auction for commercial mining, as the number of technically qualified bidder for each mine was just one

The coal ministry has again invited bids for four coal blocks whose tender process was annulled in the first round of auction for commercial mining, as the number of technically qualified bidder for each mine was just one.

Of the four coal blocks, three are in Odisha and one is in Jharkhand.

"The nominated authority conducted the first attempt of 11th tranche of auction under CM(SP) Act and 1st tranche of auction

under the MMDR Act of identified coal mines/blocks vide tender document dated June 18, 2020," the coal ministry said in a notice inviting tender.

It added that as the number of technically qualified bidders for the tender was less than 2 for Chendipada, Chendipada-II and Kuraloi (A) North coal mines in Odisha and Seregarha block in Jharkhand, the process was annulled.

The blocks, which are fully explored, have an annual peak-rated capacity of 52 million tonnes (MT).

"The nominated authority is initiating the second attempt of auction of these coal mines with the same terms and conditions as in the first annulled attempt of auction," the ministry said.

The auction of blocks for commercial mining has opened India's coal sector to private players.

The first-ever auction of coal mines for commercial mining witnessed "fierce competition".

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Earlier, Coal Minister Pralhad Joshi said 19 auctioned mines will generate total revenues of around ₹7,000 crore per annum and create

more than 69,000 jobs once they are operationalised.

In June, Prime Minister Narendra Modi launched the auction process for 41 coal blocks

for commercial mining. Some of the large corporate groups that have bagged blocks include Adani Enterprises, Vedanta, Hindalco Industries and Jindal Power.

Angola invites India to invest in diamond mining

African nation Angola has invited Indian companies to invest in diamond mining and processing, a statement said on Saturday.

Angola is the third largest producer of diamonds in Africa and has only explored 40 per cent of the diamond-rich territory within the country, but has had difficulty in attracting foreign investment.

"Angola is looking at foreign direct investment from Indian companies to help realise the mining country's potential," Pratibha Parkar, Indian Ambassador to Angola, was quoted in a statement by the Gems and Jewellery Export Promotion Council of India (GJEPC).

Parkar further stated that the country wanted to shed its overdependence on oil exports and was keen on diversifying its export basket to other segments.

Fernando Amaral of Sodiam (Angolan National Diamond Trading Company) stated that diamonds are an important

source of avenue for Angola and its people, and with the new diamond policy modalities it would like to sell through sights, tenders and spots.

"The sight contracts will be only for two years. Angola is hoping to increase diamond production from about 9 million carats per year to 15 million carats by 2022. We invite Indian companies to invest in Angola and cut and polish diamonds locally," he added.

To enhance diamond trade relations between Angola and India, the Union government, the Gems and Jewellery Export Promotion Council of India (GJEPC) and delegates from Angola jointly organised the India Global Connect.

India Embassy in Angola, GJEPC and Angola-India Chamber of Commerce jointly organised the virtual India Global Connect on December 3, GJEPC said in the statement.

India accounts to almost 10 per cent of export trade of Angola and is also the second largest African nation in terms of oil supply to India and gems and jewellery provides

a good opportunity to further strengthen the trade between India and Angola.

India's imports of rough diamonds from Angola amounted to \$6.01 million in 2019-20, while exports stood at 50.01 million, Parkar added.

"Angola could look at the prospect of selling its rough through SNZs (special notified zones) in India, and have an agreement between GJEPC and Sodiam (Angolan National Diamond Trading Company) for boosting Indo-Angola trade ties.

"The Council has played an important role in bringing the global trade to India and the government's policies have ensured that we become the industry world leaders. The Angola's proposal for India to invest on diamond mining and processing is a lucrative offer and we should look at it seriously," GJEPC Chairman Colin Shah stated.

Criminal leaders rise during mining booms

- A new study from India links the rise in mineral prices to the electoral success of politicians with violent crime records
- The mining sector in India has earned a bad name for itself due to its frequent links with corruption and crime. Bribes are often given away for licences and approvals, and whistleblowers risk violence. A new study has found that a boom in the mining sector can even be linked to electoral gains for criminal politicians.

- In their study, Sam Asher of Johns Hopkins University and Paul Novosad of Dartmouth College use election affidavits of candidates contesting polls in 948 legislative constituencies during 2003-2017. In these affidavits, candidates are required to declare all criminal charges they face.

The two economists then look at the effect of global price shocks of minerals found in these constituencies on the election outcomes.

They find that a rise in the prices makes

politicians with criminal charges win more elections. The outcomes are even more favourable for those with violent crimes.

The paper does not provide any empirical evidence on why this happens. But the authors argue that criminal politicians may have an upper hand in being the local fixers compared to their non-criminal rivals. Such politicians could facilitate illegal activities such as enforcing illegal mining, flouting

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environmental laws, or intimidating journalists and activists—all of which is commonplace in the mining industry.

The rise in prices also has an impact on the wealth of elected politicians. A doubling of local mineral wealth leads to a 25% increase

in the wealth of incumbents. Politicians in office also accumulate new crimes during the period of boom. This increase in wealth and crime is limited to politicians in power, not their unelected counterparts.

As the transactions between mining firms and

politicians are often hidden, improving transparency on these would be a step forward. Satellite imagery to detect the legal boundaries of open-cast mines could allow citizens and civil society to monitor corruption in mining, the authors suggest.

Steel producers, buyers, material suppliers fight over price hike

Steel manufacturers had focussed on exports during the lockdowns to stay afloat

Consumers and raw material providers of steel are up in arms against producers over rising prices of finished products, prompting them to write to the central government.

Steel producers are justifying the price hike by pointing towards a shortage of iron ore, among other market factors. Mining companies that supply iron ore have sought a ban on export of steel products. According to representations reviewed by Business Standard, both producers and raw material suppliers have written to the Prime Minister's office. Consumers of steel, such as electronic manufacturers, are also seeking a regulation in the prices and a 15 per cent export duty. They have written to the ministry of power in this regard.

THE ISSUE

- ◆ **Steel Producers** justify the price hike by pointing towards a shortage of iron ore, among other factors.
- ◆ **Mining companies** that supply iron ore debunk the claims and seek a ban on the export of steel products.
- ◆ **Consumers also seek** a regulation in the prices and a 15% export duty.

Association (ISA) said the industry has “no recourse, but to raise prices of steel from time to time.” “Many steel companies in India with sub-optimal operating capacity showed substantial cash losses due to non-absorption of huge fixed costs for the quarter ended June 2020. Global steel prices fell sharply below \$400 per tonne and domestic prices followed suit...when the global economy started opening up, international prices surged to over \$750 per tonne from the bottom of \$397 seen this year. As India is an open economy, steel prices move in accordance with the international price,” the ISA said.

Steel manufacturers had focussed on exports during the lockdowns to stay afloat. With steel demand picking up, the prices have firmed up significantly.

The ISA also said there is presently an “acute shortage of iron ore”. “The Indian steel industry is facing testing times as the iron ore supply has been badly squeezed. At the same time, the prices of iron ore have shown an unprecedented rise in both national and international markets. The limited supply and rising prices of iron ore, which is the basic raw material for making steel, has also led to high steel prices,” the ISA said.

The Federation of Indian Mineral Industries (FIMI) said the ISA was ‘obfuscating the whole issue.’ Terming the steel price hike unjustifiable, FIMI said: “While working out the price of steel, the Indian steel industry takes international price as the base, whereas it gets high grade iron ore at comparatively much lower prices.”

“Duplicity of steel producers about shortage of iron ore is well exposed as some of the primary steel producers are themselves exporting iron ore,” FIMI said. It also blamed the larger steel producers for the reduced production of iron ore and referred to the auction of iron ore mines in Odisha, whose leases expired in March.

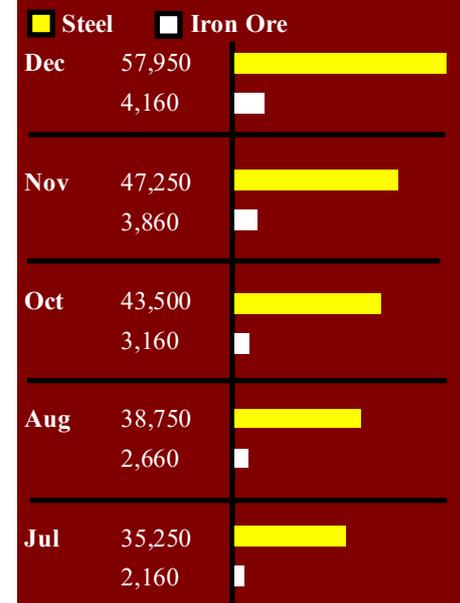
“The target production for April-October 2020-2021 was 28.70 million tonnes and actual production was 6.51 million tonnes. It can be seen that steel companies have failed to produce iron ore in accordance with the stipulation. Had the primary steel producers, who have got mines in the Odisha auction, been able to produce the quality mandated, there would not have been any ground for them to blame standalone miners for any alleged shortfall,” FIMI said.

These operational mines were reaucted after their leases expired and the statutory clearances were automatically transferred to the new winners. This was done to mitigate any shortfall in production that would have occurred for want of regulatory approvals. According to FIMI,

primary steel producers got the larger share of these iron ore mines and are now the reason for any dip in raw material availability.

PRICE MOVEMENT IN 2020

Figures in Rs. Per Tonne



Source : Letters from federation of Indian Mineral Industries and Indian Steel Association

The biggest brunt is being borne by steel consumers such as electronics manufacturers. In their representation, the Indian Electrical & Electronics Manufacturers' Association sought a 15 per cent export duty on steel.

It said: “The electrical equipment manufacturing industry is passing through difficult times due to unusual rise in the price of steel, which is a basic raw material for the industry. The content of steel, as a raw material, varies from 25 to 60 per cent in various equipment.”

Deep-sea mining: What is it, its importance, impact on the environment and India's Samudrayaan project

This article will guide you about deep-sea mining, its importance, impact on the environment, and India's proposed 'Samudrayaan' project.

With the growing interest in the mineral deposits of the deep-sea, countries such as China, France, Germany, Japan, South Korea, and Russia and small island nations such as the Cook Islands, Kiribati, have joined the race to mine the deep-sea to meet the rising demand of the metals. This article will guide you about deep-sea mining, its importance, impact on the environment, and India's proposed 'Samudrayaan' project.

WHAT IS DEEP-SEA MINING?

It is the process to retrieve mineral deposits from the deep-sea. Deep-sea is the area of the ocean below 200 m, covering around 65% surface of the Earth. Many nations are in a race to mine deep-sea to meet the rising demand of the metals.

WHY IS THE STUDY OF DEEP-SEA IMPORTANT?

The seabed comprises of an extensive array of geological features such as abyssal plains 3,500–6,500 m below the sea surface, volcanic underwater mountains, hydrothermal vents with bursting water heated by volcanic activity, and deep trenches. The seafloor also contains species which have uniquely adapted themselves to harsh conditions including lack of sunlight, poor oxygen, low temperature, high pressure and so forth. Thus, to connect the dots between biodiversity and ecosystem, and to limit environmental impacts of mining activities, there is a need to study seafloor.

IMPACT OF MINING ACTIVITIES ON THE BIODIVERSITY AND ECOSYSTEMS OF THE DEEP-SEA:

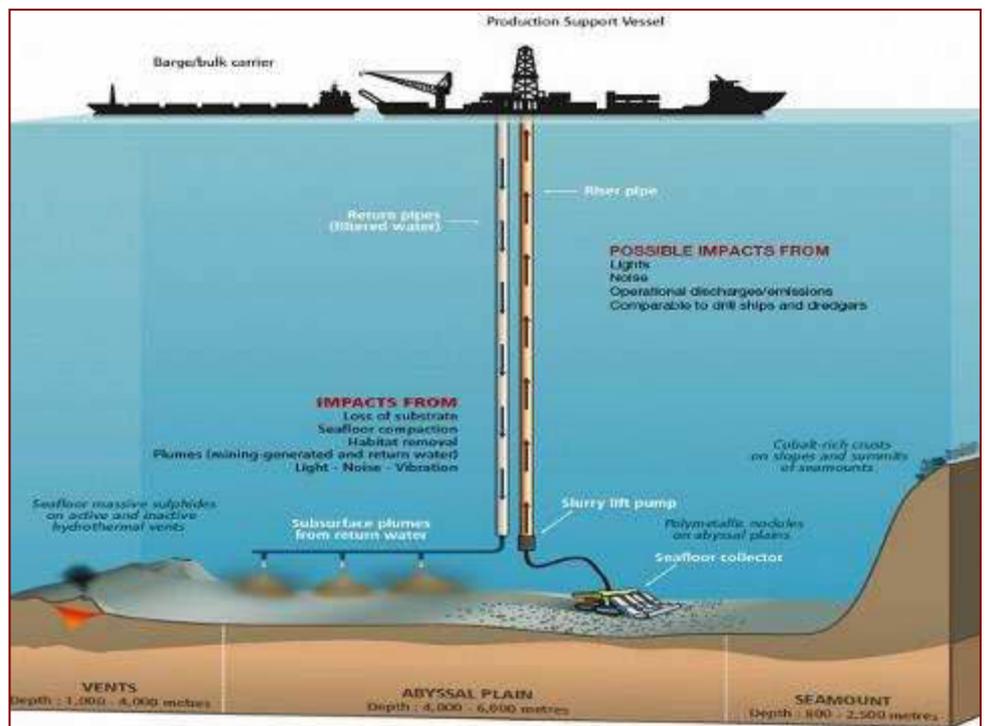
1- Disturbance of seafloor: The scraping of the seabed by machines can either alter or destroy deep-sea habitats, leading to fragmentation or loss of ecosystem structure and function.

Also, most of the species living in the deep sea are endemic (not found anywhere else on Earth) and the physical disturbances at a mining site may possibly wipe out entire species.

leaks, spilling of toxic products or fuels and light pollution caused by mining equipment and surface vessels may have a negative impact on the species.

Rising interest in the mineral deposits of the deep-sea

The interest in the mineral deposits of the deep sea has arisen in the past few years due to the depleting terrestrial deposits for metals such as copper, nickel, aluminium, manganese, zinc, lithium and cobalt. Also, there's an increased demand for the said metals in manufacturing smartphones, wind turbines, solar



Deep-sea minerals, related depths and resources found

Deep-sea minerals	Depths (in m)	Resources found
Polymetallic nodules	4,000-6,000	Nickel, Copper, Cobalt and Manganese
Manganese crusts	800-2,400	Mainly Cobalt, some Vanadium, Molybdenum, and Platinum
Sulfide deposits	1,400-3,700	Copper, Lead, Zinc, some Gold and Silver

2- Sediment plumes: Deep-sea mining may also result in stirring up fine sediments on the seabed such as silt, clay and the remains of microorganisms, creating plumes of suspended particles in the ocean.

It is indistinct how far these particles may scatter past the mining zone, how long it would require for them to resettle on the ocean floor, and to what extent they may negatively impact ecosystems and species.

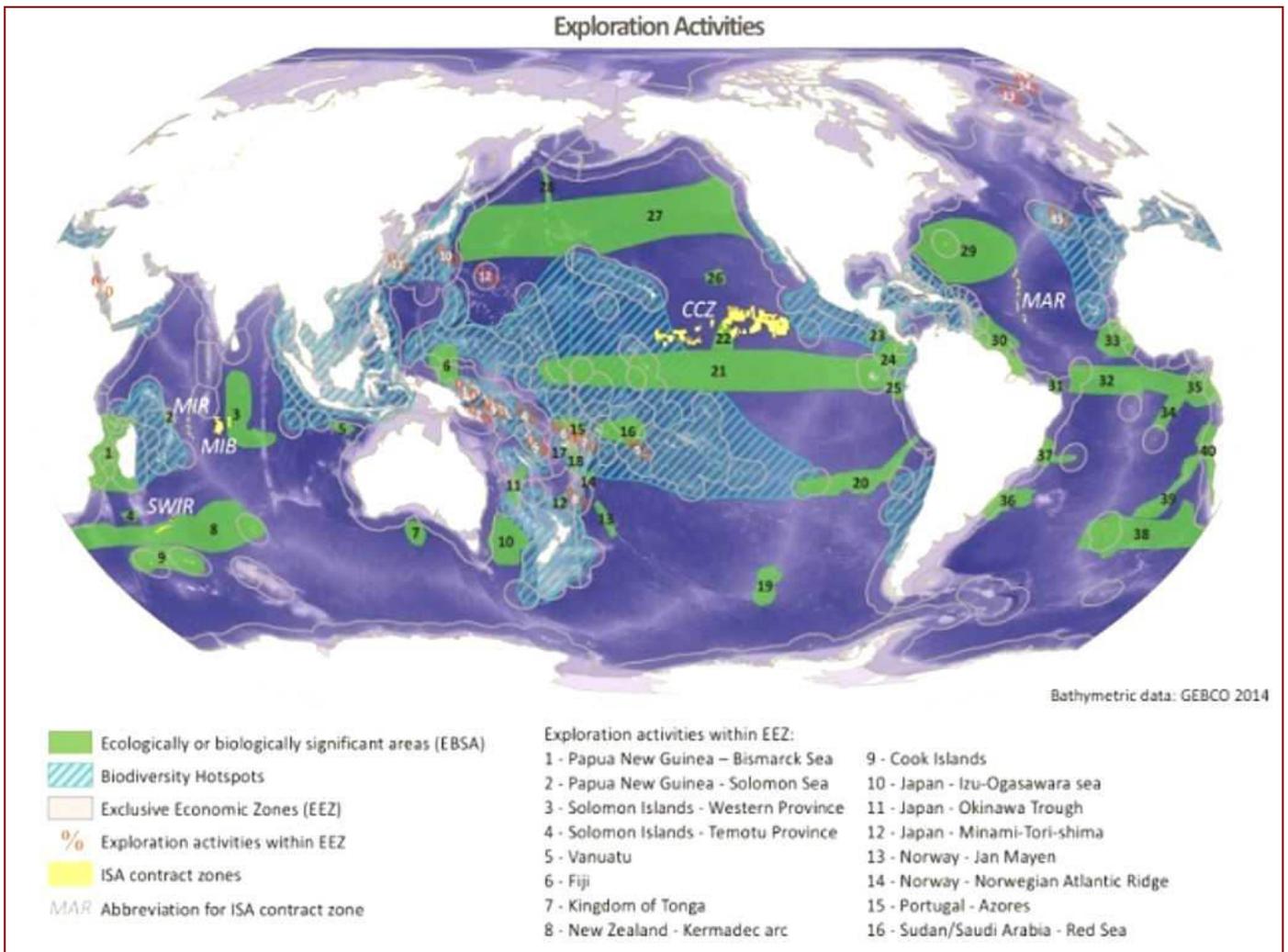
3- Pollution: Noise, vibrations, potential

panels and so on.

Earlier, only the size and extent of mineral deposits in the deep sea were explored but by May 2018, the International Seabed Authority (ISA) issued 29 contracts for the exploration of deep-sea mineral deposits.

International Seabed Authority (ISA) regulates activities in areas beyond national jurisdiction.

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STRATEGIES TO LIMIT THE ENVIRONMENTAL IMPACTS OF MINING ACTIVITIES

1- Comprehensive studies: Comprehensive studies of the ocean floor are needed to get a better understanding of the species, their way of living, and how mining activities may impact them.

2- Environmental impact assessments: Environmental impact assessments are required to assess the extent and duration of environmental damage caused by deep-sea mining.

3- Mitigation: To avoid loss of biodiversity and long-lasting negative impact on the environment; large areas must be protected to leave the seafloor undisturbed, in addition to precautionary controls on the permissible extent and duration of mining operations.

4- Three R's: The three R's-- Reduce, Re-use and Recycle must be encouraged to minimize the demand for raw materials from the deep-sea.

INDIA'S SAMUDRAYAAN PROJECT

Samudrayaan is India's proposed project to explore the deep-sea area. Under this project, three aquanauts will be sent in a submersible vehicle to study the deep-sea. The project has been undertaken by the National Institute of Ocean Technology (NIOT) and is in line with ISRO's Gaganyaan mission.

HIGHLIGHTS OF SAMUDRAYAAN PROJECT

1- It is a pilot project of Ministry of Earth Sciences (MoES), Government of India, for deep-sea mining of rare minerals.

2- Three aquanauts will be sent into the deep-sea in a submersible vehicle to a depth of about 6,000 metres to conduct several deep-sea studies.

3- The indigenously developed vehicle is capable of crawling on the seafloor at a depth of six-kilometre for 72 hours.

4- Deep-sea mining is expected to commence in the year 2022 with a projected expenditure of Rs. 200 crores.

India's industrial production rose by 3.6% in October as mining continues to contract

Industrial production rose 3.6 per cent in October, mainly due to better performance of manufacturing and electricity generation sectors, official data showed on Friday. According to the Index of Industrial Production (IIP) data, manufacturing and electricity generation sectors registered a growth of 3.5 per cent and 11.2 per cent, respectively.

The mining sector witnessed a contraction of 1.5 per cent in October.

The IIP had contracted by 6.6 per cent in October 2019.

Delhi HC issues Centre notice for environmental appraisal of power, mining projects notification

According to the petitioner Manoj Mishra, a retired Indian Forest Services officer, Union of India through Ministry of Environment, Forests and Climate Change on July 10, 2020, reconstituted the EAC for the environmental appraisal of thermal power and coal mining projects under the Environment Impact Assessment (EIA) notification, 2006.

Delhi High Court on Wednesday issued a notice on a petition challenging Centre's notification constituting the Expert Appraisal Committee (EAC) for environmental appraisal of thermal power and coal mining projects.

The bench of Justice DN Patel and Justice Prateek Jalan after hearing the submission of petitioner's Advocate Ritwick Dutta, issued notice to the respondents and slated the matter for January 22, 2021.

According to the petitioner Manoj Mishra, a retired Indian Forest Services officer, Union of India through Ministry of Environment, Forests and Climate Change on July 10, 2020, reconstituted the EAC for the environmental appraisal of thermal power and coal mining projects under the Environment Impact Assessment (EIA) notification, 2006.

The notification shows that the government

has appointed a total of nine 'non-officials' as members of the EAC and the rest six are officials, the plea said.

The plea filed through Advocate Srishti Agnihotri stated that as per the notification, no 'expert' has been appointed despite the mandatory requirement that the EAC should comprise of 'experts'. The EIA notification does not make any reference to 'officials' and 'non-officials', and any such appointment or classification is de hors the statutory scheme. The order states that a total of 15 members have been appointed, of which nine are 'non-officials', which is completely alien to the statutory scheme, the plea further added.

It also stated that these appointments fly in the face of several precedents laid down by the Supreme Court of India and the Delhi High Court on the appointment of experts to the EACs/other expert environmental bodies. The notification requires members of the said bodies to be experts having certain educational qualifications and relevant experience in spe-

cific fields/disciplines including, inter alia, Environment Quality and Project Management in relevant sectors.

The plea added that thus the qualifications for a chairperson are something more than mere expertise. The chairperson must be an 'outstanding and experienced environmental policy expert'.

The plea sought the quashing of the notification constituting the EAC and a declaration that the appointments of the respondents are illegal. It also says that the EAC for thermal power and coal mining projects has been improperly constituted vide the notification dated July 10, 2020.

The newly appointed chairperson and other members do not meet the prescribed statutory qualifications. Thus, it is imperative that during the pendency of this petition, the EAC does not take any final decision on a thermal power and coal mining project, the plea stated.

Economic revival weak as new investments fail to pick up in Dec quarter

Despite the festive season and a slowdown in the pandemic, new project investments have fallen yet again in the December quarter

After hitting record lows during the lockdown months, new project investments fell further in the December quarter, latest numbers from the project-tracking database of the Centre for Monitoring Indian Economy (CMIE) shows.

Both private and public sector companies announced new projects worth ₹80,000 crore in the December quarter, a 89% year-on-year decline and a 22% decline compared to the

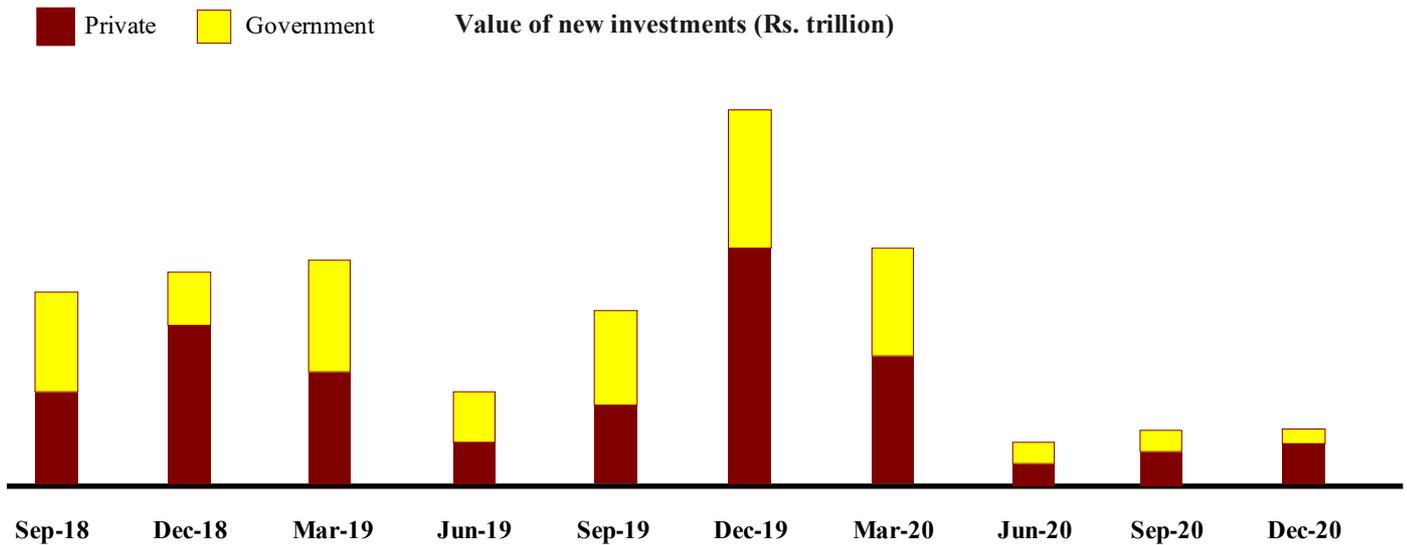
quarter ended in September this year. The numbers are provisional and subject to change. New investments struggle to rise in December quarter.

The decline in new projects in December is a cause for concern. Unlike the June quarter when a strict lockdown put a pause on most economic activities, economic indicators had improved in the December-ended quarter. Festivals, increased public mobility, and improved covid-19 curve had led to hopes of recovery.

This signals caution from companies despite the increased momentum in economic activities in the past quarter. High-frequency indicators tracked by Mint's macro tracker suggest that the Indian economy progressed marginally in November as compared to October.

After hitting a 12-year high in October this year, the pace of expansion in manufacturing activity saw a small dip in November, the

Continued on Page 26



latest purchasing managers' index data for India shows.

Notwithstanding the increased demand and relatively higher manufacturing activity, investment numbers have not revived, the latest numbers show.

Speaking recently at the Hindustan Times leadership summit, Nobel laureate and econ-

omist Abhijit Banerjee said that there was a massive demand shock and that the domestic economy was not offering huge rewards right now. This could have been a reason for the investment numbers. Banerjee also said the country needed a 'demand bounce', which hasn't happened yet.

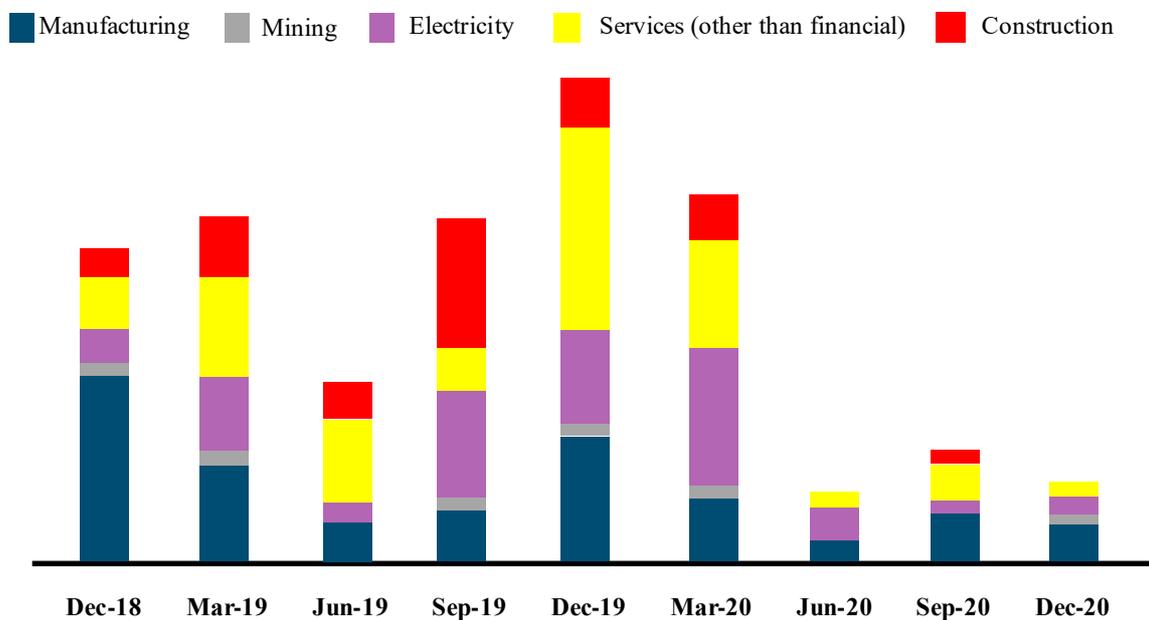
The CMIE capex numbers indicate that firms are likely to hold new investments till there is

greater clarity on demand revival and favourable economic environment.

It is not just the private entrepreneurs who continue to be risk-averse. Cash-strapped governments have squeezed capex more than the private sector. Compared to the last quarter, private sector new projects have risen by 8%, while the same fell by 71% in the government sector.

Manufacturing sector records a bump in new investments

New projects announced (rs millions)



Most sectors except mining and electricity saw a decline in new projects in the quarter ended December. Electricity saw a slight pick-up while mining project announcements quadrupled over a low base. Mining investments are just 2%

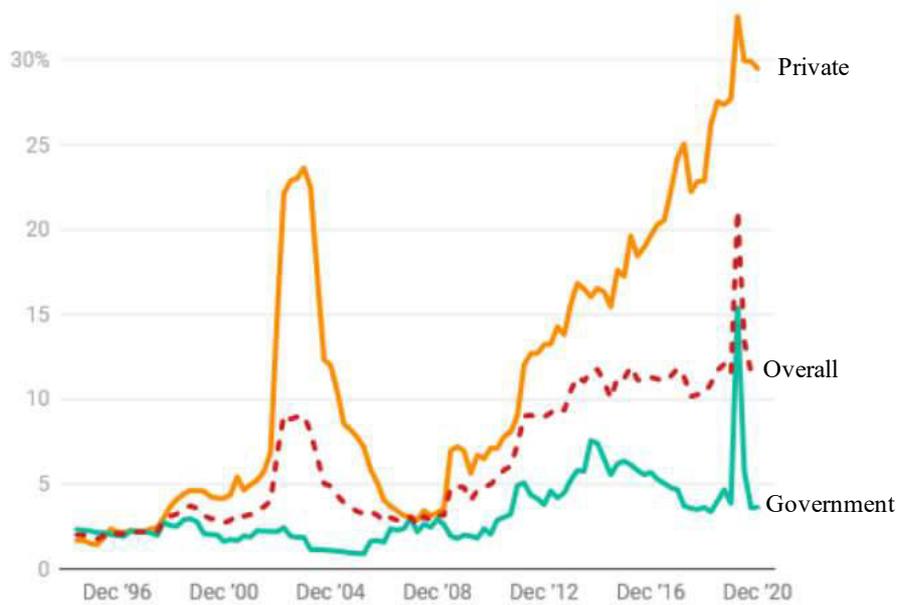
lower than the year-ago levels, signalling normalcy in the sector. New investments in the mining sector came entirely from the private sector. Essar Minmet's Beneficiation and Pellet Plant Project in Odisha and Bright Sino's project in Maharashtra accounted for more than

90% of the total fresh private investments in mining this quarter.

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Stalling rates fell marginally for the private sector projects in December quarter

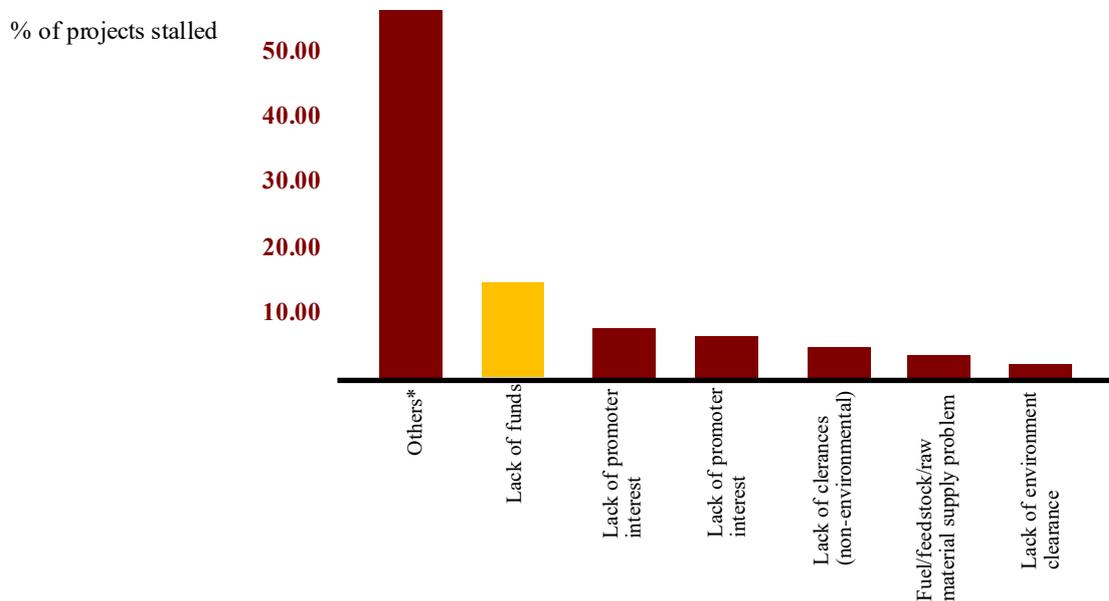
Value of stalled projects as a proportion of total projects under implementation (in %)



The proportion of stalled projects to the total programmes under implementation saw insignificant changes in both the government and the private sector.

Lack of funds dominates the reasons for stalling projects

Projects whose status is "implementation stalled" have been considered. Share is calculated by looking at projects stalled because of a given reason as a percentage of total stalled projects.



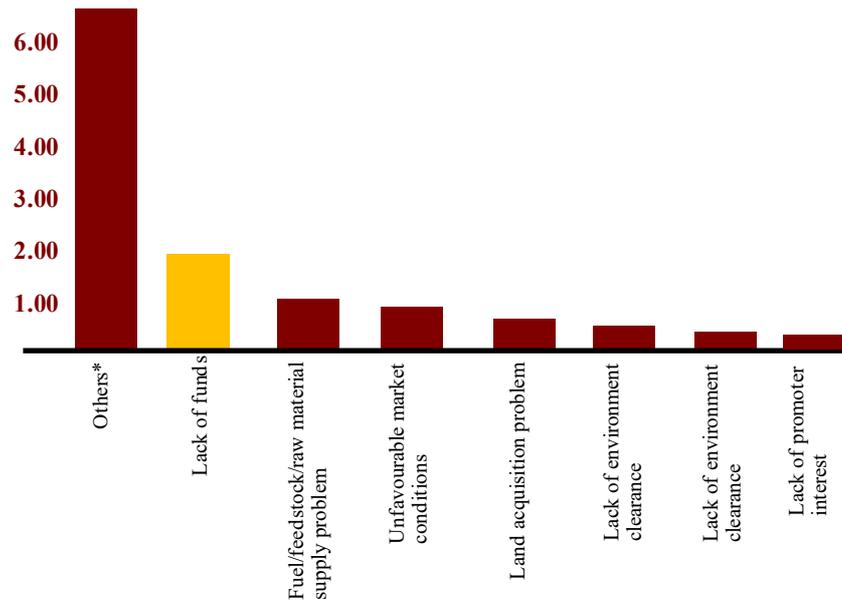
*Includes Natural Calamities and NA

Source: CMIE Capex.

Lack of funds continues to be the biggest known factor for stalled projects. ‘Other factors’ were otherwise the major reason for stalled projects. Covid-19 disruptions might have contributed to this. This category essentially takes into account unanticipated disruptions and natural calamities.

Continued on Page 30

Cost of projects (in Rs. Millions)



*Includes Natural Calamities and NA

Source: CMIE Capex.

Mining resumption issue needs sympathetic consideration: Prabhu

The demand for resumption of mining in Goa should be tackled sympathetically, India's Sherpa to G20 and G7 Suresh Prabhu said after meeting families of the people dependent on the mining industry in the coastal state.

Speaking to reporters in Panaji on Monday, Prabhu said the mining issue has two sides-one involving the employees dependent on

the activity and another is about owners of mines.

'The mining issue has to be tackled in a sympathetic manner. We have to look into how to resolve the issue for the people dependent on the mining industry,' the former Union minister said.

Prabhu on Monday met families of the people who lost their jobs after the Supreme Court quashed 88 mining leases in the year 2018, in

Vasco town.

'The situation of the people dependent on the mining industry is really bad,' he said.

In the past, Prabhu had met several Union ministers in New Delhi along with delegations from Goa seeking resumption of the mining activity. PTI RPS NSK NSK

DISCLAIMER: This is a compilation of various news appeared in different sources. In this issue we have tried to do an honest compilation. This edition is exclusively for information purpose and not for any commercial use. Your suggestions are most valuable.

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editor@geonesis.org