

Mineral Policy, Mining Laws and Development

Dr. Pradeep Kumar Jain

M. Tech. (Applied Geology) Gold Medallist, Ph. D. (Geology),
Ph. D. (Law), M.B.A., LL.M., M.C.A., M.A. (Economics),
Dip. in Environment Studies, P.G. Dip. in Yogic Science



Published by

SCIENTIFIC PUBLISHERS (INDIA)

5 A, New Pali Road

P.O. Box 91

Jodhpur - 342 001 INDIA

E-mail: info@scientificpub.com

Website: <http://www.scientificpub.com>

All rights reserved. No part of this publication or the information contained herein may be reproduced, adapted, abridged, translated, stored in a retrieval system, computer system, photographic or other systems or transmitted in any form or by any means, electronic, mechanical, optical, digital, by photocopying, recording or otherwise, without written prior permission from the publisher. Any breach will attract legal action and prosecution without further notice.

Disclaimer: While every effort has been made to avoid errors and omissions, this publication is being sold and marketed on the understanding and presumption that neither the editors (or authors) nor the publishers nor the printers would be liable in any manner whatsoever, to any person either for an error or for an omission in this publication, or for any action to be taken on the basis of this work. Any inadvertent discrepancy noted may be brought to the attention of the publisher, for rectifying it in future editions, if published.

This book contains information obtained from authentic and highly regarded sources. Reasonable efforts have been made to publish reliable data and information, but the editors and publisher cannot assume responsibility for the validity of all materials or the consequences of their use. The editors and publisher have attempted to trace and acknowledge the copyright holders of all material reproduced in this publication and apologize to copyright holders if permission and acknowledgement to publish in this form have not been obtained. If any copyright material has not been acknowledged please write and let us know so that we may rectify it.

Trademark Notice: Publications or corporate names may be trademarks, and are used only for identification and explanation in bonafide intent without intent to infringe.

ISBN: 978-93-

© 2019, Author

Printed in India

PREFACE TO THE SECOND EDITION

After the first edition of this book was published in 2005 purely based on my Ph.D. research work, encouraging response was received from various quarters and feedback given by publisher that the book is out of print and needs revision before reprint.

A time span of fifteen years has seen sea changes in terms of mineral policy, mining laws and rules made there under and development. Based on the recommendations of the High Level Committee, in consultation with State Governments, the Government replaced the National Mineral Policy, 1993 with a new National Mineral Policy on 13th March 2008. National Mineral Policy 2019 replaces the extant National Mineral Policy 2008 ("NMP 2008"). The impetus to review NMP 2008 came about by way of a direction from the Supreme Court vide its judgment dated 02.08.2017 in Writ Petition (Civil) No. 114/2014 entitled Common Cause v/s Union of India & Others. Database of National Mineral Inventory has switched over to UNFC system since 2003. There is amendment in social security legislations like Maternity Benefit Act, 1961 by introducing the Maternity Benefit (Amendment) Bill, 2016. The data pertaining to mineral resources/reserve, production, consumption, export, import, accident in mines etc also needs to be updated in second edition of this book.

All these factors have gone into reckoning while undertaking revision of the first edition of the book. I am confident that this will fill up some of the missing links in the literature on this important topic which has become more

important and relevant today to stake holders today than before.

I look forward to your suggestions to enable me to further improve the quality of this book.

(Dr. Pradeep Kumar Jain)

Place: Nagpur

Date

CONTENTS

1 PROLOGUE

2 MINERAL POLICY

- Introduction
- Historical Background
- Industrial Policy Resolution of 1956
- Industrial Policy Statement, 1991
- Global Perspective of Mineral Policy
- Mineral Policy in India
- Financing Pattern
- Role of Government
- Discussion

3 MINERAL AND MINE LEGISLATION

- Introduction
- Historical Background
- Role of Mineral and Mine Legislation in Liberalised Economic Reform
- Mines and Minerals (Development and Regulation) Act, 1957
- Mineral Concession Rules, 1960
- Mineral Conservation and Development Rules, 1988
- Mining Leases (Modification of Terms) Rules, 1956
- Legislation on Offshore Mining
- Discussion

4 MINERAL INVENTORY

Introduction
Exploration and Resource Estimation
Resource Classification – The Beginning
Indian Mineral Resource Classification
National Mineral Inventory
Implementation of UNFC System in India
United Nations Framework Classification (UNFC)
System - Concepts and Terminologies
Resource Status & Analysis
Exploration Expenditure
Recommendations
Conclusion

**5 ENVIRONMENT PROTECTION LEGISLATION
RELATED TO MINING**

Introduction
Environmental Policy in Ancient India
Environmental Policy in British India
Environmental Policy in Post Independence Period
Environmental Regulation Related to Mining
Industry
Sustainable Mining
Discussion

**6 SOCIAL SECURITY LEGISLATION RELATED TO
MINING**

Introduction
Characteristics of Social Security
Social Security: Global Scenario
Social Security System in India
Provision of Social Security in Constitution of India
Important Enactments Related to Welfare of Mine
Workers in India
Present Status of Safety and Health in Mines
Discussion

7 MINERAL SCENARIO OF THE COUNTRY

Introduction

Historical Background
Mineral Occurrences in Relation to Geological
Set-up
Indian Mineral Resources
Production
Life Indices of Mineral Reserves
Export
Import
Contribution to Socio-Economic Development
Discussion

8 EPILOGUE

Musing
Need of the Day

SELECTED BIBLIOGRAPHY

LIST OF FIGURES

Fig. No.	Title	Page No.
2.1	Mineral Exploration Expenditure- World Scenario (1.4.2000)	
2.2	Industrial Mineral and Social Services Outlay/ Expenditure during Different Five Year Plans in India	
3.1	Structure of Mines and Minerals Development Legislation in India	
7.1	Total Geological Resources vis a vis Recoverable Resources of Important Minerals & Metals in India (as on 1.4.2000)	
7.2	State-wise Reserves of Coal in India (as on 1.4.2003)	
7.3	Decennial Growth of Mineral Production in India	
7.4	Life Index (year) of Selected Minerals	
7.5	Export of Ores & Minerals from India (2001-02)	
7.6	Imports of Ores & Minerals in India (2001-02)	
7.7	Gross Domestic Product (GDP) Trend in India	

LIST OF PLATES

Plate No.	Title	After Page
I	Panoramic views of stabalisation of old dumps, afforested dead dump and reclaimed area of mines around India	
II	Socio-economic activities around some of the Indian mines	
III	Mining activities around semi and mechanized mines in India	

LIST OF TABLES

Table No.	Title	Page No.
2.1	Central and State Government Undertaking Related to Minerals and Mines in India	
2.2	FDI inflow in Mining Sector	
3.1	Mineral Exploration Expenditure –World Scenario A Comparison of various provisions in MMDR Act 1957 (prior to 12th January, 2015) & MMDR Amendment Act, 2015	
4.1	Resource Status of Selected Minerals in India	
4.2	Country-wise exploration during 2013 to 2016	
5.1	State wise Total Forest Cover vis-à-vis Mining Lease Area in India	
5.2	Environmental Clearance Category with threshold limit	
5.3	Requirements on Environmental Clearance of Minor Minerals	
5.4	Ambient Air Quality in Selected Mining Areas of India	
6.1	Labour Jurisdiction in Constitution of India	
6.2a	Trend in Fatal and Serious Accidents in Coal Mines in India	
6.2b	Trend accidents rates and place-wise casualty in coal mines in India	
6.3a	Trend in Fatal and Serious Accidents in Metalliferous Mines in India	

Table No.	Title	Page No.
6.3b	Trend in accident rates and place-wise death and serious injury rates in Metalliferous Mines in India	
7.1	Geological Age-wise Distribution of Important Mineral Resources of India	
7.2	Resource Status of Selected Minerals in India	
7.3	List of Minerals mined in India	
7.4	Reserves* of Crude Oil and Natural Gas in India (Proved and Indicated)	
7.5	State wise and Category wise Coal Reserves* in India	
7.6	Type wise National Coal Reserves* in India	
7.7	World Production of Minerals, Metals and India's Share	
7.8	Leading World Producers (2017) of Selected Minerals	
7.9	Export of Selected Ores & Minerals	
7.10	Import of Selected Ores & Minerals	
7.11	Capacity and Production of Important Mineral based product, 2015-16 to 2016-17	
7.12	Total Mineral Consumption and Industry wise Percentage Shares in India	
7.13	Degree of Self-sufficiency in Principal Minerals & Metals, 2016-17	
7.14	Gross Value Added at Basic Price, 2014-15 to 2016-17 (At Current Prices)	
7.15	Sector wise total Installed Capacity of electricity in India (as on 28.02.2019)	
7.16	Source wise total Installed Capacity of electricity in India (as on 28.02.2019)	
7.17	Gauge wise distribution of Railway Track	

LIST OF ANNEXURES

Annexure No	Title	Page No
I	Changes in quantitative knowledge of geological resources of selected minerals in India	
II	Composition of National Mineral Inventory	
III	Reserves and Remaining Resources in Total Resources as on 01/04/2015	

LIST OF ABBREVIATIONS

BIFR — Board for Industrial and Financial Reconstruction	FIMI — Federation of Indian Mineral Industries
CA — Compensatory afforestation	FIPB — Foreign Investment Promotion Board
CBA (AD) Act, 1957 — Coal Bearing Areas (Acquisition & Development) Act, 1957	FSI — Forest Survey of India
CBM — Coal-bed Methane	GDP — Gross Domestic Product
CPCB — Central Pollution Control Board	GMI — Global Mining Initiative
CRZ — Coastal Regulation Zone	GOI — Government of India
DAE — Department of Atomic Energy	GSI — Geological Survey of India
DGMS — Directorate General of Mines Safety	GVA — Gross Value Added
EEZ — Exclusive Economic Zone	Ha — Hectare
EIA — Environment Impact Assessment	IFA, 1927 — Indian Forest Act, 1927
EMP — Environment Management Plan	IMG — International Mining Group
EOU — Export Oriented Unit	IMYB — Indian Mineral Year Book
EPA, 1986 — Environment (Protection) Act, 1986	IREL — Indian Rare Earth Limited
FCA, 1980 — Forest (Conservation) Act, 1980	ISI — Import-Substitution Industrialisation
FDI — Foreign Direct Investment	ISM — Indian School of Mines
	JV — Joint Venture
	MCDR, 1988 — Mineral Conservation & Development Rules, 1988

MCR, 1960 — Mineral Concession Rules, 1960	NFL — Non- forest land
MEAI — Mining Engineers Association of India	NIMH — National Institute of Miners' Health
MGMI — Mining, Geological & Metallurgical Institute of India	NMI — National Mineral Inventory
ML — Mining Lease	PL — Prospecting Licence
MOEF — Ministry of Environment and Forest	PSU — Public Sector Undertaking
MOU — Memorandum of Understanding	RBI — Reserve Bank of India
MRTP — Monopoly and Restricted Trade Practice	REE — Rare Earth Elements
NCEPC — National Committee on Environmental Planning and Coordination	RP — Reconnaissance Permit
NCSM — National Council of Safety in Mines	SC — Supreme Court
NECPC — National Committee on Environmental Planning and Coordination	SECL — South Eastern Coal Field
	SPCB — State Pollution Control Board
	SPM — Suspended Particles Matter
	UNCHE — United Nations Conference on Human Environment
	WP — Writ Petition
	WPI — Wholesale Price Index

EXPLANATION OF MEDICAL TERMS USED

Silicosis - a lung disease caused by prolonged inhalation of dust containing silica

Pneumoconiosis - any of various diseases of the lung caused by habitual inhalation of mineral or metallic dust.

Nystagmus- a spasmodic involuntary movement of the eye

Bursitis - inflammation of a BURSA (sac or pouch of liquid occurring at a point of friction between two structures, especially between a tendon and a bone.

Cellulitis - deposit of fat cells said to be resistant to change in diet or exercise regime and which give the skin a dimpled, pitted appearance.

Arthritis - inflammation of a one or more joints, associated with swelling, pain, redness, local heat and often restricted movement of the affected part.

Lunatomalacia - disease related to mind

Aetiology - scientific study of cause or origin of disease

Pathogenesis - relating to lung origin and development of a disease

Raynaud's disease - in which the finger, toes, ears and nose turn white or develop a bluish ting as a result of spasm of the arteries supplying the affected parts.

Mesothelias- cancer of pericardium or pleura and peritoneum

Anthrocosilicosis-disease of the lungs mainly affecting coal miners, caused by inhalation of coal dust.

Ankylostomiasis (hook worm)-a disorder characterised by immobility or stiffening of joint (iron deficiency anaemia)

Dermatosis/micosis-inflammation of the skin in the absence of infection, including allergy, eczema and psoriasis, but not acne.

Leptospirosis- condition resulting from leptospira fabric illness of liver and kidney.

Icterohaemorrhagica-jaundice yellow and red.