



INDUSTRIES DEPARTMENT

Mines and Minerals

Demand No.27

Policy Note

2021-2022

DURAIMURUGAN
Minister for Water Resources

INDUSTRIES DEPARTMENT

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INDUSTRIES DEPARTMENT
DEPARTMENT OF GEOLOGY AND MINING
POLICY NOTE 2021-2022

Minerals are inevitable for the economic development of a country. Raw materials for production in many industries is contributed by the mineral resources. Minerals play an important role in the development of infrastructure such as roads, bridges and buildings creating thereby employment opportunities both directly and indirectly.

Tamil Nadu is endowed with many industrial minerals like Lignite, Limestone, Garnet Sand, Silica Sand, Quartz and Feldspar, Graphite, Oil and Natural Gas, Magnesite, Iron Ore, Platinum and Molybdenum and also common use minor minerals such as Roughstone, Gravel, Brick Earth Black and Multicoloured Granite.

Since the mineral resources are depleting and non-replenishable, the minerals should be systematically and scientifically exploited for mineral conservation and for effective mineral administration. The main responsibility of the Department is to achieve mineral revenue to the State Exchequer by effective mineral administration.

The Department of Geology and Mining was functioning under the control of Director of Industries and Commerce upto the year 1982. In view of the development in the mineral sector, a separate Directorate, namely Directorate of Geology and Mining, was formed during the year 1983 as one of the branches in Industries Department.

The Department of Geology and Mining is entrusted with the responsibility of mineral exploration, mineral administration and regulating mining activities. The main objective

of the department is to augment mineral revenue to the State Exchequer through proper conservation by effective mineral administration, sustainable mining and scientific exploitation.

1.1 VISION AND MISSION

The vision of this department is “to consolidate the leadership position of Tamil Nadu in the management of the mineral wealth by sustainable mining” and the mission is “to undertake / facilitate scientific exploration, judicious and sustainable exploitation, effective conservation and revenue maximization in an eco and citizen friendly policy framework.”

1.2 THE OBJECTIVES

- i) Exploration of new mineral deposits by adopting modern techniques.
- ii) Ensuring economic and sustainable exploitation of minerals with proper protection of the environment.

- iii) Effective mineral administration and regulation.
- iv) Curtailing illicit mining and transportation of minerals by using modern tools.
- v) Creating adequate employment opportunities.
- vi) Ensuring the safety and welfare of the people engaged in mining activities.

1.3 MAIN FUNCTIONS

- i) Mineral exploration and evaluation of minerals.
- ii) Mineral Administration.
- iii) Augmentation of Mineral Revenue.
- iv) Geo-technical studies in the hilly areas of Nilgiris and Kodaikanal.
- v) Implementation of projects for the welfare of the mine affected villages and people through the District Mineral Foundation Trust Fund.

1.3.1 Mineral Exploration and Evaluation of Minerals

As per the Mines and Minerals (Development and Regulation) Amendment Act, 2015, now the grant of mineral concession for major minerals shall be through auction process for both patta and Government lands. For this purpose, the mineral bearing areas have to be explored as per the Mineral (Evidence of Mineral Contents) Rules, 2015 and thereafter the areas have to be divided into mineral blocks for auction.

As per the amended Act, 2015, the Central Government has established a Trust called National Mineral Exploration Trust (NMET). The mining lease holders of major minerals have been contributing 2% of royalty to the Trust since 12.01.2015.

To identify the mineral resources it is essential to carry out mineral exploration

programs. The Department is utilizing the provisions of National Mineral Exploration Trust Fund (NMET) for mineral exploration activities.

The prime objective of the NMET is to boost regional and detailed exploration program. It includes identification, exploration and extraction of mineral deposits by adopting advanced scientific technology on a sustainable basis. A sum of Rs.57.39 crore has been collected as on 31.03.2021 and has been transferred to the NMET account maintained by the Government of India.



The NMET is providing funds for taking up detailed and regional exploration of minerals based on the investigations carried out by the Geological Survey of India (GSI) and other agencies nominated by the Government of India.

The exploration agencies like Geological Survey of India (GSI), Mineral Exploration Corporation Limited (MECL) and Kudremukh Iron Ore Company Limited (KIOCL) have given reports on iron ore, graphite, limestone, dunite, platinoid group of elements and molybdenum.

In Ariyalur district, 5 areas have been identified for exploration of Limestone by the State Government and got approval from Ministry of Mines, Government of India under NMET and a sum of Rs.6.55 Crore has been sanctioned. The exploration agencies have completed the exploration works and 4 reports have been received from MECL and one from KIOCL. The explored area details are as follows: -

Sl. No	Area	Executing Agency	Stage	Extent (in Ha.)	Cost (in lakh)
1.	Adanakurichi Village, Sendurai Taluk	MECL	G2	151.95.0	115.92
2.	Alathiyur Village, Sendurai Taluk	MECL	G2	131.43.0	115.92

3.	Anandavadi Village, Sendurai Taluk	MECL	G2	131.21.0	89.73
4.	Unjini and Anandavadi Villages, Sendurai Taluk	MECL	G2	41.36.0	64.04
5.	Amalgamated block in Reddipalayam Village, Ariyalur Taluk	KIOCL	G2	211.61.2	270.00
Total				667.56.2	655.00

Apart from this, the Geological Survey of India has also furnished one exploration report in Pudupalayam and Periyathirukonam blocks in Ariyalur district, which is under consideration for auctioning.

The process to bring the above Mineral blocks to auction is under progress and Government will get substantial revenue from the upfront payment received from the successful bidders.

The resource of Molybdenum Mineral is established in Dharmapuri and Krishnagiri districts through detailed exploration by MECL. The molybdenum resource is estimated as 6.005 Million Tons in Dharmapuri district and 0.699 Million Tons in Krishnagiri District. The royalty rate for Molybdenum is awaited from Ministry of Mines and on its receipt, the blocks will be brought to auction.

1.3.2 Mineral Administration

Mineral administration involves granting of mineral concessions for both major and minor minerals as per the Act and Rules for the conservation and development of the minerals. Further, the mineral administration involves collection of royalty / seigniorage fees, District Mineral foundation Trust fund, National Mineral Exploration Trust fund, prevention of illicit mining and illicit transportation of minerals and

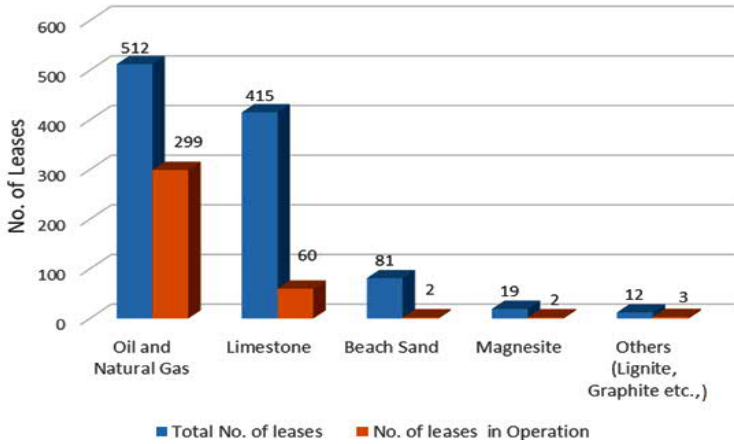
also collection of penalty from the offenders, besides taking criminal action under the appropriate Acts.

The Department of Geology and Mining is functioning under the overall control of the Director of Geology and Mining and has offices in 37 districts. The district offices are functioning with Deputy Director or Assistant Director as the head under the administrative control of the respective District Collectors. The Regional Joint Director Offices are established in 4 regions viz., Villuppuram, Salem, Tiruchirapalli and Madurai. The Regional Joint Directors are vested with the administrative control for their respective jurisdiction and look after Mineral exploration, administration and enforcement work. Apart from this, 4 regional flying squads function under the control of Director of Geology and Mining and are entrusted with the enforcement work to curtail illicit mining.

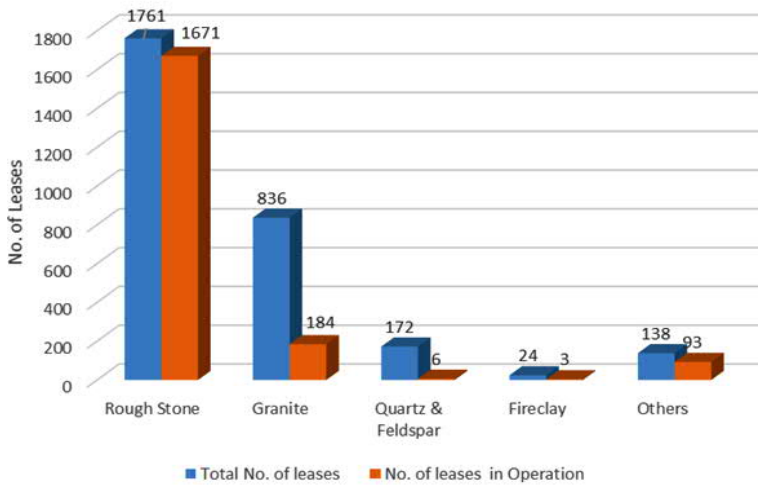
a) The details of existing major and minor mineral leases are as follows

Mineral	Total no of existing leases	Total Extent (in ha)
1) Major Minerals		
a) Oil & Natural Gas	13	24378.00.0
b) Lignite	1	25900.00.0
c) Limestone	415	7218.52.5
d) Magnesite and dunite	19	1488.92.7
e) Bauxite	5	201.60.0
f) Vermiculite	1	23.70.5
g) Graphite	5	274.74.0
h) Garnet and related minerals	81	777.38.5
Sub Total	540	60262.88.2
2) Minor Minerals		
a) Multi Coloured Granite	598	2336.58.0
b) Black Granite	238	1048.22.1
c) Rough Stone	1761	3743.05.1
d) Gravel	95	278.33.9
e) Pebbles	8	14.05.3
f) Quartz & Feldspar	172	496.60.0
g) Limekanker	6	688.13.0
h) Fireclay	24	59.15.0
i) Soapstone	3	6.68.5
j) Silica Sand	17	30.79.5
k) Gypsum	7	13.30.0
l) Quartzite	2	6.60.5
Sub Total	2931	8721.50.9
TOTAL	3471	68984.39.1

Major Mineral Leases



Minor Mineral Leases

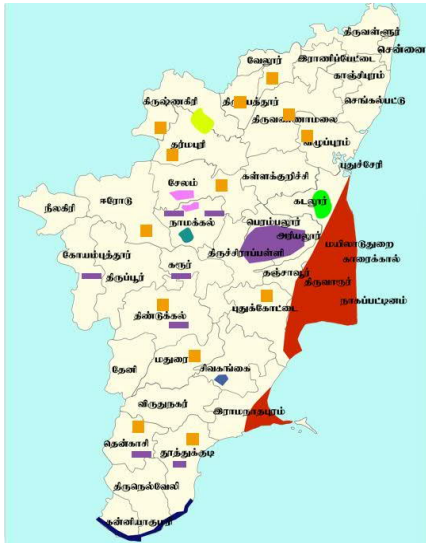


b) Mineral Production

The details of production of major, minor and oil minerals in the state during the year 2020-2021 are tabulated below:

Production of Major Minerals

Sl. No.	Mineral	Production (in Metric Tonnes)
1	Lignite	1,78,67,468
2	Limestone	1,87,74,341
3	Beach Sand Minerals	7,63,000
4	Magnesite	37,500
5	Graphite	15,747
6	Vermiculite	541



Legend

- Lignite
- Oil and Natural Gas
- Limestone
- Magnesite
- Garnet Sand
- Graphite
- Molybdenum
- Granite
- Platinum

Production of Minor Minerals

Sl.No.	Mineral	Production (in Cubic Meters)
1	Roughstone	2,55,65,797
2	Earth/Gravel	72,55,139
3	Lime Kankar	7,90,077
4	Fire Clay	1,43,100
5	Coloured Granite	98,968
6	Quartz and Feldspar	71,801
7	Pebbles	17,712
8	Black Granite	13,965
9	Quartzite	9,070

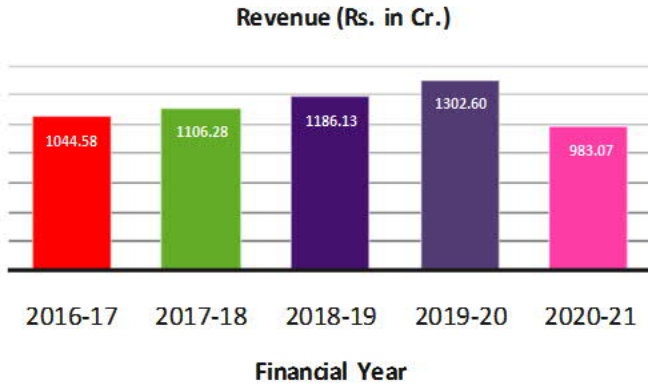
Production of Oil minerals

Sl.No.	Mineral	Production
1	Natural Gas (M ³)	86,56,98,870
2	Crude Oil (MT)	4,06,939

1.3.3 Mineral Revenue

The Department has taken effective measures to increase the mineral revenue for the State Exchequer and in the financial year 2020-2021, the revenue realized was Rs.983.07

crore. The following graph indicates the mineral revenue for the past 5 years:



(Note: During the year 2020-21 the mineral production declined due to Covid -19 pandemic.)

Curtailing illicit quarrying and transportation

During the year 2020-2021, 12,390 vehicles were seized and a sum of Rs.11.73 crore was collected as penalty to curtail illicit mining. Besides, 10,680 criminal cases / First Information Reports were registered and 22 cases booked under the Goondas Act.

Government have already issued various orders and directions for curtailing illicit mining and quarrying to arrest the leakage of mineral revenue. For effective enforcement, the Government has decided to fix a target for the District Collectors and other officers for surprise inspection of quarries and mines for taking stringent action against the offenders.

1.3.4 Geotechnical Studies in the Hill areas of the Nilgiris and Kodaikanal

The main objective of the Geotechnical studies is to prepare thematic maps and zonation maps to find out the vulnerable zones for landslides. Further, these studies provide technical guidance regarding preventive measures for safeguarding the lives and properties in these areas.

Further, Micro Level Landslide Hazard Zonation project in Nilgiris District and

Kodaikanal taluk are proposed to be taken up on collaborative basis with Geological Survey of India, Southern Region, Chennai which will guide the district administration for taking remedial measures to safeguard the life and property of the public.

This Department is processing the applications made by the individuals and Government bodies after examining the safety and suitability of the site, furnishing their feasibility reports on the construction activities proposed in the hilly areas. During the year 2020-21 the Geotechnical cell in the Nilgiris has processed 2,131 applications seeking geotechnical report for construction works in the hilly areas. Out of 2,131 applications received, 1,900 applications were recommended for execution of construction activities and 231 applications were rejected on various geotechnical parameters. At present, service

charges are not being collected for issuance of feasibility reports. Hence, it is proposed to fix service charges for the site clearance certificate issued for Commercial buildings only.

1.3.5 District Mineral Foundation Trust

Under Section 9-B of Mines and Minerals (Development & Regulation) Amendment Act, 2015, the District Mineral Foundation Trust (DMFT) was established in all the districts except Nilgiris District.

The lessees who were granted mining leases before 12.01.2015 are contributing 30% on royalty or seigniorage fee and the lessees granted leases after this period are contributing 10% on royalty (or) seigniorage fee to DMFT. The District Mineral Foundation Trust (DMFT) fund is utilized for implementation of schemes for the welfare of the areas and people affected by mining.

More than 60% of the DMFT fund is being utilized for high priority sectors such as supply of drinking water, health care, education, welfare of women and children, welfare of aged and differently abled people, skill development, infrastructure, sanitation, environmental preservation and pollution control measures and the remaining is being utilized for other sectors such as irrigation development, energy and watershed management.

As on 31.03.2021, an amount of Rs. 844.92 crore has been contributed by the lessees towards DMFT fund since its inception. From this, 2381 projects at a cost of Rs.700.68 crore have been taken up so far.

The details are as follows:

i) Projects under High Priority Sectors

Sl. No.	Sectors	No of projects	Fund utilization (Rs in crores)
1	Infrastructure	630	159.17
2	Health	511	53.10
3	Drinking Water	422	263.77
4	Education	363	30.02
5	Sanitation	159	11.15
6	Welfare of aged and differently abled people.	104	1.40
7	Welfare for Women and Children	55	4.80
8	Skill Development	21	2.83
9	Environment, Pollution Control and Ecology	20	4.89
	Total	2285	531.14

ii) Projects under Other Sectors

Sl. No	Sectors	No of projects	Fund utilization (Rs in crore)
1	Irrigation	44	154.52
2	Energy & Watershed Management	40	12.28
3	Others	12	2.73
	Total	96	169.54
	Grand Total (i+ ii)	2381	700.68



Construction of Checkdam across Pennaiyar river in Kandarakottai Village in Panruti Taluk of Cuddalore District at a cost of Rs.33 Crore.



Vertical Laminar Flow



Rotar Gene 5 Plex Platform



Biosafety Cabinet



Automatic Extractor

Procurement of testing equipment with accessories for COVID-19 RT PCR LAB in Government Medical College and ESI , Coimbatore at a cost of 40 lakh.

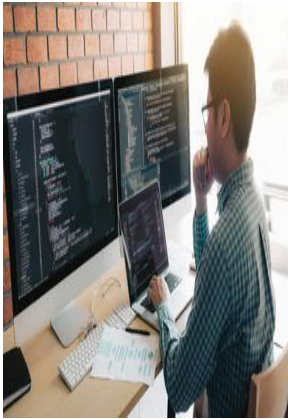
1.4 New Initiatives

1.4.1 Formulation of a Sustainable Mining Policy for the State

Mineral wealth plays a vital role in industrial growth and economic development of the Country. To conserve the mineral wealth for the future generation, substantial eco-friendly mining with minimum damage to the mineral bearing lands and restoration of the mined areas are indispensable. Hence, the State Government has proposed to come up with a Sustainable Mining Policy for the State.

1.4.2 Reducing the compliance burden:

Since the establishment of the Department of Geology and Mining in 1983 the entire mineral administration is being dealt manually.



For ensuring transparency in mineral administration such as grant of mineral concession, issue of transport permits and creation of data base management of the existing mineral resources of the state, it is imperative to adopt technology driven monitoring and e-governance.

To simplify the process of grant of mineral concession for minor minerals from the stage of application to grant of lease and till the issue of permits, the Department is in the process of developing an online based service i.e., Mining Tenement System (MTS).

The execution of the above modules have been entrusted to Tamil Nadu e-Governance

Agency (TNeGA) and the development of the software and payment gateway integration has been completed. The Mining Tenement System for minor minerals will be rolled out once the trial of the same is completed.

To implement the MTS for major minerals, the State Government has signed MoU with Regional Controller of Mines, Chennai. The Government of India is in the process of appointing an agency for this work.

1.4.3 Drone Technology

To keep a vigil on excess mining in the leased out areas and mining of minerals outside the leased boundaries, drone technology is deployed for assessing the quantum of minerals removed, for recovering the cost of minerals from the lessees and invoking penal provisions against them.



In this regard, Government has already sanctioned an amount of Rs.50 lakh during the year 2020-2021. In the first phase drone technology was utilized in Theni District for which, a MoU was executed with the Aero Space Research Center, MIT Campus, Anna University. It is proposed to utilise Drone Technology to prevent revenue loss and curb illicit mining in all limestone, roughstone and granite quarries to start with. The condition of the quarry including availability of minerals will be captured using drone technology at least two times in a year. Through this, the exact quantum of minerals

mined can be computed and compared with seigniorage fee collected and transport permits issued. Any shortfall in seigniorage fee can be collected from the lessee before issuing transport permits for the succeeding year.

1.4.4 Getting UNESCO Recognition for Geo-park at Thiruvakkarai, Villuppuram district and Fossiliferous areas in Ariyalur and Perambalur districts.

a) Geo-park at Thiruvakkarai village, Villuppuram district

Petrified wood is a fossil which occurs in the Cuddalore Sandstone formation in and around the Thiruvakkarai village of Vanur taluk, Villuppuram district. The fossilized tree trunks are lying horizontally embedded in the Cuddalore Sandstone.

About 20 million years ago, these tree trunks have been brought from the forest by the river and deposited in the water

bodies along with the sediments and protected from decay due to anoxic environment. The rate of sedimentation was very rapid and has made the remnants of the trees into fossil wood by way of quick burial.



Then, ground water rich in dissolved solids has flowed through the sediment replacing the original plant material with silica retaining the original wood structure such as annular rings and tree trunk nodes.

This Geo-park is one of the best natural sites in the world to study the geological features which makes the place unique in

Geological history. In order to protect such natural heritage sites and to enable students to understand the past history of the earth, the Government had sanctioned an amount of Rs. 5 Crore for creation of Geo-park at Thiruvakkarai. The construction works have been assigned to the Public Works Department and the work is in progress.

b) Fossiliferous areas in Ariyalur and Perambalur districts

Fossiliferous areas in Ariyalur was first discovered by a British Geologist in 1840. The area has been studied intensively by scientists and has revealed very useful information about the world which existed several million years ago.

The State Government has constructed a field museum already in this fossil site to

create awareness among the local public, students and tourists.



The fossils of fauna and flora in Kallankurichi, Reddipalayam, Kilpalur, Sillakudi, Walajabad and Kayarlabad villages of Ariyalur district are unparalleled and akin to a store house of rich biological and ancient life. Hence, these fossiliferous geo-hotspots need to be conserved for posterity.

National fossil-wood park at Sattanur village in Perambalur district is a national geo-heritage monument of India. Geological studies show that the fossil

wood in the area is 12 crore years in age which are formed due to the burial of trees brought down by the rivers along with some of the trees which flourished in the coast and have petrified in course of time. The fossilized tree trunk in Sattanur having a length of 18 meters was discovered in 1940 by the Geologist Thiru M.S. Krishnan of Geological Survey of India.

Further, a Bad Lands topography with series of conical hills separated by valleys is called Karai formation in Karai village of Perambalur district with unique lithology and diversity of extinct marine life. This formation consists of pockets of phosphatic nodules and fossils like Ammonites, Nautilus, Belemnites etc. It attracts a large number of scientists from all over the world for geo-scientific studies. Its protection and preservation will not only help in creating

interest about life through ages of mother earth in the minds of common man, but also provides possibility of unravelling the palaeo-geographic and palaeo-environment of the area.

Since, the above areas depict a major stage of earth's history with records of ancient animal and plant life, it is necessary to approach UNESCO to include the areas in the list of world heritage sites. In this regard, two teams have already been constituted to gather required field data so as to prepare necessary documentation for submission to UNESCO. To protect this rare heritage, it is proposed to form a geo-park in the districts of Ariyalur and Perambalur.

1.4.5 Mining Surveillance System for Minor Minerals

The Mining Surveillance System (MSS) is a satellite based monitoring system, which create triggers for any mining and quarry activities within 500m radius from the existing mining lease boundaries. The MSS helps to identify and curb illegal mining and illegal quarrying activities in the mineral rich areas.

In the system, geo-referenced cadastral maps of mining lease areas are superimposed on the latest satellite imageries (CARTOSAT and USGS) which enable surveillance of an area within 500 meters radius from the existing mining lease boundaries.

If any unauthorized mining activities are noticed, the system will generate triggers. These triggers are studied at remote sensing control center of Indian Bureau of Mines, Udaipur, Rajasthan. The data is then

transferred to the Department of Geology and Mining for field verification. These triggers are verified through field visits and appropriate actions are being taken. In respect of Major Minerals, the Indian Bureau of Mines had already uploaded the data in the MSS portal pertaining to all mines in Tamil Nadu and triggers are being received.

In respect of Minor Minerals, lease details pertaining to Kancheepuram District were shared and plotted in MSS Portal on pilot basis and triggers are received. The Government has decided to develop a separate web page for Minor Minerals in MSS application for Tamil Nadu, so as to facilitate the Department of Geology and Mining to update new lease details, creation of triggers and monitoring of illegal mining for minor minerals. In this regard, the Government of India has been requested to instruct the Bhaskaracharya Institute of Space

Application and Geo-informatics to provide necessary software technology to the state of Tamil Nadu for customization of MSS application for Minor Minerals in the state.

1.4.6 Welfare Measures for the Quarry Workers

In order to safeguard the welfare of the quarry workers and their dependents, the Government is taking welfare measures by enrolling the quarry labourers in insurance schemes and registering them in the construction workers welfare board. So far 8,972 quarry workers have been registered in the construction workers welfare board and 9,133 workers have been enrolled in the insurance schemes. By the efforts taken by the Government, so far various benefits to the tune of Rs. 75.87 lakh have been disbursed from the construction workers welfare board.

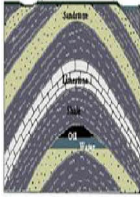

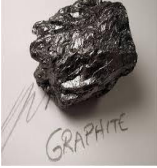

It is now proposed to provide safety gears, basic amenities in the vicinity of their work place and housing for these workers. Since, the quarry workers are prone to silicosis, regular health checkup are proposed to be organized at regular intervals.

1.4.7 Creation of Green fund for the restoration of abandoned mines and quarries

The expired and abandoned mines and quarries endanger the public and livestock. By fencing and forming green belt around them, the abandoned quarries can be brought into public utility. To restore the abandoned quarries, the Government has proposed to create a "Green Fund", for which the lessees will be levied a fraction on the seigniorage fee, in addition to the existing charges. This fund will be maintained by the concerned District Collectors for restoration of abandoned mines and quarries.

ANNEXURE

Minerals and uses

Mineral	Image	Districts where found	Uses
Major Minerals			
Crude oil and natural gas		<ol style="list-style-type: none"> 1. Nagapattinam 2. Tiruvarur 3. Thanjavur 4. Ramanathapuram 5. Cuddalore 6. Ariyalur 7. Pudukkottai 	<ol style="list-style-type: none"> 1. Electricity generation 2. Fossil fuel
Lignite		<ol style="list-style-type: none"> 1. Cuddalore 2. Ramanathapuram 3. Ariyalur 	<ol style="list-style-type: none"> 1. Fossil fuel 2. Electricity generation
Graphite		<ol style="list-style-type: none"> 1. Sivagangai 2. Madurai 	<ol style="list-style-type: none"> 1. Crucible industry 2. Insulator 3. Electrode 4. Atomic reactor 5. Foundry units 6. Carbon brushes
Limestone		<ol style="list-style-type: none"> 1. Ariyalur 2. Perambalur 3. Tiruchirapalli 4. Tirunelveli 5. Virudhunagar 6. Namakkal 7. Salem 8. Karur 9. Dindigul 	<ol style="list-style-type: none"> 1. Cement production 2. Chemical industries 3. Metallurgy 4. Manufacturing medicines

Magnesite		<ol style="list-style-type: none"> 1. Salem 2. Namakkal 3. Karur 	<ol style="list-style-type: none"> 1. Refractory bricks 2. Magnesia Cement (Sorel Cement) 3. Insulator
Bauxite		<ol style="list-style-type: none"> 1. Salem 2. Namakkal 	<ol style="list-style-type: none"> 1. Aluminum ore 2. Alloy in manufacturing of aero planes
Garnet sand		<ol style="list-style-type: none"> 1. Kanniyakumari 2. Tirunelveli 3. Thoothukudi 4. Tiruchirapalli 5. Madurai 	<ol style="list-style-type: none"> 1. Abrasive 2. Semi-conductor 3. Atomic mineral
Molybdenum		<ol style="list-style-type: none"> 1. Dharmapuri 2. Krishnagiri 	<ol style="list-style-type: none"> 1. Conductor 2. Steel alloy
Minor Minerals			
Quartz		<ol style="list-style-type: none"> 1. Salem 2. Namakkal 3. Karur 4. Dharmapuri 	<ol style="list-style-type: none"> 1. Software chips 2. Glass industries
Feldspar		<ol style="list-style-type: none"> 1. Salem 2. Namakkal 3. Karur 4. Dharmapuri 	<ol style="list-style-type: none"> 1. Ceramic industries 2. Abrasives 3. Paint
Calcite		<ol style="list-style-type: none"> 1. Salem 2. Namakkal 	<ol style="list-style-type: none"> 1. Cement production 2. Chemical industries 3. Medical industries

Silica sand		<ol style="list-style-type: none"> 1. Nagapattinam 2. Cuddalore 3. Villuppuram 4. Chengalpattu 	<ol style="list-style-type: none"> 1. Glass industries 2. Foundry 3. Ceramic industries
Fireclay		<ol style="list-style-type: none"> 1. Ariyalur 2. Cuddalore 	<ol style="list-style-type: none"> 1. Fire bricks 2. Ceramic and Brick manufacturing
Gypsum		<ol style="list-style-type: none"> 1. Perambalur 2. Coimbatore 	<ol style="list-style-type: none"> 1. Plaster of Paris 2. Fertilizers 3. Pesticides 4. Cement manufacturing
Dunite		<ol style="list-style-type: none"> 1. Salem 2. Namakkal 3. Karur 	<ol style="list-style-type: none"> 1. Refractory bricks 2. Non-conducting bricks 3. Flux in sintering

2. TAMIL NADU MINERALS LIMITED

Tamil Nadu Minerals Limited, popularly known as TAMIN, a Government of Tamil Nadu Undertaking, established during April 1978, has completed more than four decades in mineral exploitation. The main purpose of the Organisation is to exploit, process and market Granite raw blocks, Granite value added products, Major and Minor minerals and Mineral based products. TAMIN is mining Black, Colour Granites, Limestone, Graphite, Silica Sand and Vermiculite. It manufactures value added products like Polished granite slabs, Granite tiles, Graphite flakes, Exfoliated vermiculite and Indian standard sand. TAMIN has established its credentials as an exporter of International repute and its export performance has been recognized by National and State agencies.

2.1. Vision

To be number one in the mineral sector for value creation and conservation of natural resources.

2.2. Mission

- Continued search for new mineral deposits.
- Continuous updation of technology in safe mining operations, with state-of-the-art machineries, quality control measures and mineral processing and marketing.
- Export of granites and minerals with value addition for earning foreign exchange for the country.
- Generate gainful employment to people in rural and backward areas

2.3. Capital

(Rs. in lakhs)

Initial authorized capital	100.00
Initial paid up capital	27.50
Present authorized capital	2000.00
Present paid up capital	1573.89

2.4. Staff Strength

Officers	33
Staff	266
Workers	322
Total	621

2.5 Lease Details

TAMIN has 76 leases and the details are as given below: -

Sl. No.	Minerals	No. of leases	Extent (in hec.)
1	Black Granite	36	646.43.6
2	Colour Granite	31	487.98.0
3	Minor Minerals (other than Granite)	3	7.12.5
4	Major Minerals	6	282.59.0
	Total	76	1424.13.1

At present 10 mines are in operation. 29 mines are being surrendered as they are unviable.

2.6. Production and Sales Performance

Sl. No.	Description	Production	Sales	Value (Rs. in Lakhs)	Production	Sales	Value (Rs. in Lakhs)
		2020-2021			2021-2022 (Projected)		
1.	Granite Blocks	2605 M ³	2659 M ³	1985.17	14600 M ³	13342 M ³	5709.10
2.	Major Minerals	10026 MT	20000 MT	182.79	2,38,600 MT	1,68,000 MT	1016.40
3.	Granite value added Products	1171 M ²	17263 M ²	245.68	25,500 M ²	29,050 M ²	466.00
4.	Graphite flakes	1467 MT	1632 MT	547.58	6000 MT	5400 MT	1890.00
5.	Indian Standard Sand	602 MT	548 MT	169.47	3600 MT	3600 MT	1080.00
6.	Exfoliated Vermiculite	493 MT	533 MT	78.01	1200 MT	1080 MT	162.00
7.	Others	-	-	17.95	-	-	50.50
	TOTAL			3225.92			10374.00

During Financial Year 2020-2021, TAMIN has incurred a loss of Rs.28.23 Crore. During Financial year 2021-2022, it is projected to achieve a profit of Rs.12 Crore.

2.7. New Initiatives:

- a) TAMIN is hopeful of getting Environmental Clearance for

14 more mines during the current Financial Year 2021-2022. TAMIN plans to operate 24 mines by which sales turnover of Rs.103 Crore is expected.

- b) MoU with Indian Rare Earth Minerals Ltd (IREL) for forming Joint Venture for Beach Sand Minerals will be expedited. MoU will be signed during 2021-2022 and a new Joint Venture Company will be formed.
- c) TAMIN has identified areas in Arakonam for mining and production of M-Sand. The lease will be obtained and mining will be commenced in the Financial Year 2021-2022.
- d) Ministry of Mines, Government of India, has notified TAMIN as "Notified Agency" to take up explorative studies

under National Mineral Exploration Trust (NMET) fund. TAMIN is planning to take up explorative studies in certain Limestone blocks in Tamil Nadu during this year.

2.8. Management of mines and quarries

TAMIN is carrying out mining operations in a systematic and scientific manner by adopting modern techniques with state-of-the-art mining machineries to protect the environment against noise, dust, smoke and vibrations.

Minerals being marketed



Granite Blocks



Granite Slabs / Tiles



Graphite Flakes



Limestone



Exfoliated Vermiculite



Indian Standard Sand
(Silica Sand)



Ajjanahalli Black Granite Quarry, Dharmapuri District

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Periyagalur Limestone Mine, Ariyalur District

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3. TAMIL NADU MAGNESITE LIMITED

Tamil Nadu Magnesite Limited (TANMAG), a Tamil Nadu State owned Public Sector Undertaking was established in 1979, for mining of Magnesite and Dunite in Kurumbapatti Reserve Forest over an extent of 96.34 hectares (238 acres) in Salem District.

3.1. Activities

TANMAG undertakes mining of Magnesite by open cast mechanized mining method and employs qualified and experienced mining personnel. It excavates the mineral resource through scientific and eco-friendly mining techniques. While mining Magnesite, Dunite is obtained as a co-existent mineral.

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

3.2. Divisions

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

3.3. 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 sold to the consumers.

3.4. Share Capital

The authorised 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.

3.5. Action Plan for the year 2021-2022

TANMAG has an exclusive mine namely "Arasu Magnesite Mines", where Raw Magnesite

is being excavated and captively consumed for the production of Dead Burnt Magnesite and Lightly Calcined Magnesite in its two factories namely Rotary Kiln Division and Shaft Kiln Division respectively.

Mining operation was temporarily stopped in the year 2018 for want of Environmental Clearance (EC). TANMAG applied for Environmental Clearance, obtained Terms of Reference [TOR], conducted Public hearing on 29.01.2020.

SEIAA has accorded EC on 14.10.2020. Following this, TNPCB has issued Consent To Operate the Mines on 10.11.2020.

The mining operations were resumed on 19.11.2020 and the mineral production is going on.

The life of the Mines is 20 years with mineable ore reserves of 24.64 lakh of MT of Magnesite and 22.57 lakh MT of Dunite. The

resumption of Mining operations is providing livelihood for 356 employees directly and 2000 people indirectly. This will improve the livelihood of people in this part of Salem District and also in turn pave the way for the overall economic development as the import of Magnesite will be considerably reduced.

The Production and Sales during the year 2020-2021 and 2021-2022 are as detailed below: -

Particulars	2020-2021 (Actual)			2021-2022 (Projected)		
	Production (Qty in MT)	Sales (Qty in MT)	Sales (Rs in lakhs)	Production (Qty in MT)	Sales (Qty in MT)	Sales (Rs in lakhs)
Raw Magnesite*	2859.12	--		42503.00	--	
Dead Burnt Magnesite	--	230.75	54.63	10411.98	10000.00	2250.00
Lightly Calcined Magnesite	518.00	312.75	77.50	7339.60	7000.00	1575.00
Dunite & Others	9162.33	3517.81	228.71	69084.63	69000.00	4320.00
Total Revenue			360.84			8145.00
Profit / (Loss) Before Tax (Unaudited)			(-)2049.84			1592.63

* Captive consumption

DURAIMURUGAN
Minister for Water Resources