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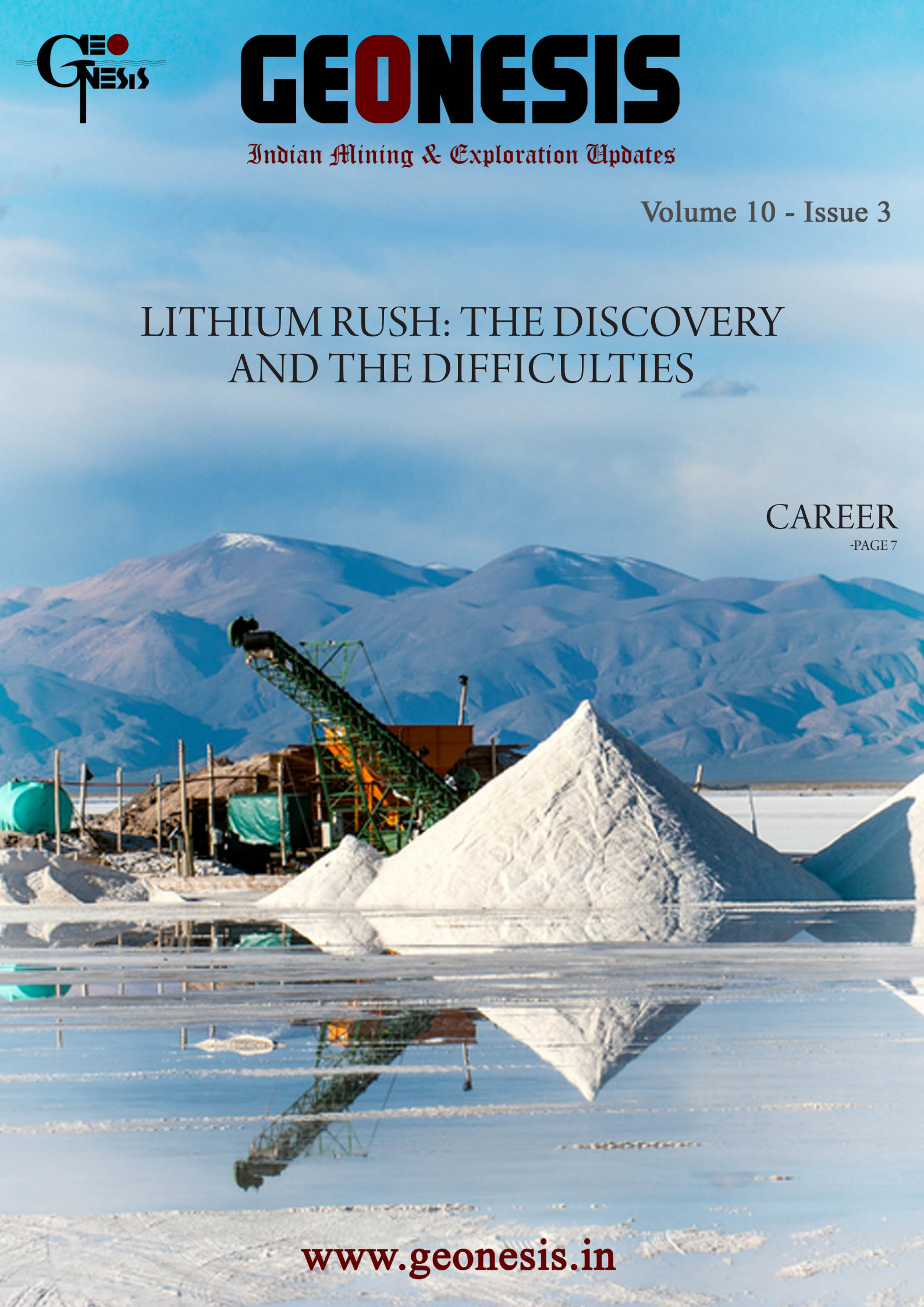
Indian Mining & Exploration Updates

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LITHIUM RUSH: THE DISCOVERY AND THE DIFFICULTIES

CAREER

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L LITHIUM RUSH: THE DISCOVERY AND THE DIFFICULTIES

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Lithium is often described as the white gold of energy storage technology; light and compact, it is the defining element in the lithium-ion batteries that drive our mobile phones, laptops and, in some cases, electric cars. The development of such batteries, in fact, was considered important enough to fetch the 2019 Nobel Prize for Chemistry to scientists John B Goodenough, M Stanley Whittingham, and Akira Yoshino.

Our reliance on lithium-ion batteries explains the excitement around the Union ministry's recent announcement that the Geological Survey of India (GSI) has established lithium inferred resources of 5.9 million tonnes in Salal-Haimana of Jammu & Kashmir. For a country that depends largely on imports for lithium as well as lithium-ion batteries, the inferred size of the resources can raise hopes for self-reliance.

That is, provided there is as much lithium as is being inferred, and that all or much of it can be extracted.

Why 'inferred'?

It is a long road between "inferring" a large amount of lithium, and actually getting to use it. The term, as it suggests, means the estimated lithium content is yet to be established. And even if it is, the next step would be a complicated task in itself: extracting the element from its source.

"Inferred resource" broadly means that the quantity of a mineral can be estimated on the basis of geological evidence, but it remains to be verified. In other words, the estimates for Salal-Haimana are of estimates "of quantities that are inferred, based on interpretation of geological, geophysical, geochemical and geotechnical investigation results".

"It is only an inferred resource right now. It needs to be worked upon, an extraction method has to be decided. It's a good finding but where it will lead to, whether we can mine it or not, we are not very sure," said Shashank Shekhar, professor of geology in Delhi University.

Again, the resource has been classified G3. Under the UN Framework Classification (UNFC) for minerals followed by the ministry of mines, G3 is the second of four stages: preliminary exploration. Much will depend on the subsequent stages of general exploration (G2), and detailed exploration (G1).

Complicated extraction

Globally, two major methods are used for large-scale extraction of lithium: the evaporation of brine at salt pans, and crushing hard rock. An alternative being explored is recycling of used lithium-ion batteries.

Evaporation, which involves a series of steps for chemical treatment and purification, is a time-consuming process, but it is much more widely used than the rock extraction process. Chile, Bolivia and Argentina, which form the "Lithium Triangle" that holds the bulk of the world's reserves of the metal, have an abundance of the metal in their salt pans.

Extraction from ores is a more complex process, and it is in ores in Jammu & Kashmir that a large lithium content has now been inferred. The process involved crushing and roasting the ore at temperatures beyond 1,000°C, then cooling and roasting it again with sulphuric acid, and finally the addition of lime for the removal of impurities and extraction of lithium carbonate, which will later be converted to other lithium compounds for use in batteries.

Nevertheless, Shekhar said: "It all depends on the type of technology you use. I think with all precautionary measures, if it is environmentally sustainable, that (the finding) is a good indication."

There may, however, be environmental issues. "It's a forest area so mining might be difficult," he said.

More potential sources

Salal-Haimana is one of several sites where GSI is carrying out lithium exploration programmes. Between 2016-17 and

2021-22, the number of such sites was 19, including Salal-Haimana, according to details tabled by the ministry of mines in the Lok Sabha in March last year.

On February 8 this year, days before its newest announcement, the ministry told the Lok Sabha that GSI has carried out 20 such projects in the last five years.

All the sites listed in the 2022 reply contained lithium in combination with other substances. The Salal-Haimana site, for instance, contained lithium, bauxite, and rare earth elements. It was already designated G3 then, alongside two sites in Rajasthan, while the programme at Rewat Hill, also in Rajasthan, was at the more advanced G2 stage.

In addition, Khanij Bidesh India Ltd (KABIL), a joint venture of three central PSEs, is exploring opportunities for investment in lithium mines in Argentina and Australia, the ministry said last week.

By: Kabir Firaque

Source: Hindustan Times

STATES AUCTIONED 133 MINES TO PRIVATE COMPANIES IN LAST 5 YEARS : MOM

The Centre on Monday said that the state governments auctioned as many as 133 mineral blocks to private companies during the last five years.

A total of 19,267.47 hectares of forest land had been diverted due to mining activities in the past five years, according to the information received from the Ministry of Environment, Forest and Climate Change.

The approval of the central government was conveyed to the various state governments for 16 proposals for reservation of area under Section 17A of the MMDR Act 1957 in favour of government companies, the ministry of mines said in a statement. "During the last five years, 133 mineral blocks have been auctioned by various state governments to private companies and approval of the Central government was conveyed to the various state governments for 16 proposals for reservation of area under Section 17A of the MMDR Act 1957 in favour of government companies," Union Minister of Coal, Mines and Parliamentary Affairs Pralhad Joshi said in a written reply in Rajya Sabha.

"As per the information received from the Ministry of Environment, Forest and Climate Change, a total of 19267.47 hectares of forest land has been diverted due to mining activities in the last 5 years," he added.

The minister said that the Mines and Mineral (Development & Regulation) Act, 1957 was amended with effect from 12 January 2015 whereby auction regime was introduced for grant of mineral concessions to bring in greater transparency and remove discretion at all levels in grant of mineral concessions.

"The auction is carried out by the respective state governments," Joshi said.

In addition to auction, mineral concessions are also granted to the government companies through area reservation as per Section 17A of the MMDR Act 1957, he added.

Source: MINT

SURVEY CALLS FOR NEW MINERAL POLICY :

The survey presented by finance minister Nirmala Sitharaman on Tuesday noted that rare earth elements (REEs) and critical minerals are essential for generating renewable energy and these are produced in a few countries and processed in even fewer countries

Raising concerns over critical minerals becoming new source of discord among countries, the Economic Survey suggested the formulation of a multi-dimensional mineral policy to boost India's journey of energy transition.

The survey presented by finance minister Nirmala Sitharaman on Tuesday noted that rare earth elements (REEs) and critical minerals are essential for generating renewable energy and these are produced in a few countries and processed in even fewer countries. It said that there is a need to create strategic mineral reserves on the lines of the existing strategic petroleum reserves to ensure a continuous supply of minerals.

Observing that a globally synchronized energy transition to non-fossil fuels might be difficult to achieve if adequate rare earth elements and critical mineral are not available, it said: "Many experts also warn of the availability of rare earth elements and critical minerals to be the next geopolitical battleground as crude oil has been over the last fifty years."

"A carefully crafted multi-dimensional mineral policy would reduce our dependence and address the problems for the future. The country has resources of nickel, cobalt, molybdenum, and heavy REEs, but further exploration would be needed to evaluate the quantities of their reserves," it said, adding that policies should consider investing in internal research including technological innovation for mineral exploration and processing and the development of recycling, reusing, and repurposing (R3) technologies.

The suggestion comes at a time when the government has major plans to boost the manufacturing of EV batteries in the country along with accelerating the setting up of energy storage systems which require minerals. Currently, China dominates the battery supply chain and India is looking at reducing its almost total import dependence for critical minerals. New Delhi has also looked to foreign partnerships, such as the one established with Australia, to develop India's latent potential through critical minerals exploration and mining.

While emphasizing the need for energy transition, the survey also observed that the Ukraine war has brought energy security back to lime-light and is again among the top priorities across the globe, and there is a need to continue using coal to ensure energy security by developing economies as developmental goals still take priority over climate targets. Taking a dig at the west for moving back to coal amid their aggressive push for emission control across the globe, the survey said: "It does not seem so strange or irresponsible that developing countries must put their own growth and development aspirations ahead of their global climate obligations when one considers that developed countries set aside their obsessive concerns about climate change and global warming to burn more coal to generate electricity this year."

The statement comes in the backdrop of developed nations asking developing countries to reduce their emissions and the use of coal over the years.

The survey further said that securing funding for a just transition from either developed nations or multilateral organizations is difficult as public finances in developed countries are stretched and they do not seem to have the intent to mobilize adequate resources for climate action in developing countries.

"They also do not have the appetite to provide additional capital to multilateral institutions for them to be able to lend more or mobilise greater resources. Further, the willingness and incentives-alignment of the private sector to undertake long gestation projects are questionable at best or non-existent at worst," it said.

India has set itself an ambitious target of achieving 500 GW installed renewable energy capacity by 2030 and net zero carbon emission by 2070.

By : Ruturaj Baruah

Source: LiveMint

MINING ON NON-FOREST LAND BEFORE FINAL NOD APPROVED

The Forest Advisory Committee (FAC) decided in October 2021 to approve coal mining on non-forest land adjoining a forest, when mining activity extends to both areas, even before a forest clearance is granted; the recent nod has been given for all minerals.

An environment ministry panel has allowed state governments to permit commencement of mining operations for all minerals on non-forest land contiguous with a forest, where both types of terrain are involved, even before the final clearance is accorded, drawing criticism from environmentalists and legal experts.

The Forest Advisory Committee (FAC) decided in October 2021 to approve coal mining on non-forest land adjoining a forest, when mining activity extends to both areas, even before a forest clearance is granted; the recent nod has been given for all minerals.

HT reported on November 20, 2021 that the FAC approved commencement of coal mining on non-forest land but imposed certain conditions. The panel ruled that in order to avoid a "fait accompli" situation, plans for mining in non-forest areas of a coal block will not involve any forest area; no component of mining activity in the non-forest land shall have any dependency in the forest area of the same block. The decision was criticised by environmental experts as they said it was a legal subsidy to the mining sector.

For other minerals too, the FAC has decided to allow mining on contiguous non-forest land if there is a separate mining plan or a separate lease.

"The FAC, after detailed deliberations in the matter observed that in respect of mining leases involving forest as well as non-forest land, working on non-forest land without ensuring the separate mining plan or lease for such non-forest (part) of the lease may create fait accompli situations, which is not desirable in terms of directions contained in the Hon'ble Supreme Court orders," the Union environment ministry wrote to all state governments and UTs on February 3.

"It is hereby clarified that after obtaining the Stage-I approval, deposition of compensatory levies and environment clearance, the State/UT Government or authorities concerned should prepare a separate Mining Plan or execute a separate mining lease for full or part of non-forest land involved in the mining lease before allowing mining operations in the non-forest land of such mining leases," the letter said. HT has seen a copy of the letter.

In 2014, a three-judge Supreme Court bench headed by justice RL Lodha said mining companies that invested money in blocks without getting all clearances took the decision at their own risk. Any investment made in anticipation of clearances cannot be justified and such coal blocks cannot be protected if the companies fail to get clearances within the time frame fixed under the law, the bench had said. Environmental experts said commencement of mining on non-forest land would result in expectations that the entire mine will be accorded clearance because of the investment involved.

"Even if they have a separate mining plan but the lease is the same, it will amount to a fait accompli situation. This is because the viability of a project is determined based on the entire capacity or area required. The cost-benefit analysis of a mining project is also based on the entire reserves available. So mining may be limited to the non-forest land in the first few years but the expectation is that a nod will be granted to the entire area, including the forest land involved," said Ritwick Dutta, environmental lawyer.

"A decision like this can be understood as a case where a regulation by exemption is resulting in reading down the intention of a statute which argues for an assessment-based approval. The viability of most mining or any other large infrastructure projects relies on accessibility to both forest and non-forest land. Initiating work on non-forest land prior to assessments of risks and costs of forest land diversion, can affect the implementation of the project if the assessments result in delayed or no approvals. Therefore, a process which is not based on sound environmental logic is also not in the interest of business," said Kanchi Kohli, legal researcher at the Centre for Policy Research.

"This move to allow commencement of mining in non-forest land first will save time for the project proponent but it cannot be quantified as to how much time will be saved," a senior environment ministry official said.

In another development, in order to fast-track forest clearances, the ministry notified the guidelines on Accredited Compensatory Afforestation (ACA) on January 24.

The final guidelines were published on the ministry's Parivesh website last week. Under ACA, any interested person or entity can develop plantations on non-forest land and trade them with the project proponent that is seeking diversion of forest land for its project.

ACA is a system of proactive afforestation, according to the ministry, where ready-made plantations are available.

Until now, the project proponent of any infrastructure project involving diversion of forest land would identify land for compensatory afforestation to compensate the loss of forests. The company would submit details of the land to the environment ministry along with an undertaking to bear the entire cost of afforestation. The afforestation land was transferred and mutated in favour of the state forest department and subsequently notified as protected forest under the Indian Forest Act, 1927. The forest department would take up afforestation on the mutated land against the loss of forests due to clearance granted to the project.

"This practice has been in vogue for the last four decades. Difficulties observed during the intervening period in the implementation of the scheme primarily include delayed fund flow, untimely availability of non-forest land, uncertainty of survival percentage, etc," said a letter issued by the ministry to all important ministries, including the home ministry, on January 24.

Under the new guidelines, the proponent of any infrastructure project requiring forest land can negotiate financial details with the person or agency holding accredited plantation and enter into an agreement for its sale.

The preconditions for afforestation plots that can be sold include: any non-forest land can be used; mined out and biologically reclaimed non-forest land, ownership of which vests with a state PSU or central PSU may also be used; land considered for raising such afforestation should be properly demarcated and fenced to ensure its protection from various biotic factors; such land should cover an area of minimum ten hectares; afforestation over land of any size situated in the continuity of land declared or notified as forest under any law, protected area, tiger reserve or within a designated or identified tiger or wildlife corridor can be considered; accreditation can be obtained after afforestation of one-hectare area with 0.4 or more canopy density is available.

Environment ministry officials said no plantation patch has been accredited so far under the new guidelines but once the process starts it will help fast-track forest clearances. The Forest Advisory Committee (FAC) decided in October 2021 to approve coal mining on non-forest land adjoining a forest, when mining activity extends to both areas, even before a forest clearance is granted; the recent nod has been given for all minerals. An environment ministry panel has allowed state governments to permit commencement of mining operations for all minerals on non-forest land contiguous with a forest, where both types of terrain are involved, even before the final clearance is accorded, drawing criticism from environmentalists and legal experts.

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Source: Hindustan Times



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Gold mining is one of the world's most destructive and unnecessary industries — here's how to end it

Around 7% of the gold purchased globally each year is used for industry, technology or medicine

The 16th-century King Ferdinand of Spain sent his subjects abroad with the command: "Get gold, humanely if possible, but at all hazards, get gold." His statement rings true today. Gold remains one of the world's most expensive substances, but mining it is one of the most environmentally and socially destructive processes on the planet.

Around 7 per cent of the gold purchased globally each year is used for industry, technology or medicine. The rest winds up in bank vaults and jewellery shops.

Beautiful objects and stable investments are worthwhile things to create and own, and often have significant cultural value. But neither can justify gold mining's staggering human and ecological toll. In a recent study, my colleagues and I showed how it might be possible to end mining and instead rely entirely on recycled gold.

Despite improvements in gold mining practices over the past century and new regulations designed to limit mining's impacts, this industry continues to wreak havoc upon landscapes across every continent except Antarctica. In a given year, gold mines emit more greenhouse gases than all passenger flights between European nations combined. Gold mining also accounts for 38 per cent of annual global mercury emissions, which cause millions of small-scale miners to suffer from chronic mercury poisoning, which can cause debilitating illness, especially in children.

Our research involved modelling hypothetical scenarios in which gold consumption could decline to more sustainable levels. Using current recycling rates, we examined a fully circular gold economy in which the world's entire supply of gold came from recycled sources.

Even today, nearly one-quarter of annual gold demand is supplied through recycling, making it one of the world's most recycled materials. The recycling process uses no mercury and has less than 1 per cent of the water and carbon footprint of mined gold.

We found that a global decline in gold mining would not necessarily derail any of gold's three central functions in jewellery, technology or as an investment.

Our model showed that the gold used for industrial purposes (mainly in dentistry and smartphones) could be supplied for centuries even if all gold mining stopped tomorrow.

We also found that jewellery could still be produced with recycled gold in a fully circular gold industry. There would just be about 55 per cent less to go around, which would still leave more than enough for essential uses.

In order to make this future a reality, investors would have to limit their trading to existing reserves, without adding newly mined gold to their coffers.

A world with a shrinking supply of gold would likely mean that consumers would pay more for the same 24-karat pure gold ring. But more likely, jewellery purchases would shift to cheaper (and more durable) alloys of gold that are already popular. And in the future, demand for gold may decline as consumers become more concerned with making sustainable choices.

The role that invested gold plays in the global economy would likely continue to function regardless of extraction. Like Renaissance art, gold is valuable precisely because it is scarce. Ending gold mining would not put an end to the buying and selling of gold for bank vaults. Instead, it would make existing stocks of gold more valuable.

Irrespective of whether the world needs gold, our research suggests that the world does not need gold mining.

Private investors and central banks may balk at this idea. The US government, for example, is the world's single largest owner of gold, holding US\$11 (9.1) billion in reserves. But transitions to sustainability are always hard-won and the gold industry is no exception.

Like gold, the extraction of fossil fuels is also environmentally damaging. But unlike gold, fossil fuels provide warmth and electricity to homes and businesses, power to vehicles and fertiliser to farms. Transitioning away from this resource required decades of research and investment into clean energy technologies.

By contrast, finding substitutes for gold does not require any research. Jewellery can be made more sustainable by blending gold with other metals. Investors can rely on existing gold stocks and diversify to other stable assets. And technology can continue to use recycled gold when appropriate.

Closing gold mines is the first step. But many regions have grown dependent on gold mining, and artisanal mining alone supports as many as 19 million miners and their families worldwide, mostly in developing economies.

These miners deserve a just transition that ensures they do not become collateral damage in the shift to sustainability. Governments must provide a robust safety net for former gold miners and their families. That includes

offering low-cost training and reskilling to ensure that miners can find employment in more sustainable industries.

Steps toward sustainability

Responsibly drawing down gold extraction will take time. But several measures are available to begin the transition today.

On the demand side of the industry, major jewellery brands, including Pandora, have already committed to using only recycled gold by 2025. Global technology firm Apple has also recently set a goal to use exclusively recycled materials by 2030.

On the supply side, mining companies should begin retiring mines that extract only gold. Many copper mines produce gold as a byproduct, which will likely continue into the future.

Meanwhile, institutional investors should stop investing in new gold mines. That includes groups like the World Bank, which has invested US\$800 (£660) million in gold mines in Africa, Asia, South America and the Pacific Islands since 2010.

Justice-minded fund managers, such as those overseeing endowments, should add gold mining firms alongside coal producers to their divestment lists. And central banks should redirect their future investments toward other stable stores of value, or at least source exclusively recycled gold.

The world is filled with difficult sustainability trade-offs. Gold mining is not one of them. Drawing down this industry stands out as a relatively easy way to reduce humanity's footprint on a fragile planet.

Source: Downtoearth.org



Two Damaging Choices: Centre Picks Water Over Diamonds in MP

The Centre has halted the Aditya Birla Group's controversial Chattarpur diamond mining project for the 'ill-conceived' Ken-Betwa Link Project in Bundelkhand.

An allegedly ill-conceived river interlinking government project has sidelined an equally controversial diamond mining project in Madhya Pradesh. A Central government expert review panel has recommended that the Aditya Birla Group's ambitious diamond mining project in Chhatarpur district be kept in abeyance till the plan to link Ken and Betwa rivers in water-starved Bundelkhand, criticised as an ecologically disastrous exercise, is finalised.

In a meeting held on December 27, 2022, the Forest Advisory Committee (FAC) of the Union ministry of environment, forest and climate change

(MoEF&CC) rejected a proposal to divert 382.131 hectares of forestland to the Bunder Diamond Mining Project on the grounds that it will potentially affect the Panna Tiger Reserve. Shockingly, the tiger reserve itself is predicted to get submerged once the Ken-Betwa Link Project takes shape. Several potential adverse environmental impacts of the mining project were listed by the FAC at the meeting. "The FAC observed that the instant project can potentially disrupt the landscape character vis-a-vis the tiger dispersal around the Panna landscape. Further, the instant proposal may be considered only when the Ken-Betwa River Interlinking Project is finalised, the tiger dispersal in the area post-construction of the Ken-Betwa Link Project is studied and a detailed study is done to assess other alternatives," the minutes of the meeting state.

The recommendation of the expert panel to scout for alternatives vis-à-

vis the diamond mining project comes at a time when the Centre itself has been alleged to have considered no alternatives other than interlinking the two peninsular rivers to ensure water availability in Bundelkhand.

In a report submitted in August 2019, a Central Empowered Committee (CEC) appointed by the Supreme Court had recommended that alternatives for ensuring water to Bundelkhand should be considered by the Centre before going ahead with the river interlinking project.

Incidentally, the top court is yet to take cognisance of the CEC report more than three years after it was submitted even as the Narendra Modi government has pulled out all stops to go ahead with the project.

The CEC, after conducting a detailed study and extensive field visits, had specifically mentioned in the report “that the project authorities have not examined the alternatives available to meet the specific objectives of the project”.

As per the government, the project has been envisaged to fetch excess water from the upper reaches of the Ken River and divert it downstream to the Betwa River through the construction of a dam in Daudhan that will solve the irrigation and potable water needs of Bundelkhand. However, this premise has been labelled as fallacious and ill-conceived by activists.

“The report of the Ken-Betwa Link Project has not taken cognisance of the fact that till around 50 years ago, Bundelkhand was never a water-starved area. The region receives adequate rainfall and local communities used to depend on traditional methods of water harvesting like small ponds and tanks,” Himanshu Thakkar, of the South Asian Network on Dams, Rivers and People, told Newsclick.

These small-scale water harvesting systems were “neglected systematically over decades. Large-scale and widespread mining started destroying water bodies, forests and the environment in the process”, he further said.

“The CEC has rightly pointed out that alternative methods of water conservation were never considered before going ahead with this large-scale project. Rainwater harvesting systems, both for surface water storage and groundwater recharge, watershed development, and revival of traditional ponds and tanks could be considered viable alternatives apart from reducing dependence on water-intensive crops like paddy,” Thakkar added.

The government not only allocated Rs 1,400 crore for the project in the 2022-23 Budget but also constituted an executive body called the Ken-Betwa Link Project Authority to execute it.

In March 2022, the minister of state for Jal Shakti, Bishweswar Tudu informed the Rajya Sabha through a written reply that the CEC concerns regarding the project’s adverse impacts on the ecology of the tiger reserve have already been responded to by National Water Development Agency, the nodal agency under the Jal Shakti ministry, which is executing the project.

The government also formed a 20-member national steering committee in February 2022 to see through the various stages of implementation of the project. On January 18, at a meeting held under the aegis of the Jal Shakti ministry in New Delhi—the steering committee was informed that orders had been issued by the BJP-led Madhya Pradesh government to transfer around 5,480 hectares of non-forest government land in Panna and Chhatarpur districts for compensatory afforestation.

It is not yet known whether the 5,480 hectares is a contiguous parcel or comprises fragmented plots. As per reports, the Jal Shakti ministry had earlier sought relaxation from the FAC regarding conditions pertaining to compensatory afforestation owing to the fact that a contiguous parcel of land was not readily available with the state government.

Nevertheless, activists argue that the very manner in which forestland has been diverted from the tiger reserve for the project is grossly violative of wildlife preservation laws.

“It has been clearly pointed out by the CEC that the Central government provided wildlife clearance to the project in gross violation of laws. The laws governing the protection of flora and fauna are based on the premise that our approach towards infrastructure development should be eco-centric and not anthropocentric,” river activist Manoj Misra, who heads the NGO Yamuna Jiye Abhiyaan, told Newsclick. “Any diversion of land from a protected wildlife habitat can be allowed only if such diversion is necessary for better management of wildlife in the area,” he added.

As per Section 35 (6) of the Wildlife (Protection) Act, 1972, destruction or removal of any wildlife, the destruction, damage or diversion of the habitat of any wild animal and the diversion, stopping or enhancement of the flow of water into or outside a national park or sanctuary can only be permitted if it is found to be necessary for the improvement and better management of wildlife.

“Diversion of land from a protected wildlife habitat can be allowed for no other purpose. Wildlife clearance for the project was granted even though more than 5,800 hectares of the Panna Tiger Reserve will get submerged once the project takes shape,” Misra further added.

The Standing Committee of the National Board for Wildlife, another expert review panel under the MoEF&CC, had recommended wildlife clearance to the project in September 2016.

On the other hand, the Bunder diamond mining block was one of the controversial bids floated by the Kamal Nath-headed Congress government during its short stint. The block, allocated earlier to Rio Tinto, was abandoned by the Anglo-Australian mining conglomerate in 2016 with uncertainties looming large over forest clearance for the project.

When the bid for the block was floated afresh by the Nath government, top industrial houses of the country had made a beeline for acquiring it as a result of which the government-approved offset price of Rs 56,000 crore had increased by 11.5%. Ironically, barely three months after awarding the block to Aditya Birla Group subsidiary Essel Mining & Industries Limited at the cost of other top industrial houses, Nath’s government was reduced to a minority due to the mass resignation of rebellious Congress MLAs and replaced by the BJP.

In May 2022, Newsclick reported how the Shivraj Singh Chouhan-headed BJP government was actively pushing for forest clearance for the diamond project. Shortly before the a tripartite agreement between the governments of Uttar Pradesh and Madhya Pradesh and the Jal Shakti ministry was signed in March 2021, Chouhan’s government had sought the MoEF&CC’s approval to clear 382.131 hectares of forestland for the project.

An email sent by Newsclick to Essel Mining & Industries asking about its plan of action on the diamond mining project now that the Centre has almost indefinitely postponed it till the completion of the river linking project didn’t receive a reply.



JSPL, NTPC, Vedanta among 59 firms that submitted bids for 36 coal blocks

“A total of 96 bids were received under two tranches of commercial coal mine auctions,” the coal ministry said in a statement

The government on Tuesday said that 59 companies, including JSPL, NTPC and Vedanta, have submitted bids for 36 coal blocks that were put up for sale under the commercial mines auction.

A total of 96 bids were submitted for the coal blocks.

“A total of 96 bids were received under two tranches of commercial coal mine auctions,” the coal ministry said in a statement.

This is the highest ever bids received since the launch of commercial coal mines auction in the year 2020, the ministry said, adding, a “total of six public sector companies had submitted the bids in the ongoing round of commercial coal mines’ auction as well”.

“Under sixth tranche of auctions, a total of 86 bids both online and offline were received against 32 coal mines and three bids were received only offline but not online, and two or more bids have been received for 25 coal mines i.e. 79 bids (both online and offline) against 25 coal mines, and 7 coal mines have received single bids (both online and offline),” the minister said.

Of these 32 coal mines, 10 are partially explored blocks whereas 22 are fully explored mines.

Ambuja Cements, Jindal Power, JSW Steel, Bharat Aluminium Company Ltd, JSW Cement, TANGEDCO and Damodar Valley Corporation are some of the other companies that have submitted their bids.

The auction process of 141 coal, lignite mines for sale of coal was launched by the coal ministry in November, 2022.

The last date for submission of technical bid for all the mines was January 30.

As part of the auction process, technical bids comprising online and offline bid documents were opened in the presence of the bidders.

“Under second attempt of fifth tranche, a total of 8 coal mines were put up for auction and 10 bids have been received against four coal mines where two or more bids have been received for two coal mines and single bids have been received for two coal mines,” it said.

“The bids will be evaluated by a multi-disciplinary technical evaluation committee and technically qualified bidders would be shortlisted for participation in the electronic auction, to be conducted on MSTC portal,” the minister said.

Source: bqprime.com

Greens worried over auction of mines

Ballari and Vijayanagara districts are rich in iron ore mining. JSW Steel Plant, NMDC and Hosapete Steels are among the big names in the districts.

In the wake of the state government floating tender for mining of 1,040 hectares of land in Ballari and Vijayanagara districts, environmentalists are worried whether the mining companies will adhere to environment guidelines. A senior officer in the mining and geology office, Ballari, said that three new mining companies may be awarded the lease to 1,040 hectares of land put on lease. Online tender notification will be open till February 27.

Ballari and Vijayanagara districts are rich in iron ore mining. JSW Steel Plant, NMDC and Hosapete Steels are among the big names in the districts. However, the Karnataka High Court had last week ordered issue of

summons to five mining companies after they violated mining guidelines and damaged Archeological Survey of India (ASI) protected monuments in Sandur taluk of Ballari district.

“Recently, the Supreme Court gave the green signal to increase the mining limit from 28 MMT to 35 MMT. E-auction started and legal documents and following of strict rules have been made mandatory. 108.62 MMT iron ore can be mined in Ballari district”, the official added.

Environmentalists, however, say that government should also keep the protection of environment in mind while focusing increasing revenue through mining. The department should mark the reserve forest area, an activist said.

Source: The Indian Express

LABORATORY STUDIES OF SOME INDUSTRIAL ROCKS AND MINERALS OF JAISALMER DISTRICT

Laboratory studies of some industrial rocks and minerals of Jaisalmer district are described in this article.

Limestones of Jaisalmer Formation(Middle Jurassic):Industrial grade limestones of Jaisalmer Formation mainly include calcarenite, oolitic calcarenite and calcilutite. Jaisalmer Formation has been divided into 4 units- A,B,C and D.

Calcarenite:The fine to very coarse bioclastic limestone is a major type & is widespread and occurs in different shades of yellow,orange, grey and buff colour. Pseudo-oolitic/oolitic calcarenite forms the upper part of Unit B. Typical oolitic calcarenite characterizes Unit D.

Petrography: Calcarenite:In thin section studies, calcarenite exhibits fossil fragments of bivalves, gastropods, and other calcareous clasts, crystalline calcite, sub-rounded to rounded quartz grains cemented with calcareous and subordinate ferruginous ground-mass.

Calcilutite: Fine-grained limestone (calcisiltite/calcilutite) can take very good polish and therefore finds application on large scale as yellow marble. Calcilutite is generally grey to buff colour.Microscopically it shows an uniform even distribution of extremely fine calcareous material which is mosaic of calcareous mud and cryptocrystalline calcite.Few minute sub-angular to sub- rounded quartz grains and cluster of

calcite have also been observed.

Comprehensive Strength: In general the compressive strength of calcarenite used as building blocks and for artistic work is 220-260 kg/cm² and that of oolitic calcarenite is 224.5Kg/Cm².Jaisalmer limestone finds application as building and decorative stone .

Due to its soft nature, calcarenite/oolitic calcarenite is preferred for carving purposes to prepare perforated windows, exterior blocks, panels and beams of buildings. Jaisalmer town is rightly called as “Golden City” and Fort as Sonar Kila . Jaisalmer Limestone is now in the list of Geoheritage stones. This type of limestone is quarried on large scale in places like Jethwai, Shipla & other places .

Chemical analysis and grade: Samples of fine grained limestone(Calcilutite) from NibhDungar have analyzed high grade and typical oolitic limestone collected from Dedha area have analyzed cement to high grade.

Random sampling and investigation by GSI and DMG has indicated the cement to high grade limestone with CaO content varying from 44% -50% . Investigation by DMG for high grade limestone in Jethwai – Joshionwala Gaon by drilling indicated 1 - 3 m thick fine-grained limestone (calcilutite). This fine-grained limestone has analyzed 52 - 54 % CaO and SiO₂ 1.6 to 3.29% and is overlain by 3 - 5 m thick yellow limestone bed (Publication: Limestone DMG,1998). Sahiwala and Virendra Kumar carried out an assessment of cement grade limestone and samples collected during investigation have shown following results.

No of samples	CaO %	SiO ₂ %	Fe ₂ O ₃ %	Grade
131	< 42	> 16		Below cement
90	>42	<16		Cement
11	> 48	<3	<1.0	White
135	48-53	<4		Chemical
9	> 50	<2	<0.5	Steel

After Sahiwala & Virendra Kumar (Rec GSI 133(7),1998-99 Different types of limestones of Jaisalmer Formation and their applications have been discussed by Laul and Laul, MEAI Jaipur, March 2016.

Jurassic phosphorite, Jaisalmer basin: Phosphorite occurs as phosphatic nodules & phosphatized fossils in uppermost unit D of Jaisalmer Formation (Middle Jurassic)and phosphatic nodules bearing ferruginous bands in shales of basal unit A of Baisakhi Formation(Upper Jurassic).

Chemical analysis:Phosphatic nodules and phosphatic fossils in the upper most part of Jaisalmer Formation (Middle Jurassic) may analyze 22-27% P₂O₅ as indicated by nodules of Kaladungar and NibhDungar.

Kaladungar: Basal Baisakhi shale has five phosphatic nodules bearing ferruginous bands and nodules have analyzed phosphate content varying from 5.85 -22.42 % P₂O₅, ferruginous cortex 0.5-9.95 % and host rock 0.5- 1%.

Average grade is 9.5% P₂O₅. Jaisalmer phosphatic nodules have average grade of 22.47% P₂O₅.The average grade of Jaisalmer- Baisakhi contact zone is 12.75 % P₂O₅, Laul & Virendra Kumar, Curr.Sc. 1994.

Solubility Test: Two samples of Baisakhi nodules of Kaladungar show solubility of phosphate in 2% formic acid (FA)39.19% and 34.5% and in neutral ammonium citrate (NAC) 16.71 and 9.76%.The Kaladungar phosphorite is suitable for direct application in acidic soils.

The distribution of Jurassic phosphorite in the Jaisalmer basin has been discussed by Laul, Feb. Geonesis, 2021. Studies suggest that Kaladungar section is perhaps type section for understanding the glauconite occurrence in Jaisalmer- Baisakhi contact zone of Jurassic sequence but NibhDungar- Dedha-Jajiya area has some prospects to locate phosphorite in subsurface at shallow depth. Laul, Geonesis, July 2021.

Limestone deposits of Khuiala Formation (Lower Tertiary).

Limestone of industrial importance was discovered followed by investigation, GSI News V.10 No.11, 1979. and Laul, Indian Minerals, V.33(4), 1980.

Analytical results of samples collected from different places are summarized below.

Area	CaO %	MgO %	Acid Insolubles %
Mohamad ki Dhani- Sirara Dungar	51.90-55.07	0.30- 0.76	1.07-4.33
Alamwali Dhani- Hingola	51.48-54.75	0.30- 0.76	1.56-4.19
Near Sam Village	53.57-54.10	0.56-0.76	1.36-2.05

Ref, GSI news V.10 No.11, 1979

Results of samples collected from Khuiala, Alamwali Dhani-Hingola & adjoining areas are summarized in the table below.

Area	Member	CaO %	MgO %	P2O5 %	Acid Insolubles %
Khuiala,Alamwali Dhani- Hingola	Limestone- Upper member 10 Samples	51.48-54.75	0.30-0.76	0.015 & less	1.56- 2.48
				2 samples 0.020- 0.025	2 samples 3.53-4.19
Same area	Limestone- Lower member 7 Samples	51.90-55	0.30-0.68	<0.015- 0.035	1.07-4.32

Ref: V.P.Laul, Indian Minerals, V.33(4),1980.

Limestone investigation for regional assessment has been carried out by Virendra Kumar and Sahiwala and 1 year by Laul and Sahiwala and samples in general have indicated cement to high/ steel grade, Virendra Kumar & Sahiwala,1990.

Manshuriyan Glauconite of Paleocene age:

Glauconite was discovered in newly dug well dump material of Mashuriyan Village. Chemical analysis of sample collected from a newly dug well dump analyzed around 7% K₂O and XRD studies of samples in general have shown glauconite as dominant mineral and siderite as subordinate mineral. Average grade on investigation has indicated average 4.5 % K₂O, Binod Kumar & Sahiwala, GSI unpub Rept. 1989, Rec GSI 118(1)& 119(1) and Laul, Geonesis, October 2021. Vivek Laul has discussed the importance of glauconite, Geonesis July, 2020.

Petrographic Studies: In thin section glauconite sandstone exhibits min-

ute aggregates and sub angular to subrounded quartz, minor feldspar, few opaque mineral grains and some carb. matter, all cemented with calcareous matter, at places coated with yellowish brown thin ferruginous film (siderite?). Matrix of clay minerals (illite, mica, kaolinite etc) observed in interstices of mineral grains. Calcite has also been observed. Pellets and oolites of glauconite with quartz in nucleus also observed. The visual estimate of minerals is as shown: Glauconite 30- 90 % , Quartz 3- 15 % , Siderite (?) 5-10%, clay minerals 2-12%, Feldspars, 2- 5 , Calcite 2-5% and Opaques & Carb. matter 2-5 %. Virendra Kumar & Laul, Indian Minerals, V.38(4),1984.

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References:

Binod Kumar & Sahiwala, N.K., GSI unpub.Rept. 1989, Rec GSI 118(1)& 119(1)
 DMG. 1998. Limestone
 GSI, - GSI News, V.10(11), 1979
 Laul, V.P., Indian Minerals, V.33(4), 1980
 -----& Virendra Kumar, Curr.Sc., 66(3), February 1994.
 -----& Laul, MEAI Jaipur, March 2016.
 -----Geonesis, February, 2021
 ----- Geonesis, May 2021.
 ----- Geonesis, July 2021
 ----- Geonesis, October 2021
 Laul, Vivek, Geonesis, August 2020
 Sahiwala & Virendra Kumar. Rec GSI 133(7), 1998-99
 Virendra Kumar & Laul, V.P., Indian Minerals, V.38(4), 1984
 ----- & Sahiwala, N.K., Indian Minerals, V.44(1), 1990

About Author:

V.P.Laul
 Vivek Geoservices
 Jaipur
 Email: vp_laul@yahoo.co.in

Date: January 31, 2023

LIST OF BIDDERS – AUCTION OF COAL MINES FOR SALE OF COAL

(16th TRANCHE OF AUCTION UNDER THE COAL MINES (SPECIAL PROVISIONS) ACT, 2015)

(6th TRANCHE OF AUCTION UNDER THE MINES AND MINERALS (DEVELOPMENT AND REGULATIONS) ACT, 1957)

S. No.	Name of Coal Mine	MSTC Reg No.	Name of the Bidder
1	Arjuni (Western Part)	374541	Thriveni Earthmovers Pvt Ltd
		364344	Ganga Khanij Pvt Ltd
		369540	Ambuja Cements Limited
2	Arjuni (Eastern Part)	374817	Rama Cement Industries Pvt Ltd
		64859	Shri Bajrang Power and Ispat Ltd.
		64851	Ultratech Cement Ltd
		241935	Shreesatya Mines Private Limited
3	Baitarni West	319588	NLC India Limited
		324214	Gujarat Mineral Development Corporation Limited
4-5	Banai - Bhalumuda	319588	NLC India Limited
		324214	Gujarat Mineral Development Corporation Limited
		64849	Jindal Power Limited
		360912	Raigarh Natural Resources Ltd
		64836	JSW Steel Limited
6	Binja	369511	Dwivedi Consultancy Services Pvt Ltd
		328683	Rungta Metals Pvt Ltd
		265144	Assam Mineral Development Corporation Limited
7	Burakhap Small Patch	370315	JISL Irrigation Pvt Ltd
		241935	Shreesatya Mines Private Limited
		330017	Bull Mining Pvt Ltd
8	Burapahar	324214	Gujarat Mineral Development Corporation Limited
		360940	Hirakund Natural Resources Ltd
		64836	JSW Steel Limited
		375957	NTPC Limited
9	Chhendipada (Revised)	148302	Rungta Sons Private Limited
		64898	Jindal Steel and Power Limited
		360940	Hirakund Natural Resources Ltd
10	Dahegaon Gowari	369540	Ambuja Cements Limited
		148095	Gangaramchak Mining Private Limited
11	Gare Palma Sector I (East)	324214	Gujarat Mineral Development Corporation Limited
		64849	Jindal Power Limited
		360912	Raigarh Natural Resources Ltd
12-13	Gare Palma Sector IV/2 and IV/3	375045	Jagannath Corporation Projects Pvt Ltd
		372206	Power Mech Projects Ltd
		325256	Siddhi Vinayak Power and Steel Pvt Ltd
		65348	Shyam Sel and Power Limited
		324214	Gujarat Mineral Development

S. No.	Name of Coal Mine	MSTC Reg No.	Name of the Bidder
			Corporation Limited
		235923	MB Power (Madhya Pradesh) Limited
		64849	Jindal Power Limited
		360912	Raigarh Natural Resources Ltd
		376030	SG Air Travel Pvt Ltd
		376017	Sudha Bio Power Pvt Ltd
		375978	Kineta Global Limited
		64885	OPG Power Generation Pvt Ltd
		376024	Essar Constructions India Ltd
		64836	JSW Steel Limited
		64845	Bharat Aluminium Company Limited
14	Gondbahera Ujheni	324214	Gujarat Mineral Development Corporation Limited
		328375	Cavill Mining Private Limited
		235414	MP Natural Resources Pvt Ltd
15	Kalambi Kalmeshwar (Western Part)	372047	Samlok Industries Pvt Ltd
		330017	Bull Mining Pvt Ltd
16	Khagra Joydev	371549	Orissa Metallurgical Industry Pvt Ltd
		373955	MSP Mines and Minerals Limited
17	Mandla North	369750	Winbuiild Metals Pvt Ltd
		65013	Dalmia Cement (Bharat) Limited
18	Marwatola VI	370036	Mahavir Coal Resources Pvt Ltd
		146863	Inspire Construction and Coal Pvt Ltd
		64860	JSW Cement Limited
19	Marwatola VII	374817	Rama Cement Industries Pvt Ltd
		65348	Shyam Sel and Power Limited
		369540	Ambuja Cements Limited
		324214	Gujarat Mineral Development Coporation Limited
20	Namchik Namphuk	265144	Assam Mineral Development Corporation Limited
		274153	Platinum Alloys Private Limited
		362180	Arunachal Pradesh Power Corporation Pvt Ltd
		370056	Star Cement Limited
		280375	Coal Pulz Pvt Ltd
		375720	Prachi Infra and Roads Pvt Ltd
21	North West of Madheri	231026	MH Natural Resources Private Limited
		328375	Cavill Mining Private Limited
22	Parbatpur Central	64836	JSW Steel Limited
		362836	Vedanta Limited
23	Patal East (Eastern Part)	369511	Dwivedi Consultancy Services Pvt Ltd
		331686	RCR Steel Works Pvt Ltd
24	Purunga	372206	Power Mech Projects Ltd
		231019	CG Natural Resources Pvt Ltd
25	Sakhigopal B Kankili	65519	TANGEDCO
		148302	Rungta Sons Private Limited

Note: Only one Technical Bid has been received for Gawa (Western Part), Kalambi Kalmeshwar (Eastern Part), North Dhadu (Eastern Part), North Dhadu (Western Part), Panchbahani, Riri and Sattupalli Block III.

Further, no bids have been received for Bamhanwara, Bapeu, Barapara, Barimahuli, Bartap, Bigga Abhaysinghpura, Brahmani, Chainpa (Revised), Chhendipada II(Revised), Chintalpudi Sector A1 (NW Part), Chintalpudi Sector A1 (SE Part), Chopna Shaktigarh, Dahegaon-Jhunki, Dahegaon-Saptadhara, Dhobbanpur, Dhorakuhi, Dhulia North, Dighi Dharampur North, Dighi Dharampur South, Dip Extn Of Belpahar, Dip Side of Chatabar, Dolesara, East of Sethiathope, Gawa (Eastern Part), Ghutra, Gomarpahari Siulibana, Gorhi – Mahaloi Devgaon, Gorhi – Mahaloi Kasdol, Gorhi-Mahaloi Amlidhonda, Gorhi-Mahaloi Bijna, Hingna Bazargaon (Central Part), Hingna Bazargaon (Northern Part), Hingna Bazargaon (Southern Part), Jadunathpur, Jaganathpur A, Jamui, Jarekela, Jhara North, Jhara South, Jharpalam Thangarghat, Jobro East, Jobro West, Kahua Khireti Sector – A, Kalyan Khani Block-6, Kantaikoliya North, Kapasdanga – Bharkata (Northern Part), Kapasdanga – Bharkata (Southern Part), Kardabahal-Brahmanbil, Kartala, Kendudihi, Kosala West (Eastern Part), Kosala West (Western Part), Latehar, Machhakata (Revised), Mahanadi (Revised), Maiki South, Makhdumnagar, Mandakini B, Mandar Parvat, Mausingha, Meghuli (Revised), Merkhi West, Michaelpatti, Nagurda, Nagurda West, New Patrapada(Southern Part), Nigwani Bakeli – A, North of Arkhapal Srirampur (Revised), North West of Belgaon, Nuagaon Telisahi, PathaKhuri – Pipariya (Northern Part), PathaKhuri – Pipariya (Southern Part), Penagadapa, Phuljhari East & West, Pipraul, Pirpainti Barahat, Rajathari Pathakhuri West, Rajathari South, Ramchandi Promotion Block(Revised), Ramnagar, Rawanwara North (Eastern Part), Rawanwara North (Western Part), Reonti East, Reonti West, Sakhigopal – B Kakurhi, Salbhadra-Gomarpahari, Saradhapur North (Revised), Sarai East (Northern Part), Sarai East (Southern Part), Sarapal – Nuapara, Sendur, Shankarpur Bhatgaon II Extn, Somawaram West (Northern Part), Somawaram West (Southern Part), Sravanapalli (Revised), Sukli, Tentuloi, Thesgora-B/ Rudrapuri, Vadaseri, West of Kiloni and West of Shahdol. Accordingly, under clause 3.3.2 (b) (II) (iii) and 9.6 of the Tender Document dated November 03, 2022, the tender process for the said Coal Mines have been annulled.

Office of Nominated Authority



THE BEST INVESTMENT YOU WILL EVER MAKE IS – IN YOURSELF

Ways to invest in yourself for the rest of the year and beyond.
 “invest in yourself to the point that it makes someone else want to invest in you” –tony gaskins.
 Since the term global village came into existence this generation is seeing themselves globally than locally compared to their parents and grandparents time as the world is now interconnected through the use of new media technologies.
 Obviously like we say we have to pay a price for everything, the constant bombardment of information regarding every dimension of human existence is sometimes a blessing as well as a curse.
 The most unexpected, unbelievable ways the financial market is crashing, job layoffs, the physical and emotional health still not completely recovered from the nightmare of covid pandemic, the relationship between two persons supposed to lead an entire lifetime together under the institution of marriage now lasting only for days for many, the list will go on is leading to a most dangerous situation of wellbeing debt.
 Here comes the need for constant attention towards our emotional health bank. just like our monthly bank statements, our emotional health must be seen as a series of deposits and withdrawals.
 The past two years with covid pandemic we all faced an equivalent of a financial crisis on our emotional resources.
 We need to open an emotional health bank account to take care of ourselves on a daily basis.
 Now lets walk through the steps.
 Step 1 – keeping a log of emotional assets and debts.
 Behaviours and activities that add's benefit to your life are assets and the as-

pects of life that causes you stress are your liabilities. A point to note is that there is no method to completely eliminate stress. some stresser's are assets also.

The goal is to make sure that life isn't so imbalanced that you are living an emotional deficit.

Step 2 – make daily deposits

Remember the old phrase “a penny saved is a penny earned”. when we magnify challenging situations in our minds and feel vulnerable, increases the magnitude of withdrawal from our emotional health bank.

step 3-diversify investments

Just like any financial investments, it's important to diversify, by keeping short term positives that pay off right now and long term investments that pay over time. values, morals, ethics, principals are our investments in diverse ways by giving instant joy and happiness as well as long term meaning and purpose of life.

Step 4- turn on emotional alerts

Mindfully manage our emotional health bank by monitoring unhealthy activity and write down warning signs to keep a watch on emotional spending habits. If we aren't paying attention on rising debts, then they can quickly accumulate and outpace deposits. spending time with toxic people, staying up late night and not getting enough sleep are examples of eroding the emotional wellbeing.

Thus investing in self isn't selfish or vain.

However you decide to invest in yourself –through coaching, therapy, training, education, new books, nourishing food, more rest, new habits, healthier routines, or anything else you might choose, remember this always - you are the best investment you will ever make.

Live life with passion.

ABOUT AUTHOR

Dr. Majo Joseph

Dr. Majo Joseph is an Ayurveda Consultant, & General Practitioner. He is also a Psychology And Counselling, Wellness Trainer.

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 editor@geonesis.in