

Chapter I: Introduction

1.1 Introduction

Mineral as defined under Section 3aa of the Mines and Minerals Development and Regulation Act, 1957 (MMDR Act) includes all minerals except mineral oils. State of Rajasthan has 81 varieties of minerals out of which 57 are being commercially exploited. Mining is not only a major source of employment in the rural and tribal areas of the State but also a major source of revenue for the government, thus playing an important role in the development of the State.

Rajasthan has the highest number of mine leases (ML) in the country. There were a total of 301 major mineral¹ leases, 22,242 minor mineral² leases and 23,106 quarry licenses³ as on 01 April 2020 in the State⁴. The State earned ₹ 4,579.09 crore revenue from minerals in 2019-20 and the sector contributes 6.11 *per cent* to the State's revenue.

However, the State also faces challenges in this sector. There were numerous instances of illegal mining and several study reports have highlighted the environmental damage done in the Aravalli region due to mining. This is despite the fact that several regions of the State have been declared eco sensitive zones, where mining is prohibited.

Regulation of Mining and Illegal Mining:

The MMDR Act lays down the legal framework for the regulation of mines and development of minerals. It provides the manner and system of mining operations, conservation and systematic development of minerals and also the penalties for violation of this Act and rules made thereunder.

Section 13 of the Act provides power to Central Government to make rules in respect of minerals. Section 15 provides power to state governments to make rules in respect of minor minerals. Accordingly, the state government may, by notification in the Official Gazette, make rules for, regulating the grant of quarry licenses, mining leases or other mineral concessions in respect of minor minerals and for purposes connected therewith. Receipts from minerals mainly consist of royalty which is levied on the quantity removed or consumed from mines. The Government of Rajasthan had approved Rajasthan Minor Mineral Concession Rule, 1986 which was amended and notified as Rajasthan Minor Mineral Concession Rules, 2017 (RMMC Rules, 2017) and is applicable from 1 March 2017.

¹ Major minerals means minerals like Asbestos, Barytes, Bauxite, Cadmium, Coal, Copper, Lead, Manganese, Nickel, Rock Phosphate, Tungsten, Wollastonite, Zinc, *etc.* as specified in Second Schedule appended with the Mines and Minerals (Development and Regulation) Act, 1957.

² 'Minor minerals' means building stones, gravel, ordinary clay, ordinary sand other than sand used for prescribed purposes, and any other mineral which the Central Government may, by notification in the Official Gazette, declare to be a minor mineral;

³ 'Quarry Licence' means a licence granted under these rules to excavate minerals on fixed annual licence fee exclusive of royalty. Mining lease could not be granted for less than one hectare, however, quarry licence could be granted up to 0.18 hectare up to August 2018.

⁴ Source: Departmental web-site (<https://mines.rajasthan.gov.in/>).

According to rule 2 (xxx) of RMMC Rules, 2017 ‘**Illegal Mining**’ means any prospecting or mining operations undertaken by any person in any area without holding any mineral concession, permit or any other permission granted or permitted under these rules or without any lawful authority, as the case may be. It is further explained that for the purpose of this clause:

- (a) violation of any rules, during prospecting or mining operations in any area under authority of valid mineral concession, permit or any other permission granted under these rules shall not be considered as illegal mining;
- (b) any area granted under a mineral concession, permit or any other permission granted under these rules, as the case may be, shall be considered as an area held with lawful authority by the holder of such lease, licence or permit while determining the extent of illegal mining; and
- (c) any research work or field studies carried out by teachers and students of college as a part of their field curriculum shall not be treated as illegal mining.

Further, rule 54 of RMMC Rules, 2017 provides that:

1. No person shall undertake any prospecting or mining operations in any area without holding any mineral concession, permit or any other permission granted or permitted under these rules, as the case may be and shall not dispatch mineral from the mines, except from the quarry licenced area or bricks, without valid *rawanna*⁵ or transit pass.
2. No person shall transport or store or cause to be transported or stored any mineral otherwise than in accordance with the provisions of these rules.
3. Whoever contravenes the provisions of sub-rule (1) and (2) shall be punished with imprisonment for a term which may extend to five years or with fine which may extend to five lakh rupees, or with both.

Provided that the competent authority may either before or after the institution of the prosecution, compound the offence committed in contravention of the rule on payment of cost of mineral and compound fee. Cost of the mineral shall be taken as ten times of royalty in lieu of rent, royalty, compensation for environmental degradation and tax chargeable on the land occupied without lawful authority, *etc.*

1.2 Why we selected the topic?

There were frequent reports in the media regarding illegal mining of minerals in the State. According to the Mines and Geology Department, Rajasthan there were 48,486 cases of illegal mining during the years 2015-16 to 2019-20. There was an increasing trend (as given in Table 2.1 of paragraph number 2.4) in illegal mining cases during the last years except 2019-20. CAG’s Audit Report for the year ended 31 March 2011 (Paragraph number 6.7.6) and Audit Report for the year ended 31 March 2014 (Paragraph number 7.4.11.1) *etc.*

⁵ “*Rawanna*” means the *rawanna* or *e-rawanna* duly issued by the department or electronically generated from the departmental web portal and includes any other system notified by the Government for dispatch, consumption or processing of mineral or overburden from a specified area granted under any mineral concession or permit. “*Transit Pass*” means a pass including *e-transit pass* duly issued by the Department or generated online, to the lessee, stockiest, trader, dealer *etc.* for lawful transportation of royalty paid mineral.

depicted the quantum of illegal mining in the State. Thereafter, regular audit conducted by this office had also highlighted cases of illegal mining operations. The Rajasthan State Mineral Policy 2015 and RMMC Rules, 2017 have been promulgated by the State Government. Certain significant changes were introduced through these policy/new rules. However, use of new technology was not adopted by the Department to assess legal as well as illegal mining except drone survey of 43 leases in one district. Insufficient inspections of leases by the concerned officials were also noticed during regular audits.

The Department also introduced a new system for online generation of *rawanna*/transit pass through departmental web portal from November 2017 for dispatch of minerals with the aim to check evasion of royalty, to enhance transparency in the system and to facilitate paper less environment friendly work. A summary of illegal activities in mining before and after introduction of this system is shown in **Table 1.1** and **Table 1.2**:

Table 1.1
Illegal mining activities identified by the Department before introduction of *e-rawanna* system

Period	Illegal mining cases	Illegal transportation cases	Illegal Stock cases	Total
2015-16	625	4,159	125	4,909
2016-17	452	4,426	105	4,983
4/2017 to 10/2017	242	2,667	40	2,949
Total cases	1,319	11,252	270	12,841
Total 12,841 cases of Illegal mining activities were identified in 2 years and 7 months.				

Table 1.2
Illegal mining activities identified by the Department after introduction of online *e-rawanna* system

Period	Illegal mining cases	Illegal transportation cases	Illegal Stock cases	Total
11/2017 to 3/2018	237	5,292	46	5,575
2018-19	631	15,977	245	16,853
2019-20	606	12,141	470	13,217
Total cases	1,474	33,410	761	35,645
Total 35,645 cases of Illegal mining activities were identified in 2 years and 5 months.				

The above tables indicate that there was significant increase in identification of illegal mining activities after introduction of *e-rawannas*. However, shortcomings were noticed during Compliance audits even after introduction of *e-rawannas*/transit passes.

Therefore, this topic was selected to check the effectiveness of the departmental monitoring system to identify illegal mining activities and use of modern technology *i.e.* remote sensing data⁶ and Geographic Information System⁷ (GIS) to check illegal excavation of minerals.

1.3 Organizational set-up

Director Mines and Geology (DMG) is overall responsible to prevent illegal mining activities in the State. Further, according to rule 33 (4) of RMMC Rules,

⁶ Remote sensing is the science of obtaining information from a distance wherein it can be used to assess certain features of the Earth.

⁷ A Geographic Information System is a conceptualized framework that provides the ability to capture and analyse spatial and geographic data.

2017 the forest officials shall take necessary action under forest laws against any illegal mining in forest land. The Mines and Geology Department has:

(i) 49 Mining Engineers/Assistant Mining Engineers (MEs/AMEs) offices at divisions level

- to keep proper watch and take suitable measures to check unauthorized mining/leakage of revenue and
- to inspect check posts as well as mineral stocks of processor, manufacturer, dealer or trader or any permit holder in their jurisdiction as per provisions of the MMDR Act 1957 and the Minor Mineral Concession Rules.

MEs/AMEs are assisted by Mines Foremen and Surveyors.

(ii) There were nine Superintending Mining Engineers (SME) at Circle level for supervision of MEs/AMEs and to keep watch on the unauthorised removal of minerals.

(iii) Four Additional Directors of Mines (ADM) at zone level monitor the working of the SMEs and their subordinates.

(iv) Further, the Department has a specialized Vigilance Wing comprising 32 MEs/ AMEs offices to

- carry out intensive checking against unauthorised mining or unauthorised excavation and removal of minerals,
- inspect the departmental check posts in his jurisdictions frequently to check leakage of Government revenue,
- ensure that proper records were maintained by the processors/manufacturers/stockists.

(v) MEs/AMEs of vigilance wing are supervised and monitored by seven SMEs (Vigilance) at circle level and one ADM (Vigilance) at Directorate.

At the Government level, the Principal Secretary, Mines and Petroleum is responsible for administration and implementation of the related Acts and Rules.

A chart showing overall organisational set up of the Department is given hereunder:



