NATURAL RESOURCES DEPARTMENT

POLICY NOTE

2024-2025

DEMAND NO.55

DURAIMURUGAN

MINISTER FOR WATER RESOURCES

NATURAL RESOURCES DEPARTMENT

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1. DEPARTMENT OF GEOLOGY AND MINING

Minerals play a vital role in the economic and infrastructure development of a Nation. Tamil Nadu has varied geological rock formations and geomorphological features. These rock formations contain i) Major minerals like Limestone, Lignite, Magnesite, Vermiculite, Bauxite, Iron ore, ii) Critical minerals like Graphite, Molybdenum, Platinum group of minerals, Rare earth elements, iii) Atomic Minerals like Ilmenite, Rutile, Garnet, Leucoxene, Monazite, Zircon, Sillimanite, iv) Petroleum and Natural Gas, and v) Minor minerals like Black Granite, Multi Coloured Granite, Rough stone, Clay, Gypsum, Silica Sand, Quartz, Feldspar,

common use minerals like Gravel and Brick earth.

Tamil Nadu is one among the mineral rich States in the Country and it has multiple mineral resources in many parts of the State. The development of these mineral resources has resulted in rapid industrialization of the State. In order to ensure regular supply of minerals to industries and general public, timely grant of mineral concessions by adopting scientific exploration and eco-friendly methods, is indispensable. The mineral resources are non-replenishable and hence it is imperative that the minerals should be scientifically quarried for the conservation of mineral for posterity, combined with effective mineral administration to achieve optimum mineral revenue.

Due to strenuous and concerted efforts of this Government, the revenue from mineral resources has increased significantly. The revenue achieved increased from Rs.983 crore during 2020-21 to Rs.1835.93 crore in 2023-24.

In order to further enhance revenue, exploration of new minerals and new deposits is being regularly taken up through agencies such as Geological Survey of India (GSI), Mineral Exploration Corporation Ltd., (MECL), and Kudremukh Iron Ore Corporation Limited (KIOCL). These agencies have submitted geological reports on Limestone, Dunite, Iron ore, Graphite, Gold, Platinum group of Elements (PGE) and Molybdenum.

District survey reports have been prepared in all the districts and hosted on the district websites. These survey reports

contain complete information on minerals available in the district. It is useful for entrepreneurs to apply for mineral concessions and development of minerals.

In the areas affected due to mining activities, the Government has implemented a plethora of projects for the welfare of the people through District Mineral Foundation Trust Fund in the sectors of infrastructure, education, drinking water, health, sanitation, welfare of the aged and differently abled people, welfare of women and children, skill development, environment and pollution control and irrigation. The amount accrued under DMFT Funds so far is Rs. 1471.10 crore and a total of 3164 projects have been taken up at a cost of Rs. 1027.96 crore upto March, 2024.

Illicit mining and transportation of minerals poses a significant challenge. To

curb this menace, which deprives the State from the revenue due to it, apart from degrading the environment, the Government has taken a series of stern measures, such as deployment of Drone technology, Mining Surveillance System and Online Mineral Management System.

1.1 Vision

The vision of this department is to strive to attain a leadership position in the management of mineral wealth by becoming future ready to meet the rising demand for minerals for sustainable industrial growth.

1.2 Objectives

i. Use of modern technologies in the exploration of minerals.

ii. Augmentation of revenue through effective and efficient administration of minerals.

iii. Generation of employment opportunities.

iv. Prevention of illegal mining and transportation of minerals by improving enforcement through use of technology.

v. Implementation of projects for the welfare of the society in the areas affected by mining using District Mineral Foundation Trust Fund.

1.3 Functions

i. The primary function of the Department is mineral administration, i.e., grant of mineral concessions and regulating the production and transportation of minerals. Mineral Concessions are granted to applicants who could be individuals, partnership firms, private companies and public sector undertakings. PSUs such as TAMIN,

TANCEM, TANMAG, Neyveli Lignite Corporation India Limited (NLCIL), Indian Rare Earths (India) Limited have been granted leases for minerals such as Granite, Graphite, Lime stone, Magnesite, Lignite, Dunite and heavy minerals.

ii. Revenue is collected in the form of levies such as royalty, surface right compensation from the lessees of major minerals; seigniorage fee, dead rent, area assessment, annual brick mineral fee are being collected from the lessees of minor minerals.

iii. Exploration of new mineral deposits is being carried out through Geological Survey of India (GSI) and notified agencies such as Mineral Exploration Corporation Limited (MECL), Kudremukh Iron Ore Corporation Limited (KIOCL), Tamil Nadu Cements

Corporation Limited (TANCEM), Tamil Nadu Magnesite Limited (TANMAG) and Tamil Nadu Minerals Ltd (TAMIN).

iv. For effective control of illicit mining and transportation of minerals, apart from inspections by district level officials, flying squads operating in the regions of Salem, Villupuram, Tiruchirapalli and Madurai are regularly monitoring the mining areas and vehicles transporting minerals.

v. In view of the sensitive eco-system, mining activities are not permitted in the hill areas of Kodaikanal in Dindigul district and the Nilgiris district. These areas are prone to landslides and hence Geotechnical Cells have been mapping the hilly areas for identification of vulnerable zones in these districts. The Geotechnical Cells suggest remedial measures to the

district administration to mitigate the impact of natural hazards. Besides, the Geotechnical Cells are processing the applications made by individuals and Government bodies and after examining the safety and suitability of the areas, submit technical feasibility report for any construction activity in the hill areas.

1.4 Mineral Resources of Tamil Nadu

Tamil Nadu is endowed with various major minerals, minor minerals, oil and Natural Gas. These minerals are detailed below:

A. Major minerals

Limestone: It is used in manufacturing of lime, cement, chemicals, fertilizers and in metallurgical industries.

It is of two types.

a) Crystalline Limestone, which mainly occurs in Salem, Tiruchirapalli, Karur, Dindigul, Madurai, Virudhunagar, Coimbatore and Thoothukudi Districts.

b) Non-Crystalline Limestone or Fossiliferous Limestone occurs predominantly in Ariyalur, Tiruchirapalli, and Perambalur Districts.

Lignite: This energy mineral is found in three areas namely Neyveli, Mannargudi and Ramanathapuram. The total reserves of Lignite in these areas is estimated at

34,764 million tonnes. The Neyveli Lignite Corporation India Limited (NLCIL) has been mining Lignite in Neyveli over an extent of 25,900 hectares in Cuddalore district.

Marl: Marl is a sedimentary rock with mixed composition consisting of carbonates. It is a material rich in carbonate minerals, clays and silt. It is used in the manufacturing of fertilizers and cement. It occurs as a sedimentary deposit in association with fossiliferrous limestone in Ariyalur district.

Magnesite: It is a magnesium carbonate mineral. It finds wide use in refractories as flux in sintering, blast furnace, conditioners, ceramic filters and abrasives. One of the World's best Magnesite deposit occur in the Chalk hills of Salem district. Three leases are under operation over an extent of 192.86.0 ha.

Vermiculite: It is a micaceous mineral, which appears brownish yellow in colour. It is used as insulators and in manufacture of vermitiles. TAMIN is mining

this mineral over an extent of 23.70.5 ha in Sevathur village, Tirupathur district.

Bauxite: Aluminium is extracted from this ore. Bauxite is also used in refractory, cement, chemical, paint industries and in refining petroleum products. The Shervaroy hills in Salem district and Kolli hills in Namakkal district contain good deposits of Bauxite.

B. Critical Minerals:

Graphite: It is a naturally occurring crystalline Carbon used in crucible industry, insulators, electrode, atomic reactors and foundry units. Graphite occurs

mainly in Sivaganga and Madurai districts. One lease granted to Tvl. TAMIN Ltd., over an extent of 236.85.0 ha is in operation in Poovandhi village of Sivaganga district.

Molybdenum: Molybdenum occurs mainly in Dharmapuri and Krishnagiri Districts. It is used to make alloys to increase strength, hardness, electrical conductivity and resistance to corrosion and wear.

Platinum Group of Elements (PGE)

The Platinum group elements are Osmium, Iridium, Ruthenium, Rhodium, Platinum and Palladium. Platinum group of elements occur in Namakkal district. Platinum (Pt) is the most

popular element of PGE. The Platinum group metals are a family of six structurally and chemically similar elements that are most valued for their wide range of industrial, medical, and electronic applications. Platinum is probably the most recognized because of its use in jewellery, but its main application is in the manufacture of catalytic converters.

Tungsten: It is a rare metal found naturally on earth almost exclusively as compounds with other elements. It is used in

any electrical and electronic applications. It is used in the form of tungsten carbide for very hard and tough dyes, tools, gauges and bits. Tungsten is used mostly in the production of tungsten steels and in

the aerospace industry to fabricate rocket-engine nozzle throats and leading-edge reentry surfaces. Tungsten occurs mainly in Madurai district.

C. Atomic Minerals:

Beach sands in Tirunelveli, Thoothukudi and Kanniyakumari districts contain atomic minerals such as Monazite, Garnet, Ilmenite, Rutile, Sillimanite, Zircon and Leucoxene. Beach sand minerals are used as abrasives, semi-conductors, and in atomic reactors. The Indian Rare Earths (India) Limited has been mining these minerals in Kanniyakumari district. Garnet also occurs as placer deposit in Tiruchirapalli district and as rock forming deposit in Madurai district.

 Ilmenite	 Zircon	 Monazite
 Rutile	 Garnet	 Sillimanite

The Ministry of Mines, Government of India, vide order dated 01.03.2019 notified the threshold value of Monazite occurring in beach sand minerals and other placer deposits as 0.00%. Henceforth, any mineral concession of beach sand minerals shall be granted to a "Government Company or Corporation owned or controlled by the Government" under the

provisions of the Atomic Minerals Concession Rules, 2016.

D. Minor minerals

Granite: Tamil Nadu contains rich deposits of Granite. The hard crystalline rocks that are amenable to cutting and polishing are called Granite.

Granite which are produced in different sizes such as monuments and tiles has huge market in the foreign countries, earning substantial foreign exchange. Black Granite occurs in the districts of Krishnagiri, Dharmapuri, Salem,

Villupuram and Tiruvannamalai. Granites of various shades occur in the districts of Krishnagiri, Madurai, Virudhunagar, Salem and Dindigul. Some of the most popular commercial varieties quarried in Tamil Nadu are Kunnam black, Zebra white, Paradiso, Red wave, Tiger skin, Desert brown and Kashmir white. A total of 38 black granite and 74 multicoloured granite quarries over an extent of 329.86.0 ha are under operation in Tamil Nadu.

Fire Clay: The main use of fire clay is in refractory, ceramic articles, cement industries and as decorative tiles.

It is found in the districts of Ariyalur, Perambalur, and Cuddalore. 11 leases

are in operation over an extent of 44.413 hectares land.

Quartz and Feldspar: The districts of Salem, Karur, Dindigul, Namakkal, Tiruppur and Dharmapuri have good deposits of Quartz and Feldspar. It is mainly used in glass, refractory, foundry, ceramic, electrical, abrasives and paint industries. 17 leases over an extent of 31.64.6 hectares land are under operation in the above districts for mining these minerals.

Silica Sand: It is mainly used in glass industries and in foundaries as moulding catalysts. It occurs in the districts of Villupuram, Nagapattinam, Chengalpattu and Cuddalore.

Soapstone: It occurs mainly in the districts of Salem and Namakkal. It is used in the manufacture of talcum powder and decorative articles. Leases have been granted for mining Soapstone over an extent of 3.28.5 hectares in Salem and Namakkal districts.

Gypsum: Gypsum is used in the manufacture of Plaster of Paris and also in industries such as cement, fertilizer, pesticides. A total of 16.46.0 hectares of land in Coimbatore, Perambalur and Tiruppur districts have been leased out for mining Gypsum.

E. Mineral oils

Petroleum and Natural Gas: The Oil and Natural Gas Corporation (ONGC) is producing Oil and Natural Gas in the districts of Cuddalore, Thanjavur, Tiruvarur,

Nagapattinam, Pudukottai, Mayiladuthurai, Ariyalur and Ramanathapuram.

1.5 Mineral Production

The details of production of major minerals including oil and natural gas and minor minerals from April 2023 to March 2024 are tabulated below:

Table-I

Production and Revenue of major minerals

Sl. No.	Mineral	Production (in 000't)	Revenue (Rs. in crore)
1	Lignite	18283	343.87
2	Limestone	25450	238.81
3	Marl	552	3.12
4	Magnesite	44	0.64
5	Graphite	46	0.16
6	Atomic Minerals	977	5.74
	Total	**45352**	**592.34**

Table-II
Production and Revenue of Oil and Natural Gas

Sl. No.	Mineral	Production	Revenue (Rs.in crore)
1	Crude Oil (MT)	286501	203.45
2	Natural Gas (Million cbm)	1008	208.82
		Total	**412.27**

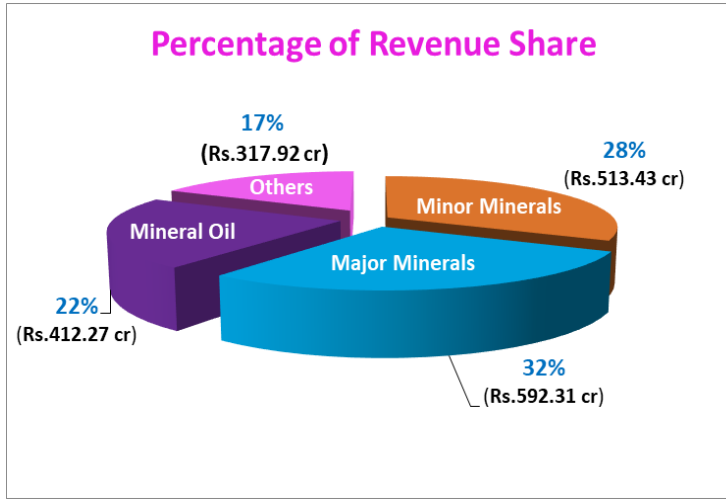
Table-III
Production and Revenue of minor minerals

Sl. No.	Mineral	Production (in 000' cbm/MT)	Revenue (Rs. in crore)
1	Coloured Granite (cbm)	88	23.65
2	Black Granite (cbm)	24	11.25
3	Rough Stone (cbm)	49645	390.08
4	Gravel (cbm)	6694	31.13
5	Earth (cbm)	7579	40.23
6	Pebbles (cbm)	7	0.19
	Total	**64037**	**496.53**
7	Quartz (MT)	56	0.46
8	Feldspar (MT)	86	1.08
9	Silica Sand (MT)	65	1.24
10	Lime Kankar (MT)	1077	12.05
11	Fire clay (MT)	268	1.10

12	Calcite (MT)	12	0.12
13	Quartzite	46	0.15
14	Dolomite	3	0.13
15	Ball Clay	29	0.08
14	Clay (MT)	100	0.49
	Total	**1742**	**16.90**

1.6 Mineral Revenue

The revenue generated from the mineral resources during the financial year 2023-24 is Rs 1835.93 crore. The share of revenue from major minerals, minor minerals and oil minerals is shown below.



Due to effective enforcement, during 2023-24, 5245 vehicles transporting minerals without valid transport permits were seized. A penalty of Rs.17.43 crore was collected. In addition, 3891 criminal cases / FIRs have been filed. Goondas Act has been invoked against 4 habitual offenders.

1.7 District Mineral Foundation Trust

The District Mineral Foundation Trust was established in all the districts except Nilgiris in the year 2017. Lessees are required to contribute 30% of the royalty/seigniorage fee for leases granted prior to 12.01.2015 and 10% for leases granted subsequently, as a levy to this fund. It is utilized for the implementation of the welfare schemes for the socio-economic and infrastructural development in order to

improve the livelihood of the people and the areas affected by mining activities. So far, Rs. 1471.10 crore has been contributed by the lessees from the period of establishment of this Trust in 2017 till 31.03.2024.

A minimum of 60% of the fund is earmarked for taking up projects under the high priority sectors such as health care, drinking water, education, welfare of women and children, welfare of aged and differently abled people, skill development, infrastructure, sanitation, environmental preservation and measures to control pollution.

The remaining fund is used for projects that fall under other priority sectors such as irrigation development, energy and watershed development, environmental preservation and pollution control measures.

A total of 3164 projects have been taken up so far at a cost of Rs. 1027.98 crore. Out of these projects, 2017 have been completed and put to use. The number and cost of projects taken up under high priority and other priority sectors are shown in the following table:

Table-IV

i) Projects under High Priority Sectors

Sl No	Sectors	No of projects sanctioned	Amount in Cr.	No of projects completed	Amount in Cr.
1	Physical Infrastructure	890	240.06	493	127.99
2	Health	650	92.05	491	46.24
3	Drinking Water	542	329.81	306	205.96
4	Education	530	97.81	313	25.25
5	Sanitation	167	11.78	128	6.52
6	Welfare of aged and differently abled people	112	1.54	105	1.16
7	Welfare of Women and Children	76	7.00	62	5.61

8	Skill Development	33	4.17	29	3.90
9	Environment, Pollution Control and Ecology	41	16.97	17	1.49
Total		**3041**	**801.19**	**1944**	**424.12**

ii) Projects under Other Sectors

Sl No	Sectors	No of projects sanctioned	Amount in Cr	No of projects completed	Amount in Cr
1	Irrigation	60	210.69	37	144.30
2	Energy and watershed development	41	12.36	27	8.71
3	Others	22	3.74	9	2.45
Total		**123**	**226.79**	**73**	**155.46**
Grand Total		**3164**	**1027.98**	**2017**	**579.58**

1.8 National Mineral Exploration Trust

The National Mineral Exploration Trust was established in 2015. The lessees of major minerals have been contributing 2% on royalty to this Trust. A sum of Rs. 87.12 Cr has been contributed by them to the Trust till 31.03.2024.

This fund is utilized for exploration of minerals regionally and particularly for strategic and critical minerals, development of mineral resources, extraction of minerals by adopting modern scientific and technological methods, facilitate geophysical, geochemical, aerial geo-survey of mineral

potential areas and to organize capacity building programs.

Recently, the NMET have approved the exploration projects submitted by Mineral Exploration and Corporation Limited for Gold, REE in Krishnagiri and Tiruppur districts and the exploration project for Graphite in Arasanur East block submitted by the Kudremukh Iron Ore Company Limited.

1.9 E-Auctioning of Major Minerals

After the enactment of the Amended Mines and Minerals (Development & Regulation) Act, 1957, grant of mineral concessions for major minerals are through e-auction. The area proposed for auction has to satisfy the norms specified in the Minerals (Evidence of Mineral Contents) Rules, 2015. Accordingly, 10 limestone blocks have been identified in Ariyalur and

Cuddalore districts for auctioning of mining lease. The Department has published NIT on 04.03.2024 in accordance with Mineral Auction Rules, 2015 and the tender is under process. It is expected that substantial revenue will be generated on successful completion of e-auction process. New mineral blocks of Gold and Limestone have been identified and Geological Reports have been submitted by the exploration agencies. Auction of these blocks will also be taken up by the Department shortly.

1.10 NEW INITIATIVES:

(i) e-Auctioning of Minor Minerals:

Granting of mining leases for the major minerals by e-auction system is already in existence. However, the quarry leases for minor minerals including rough stones and granites in poramboke lands are presently being granted through a manual tender cum

auction procedure which causes undue delay in completion of the process. In order to expedite the process for granting quarry leases and to ensure transparency, it is proposed to adopt the e-Auction procedure to grant quarry leases in poramboke lands.

During the budget session, the Hon'ble Minister has announced that e-auction system will be extended to the minor minerals by making necessary amendment in the Tamil Nadu Minor Mineral Concession Rules, 1959 and the same is under process.

Training program was also organized for district officers on conducting e-auctions through NIC.

(ii) Restoration of old abandoned mines and quarries, for public utility.

A Green Fund has been constituted in all districts for reclamation, restoration and rehabilitation of abandoned mines and quarries vide

G.O (Ms) No. 23 Industries (MMC-1) dated 23.02.2022. The Government have initiated collection of green fund at 10% and 50% of seigniorage fee remitted by the lessees and is being collected in all the districts. Green fund collected upto March 31, 2024 is Rs 125.01 Cr. By using green fund, efforts are being taken to bring the abandoned mines / quarries in the State to public utility. Presently, 720 abandoned quarries have been identified and in the first phase,

abandoned quarries in Kancheepuram and Chengalpattu districts will be taken up for restoration, reclamation, and rejuvenation by using green fund.

Feasibility study for assessment of the adoptive re-use of the abandoned quarries in Kancheepuram and Chengalpattu districts will be carried out for the same.

(iii) Granite waste disposal:

The Government vide G.O.(Ms).No.5 Natural Resources (MME.1) Department dated 26.10.2023 have made provisions for selling granite waste by inserting sub rule 8-C (11) of Tamil Nadu Minor Mineral Concession Rules, 1959. The rate of seigniorage fee for granite waste has been fixed at Rs.100/- per tonne.

The Government in letter No. 6588/MME.1/2022-6 dated 13.12.2023,

Natural Resources Department have issued guidelines for Standard Operating Procedure (SOP) for disposal of granite waste from the existing and expired leases in Government lands granted under Tamil Nadu Minor Mineral Concession Rules, 1959.

Granite waste accumulated in 82 expired Granite quarries in Government lands have been estimated by using Drone Technology, by the empaneled agencies and the Granite waste will be auctioned shortly as per the G.O. and SOP.

(iv) Fossil Geological Park

Fossils are the preserved remains or traces of animals, plants, and other organisms from the remote past. Ariyalur and Perambalur districts are enriched with rich fossiliferous deposits and considered to be geological hotspots. These formations consist of pockets of phosphatic nodules and

fossils like Ammonites, Nautilus, Belemnites, etc. It attracts large number of scientists from all over the world for geo-scientific studies and

therefore it is imperative to protect and preserve these formations to study about life through ages and needs to be conserved for posterity.

To protect this rare heritage, the Hon'ble Minister made an announcement on the floor of Assembly for construction of a Fossil Geological Park in Ariyalur and Perambalur Districts. The Government have sanctioned an amount of Rs 8.52 crore vide G.O. (Ms) No. 191 Industries, Investment Promotion & Commerce (E.1) Department dated 29.08.2022 for construction of museum, watch tower, guard room, overhead tank, and fencing around the park.

The Government vide G.O. (Ms) No.2, Natural Resources (E.1) Department, dated 12.02.2024 has given administrative sanction for acquisition of intervening 9.73.0 ha of patta lands in Kulakkanatham, Karai East, Therani and Ayinapuram villages of Perambalur district and sanctioned an amount of Rs.1.04 cr.

Construction of museum, guard room, watch tower, overhead tank and barbed wire fencing are under progress and expected to be completed by July, 2024.

(v) DGPS and Drone Survey Technology

Twenty three agencies have been empaneled for conducting Differential Global Positioning System (DGPS) survey for the existing / proposed mines / quarries to demarcate the lease area. DGPS survey has been completed in 1132 mines/quarries.

In order to prevent illicit mining/quarrying in the State, the Government has sanctioned an amount of Rs. 25 crore as recurring expenditure for measuring the volume and extent analysis of the mines and quarries using drones. So far, the Department has empaneled 13 agencies for surveying the quarries/mines using drones. In the first phase drone survey has been completed in 200 quarries and the reports are under scrutiny by Tamil Nadu Unmanned Aerial Vehicle Corporation.

(vi) Mineral Management System (MiMaS)

The development of software for Mineral Management System (online Mineral Administration) was entrusted to the Tamil Nadu e-Governance Agency. TNeGA has developed 16 mineral concession modules which facilitates online receipt of

quarry lease applications, tracking of lease applications, scrutinizing and granting of lease applications.

The online system for minor minerals, both mineral management system and e-permit will be made live shortly. Initially, the e-permit system for obtaining bulk permits has been launched on trial basis in Chengalpattu and Kancheepuram districts. Further, issuing of online bulk permits will be launched in Villupuram, Tiruvannamalai, Dharmapuri and Krishnagiri districts in the next phase. Action is being taken to enable generation of e-dispatch slips on security paper by the lessees, for which printing of paper with security features has been entrusted to the Government Printing Press.

The Government have accorded sanction for an amount of Rs.3.78 crore for issuing e-permits with security feature for transporting minerals.

2. TAMIL NADU MINERALS LIMITED

TAMIN's endeavor is to exploit prudently the available natural resources and market them profitably. The main objective of TAMIN is production and marketing of minor minerals like black granite, multicolour granites blocks, granite finished products and major minerals like Graphite, Limestone & Vermiculite. TAMIN is the largest producer of natural graphite flakes in India. TAMIN is the only authorized manufacturer of Indian Standard Sand popularly known as Ennore Sand which is used as a reference material for quality testing by every cement company in India.

The revenue generated during the financial year 2023-2024 is Rs.113 crore (unaudited) which witnessed a growth of 22% compared to the revenue of Rs.93 crore generated during the previous financial year

2022-2023. However, with a major turnaround, TAMIN expects significantly improved financial performance for the next financial year 2024-2025. The budgeted revenue generation for FY 2024-2025 is Rs.149 crore.

2.1 Vision

Aspire to be top in the minerals sector for value creation and conservation of natural minerals by adopting scientific & sustainable mining and diversify into other minerals and value-added products.

2.2 Mission

- Continual search for new mineral deposits.
- Continuous updation of technology in safe mining operations, with state-of-the-art machinery, quality control measures and mineral processing & marketing.

- Generate gainful employment.
- Be a model for sustainable mining.

2.3 Leases in Operation (as on 01.04.2024)

Sl. No.	Minerals	No. of leases	Extent (in hects.)
1	Black Granite	07	113.60.0
2	Multi Colored Granite	02	20.01.0
3	Minor Minerals (other than Granite)	03	8.05.5
4	Major Minerals	02	246.79.5
	Total	**14**	**388.46.0**

2.4 Employees Details (as on 01.04.2024)

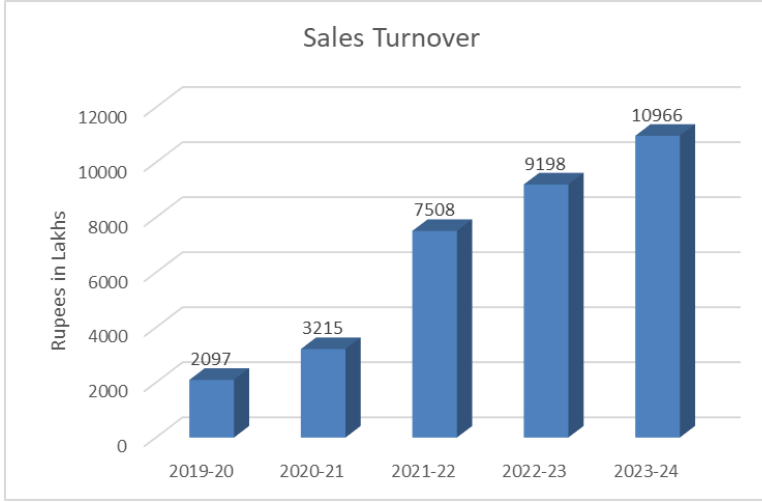
Staff & Officers	248
Workers	269
Total	**517**

2.5 Production & Sales Performance during the year 2023-2024 (unaudited)

Description		Production in Quantity	Sales in Quantity	Value Rs. (in Lakhs)
(I) GRANITES – RAW BLOCKS				
1. Black Granite	M3	4,562.00	5,086.00	4,170.00
2. Multi Colour Granite	M^3	3,789.00	2,905.00	722.00
(II) GRANITES – FINISHED PRODUCTS				
1. Granite slabs	M2	-	43,061.00	63.00
(III) MINERALS – ORE				
1. Vermiculite, Silica Sand, Graphite ore.	MT	80,322.00	-	-
(IV) MINERALS– FINISHED PRODUCTS				
1. Graphite Flakes	MT	6,308.00	6,733.00	3,641.00
2. Indian Standard Sand, Exfoliated Vermiculite	MT	1,551.00	1,005.00	1,274.00
3. Limestone	MT	68,619.00	68,619.00	819.00
4. Quartz	MT	4,357.00	4,004.00	150.00
5. Fireclay & Laterite	MT	17,604.00	18,500.00	76.00
6. Others-Sawn Blocks, Tailings waste etc.,	-	-	-	51.00
Total				**10966.00**

2.6 Achievements and New Initiatives:

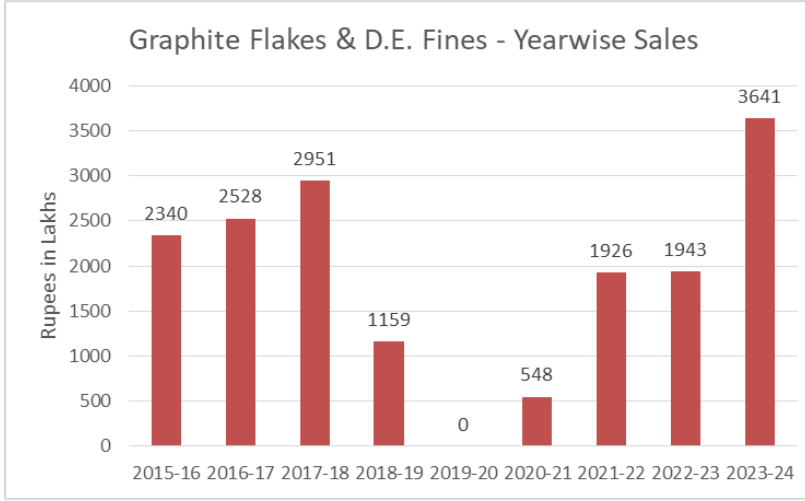
- TAMIN achieved a sales turnover of Rs.109.66 crore during the financial year 2023-2024 which is the highest among the last 5 financial years

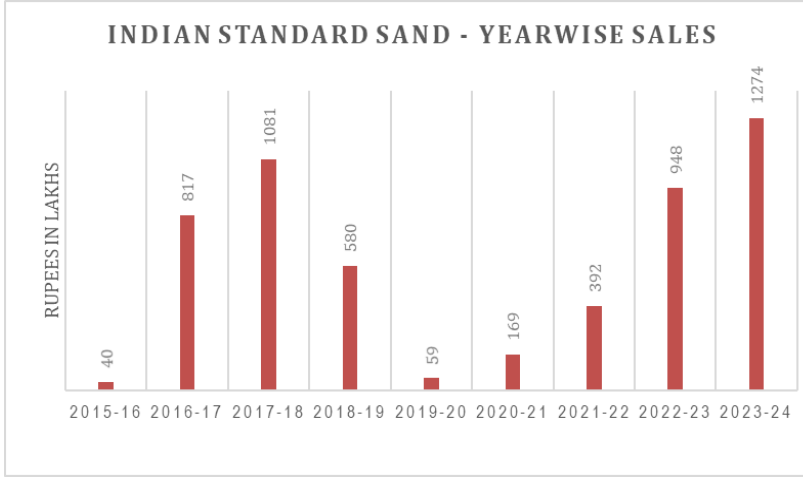


TAMIN proposes to reach a sales turnover of Rs.147.00 crore in the year 2024-2025.

TAMIN achieved the highest sales value in the sale of Graphite and Indian Standard Sand from its inception during the financial

year 2023-2024 as Rs.36.41 crore and Rs.12.74 crore respectively.





TAMIN started a new mine to produce Fireclay during the financial year 2023-2024 and sold 18500 MT of Fireclay & Laterite and earned a revenue of Rs.76 lakhs.

2.7 New Projects:

- TAMIN has signed a MoU with IREL on 09.01.2023 for mining, processing, marketing of beach sand minerals. The Joint venture agreement was signed on 27.11.2023. New JV Company namely IREL TAMIN Ltd has been incorporated. Two Teri sand deposits in Thoothukudi District was identified and investigation works are in progress.
- TAMIN has floated a tender to fix Mine Developer cum Operator (MDO) to set up a new graphite processing plant with a capacity to produce 25000 MT graphite flakes and convert it into uncoated spherical

purified graphite to cater the demand for making electrical vehicles batteries.

- TAMIN has installed LPG based Dryer unit at its Graphite Beneficiation Plant, Sivaganga Division, at the cost of Rs.60 lakhs to save fuel cost on diesel and to reduce the carbon emission. The LPG unit is in operation from November 2023.
- TAMIN installed an Artificial Intelligent (AI) based vehicle movement monitoring system in its graphite plant in Sivagangai Division to monitor the vehicle movement, type of vehicle number plate details, with alert systems. TAMIN proposes to expand it to other granite quarries too.

2.8 Product Promotion:

- TAMIN participated in the world's largest stone fair MARMOMAC 2023, Verona, Italy to promote its product in the international market.

- TAMIN displayed its stone products in the STONA 2023 held in Bengaluru, India and promoted its products to both inland & foreign buyers.

2.9 Mines Awards:

TAMIN has been awarded 4 First prizes and 5 second prizes during the mines safety week celebrations in the year 2023-2024 by the Director General of Mines Safety (DGMS) for various aspects like maintenance of safety, maintenance of pollution free, cleaner environment and scientific mining operations.

2.10 Corporate Environment Responsibility Activities:

In its efforts to be a model sustainable mining company, TAMIN spent Rs.17.5 lakh towards Corporate Environment Responsibility activities in 2023-2024 and proposes to spend Rs.100 lakh in 2024-2025. TAMIN planted 7,000 saplings in Mahimandalam quarry.

3. TAMIL NADU MAGNESITE LIMITED

Magnesite Mineral ore is an essential raw material for manufacturing Refractory bricks used by Steel Industry. India ranks 9th among the Magnesite producing countries in the world. Salem Magnesite Reserve is famous for its molecular structure and is suitable for manufacturing refractory bricks. Tamil Nadu Magnesite Limited (A Government of Tamil Nadu Undertaking) was formed in the year 1979.

3.1 Divisions

The Company has been functioning with three Divisions namely, Mines Division, Shaft Kiln Division (SKD) and Rotary Kiln Division (RKD).

3.2 Products

The excavated Raw Magnesite is captively consumed for manufacturing of Dead Burnt Magnesite (DBM) at Rotary Kiln Division and Lightly Calcined Magnesite (LCM) at Shaft Kiln Division and selling to the customers. Dunite is a co-existing mineral with Raw Magnesite and sold to customers directly.

3.3 Mining Division

The magnesite mine located at Kurumbapatty Village, in Salem District is being operated under lease issued by Environment and Forest Department with an extent of 96.34 Hect.(238 acre) for a period of 20 years from 12.8.2008 for production of approximately 1,33,000 MT of Raw Magnesite and 1,06,000 MT of Dunite per year.

TANMAG has open cast and semi-mechanised mines. The recovery of magnesite from blasted earth is about one in twenty.

The process of mining Raw Magnesite involves selection and preparation of site, drilling, blasting, picking, dressing, sorting, stacking and removal of rejects to spoil bank.

3.4 Rotary Kiln Division (RKD)

TANMAG manufactures Dead Burnt Magnesite (DBM) from Raw Magnesite in its Rotary Kiln Division using Furnace Oil as fuel. The installed capacity is 30,000 Metric tons per annum. The Raw Magnesite is sintered at a temperature of 1750^{o}c using Furnace Oil to produce Dead Burnt Magnesite. About 2.7 Metric ton of Raw Magnesite and 220 litres of

Furnace oil are required to produce one Metric ton of DBM.

DBM is used for manufacturing Refractory Bricks as well as Monolithics required for Steel Industries.

3.5 Shaft Kiln Division (SKD)

TANMAG manufactures Lightly Calcined Magnesite (LCM) in its Shaft Kiln Division. Furnace oil is used as fuel. The installed capacity is 19,500 Metric tones per annum. Lightly Calcined Magnesite (LCM) is produced from Raw Magnesite which is Calcined in Shaft Kiln at a temperature range of 1000^{o}c to 1100^{o}c using Furnace oil and pulverized to a mesh size -200 mm. About 2.2 Metric ton of Raw Magnesite and 140 litres of Furnace oil are required to produce one Metric Ton of LCM.

This Lightly Calcined Magnesite (LCM) is used for manufacturing Emery stones grinding wheel, polishing abrasives for granite and marble polishing, adhesives for Ball mill to fix the grinding stones, Pharmaceuticals, Agro feeds, Animal feeds

3.6 Share Capital

The authorized share Capital of the Company is Rs.50.00 crore consisting of 50.00 lakh shares of Rs.100/- each and the paid up capital is 16,65,000 shares of Rs.100/- each amounting to Rs.16.65 crore.

3.7 Performance in 2022-23 & 2023-24

TANMAG has an exclusive captive mine namely "Arasu Magnesite Mine". Its Mining operation was temporarily stopped in the year 2018 for want of environmental clearance. In November 2020, EC was obtained and mining operations were

resumed. TANMAG has been a profit making organisation consistently. The profit earned during Financial Year 2022-23 was Rs.17.70 crores. The profit for the Financial Year 2023-2024 is Rs.38.16 crores.

Since the mineable ore reserves are approximately 23.05 lakh MT of Magnesite and 20.48 lakh MT of Dunite, the mining operations can be carried out for at least another 20 years. The resumption of Mining operations is providing employment & livelihood opportunity for around 300 persons directly and 2500 persons indirectly.

3.8 The Production and Sales Performance in Financial Year 2023-24 & Budget Estimate for action plan for Financial Year 2024-25.

(Qty in MT)

Particulars	Actuals 2023-2024		Budget Estimate 2024-25	
	Production	Sales	Production	Sales
Raw Magnesite *	37,136	500	40,000	1000
Dead Burnt Magnesite	7,336	4,193	9,000	8,000
Lightly Calcined Magnesite	4,044	3,881	5,000	5,000
Dunite	1,01,765	99,425	1,06,088	1,00,000

* Captive consumption

3.9 Sales Details

(Rs. in lakh)

Particulars	2023-24 (Unaudited)	Budget Estimate 2024-25
Dead Burnt Magnesite	1435.71	2400
Lightly Calcined Magnesite	1164.37	1500
Dunite	6165.52	6300
Others (RM, etc.,)	43.45	100
Total	**8809.05**	**10,300**

(in MT)

Products	Production			Sales		
	2022-23	2023-24	Inc %	2022-23	2023-24	Inc %
Raw Magnesite (RM)	28,941	37,136	28%	-	500	
DBM	5,984	7,336	23%	5,737	4,193	
LCM	3,895	4,044	4%	3,882	3,881	
Dunite	54,228	1,01,765	88%	48,862	99,425	103%

3.10 Achievements

- TANMAG has increased the production of RM (28%), DBM (23%), LCM (4%) and Dunite (88%) during financial year 2023-24, when compared to previous year 2022-23.
- TANMAG had produced 1,01,768 MT of Dunite which is 112% of its estimate 90,848 MT for the year 2023-24.

- Approved quantity of Dunite production as per Mining Plan is 1,06,680 MT. It is noteworthy to mention that 95% of approved quantity of Dunite has been produced during 2023-24.

(Rs. in lakh)

Products	Sale Value		
	2022-23	2023-24	Increase %
DBM	1,972.32	1,435.70	
LCM	1,169.27	1,164.37	
Dunite	2,945.09	6,165.52	109%
RM	8.87	43.45	390%
Total	6,095.55	8,809.04	45%
Profit	2,070.13	3,816.31	84%
Profitability to Sales (%)	34%	43%	9%

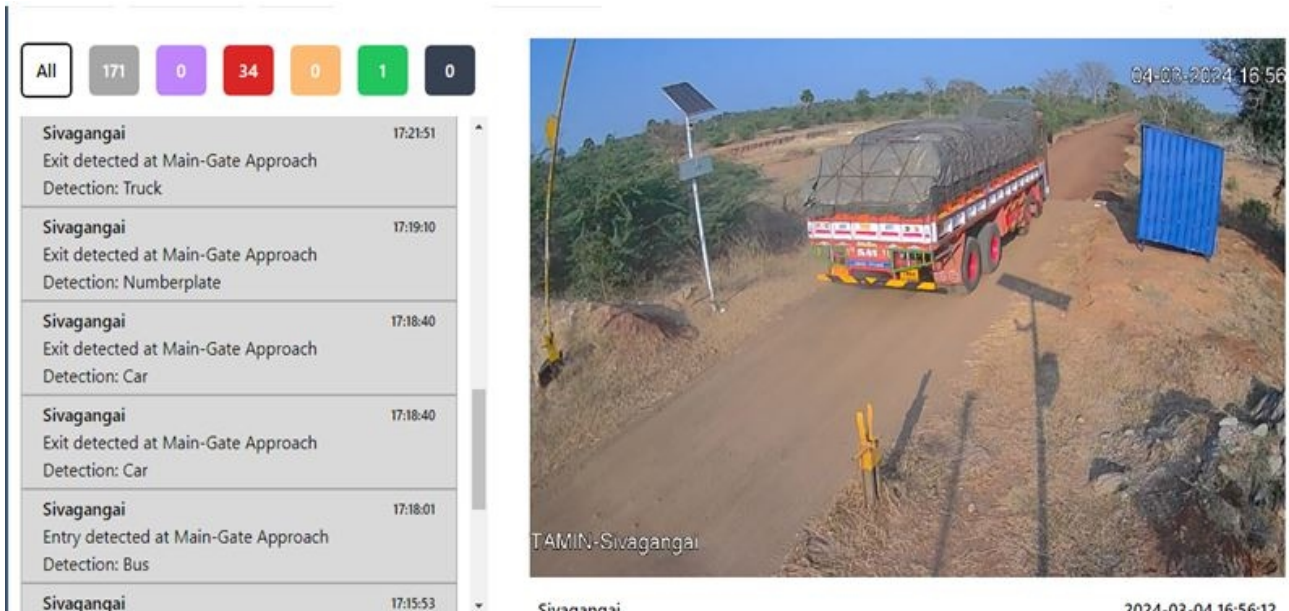
Sale value of Dunite has doubled from Rs. 2,945.09 lakhs (F.Y 2022-23) to Rs. 6,165.52 lakhs (F.Y. 2023-24) and revenue from operation during 2023-24 had also

increased by 45% (Rs. 2,713.49 lakhs) over the previous year.

Management has put in considerable effort to reduce the cost of raw Magnesite production by eliminating multiple piecemeal contracts and implementing a comprehensive mining contract. Further flexible operation mode in line with customer's demand, quick response to customer inputs and feedback and close watch on market fluctuation strategised the operational efficiency which consequently led to improvement in sales.

DURAIMURUGAN
MINISTER FOR WATER RESOURCES

கடற்கரை தாது மணல் கனிமங்களை பிரித்தெடுத்து, சந்தைப்படுத்த தமிழ்நாடு கனிம நிறுவனம், ஐ.ஆர்.இ.எல் (இந்தியா) நிறுவனத்துடன் 09.01.2023-ஆம் நாள் அன்று ஓர் புரிந்துணர்வு ஒப்பந்தத்தில் கையெழுத்திட்டுள்ளது. 27.11.2023-ஆம் நாள் அன்று கூட்டு நிறுவன ஒப்பந்தம் கையெழுத்திடப்பட்டு, புதிய கூட்டு நிறுவனம், அதாவது, ஐ.ஆர்.இ.எல் டாமின் லிமிடெட் நிறுவனம் என்ற பெயரில் பதிவுசெய்யப்பட்டுள்ளது.



தமிழ்நாடு கனிம நிறுவனம்,சிவகங்கை கோட்டத்தில் உள்ள கிராஃபைட் சுத்திகரிப்பு ஆலையில், செயற்கை நுண்ணறிவு அடிப்படையிலான வாகன இயக்க கண்காணிப்பு அமைப்பை நிறுவியுள்ளது, எச்சரிக்கைகளுடன் கூடிய இவ்வமைப்பின் மூலம், வாகன இயக்கம், வாகன நம்பர் பிளேட் விவரங்கள் ஆகியவற்றை கண்காணிக்கலாம். மற்ற கிரானைட் குவாரிகளுக்கும் இதனை விரிவுபடுத்த தமிழ்நாடு கனிம நிறுவனம் உத்தேசித்துள்ளது.

Graphite Mining Details

- Mine Ore Production = 2.5 Lakh MTPA
- Expected Ore Quality = 14% FC.

Beneficiation Plant Details

- **Input:** Plant Feed Capacity = 2.5 Lakh MTPA
- **Output:** Expected Production = 25000 MTPA with ≥95% FC (based on 10% yield)

Spheroidization Plant Details

- **Input:** Matching capacity of Beneficiated Product. (25000 MTPA).
- **Output:** Expected Production = 12500 MTPA (based on 50% yield)

Purification Plant Details

- **Input:** Matching Capacity of Spheroidization Plant Product. (12500 MTPA)
- **Output:** Expected Production = 12360 MTPA with 99.99% FC (based on 98.9% yield)

தமிழ்நாடு கனிம நிறுவனம், 25000 மெட்ரிக் டன்அளவிற்கு, கிராஃபைட் செதில்களை உற்பத்திசெய்து, அவற்றை மின்சார வாகனங்களுக்கான மின்கலன்கள் தயாரிக்கத் தேவையான பூசப்படாத கோளவடிவ சுத்திகரிக்கப்பட்ட கிராஃபைட்டாக மாற்றும் ஒரு புதிய ஆலையை அமைப்பதற்கு ஏதுவாக, மைன் டெவலப்பர் கம் ஆபரேட்டரை தெரிவு செய்ய ஒப்பந்தப்புள்ளி கோரியுள்ளது.

டீசலின் பயன்பாடு மற்றும் கார்பன் வெளியேற்றத்தைக் குறைக்கும் விதமாக, தமிழ்நாடு கனிம நிறுவனம், சிவகங்கை கோட்ட கிராஃபைட் சுத்திகரிப்பு ஆலையில் எல்பிஜி வாயுவினை பயன்படுத்தி கிராஃபைட் உலர்த்தும் ஆலையை ரூ.60 லட்சம் செலவில் நிறுவியுள்ளது. எல்பிஜியூனிட், நவம்பர் 2023 முதல் செயலாக்கத்தில் உள்ளது.

STONA 2023-இல் பெங்களூரில் நடைபெற்ற கண்காட்சியில் தமிழ்நாடு கனிம நிறுவனம் பங்கேற்று, தனது கிரானைட் தயாரிப்பு பொருட்களைக் காட்சிப்படுத்தி உள்நாட்டு மற்றும் வெளிநாட்டு வாங்குபவர்களுக்கு விளம்பரப்படுத்தியது.

உலகின் மிகப்பெரிய கிரானைட் கண்காட்சியான இத்தாலி நாட்டிலுள்ள வரோனாவில் நடைபெற்ற MARMOMAC 2023-இல் தமிழ்நாடு கனிம நிறுவனம் பங்கேற்று சர்வதேச சந்தையில் தனது முத்திரையை பதித்துள்ளது.

சுரங்கப் பணிகளில் பாதுகாப்பு பேணுதல், மாசு இன்மை, தூய்மையான சுற்றுச்சூழல் மற்றும் அறிவியல் ரீதியான சுரங்க நடவடிக்கைகள் போன்ற பல்வேறு அம்சங்களுக்காக, 2023-2024 ஆம் ஆண்டில் சுரங்கப் பாதுகாப்பு வார விழாவின் போது தமிழ்நாடு கனிம நிறுவனத்திற்கு 4 முதல் பரிசுகளும், 5 இரண்டாம் பரிசுகளும், சுரங்கப் பாதுகாப்பு தலைமை இயக்குநரால் வழங்கப்பட்டுள்ளன.

மாவட்ட கனிம அறக்கட்டளை நிதியின் கீழ் கள்ளக்குறிச்சி மாவட்டம் உளுந்தூர்பேட்டை தாலுகாவில் நிலன் ஏரி மற்றும் சேந்தநாடு ஏரிகளுக்கு நிரப்ப விஜயங்குப்பம் கிராமத்திற்கு அருகில் உள்ள நரியன் ஓடையின் குறுக்கே அணைக்கட்டு மற்றும் செயற்கை நீர்நிரப்பும் அமைப்பு கட்டுவதற்காக செலவிடப்பட்ட தொகை ரூ.4,50,00,000/-

மாவட்ட கனிம அறக்கட்டளை நிதியின் கீழ் விழுப்புரம் மாவட்டம் வானூர் தாலுகா பொன்னம் பூண்டி கிராமத்தில் பொன்னம் பூண்டி சப்ளை கால்வாயின் குறுக்கே தடுப்பணை கட்டுதல்.

மாவட்ட கனிம அறக்கட்டளை நிதியின் கீழ் கடலூர் பண்ருட்டி தாலுகாவில் உள்ள எலந்தம் பட்டுகிராமத்தில்
கெடிலம் ஆற்றின் குறுக்கே தடுப்பணை கட்டுவதற்காக
செலவிடப்பட்ட தொகை ரூ.15,00,00,000 /-

மாவட்ட கனிம அறக்கட்டளை நிதியின் கீழ் தருமபுரி மாவட்டம் பாலக்கோடு தாலுகாவில் பாலக்கோடு பெண்கள் மேல்நிலைப் பள்ளியில் 5 வகுப்பறைகள் ரூ.85,00,000 லட்சம் செலவில் கட்டுதல்.