

National Mineral Policy

Report of the High Level Committee



Government of India
Planning Commission
New Delhi
December 2006

National Mineral Policy

Report of the High Level Committee



**Government of India
Planning Commission
New Delhi**

December 2006

Preface

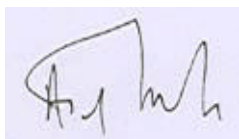
The National Mineral Policy, 1993 aimed at encouraging the flow of private investment and introduction of state-of-the-art technology in exploration and mining. Although the liberalisation of the mineral sector is now over a decade old, the results have not been encouraging. In the Mid-Term Appraisal of the Tenth Five-Year Plan, it was observed that the main factors responsible for this were procedural delays in the processing of applications for mineral concessions and the absence of adequate infrastructure in the mining areas. To go into the whole gamut of issues relating to the development of the mineral sector and suggest measures for improving the investment climate the Mid-Term Appraisal had proposed the establishment of a High Level Committee. Accordingly, the Government of India, Planning Commission, constituted a Committee on 14 September 2005.

The task before the Committee proved challenging as there was divergence of views among various stakeholders—mineral-rich states and states not well endowed with mineral reserves, manufacturing industries with captive mines and stand alone miners, exporters of minerals, and domestic industry based on the mineral. The recommendations were finalised at the meeting of the Committee held on 30 June 2006. Where it was not possible to reach an agreement among members, the recommendation was based on the majority view. One dissenting note was subsequently received, which has been annexed as a part of the Report.

It is our pleasure and privilege to thank all the members of the Committee for their valuable suggestions and for sparing time for finalisation of this Report.

We are also thankful to the officers and staff of the Mineral Unit of the Planning Commission for their contributions in the preparation of this Report. Thanks are particularly due to Shri L. P. Sonkar, Adviser (Minerals) and convenor of the Committee, Shri R. B. Tyagi, Consultant (Minerals), and Shri Sunil Barthwal, Director, Ministry of Mines for providing vital inputs and help in drafting the Report. We also acknowledge the contribution of Ms Rama Goyal who edited the Report meticulously. Thanks are also due to Ms Neelam Khanduri for rendering secretarial assistance.

The Report was submitted to the Government on 19 July 2006 and is now being released to the public for information.



(A. K. D. Jadhav)
Secretary, Ministry of Mines
Member, High Level Committee



(Anwarul Hoda)
Member (Industry), Planning Commission
Chairman, High Level Committee

Dated 22 December 2006

Contents

<i>Acronyms</i>	v
<i>Conversion Table</i>	viii

PART - A

Introduction	2
Chapter 1: National Mineral Policy and MMDR Act	5
Evolution of Mining Policy and Law	5
Liberalisation of Foreign Direct Investment	8
Issues related to Policy and Statutes	13
Chapter 2: Procedures for Granting Mineral Concessions	51
Procedural Complexities	51
Application Processing: Time and Motion Analysis	52
Other Clearances	54
Single Window: Co-ordination-cum-Empowered Committee Approach.....	55
Adherence to Time Schedules for Consideration of Applications for RP, LAPL/PL, and ML	58
Simplification of Procedure for Ascertaining Availability of Areas	61
Procedure for Dispute Resolution.....	64
Chapter 3: Forest Conservation and Environment Protection	66
Need for Sustainable Development	66
Control, Use, and Management of Land	67
Mining Activities and the Environment.....	68
Local Communities and Mining Activities	69
ICMM and SDF	70
Relief and Rehabilitation	73
Social Responsibility and the Mining Sector	76
Forest and Environment Clearances	77
Chapter 4: Infrastructure Needs and Financing	94
Linking Infrastructure for Mining Activities	94
Infrastructure Needs of the SME Sector	97
Infrastructure Needs in Iron Ore Belts	101
Infrastructure Needs of Dimension Stone Industry	102
Transport Infrastructure: Roads, Railways, and Ports	102
Infrastructure Financing	107
Institutional Framework	109
Chapter 5: Value Addition	111
Pros and Cons of Value Addition as a Condition for Mining Concession	112
Striking a Balance	117

Chapter 6: Augmenting State Revenues.....	120
Revenue to States from Mining Sector	120
Methodology for Calculation of Royalty.....	122
Present Royalty Regime in India	122
Royalty Rates in Other Countries and Implications for India	125
Implications of Illegal Mining	130
Fiscal Regime and its Stability	132
Other Sources of Revenue	133
Chapter 7: Other Issues.....	135
Raising Funds for Prospecting	135
Allocation of Captive Mines to Steel Makers	143
Restrictions on the Export of Iron Ore.....	160
Policy on Beach Sand Minerals	168
Chapter 8: Conclusions and Recommendations	183
National Mineral Policy and MMDR Act.....	183
Procedures for Granting Mineral Concessions	197
Forest Conservation and Environment Protection.....	202
Infrastructure Needs and Financing	209
Value Addition.....	211
Augmenting State Revenues	213
Other Issues.....	216

PART - B

Appendices

Appendix A: ORDER - Constitution of the High Level Committee	222
Appendix B: Minutes of the Twelfth Meeting of the High Level Committee.....	224
Appendix C: Submissions for and Presentations made before the High Level Committee ..	233
Appendix D: Summary of the Recommendations of the Committee headed by Additional Secretary, Ministry of Mines to Review Policy and Procedural Aspects of Reconnaissance Permits	235
Appendix E: Recommendations of the Expert Group on National Guidelines for Mining Leases—Iron, Manganese, and Chrome Ores, Headed by Shri R. K. Dang	238
Appendix F: Cross-country Comparison of Mining Laws	244
Appendix G: Cross-country Comparison of Mining Lease Aspects	248
Appendix H: Cross-country Comparison of Environment Laws and Related Aspects	252
Appendix I: Cross-country Comparison of Various Aspects of Mining Reforms	253

Annexures

Annexure 1: Geological Survey of India: Mineral Exploration Status and Future Scenario	255
Annexure 2: Federation of Indian Mineral Industries—Querist: OPINION	257
Annexure 3: Recommendations of the High Level Committee – Disagreements of the States’ Representatives	261
Annexure 4: The 2002 Sustainability Reporting Guidelines of Global Reporting Initiative	268

Annexure 5: Using the GRI Guidelines and the Mining and Metals Sector Supplement	275
Annexure 6: ICMM Principles	281
Annexure 7: Royalty Accruals on Minerals in States with Significant Mining Activities	282
Annexure 8: Mineral-wise Collection of Royalty in Selected States	283
Annexure 9: The Second Schedule: Rates of Royalty	286
Annexure 10: International Comparison of Royalty Rates	294
Annexure 11: Eleven Large Non-captive Iron Ore Mines in 2004–05	295
Annexure 12: Production, Consumption, Exports, and Iron Ore Surplus in India	296
Annexure 13: Iron Ore Production by Sectors: Captive vs. Non-captive	297

Figures

Figure 3.1: Procedure for Processing of Application for Mining in Forest Land	84
Figure 3.2: Flow Chart for Existing Environmental Clearance Process (GOI Level)	89
Figure 3.3: Public Hearing/NOC from SPCB	92

Tables

Table 4.1: Mineral Production in India, 2004–05	98
Table 4.2: Non-captive Production in Large-scale and SME Sector	99
Table 4.3: Current Position of Railway Projects Relevant for Mining	104
Table 4.4: Port-wise Exports of Indian Iron Ore	105
Table 4.5: Iron Ore: Cross-country Comparison of FOB Cost	107
Table 7.1: Admission Criteria for the Main Market and AIM	137
Table 7.2: Minimum Listing Requirements for Mining Companies	138
on Toronto Venture Exchange	138
Table 7.3: Iron Ore Production by Sectors: Captive vs. Non-captive	149
Table 7.4: Iron Ore Resources and Production, 1980, 1990, and 2000	150
Table 7.5: Steel Consumption Pattern in India, China, and South Korea	153
Table 7.6: World Ilmenite Reserves	175
Table 7.7: Titanium Sponge Capacity and Production	176
Table 7.8: Reserves and Production of Ilmenite in India <i>vis-à-vis</i> Other Countries	178

Boxes

Box 6.1: Methods of Valuation of Royalty in Western Australia	128
---	-----

Acronyms

AERB	Atomic Energy Regulation Board
AIM	Alternative Investment Market
AMD	Atomic Minerals Directorate for Exploration and Research
ASX	Australian Stock Exchange
BOT	build–operate–transfer
BSM	beach sand minerals
C	Civil
CA	Civil Appeal
CAD	Command Area Development
CAF	Compensatory Afforestation Fund
CAGR	compound annual growth rate
CCF	Chief Conservator of Forest
CF	Conservator of Forest
CII	Confederation of Indian Industries
CIS	Commonwealth of Independent States
CSA	Companhia Siderurgica do Atlantico
CSN	Companhia Siderurgica Nacional
CSR	Corporate Social Responsibility
CST	Companhia Siderurgica de Tubarao
DAE	Department of Atomic Energy
DFI	development financial institution
DFO	Divisional Forest Officer
DGCA	Directorate General of Civil Aviation
DGFT	Directorate General of Foreign Trade
DMG	Directorate of Mining and Geology
DMO	District Mining Officer
DMRL	Defence Metallurgical Research Laboratory
DPR	Detailed Project Report
DWT	dead weight tonnage
EBITDA	earnings before interest, tax, depreciation and amortisation
EIA	Environmental Impact Assessment
EMP	Environmental Management Plan
EMS	Environment Management System
EPA	Environment (Protection) Act, 1986
EXIM	Export–Import
FCA	Forest (Conservation) Act, 1980
FCR	Forest (Conservation) Rules
FDI	foreign direct investment
Fe	Iron
FII	foreign institutional investor
FI	financial institution
FICCI	Federation of Indian Chambers of Commerce and Industry
FIMI	Federation of Indian Mineral Industries
FIPB	Foreign Investment Promotion Board
FMCG	Fast Moving Consumer Goods
FOB	free on board
G&A	General and Administration

GDP	gross domestic product
GIS	Geographical Information System
GMOEA	Goa Mineral Ore Exporters' Association
GOI	Government of India
GRI	Global Reporting Initiative
GSI	Geological Survey of India
HS	Harmonised System
IBM	Indian Bureau of Mines
ICMM	International Council of Mining and Metals
IIFCL	India Infrastructure Finance Company Limited
INR	Indian Rupee
IPO	Initial Public Offering
IPR	Industrial Policy Resolution, 1956
ISRO	Indian Space Research Organisation
IT	Information Technology
ITC	Indian Trade Classification
ITeS	IT-enabled services
IUCN	International Union for the Conservation of Nature and Natural Resources
JORC	Joint Ore Reserve Committee
JSW	Jindal Steel Works
JV	Joint Venture
KIOCL	Kudremukh Iron Ore Company Limited
Km	kilometre/s
KMML	Kerala Minerals and Metals Ltd.
LAPL	Large Area Prospecting Licence
LTA	Long Term Agreement
M&A	mergers and acquisitions
MCDR	Mineral Conservation and Development Rules, 1958
MCR	Mineral Concession Rules, 1960
MCV	Mine Concentrate Value
MDF	Mineral Development Fund
MECL	Mineral Exploration Corporation Ltd
MIC	metal-in-concentrate
MIDFIC	Mineral Infrastructure Development and Finance Corporation
ML	Mining Lease
MMCR	Minor Mineral Concession Rule
MMDR	Mines and Minerals (Development and Regulation)
MMSD	Mining, Minerals and Sustainable Development
MMTC	Minerals and Metals Trading Corporation
MOEF	Ministry of Environment and Forests
MOIL	Manganese Ore (India) Limited
MOSRTH	Ministry of Surface Road Transport and Highways
MOU	Memorandum of Understanding
NBFC	non-banking financial company
NCA	National Commission on Agriculture
NGO	non-governmental organisation
NH	National Highway
NHAI	National Highways Authority of India
NHDP	National Highway Development Project
NMDC	National Mineral Development Corporation

NMP	National Mineral Policy
NOC	No Objection Certificate
NPV	net present value
NRSA	National Remote Sensing Agency
NSG	Nuclear Suppliers Group
NV	Net Value
OMC	Orissa Mining Corporation
PAF	Project Affected Family
PAP	project affected person
PCCF	Principal Chief Conservator of Forest
PDF	Project Displaced Families
PF	protected forest
PL	Prospecting Licence
POSCO	Pohang Steel Company
ppb	parts per billion
ppm	parts per million
PPP	public–private partnership
PRR	Production to Reserve Ratio
PSU	public sector undertaking
QIB	Qualified Institutional Buyer
R&D	research and development
R&R	Relief and Rehabilitation
RBI	Reserve Bank of India
RCCF	Regional Chief Conservator of Forest
RF	Reserve Forest
RP	Reconnaissance Permit
Rs	Rupees
SAIL	Steel Authority of India Limited
SC	Scheduled Caste
SCOMET	Special Chemicals, Organisms, Materials, Equipment and Technologies
SDF	Sustainable Development Framework
SEBI	Securities and Exchange Board of India
SEIAA	State Environment Impact Assessment Authority
SEZ	Special Export Zone
SFI	State financial institution
SH	State Highway
SLP	Special Leave Petition
SME	small and medium enterprise
SO	Section Officer
SPCB	State Pollution Control Board
SPV	Special Purpose Vehicle
sq.	square
ST	Scheduled Tribe
TISCO	Tata Iron and Steel Co Ltd
TORs	Terms of Reference
TSX	Toronto Stock Exchange
TVE	Toronto Venture Exchange
UKLA	United Kingdom Listing Authority
UNEP	United Nations Environment Programme
UNESCAP	United Nations Economic and Social Commission for Asia and the Pacific

UNFC	United Nations Framework Classification
US	United States
VAT	Value Added Tax
WCU	World Conservation Union

Conversion Table

1 lakh = 0.1 million

1 crore = 10 million

US\$ 1 = Rupees 44.59

(as per Reserve Bank of India Reference Rate for 22 December 2006)

PART - A

Introduction

1. The Government of India (GOI), Planning Commission, by its Order No-I&M-25(3)/2005 dated 14 September 2005, constituted a Committee under the Chairmanship of Shri Anwarul Hoda, Member, Planning Commission with the following terms of reference (TOR):

1. To review the National Mineral Policy, 1993 and the Mines and Minerals (Development and Regulation) (MMDR) Act, 1957 and suggest the changes needed for encouraging investment in public and private sector in exploration and exploitation of minerals;
2. To review the existing procedures for granting Reconnaissance Permits (RPs), Prospecting Licences (PLs), and Mining Leases (MLs) and suggest ways for their streamlining and simplification;
3. To review the procedures for according clearance to mineral exploration and mining projects under the Forest (Conservation) Act, 1980 and Environment (Protection) Act, 1986, and suggest ways for speeding them up;
4. To prioritise the critical infrastructure needs of the Indian mining sector and make recommendations on ways to facilitate investment to meet these needs;
5. To examine the implications of the policy of mineral-rich states to make value addition within the state a condition for grant of mineral concession and make appropriate recommendations in this regard;
6. To examine ways of augmenting state revenues from the mineral sector; and
7. To examine any other issue relevant for stimulating investment flows and inducting state-of-the-art technology into the sector.

A copy of the order of the Planning Commission is appended as Appendix A.

2. The Committee held 12 meetings between 7 October 2005 and 30 June 2006. The minutes of the concluding meeting, which considered the draft Report, is provided in Appendix B.

3. The Committee held extensive consultations with various interest groups and stakeholders. At the outset, the Committee invited all stakeholders to submit representations

and/or make presentations detailing their perceptions in respect of the various terms of reference of the Committee. The Committee viewed the presentations and held exhaustive discussions on the issues raised by the stakeholders.

4. The Committee studied the various reports prepared and submitted by study groups and in-house committees set up by various ministries from time to time on the issues before the Committee. In the main, these included a Review Paper on the findings and recommendations of all previous committees set up by the Ministry of Mines from time to time, including the recommendations of the committee set up in 2005 under the chairmanship of the Additional Secretary, Ministry of Mines to recommend changes in the MMDR Act, Mineral Concession Rules, 1960 (MCR), and Mineral Conservation and Development Rules, 1958 (MCDR), the steel ministry's Dang Committee report on the allocation of iron ore mines [along with the dissenting note of the Federation of Indian Mineral Industries (FIMI)], and the policy paper of the Ministry of Mines on the same subject.

5. The Committee gave consideration to the mineral policies of the states as presented by the state governments, especially to the differing perceptions of mineral-rich and non-mineral-rich states. The Committee also gave consideration to the papers prepared by FIMI, which provided comparative analyses of the mineral policies and statutes of other major mineral producing countries in the world such as Australia, Canada, Chile, and South Africa, the changes in these policies and statutes over time, and the lessons that could be drawn from them.

6. The presentations submitted to the Committee are listed in Appendix C. The Reports of in-house committees etc. are listed in Appendices D and E. The paper on comparative analysis of the mineral policies of other countries may be seen at Appendices F–I.

7. The Report is presented in eight chapters. The first seven chapters deal with the seven terms of reference of the Committee respectively. In each case, the issues are spelt out, the arguments of the concerned interest groups examined, and the recommendations are laid out. In Chapter 7, important issues raised in the Committee that are not covered by the first six terms of reference are taken up. These include four important issues whose resolution would be important not only for stimulating investment flows and inducting state-of-the-art technology but also for the smooth functioning of mining operations in the country. These

issues relate to fund raising by prospecting companies, captive mining in iron ore, restrictions on iron ore exports, and opening up of the beach sand mineral sector. Chapter 8 lists the main conclusions and recommendations of the Committee.

8. While the Committee's Report takes into account the presentations, reports, and other documents submitted to it by the various stakeholders, the Committee's recommendations seek to resolve the conflicting views of the stakeholders in the best economic interests of the country. Where it has not been possible to harmonise differences among stakeholders the recommendation has been based on the majority view. Individual members had the option to append dissenting notes. Only one such note was received, which is provided at Annexure 3.

Chapter 1

National Mineral Policy and MMDR Act

(Term of Reference no. 1)

To review the National Mineral Policy, 1993 and the Mines and Minerals (Development and Regulation) Act, 1957 and suggest the changes needed for encouraging investment in public and private sector in exploration and exploitation of minerals

EVOLUTION OF MINING POLICY AND LAW

1.1 The Mineral Policy Conference held in January 1947 resulted in the enactment of the Mines and Minerals (Regulation and Development) Act, 1948, the first legal framework in independent India for the regulation and development of mines. The conference also resulted in the establishment of the Indian Bureau of Mines (IBM) in March 1948 as the main regulatory agency for monitoring and supervising mining activity in the country. With the adoption of the Constitution of India on 26 January 1950, the legislative powers of the Central government and the state governments were clearly defined. Entry 54 of List I in the Seventh Schedule of the Constitution empowered the Central government to regulate mining activities and the development of minerals. Entry 23 of List II in the Seventh Schedule empowered the state governments to frame rules and regulations in respect of mining activities and mineral development, subject to the provisions of List I.

1.2 The Industrial Policy Resolution, 1956 (IPR) put major minerals such as coal, lignite, mineral oils, iron ore, copper, zinc, atomic minerals, etc. in Schedule A, which was reserved exclusively for the public sector, and minor minerals in Schedule B, in which the private sector was allowed to participate in mining activities along with the public sector. In pursuance of the IPR, the Parliament enacted the Mines and Minerals (Regulation and Development) Act, 1957 for the regulation of mines and development of minerals, applicable to all minerals except mineral oils. Two Rules, viz. MCR and MCDR, were framed under the Act. While the MCR deals with the major minerals the state governments are free to frame their own rules for mineral concessions with respect to minor minerals. Accordingly, most states have framed their own minor Mineral Concession Rules.

1.3 The Mines and Minerals (Regulation and Development) Act, 1957 was first amended in 1972, enhancing government control over mining through such measures as premature

termination of MLs, lowering of ceiling on individual holdings, power to modify MLs and for the Central government to undertake prospecting and mining operations in certain areas, removal of ceiling on royalty charged on minerals, inclusion of provision of dead rent as part of the Act,¹ and enhancement of penalties. In 1986, even more stringent amendments were made. First Schedule minerals, in which prior approval of the Central government had to be obtained under the Act, were increased in number from 27 to 38, the Central government was authorised to reserve areas for Public Sector Undertakings (PSUs), and mining plan approval was made compulsory. In 1988, the MCDR was revised to enable IBM to monitor and regulate mining activity. This severe regulatory regime introduced by the IPR and the statutory amendments of 1972 and 1986 continued till the early 1990s.

1.4 Alongside the economic liberalisation introduced by GOI in 1991, a comprehensive National Mineral Policy (NMP) was announced in March 1993. The policy introduced for the first time the idea of encouraging private investment in exploration and mining. Thirteen major minerals—iron ore, manganese ore, chrome ore, sulphur, gold, diamond, copper, lead, zinc, molybdenum, tungsten, nickel, and platinum group of minerals—hitherto reserved exclusively for the public sector were opened up to the private sector. Induction of foreign technology and foreign participation in exploration and mining was encouraged and foreign equity investment in joint ventures (JVs) in mining promoted by Indian companies was allowed. While generally there was a limit of 50 per cent on foreign equity the government announced its intention to consider relaxation of this limit on a case-by-case basis.

1.5 Consequently, amendments were carried out in the Mines and Minerals (Regulation and Development) Act in January 1994 and soon after in the MCR and MCDR. These amendments sought to simplify the procedure for grant of mineral concessions so as to attract large investment through private sector participation, including foreign direct investment (FDI), and thereby, induct modern technology into the mining sector.

1.6 Recognising the lack of resources and up-to-date technology with the Geological Survey of India (GSI) for carrying out even regional (or preliminary) exploration and the consequential need to attract private investment, especially FDI, in exploration and prospecting, the concept of Large Area Prospecting Licence (LAPL) was introduced and guidelines were issued in October 1996, whereby the area for a single PL for facilitating

¹ See paragraph 6.3 for conceptual meaning of royalty and dead rent.

aerial prospecting was enhanced from 25 sq. km to 5000 sq. km, with a proviso that the aggregate area held by a single party would not exceed 10,000 sq. km in the whole country. Simultaneously, a scheme of gradual relinquishment in a time-bound framework was introduced, whereby the search for detailed exploration was to be narrowed down to 25 sq. km at the end of the third year.

1.7 The changes in the Act and the Rules mentioned above were intended to accelerate private sector investment and FDI in the mining sector. Despite this, prospecting and mining activity failed to pick up and in February 1997, the Ministry of Mines constituted a committee, headed by the then Additional Secretary, Ministry of Mines, to go into the reasons for this failure. The committee submitted its report in January 1998, suggesting wide-ranging amendments in the Mines and Minerals (Development and Regulation) Act. Amendments were made in line with these suggestions in the MMDR Act, 1957 in December 1999 as well as the MCR and MCDR in January 2000.

1.8 The major changes carried out in the MMDR Act, 1957 were as follows:

- Introduction of the concept of reconnaissance operations as a distinct stage prior to prospecting, and replacement of LAPL by the instrument of RP; RP holder to progressively relinquish the area down to 1000 sq. km or 50 per cent of the area granted, whichever was less, at the end of two years and to 25 sq. km at the end of three years;
- RP holder to get priority in the grant of PLs within reconnaissance areas subject to certain conditions;
- Minerals listed in the First Schedule requiring prior approval of the Centre were brought down from 11 to 10;
- Further delegation of powers to state governments was as follows:
 - (a) Power to renew lapsed PLs/MLs;
 - (b) Power to grant RP/PL/ML for areas that were not compact or contiguous;
 - (c) Power to transfer MLs in respect of minerals under Part C of the First Schedule;
 - (d) Power to permit amalgamation of two or more adjoining MLs;
- Liberalisation of area restrictions of RP/PL/ML by making such restrictions applicable state-wise;

- In the case of large mining operations, the ML would not lapse if mine development did not take place in a period of two years.

1.9 The major changes carried out in the two Rules were as follows:

I. Mineral Concession Rules, 1960:

- Rule 75(2) of MCR enabling the Agency System was deleted;
- State governments could undertake prospecting or mining operations after notification of areas;
- Charging of premium by government companies in case of transfer of ML to a private venture was deleted.

II. Mineral Conservation and Development Rules, 1988:

- State governments would approve mining plan in respect of 29 non-metallic/industrial minerals for open cast mines (the remaining being retained with IBM);
- Once approved, mining plan would be valid for the entire duration of the ML;
- Relevant modifications, such as mining plan and mine closure plan, were made to take account of the qualitatively different impact on environment due to prospecting operations as compared to that of mining operations;
- In addition to the tentative scheme of mining plan for the first five years of the ML, an annual programme from year to year for five years would also be submitted.

Thus, after the Act was promulgated in 1957, the Act was amended four times, i.e. in 1972, 1986, 1994, and 1999, and after each amendment corresponding changes were carried out in the two Rules, viz. MCR and MCDR. While the first two amendments increased governmental control, the last two relaxed them. The changes in the regulatory dispensation in 1994 and 1999 envisaged considerable devolution of authority from the Centre to the states.

LIBERALISATION OF FOREIGN DIRECT INVESTMENT

1.10 In the first 40 years after independence, FDI was not encouraged in the mining sector. Mineral concessions were restricted to companies with less than 40 per cent foreign holding,

as in other sectors. With the formulation of the NMP in 1993 there was a slight easing up and FDI was allowed upto 50 per cent with no limit on captive mines. Additional FDI could also be allowed on a case-by-case basis. All FDI proposals required clearance by the Foreign Investment Promotion Board (FIPB). In 1997, FDI upto 50 per cent was taken out of the purview of the FIPB and put on automatic approval route. For exploration and mining of diamonds and precious stones FDI was allowed up to 74 per cent under automatic route in February 2000. In February 2006, the mining sector was opened up to 100 per cent FDI.

1.11 Mining is a three-stage operation, involving regional exploration, detailed exploration, and extraction (or mining proper). The first two, taken together, are also covered under the generic term 'prospecting'. In India, the term 'reconnaissance' is used to cover the regional exploration phase of prospecting. Mine development, which precedes extraction, is treated as a part of mining, as this work starts only after the ML is granted. Regional exploration is mainly a survey activity to identify areas bearing deposits through such means as geological and theme (geophysical and geochemical) mapping, aerial photography, satellite imagery, topographic and underground surveys, and some very limited geophysical exploration with sample drilling. The GSI conducts regional exploration in four phases, known as P1, P2, E1, and E2, which are distinguished mainly by the intensity of geophysical and geochemical survey. As compared to regional exploration, detailed exploration is more intensive. Unlike regional exploration, detailed exploration is invasive and involves close distance drilling, including slim hole drilling, large-scale mapping, and very substantial geophysical and geochemical testing to establish economically recoverable ore bodies. The last phase of regional exploration, viz. E2, overlaps with the first phase of detailed exploration in some ways. Mining involves mine development (i.e. earthwork to access ore bodies) and extraction. Thus, mining projects, especially large ones, have a long gestation period and large amounts are spent in detailed exploration and other development activities before commercial production can begin.

1.12 Prospecting, i.e. regional exploration and detailed exploration, is a high risk venture inasmuch as the prospecting agency has to spend considerable amounts on activities that may or may not result in finds of commercially exploitable deposits. Domestic entrepreneurs typically lack adequate financial and technical resources for entering into such high-risk ventures. This became clear as investment in prospecting by the private sector failed to materialise despite the reforms in policy and statute opening up the sector to private

investment. The work done by GSI continued to be the main basis for investment in mining. In India, GSI is mainly charged with the task of regional exploration and there is no other agency doing this work in a substantive way. However, due to lack of resources in terms of manpower, equipment, and technology, GSI has not been able to do either extensive or intensive regional exploration for most minerals other than coal. For doing detailed exploration, there is also only one Central PSU, namely the Mineral Exploration Corporation Ltd (MECL). Promotional work done by MECL is negligible. In the face of the huge investment gap in prospecting and extraction, mainly due to the risky nature of mining ventures, private sector involvement becomes a *sine qua non* for investment in the mining sector. Taking cognisance of this reality, the investment policy was liberalised in February 2006 vide Press Note no. 4 (2006 Series), allowing 100 per cent FDI in the mining sector.

1.13 Large mining companies, especially those in Australia, South America, and Europe, welcomed the decision of GOI to allow FDI in the mining sector. There is a consensus among geologists that Australia, India, South and Central Africa, and South America belong to the same prehistoric land mass known as Gondwanaland and that these countries should have similar mineral resources in terms of quantity and grade. In fact, conventional wisdom in the mining sector is that India is endowed with large mineral resources, especially of iron ore, bauxite, stones, base metals, noble metals, and diamonds. However, adequate survey and exploration activities have not been carried out in the country to discover the full potential of these deposits. While geological mapping on a scale of 1:50,000 has been largely completed (and some amount of multi-sensor aero-geophysical work was done with hired aircraft in 1967–72, covering about 347,040 sq. km), not much geophysical and geochemical mapping has been done, with the result that quantification of any significance is not possible. Even in respect of iron ore and bauxite, where not much work is required to be done by way of regional exploration due to the shallow nature of the ore bodies, there is much scope for further work. A number of iron ore belts are still unexplored and no formal resource assessment has been attempted since the early 1980s. Most magnetite findings are entirely incidental and since, unlike haematite iron ore, magnetite does not occur with specified groups of rocks, even an estimate is not available. The formal position taken by GSI in respect of bauxite is that the occurrence of this mineral is so plentiful that there is really no point in expending resources and time on its search. The work in respect of base metals and noble metals is particularly dismal. Out of 1.82 million sq. km of hard rock area (excluding the Deccan Trap), geophysical mapping of only 56,000 sq. km and geochemical mapping of

only 73,000 sq. km has been completed. Even if the general geological environment of only Scheduled minerals, estimated at about 571,040 sq. km, is considered, proper reconnaissance or regional exploration up to P2 level of only 8–13 per cent has been done. Even this negligible work is of low quality in the modern day context as it is based on outdated technology. Gold search data, for example, is based on 20 parts per billion (ppb) while technologies today look for 2–5 ppb. In most cases, detailed exploration targets have been decided simply on the basis of geological mapping, evidence of ancient working, and surface manifestations. Annexure 1 shows the status of GSI activities in mineral exploration currently and the future scenario.

1.14 While Australia spends, on average, about US\$ 500 million per annum on survey and exploration and Latin America spends about US\$ 700 million per annum, India, which has a geological setting identical to both these regions, spends, on average, only US\$ 5 million on promotional exploration, mainly through GSI, and a major part of this is spent on coal. Canada witnessed the largest expenditure on exploration with 19 per cent of the total world expenditure in 2005, followed by Australia with 13 per cent and the US with 8 per cent. While South America accounted for 23 per cent of the global exploration expenditure, followed by Africa (17 per cent), India accounted for less than 1 per cent of the global exploration expenditure. In the last 50 years, the total amount spent by GSI on mineral search is about Rs 500 crore only, and of this, as much as Rs 350 crore has been spent on looking for coal deposits. Experience in other parts of the world has shown that reserves can increase significantly with additional exploration and beneficiation driven by state-of-the-art technology. Australia's known iron ore resources increased hundred-fold in 40 years, from around 400 million tonnes in 1966 to over 40 billion tonnes by 2005, after having extracted over 3 billion tonnes in the interregnum. Given the fact that in India, so far no major investment has taken place in prospecting (regional exploration and detailed exploration), the potential for attracting such investment is very high.

1.15 The FDI policy announced in February 2000 was taken as a great opportunity for survey and exploration by global mining companies, both majors and juniors, and many foreign companies put in their applications for RPs and PLs. As a result, until July 2005, 65 PLs, covering an area of 90,143 sq. km, and 196 RPs, covering an area of 264,520 sq. km, were granted, mainly in the mineral-rich states of Chhattisgarh, Jharkhand, Karnataka, and Orissa, but also in Andhra Pradesh, Madhya Pradesh, and Rajasthan. These concessions were

mainly for minerals of base metals and noble metals, diamonds and precious stones, and beach sand minerals (BSM) and a few for iron ore. Upto the year 2006, FIPB clearances for FDI above 50 per cent were given on a case-by-case basis and proposals for FDI amounting to Rs 4044 crore were reported to have been approved by the FIPB for investment in the Indian mining sector. However, only Rs 345 crore of this amount is reported to have actually come in before February 2006, when 100 per cent FDI was put on the automatic route. What is equally significant is that only very few of the RPs and PLs granted under the new dispensation have been converted into MLs.

1.16 The failure of FDI to come into the mining sector even five years after the liberalisation of the investment regime, the lack of enthusiasm for investment in prospecting shown by the domestic private sector, and the lack of resources with public sector agencies such as GSI, MECL, and other state and Central agencies for undertaking promotional exploration has meant that the sector is unable to contribute to growth of the gross domestic product (GDP) of the country in any significant way, let alone up to its potential. This lack of investment has hampered the nation's ability to (i) delineate and extract already located mineral occurrences from the ground; and (ii) discover the huge resources of minerals that possibly are still underground.

1.17 The growing demand for metals and minerals is continuously pushing up both domestic and international prices. The margins available in the mining sector have been very substantial and are widely expected to continue being so in the foreseeable future. The country's accelerated growth rate warrants a rapid development of the mining sector, on which most of the basic industries in the manufacturing sector depend. It is, therefore, imperative that the bottlenecks in the development of the mining industry are identified and suitable steps taken to deal with them. The world mineral scenario has changed significantly since India last reformed its mineral regulatory system in 1999. In today's globalised economy, investments in mining and exploration flow into those countries where apart from there being mineral potential the regulatory regime is also investor friendly. Mining, being a risk-oriented activity with long gestation periods and uncertain returns on capital, is extremely sensitive to the regulatory framework operating in a country. In the last decade, many developing countries have significantly reoriented their mining laws and policies to attract global investment. In a study conducted in 2001 by the World Bank, 'Mining Sector Reforms and Investment—A Global Survey', India was found to have one of the lowest

scores on various parameters of interest to investors compared to other resource countries such as Australia, Brazil, Chile, China, and Indonesia.

ISSUES RELATED TO POLICY AND STATUTES

1.18 As many as 27 representations were received and 21 presentations were made before the Committee, and it is significant that the issues relating to the regulatory dispensation run as a common theme in all these representations. While they vary in their specifics, the commonality can be identified under three heads, viz. policy issues, statutory issues, and procedural issues. In this chapter, we deal with the first two only. Procedural issues are dealt with in Chapter 2.

POLICY ISSUES

1.19 Para 4 of the NMP document states that the provisions of the MMDR Act and the Rules will be reviewed from time to time and harmonised with the policies governing industrial and socio-economic developments in the country. Since the current NMP is now over a decade old, it is necessary to examine the needs of the mining sector in the context of the increasing economic liberalisation in India and the overall process of globalisation in the world economy and revisit our mining policy, law, and rules. The NMP of 1993 is in need of being updated in the context of the changed nature of the world mining industry by incorporating those international best practices that would best fulfil the expectations and needs of the country's mineral sector.

International Scenario

1.20 Over the last two decades or so notable changes have occurred in the mining policies of governments across the world. Just 20 years ago, significant national or regional barriers prevented the international flow of investment in mining. Many of the Latin American economies required that at least 51 per cent of the investment in a mining project be held by nationals,² and in many instances, large-scale mining was done mainly by government enterprises. Centrally planned economies did not permit private investment. In some nations, including India, Japan, and the United States of America (USA), security of supply or self-sufficiency was a primary concern.

² Decision 24 of the Andean Pact stipulated that 51 per cent ownership was to be held by local investors.

1.21 This situation has changed dramatically, and today investors have unprecedented opportunities to access prospective geological areas in almost every region of the world. Almost all countries in Latin America routinely seek both domestic and international mining investment, as do the North American nations. African nations actively promote their geology, hoping to attract investors. In Eastern Europe, investment barriers have been eliminated, and foreign owned mines are being developed in Russia and the Central Asian countries. China has taken steps to allow foreign participation in its mining industry. Most countries have concluded that the goal of national self-sufficiency is outdated in a world where ready access is available to deposits and mines worldwide. The privatised mining companies of China are acquiring mines in Peru and Australia, CVRD³ of Brazil is active in Asia and Africa, and Indian firms, such as Hindalco and Jindal Steel Works, are seeking the best deposits wherever they may occur. This changed policy environment has been reflected in legislative reform across the world and between 1985 and 2005, more than 100 nations have drafted and adopted new or amended mining laws.

1.22 In today's global market place, minerals are readily available from multiple sources, either through direct purchase or through acquisition of domestic and foreign deposits and mines. Most nations today rely on the private sector to make exploration decisions. Instead of national self-sufficiency and uneconomic production of nationally scarce minerals, the global market place has changed the goal post, and access to supplies of natural resources and access to markets for such resources are being sought simultaneously by nations. Comparative advantage can express itself through benefits of location to domestic industry, such as savings in freight.

1.23 In today's world, governments perform three primary functions in the minerals sector, viz. information collection and dissemination, regulation, and tax collection. Collection and dissemination of geological information is an important task of government in most nations. Most nations maintain a geological survey that collects an array of information useful for understanding the geological situation. In the past, many geological survey and state exploration organisations were involved with every aspect of the exploration process—from general mapping to delineation of deposits by drilling. Today, it is rare for government agencies to explore for mineral deposits. Instead, these agencies focus their limited budgets

³Compania Vale Do Rio Doce.

on providing the types of information that could assist the private sector in its search for deposits (for example, provision of regional geological, geophysical, and geochemical data and maps). Government support for delineating individual deposits through detailed exploration is by and large a thing of the past, as geological surveys have shifted financial allocations to acquire new technologies that allow them to use and interpret regional information better, complete mapping at scales useful to the private sector, and build web-based information dissemination systems. Furthermore, only a few governments aspire to mine minerals now, as the private sector has become highly efficient, technologically advanced, and competitive. In this highly competitive environment, not many State-run exploration and mining entities have survived.

National Mineral Policy

1.24 The NMP (1993) is ambiguous about the relative roles of the State and the private sector. India officially relies primarily on the public sector to explore for minerals. While geological information collection is the domain of the GSI, the fact is that, as mentioned earlier, GSI has been spending a large part of its scarce resources on coal while a vast amount of work still remains to be done in the area of regional exploration for the other major minerals. Given the technology and resource limitations of GSI, it is necessary for the policy to envisage private sector initiative to be the main driver of investment in exploration even as the GSI is strengthened to access the latest technologies such as deep imaging and electromagnetic probing. This should be the case not only in detailed exploration but also in regional exploration where substantial private investment is needed to supplement the work of GSI in the areas of geophysical and geochemical mapping, which are the main components of reconnaissance or regional exploration. This implies that as a rule, the policy should encourage access of the mining industry to global markets rather than restricting them to producing minerals only for the domestic market, and simultaneously, the policy should enable the end-user industry to access global resources rather than depending only on local resources for their raw material.

1.25 Given the changing global environment, governments have sought to understand better the needs of the private sector. Investors have many nations to choose from when deciding where to explore or to mine. Nations with geological potential, reasonable tax terms, acceptable legislation assuring fair play, and political stability have brighter prospects for the long-term development of their mineral sector than those in which one or more of these are

absent. A study by the United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP),⁴ undertaken to identify the criteria usually considered by private sector exploration and mining companies when deciding where to invest, pointed out that among the top 10 priority factors, all but one, namely geological potential, were concerned with the regulatory system. At the exploration stage, the top criteria include security of tenure, consistency, and predictability of mineral policies, and management control. At the mining stage, stability of the terms of exploration and mining becomes an important consideration. The NMP, therefore, needs to lay adequate emphasis on the role of the government as a facilitator and an equitable regulator, providing a stable environment for investment in reconnaissance, prospecting, and mining.

1.26 The NMP makes no mention of security of tenure. The MMDR Act states that the holder of a PL has a preferential right to obtain an ML over any other person, provided certain requirements are met, but this does not provide an actual right to obtain an ML. Companies that propose to invest heavily in the risky venture of detailed prospecting view the lack of a security of tenure provision in the NMP and the MMDR Act and the Rules as a major weakness in the regulatory system. It is necessary that the NMP declare the absolute right of a RP holder to a PL and of a PL holder to obtain an ML in the areas where they have done the prospecting.

1.27 Para 7.1.1 of the NMP lays down that the State may undertake the development of any mineral deposit in the public interest to ensure unhindered availability of mineral raw materials. Detailed enabling provisions in the MMDR Act, MCR, and MCDR have been framed for this purpose. Great care needs to be taken when the regulator is allowed to both regulate and mine. Ideally there should be arm's length between the regulator and any State entity that mines. It is necessary that if State organisations mine, they should be required to do so with the same obligations and rights as all other miners. In addition, transparent and secure measures need to be undertaken to ensure that confidential information provided to the regulator by ML holders does not make its way to State organisations that undertake mining activity. This is important as it would assure the investor of a level playing field and thus boost investor confidence. The existing Indian mineral policy and laws provide for State organisations to undertake mining and give a clearly preferential treatment to PSUs

⁴ United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP), 1999, *Minerals and Metals Development and Trade for Sustainable Supply in Asia and the Pacific*, Mineral Resource Assessment, Development, and Management Series, Vol. 4, United Nations, New York.

undertaking prospecting and mining, even in respect of areas prospected by private sector investors.

1.28 The NMP states that the states and Centre will play their regulatory roles in their respective domains. In fact, one of the most serious concerns expressed in the many presentations before the Committee relates to the confusion between the relative roles of the states *vis-à-vis* the Centre. While the issue of value addition has been posed as a separate term of reference for this Committee and will be dealt with separately, there are other areas where the states disregard the spirit of the MMDR Act. These mainly concern statutory and procedural issues in the NMP. It is necessary to ensure that states do not make laws, rules, and guidelines that are not in harmony with the Central laws and national policy.

1.29 The NMP commits the State to facilitation of finance for mine development and exploration. However, financing of exploration projects carries with it the element of risk and returns are not always guaranteed. The economics of mining is a little more complicated than that of industry generally because prior to investment finance, risk capital is needed for exploration. This needs to be in the nature of venture funding because finds in the form of adequately large ore bodies may not be forthcoming. Hence, operations have to be carried out on a large enough scale to enable set-offs (i.e. of no-find operations against finds). It is due to the uncertainty in finding economically viable ore bodies that exploration projects face difficulties both on the equity and debt front. It is, therefore, necessary to promote such financing proactively by encouraging venture capital.

1.30 For encouraging private sector initiative in the matter of raising risk finance for prospecting, the Committee found the Canadian model to be very attractive. Canada, which is known to be the main mining based economy of the world, spends more on exploration than any other country. Mining in Canada has grown as a result of investment in mining by financial institutions and institutional investors, such as investment funds (both debt and equity), through stand alone small- and medium-scale exploration companies known as juniors. These companies, numbering in the hundreds, are specialists with state-of-the-art technologies in detailed exploration and, to some extent, in mine development but not in mining proper. They raise finance from the financial markets for taking up a prospecting project. The end product is the data in respect of a mineable ore body, which is then sold to interested miners along with the ML. Variations of the model are also available, where, for

example, a mining major may outsource the exploration work to a junior, or where the major in the process of exploration comes across a relatively small ore body in which it may not be interested and which it passes on to a junior for exploration and disposal to small- or medium-scale miners. It may be noted that the finance raised by juniors is basically risk finance, which looks for high returns commensurate with the risk. In 2005, juniors accounted for an exploration expenditure of US\$ 2.3 billion out of the global total of US\$ 5.1 billion. The Mongolian Gold vein and the Tibetan Gold vein, which were barely suspected as reserves of any worth, were prospected by Canada's junior prospecting companies, using risk/venture finance from the Canadian and European financial markets, and were discovered to be major finds. China has made great progress in finding and mining unexpected and unknown ore bodies by utilising the juniors' model of Canada.

1.31 For India to use the Canadian model, three major changes will be needed in the Indian policy, laws, and rules. First, a seamless transfer to a ML from a PL held by a prospecting company, which means that a junior PL holder should be guaranteed a ML in respect of his find without any exception or exemption; second, deletion of the third proviso to Rule 37(2) of the MCR, which prohibits a prospector from charging a premium for his find while transferring his ML to another miner; and third, speedy decision making on applications for PLs and MLs submitted by junior companies. A junior company raises funds from financial markets and these funds have to be deployed immediately. Once a proposal to prospect is put before the investor and a decision to invest is taken, the work has to start straightaway. This means that the PL should be in the possession of the junior when it goes to the market to look for funds. The time available at the disposal of the junior is very limited. The PL should either be granted or rejected within two months of the application. The current time frame of two years between an application and a PL is not conducive to investment through juniors *à la* the Canadian model. These shortcomings in the Indian policy, laws, and rules have been responsible for keeping the entire junior community out of the mining sector in India, thus depriving the sector of the large amounts of FDI in the form of risk finance needed to discover and mine its resources. A policy decision to attract the Canadian type junior companies to invest in the risky business of exploration and prospecting is imperative and for this, suitable amendments would have to be made in the laws and rules, as proposed later in this chapter.

1.32 The NMP, MMDR Act, MCR, and MCDR provide for Central and state organisations to prospect for minerals but do not lay down separate guidelines for allocation of mines prospected by public agencies. The lack of a clear system for disposal of government prospected mineral ore bodies can provide an opportunity for arbitrary practices. In India, the main government bodies engaged in detailed exploration activity are the MECL, which undertakes promotional exploration on behalf of the government, GSI in a few rare cases, and the state Directorates of Mining and Geology (DMGs). The current provision for disposal (or allocation) is mainly through discretionary decision by the state governments (in some cases, with the approval of the Centre) on the basis of some very broad parameters. In non-notified areas (areas for which applications have not been invited through publication in the official Gazette), state governments are expected to follow the first-come-first-served principle, while all applications in notified areas (areas for which applications have been invited) are to be considered in terms of the parameters laid down in Section 11(3) of the MMDR Act. However, in all cases, the state governments, and in some cases, even the Central government, are authorised to bypass these provisions at their discretion. It is necessary to introduce transparency in the allocation of ore bodies either through a tender/auction system or by spelling out in very precise detail the method of ascertaining who best satisfies the requirements of Section 11(3) and making the same binding. Ideally, a tender/auction system would be most suitable inasmuch as such a system would have the additional advantage of augmenting state revenues, which is a major concern of the state governments. The tender/auction system may also be applied to ore bodies in respect of which prospecting data has come into the public domain after the lock-in period has expired without the prospector having filed a ML application. Hence, subject to the exception mentioned in Chapter 5 (see paragraphs 5.13 and 5.14), the tender/auction system should be used for disposing of ore bodies prospected by State agencies at public expense.

1.33 Para 7.12 of the NMP states that efforts will be made to promote small-scale mining for exploiting small and scattered deposits as the capital required is low and mining is employment-intensive. One of the geological peculiarities is the occurrence of small mineral deposits. However, it is also recognised that economies of scale are particularly important for mining. Small ore bodies either remain unexploited or are mined intermittently by miners in the small scale, depending on the price of ore prevailing in the local market, resulting in inefficient or suboptimal mining. While small-scale mining may be allowed to flourish wherever feasible, it has been argued before the Committee that such small deposits that

would otherwise remain unexploited could be given, wherever possible, on priority basis as a cluster of mines to individual miners/ end users who are otherwise qualified. This would reduce the phenomenon of non-operating leases by enabling investors to reap the benefits of scale economies. In the case of iron ore, for instance, as against 600 MLs actually issued, only 240 leases are currently operational, with most of the small mines being operated either intermittently or not at all.

1.34 Para 7.13 of the NMP deals extensively with the issue of environment, forests, and the need to restore ecological balance. This aspect of mining development is now an area of prime importance. With the Samatha judgment⁵ of the Hon'ble Supreme Court, the right to compensation of local populations, not only in cash through usual relief and rehabilitation (R&R) packages but also to a fuller life, now requires to be written into the law. While the NMP speaks extensively of environment-related issues the issue of Scheduled Tribes (ST) is mentioned only in passing in paragraph 1.3. The issue of compensation for local tribal populations as a primary charge on the minerals extracted from their land needs to be built into the policy and given primacy along with the issues of deforestation, pollution, and other disturbances caused in the ecology by mining activity. Detailed recommendations in respect of environment, forests, and local populations have been made by the Committee in Chapter 3 of this Report.

1.35 Foreign trade and augmenting of state revenues are dealt with separately in this report. However, as regards exports, broadly it may be said that financing of exploration projects carries with it the element of risk and returns are not always guaranteed. A limitation on exports would also amount to restricting the market for Indian ores, thereby depriving the miner of the best international price for his product. This would have consequences in terms of profitability of mining operations and, therefore, on investment decisions. The mining industry would be doubly handicapped in that not only would normal investment be adversely affected, so would also risk investment in exploration, which is vital for establishing new and recoverable finds. A selective ban or limitation on exports would be a direct disincentive to FDI in the mining sector. The policy should stress on linkages with global demand and global supply rather than domestic industry. Local industry can gain from

⁵ Supreme Court Judgment dated 11 July 1997, in Civil Appeal (CA) nos. 4601–02 of 1997 arising out of Special Leave Petition (SLP) nos. 17080–81, Samatha vs. State of Andhra Pradesh & others.

economies flowing from the country's comparative advantage rather than ownership of minerals.

1.36 In the Committee, there was a strong sense that the NMP would have to be revised to attune it to the current realities in the world economy in which barriers to international trade and investment flows have been rapidly dismantled. The policy would have to provide for the mining laws and practices to evolve in order to adapt to international best practices. While GSI and MECL need to be strengthened to enlarge their activities using state-of-the-art techniques, much of the investment needed for exploration and mining would have to come from the private sector. To induce investment flows, the policy environment would have to change. The procedures for grant of RP/LAPL/PL/ML would need to be made seamless and the holders of these permits and licences accorded security of tenure. The policy should also envisage unbundling of reconnaissance, prospecting, and mining activities to maximise private investment. The policy would have to require an arm's length to be maintained between the State as a regulator and the State as a commercial entity engaged in mining activities. While enacting legislation and drawing up rules and guidelines the states should ensure harmony with Central laws and national policy. The policy should provide for disposal of fully prospected ore bodies through public tender/auction to the extent possible. Equally importantly, the policy should provide for environmental concerns and the needs of local communities to be fully taken into account in mining operations. While comprehensive changes in the NMP document would have to be carefully drafted in order to reflect these ideas, the Committee agreed to the following specific textual changes in the NMP to embody some of them:

(i) Chapter 1: Preamble

- In paragraph 1.2, delete the first sentence. Also delete the words 'in times of international strife' at the end of the third sentence and add the following text as the fourth sentence:

'At the same time, it is essential that search is made in the country for more mineral resources through scientific exploration using state-of-the-art techniques, and for this

the policy environment must continue to be improved so that it is conducive for investment and technology flows.’

(ii) Chapter 2: Regulation of Minerals

- Add the following text as paragraph 2.3:

‘In order to make the regulatory environment conducive to private investment the procedures for grant of mineral concessions shall be seamless and security of tenure shall be guaranteed to the concessionaires.’

(iii) Chapter 3: Objectives

- Replace 3(c) by the following: ‘to promote use of state-of-the-art exploration techniques and mining technology’.

(iv) Chapter 4: Role of the State in Mineral Development

- Insert the following sentence at the end of the existing text:

‘In line with the current economic policy, in future the core functions of the State in mining will be facilitation of exploration and mining activities of investors and entrepreneurs, provision of infrastructure, and regulation and tax collection. Where it is deemed necessary for the State to continue in mining activities, there shall be arm’s length between State agencies that explore and mine and those that regulate. There shall be transparency in the allocation of ore bodies for mining.’

(v) Chapter 5: Survey and Exploration

- Replace the last sentence of paragraph 5.1 by the following:

‘While these government agencies may continue to perform the tasks assigned to them for exploration and survey, in future the private sector would be the main source

of investment in reconnaissance and exploration. For this to be accomplished, the regulatory regime would ensure clarity, fair play and security of investment.’

- In paragraph 5.2, insert the words ‘by government agencies’ after the word ‘given’ so that the paragraph reads as follows:

‘In conducting exploration for minerals, special attention will be given by government agencies to the development of strategic minerals through systematic investigation of various potential sources of their supply.’

- Delete paragraph 5.3.
- In paragraph 5.4, add the words ‘by government agencies’ after the words ‘Coordination of exploration work’. Also redraft the last sentence as follows:

‘The existing arrangement shall be reviewed periodically with a view to bringing about coordination among the survey and exploration agencies of the government, taking into account the exploration work undertaken by the private sector.’

(vi) Chapter 6: National Inventory of Mineral Resources

- After the first sentence in paragraph 6.1, replace the remaining text by the following:

‘In coordination with the Geological Survey of India, the Indian Bureau of Mines will maintain a database in accordance with the latest version of the UNFC system. The database would comprise both physical and resource inventory and include a Tenement Registry with details of greenfield areas, brownfield areas and relinquished areas, including areas given up by the GSI as not worth pursuing. The data would be maintained online, giving instant information to prospective investors on what is available for reconnaissance, prospecting and mining.’

(vii) Chapter 7: Strategy of Mineral Development

Conservation and Mineral Development

- In paragraph 7.1.2, redraft the third sentence as follows:

‘A thrust is to be given to exploitation of mineral resources in which the country is well endowed so that the needs of domestic industry are fully met, keeping in mind present and future needs, while at the same time exploiting the external markets for the minerals.’

Mining Equipment and Machinery

- Replace the existing text of paragraph 7.6 by the following:

‘Use of equipment and machinery that improve the efficiency, productivity, and economics of mining operations and safety and health of the persons in the mines and surrounding areas shall be encouraged.’

Linkages

- Replace the first two sentences of paragraph 7.8 by the following:

‘Mining contributes to the generation of wealth and creation of employment independently and should therefore be treated as an economic activity in its own right and not merely as an ancillary activity of the manufacturing industry. Domestic processing industry receives supplies of mineral resources produced by the mining industry at market prices prevailing from time to time. In order to be assured of uninterrupted supply of the mineral raw material from domestic sources, the user industry should develop long-term linkages with the mineral producing units.’

Infrastructural Facilities and Regional Development

- Insert a new sub-paragraph in paragraph 7.10 to read as follows:

‘For the improvement of infrastructural facilities, particularly transport facilities, in mining areas, financial resources available with government should be leveraged to the maximum extent possible through recourse to public–private partnership arrangements, wherever possible.’

Financial Support for Mining

- In paragraph 7.11, replace the first sentence of the second sub-paragraph by the following:

‘Induction of foreign technology and foreign participation in exploration and mining shall be encouraged.’

- Delete the remaining part of the second sub-paragraph and the third and fourth sub-paragraphs altogether.

Small Deposits

- Add the following text at the end of the paragraph 7.12:

‘Efforts would also be made to grant mineral concessions to consortia of small-scale miners and users who are otherwise qualified, for a cluster of small deposits so that the benefits of economies of scale are reaped.’

STATUTORY ISSUES

1.37 It is evident that the premises on which the last NMP was based have changed considerably and the changes proposed in the policy need to be reflected adequately in the MMDR Act and the Rules, viz. MCR, and MCDR. The critical issues raised by the investors pertaining to the current mining law are summarised as follows:

- Lack of clarity in the law and rules on such issues as the basis for grant or denial of concessions;
- Impediments currently obtaining in the law and rules such as transfer restriction conditions;
- Conflicting laws at the federal and state levels, giving a confusing picture to investors, e.g. states levying their own cess over and above royalties imposed by the MMDR Act, MCR, and MCDR;
- Uncertainty of tenure arising out of the non-seamless nature of moving over to the next stage and discretionary rules for termination of concessions;
- Non-viable conditionality imposed outside the provisions of the legal framework established by the MMDR Act, MCR, and MCDR, such as value addition;

In reviewing the MMDR Act, it is necessary to recapitulate the areas of concern raised by both domestic and international companies operating in India in their presentations before the Committee. These concerns are examined in the following paragraphs under various heads. The recommendations that follow should be treated as subject to the exceptions mentioned in Chapter 5 and the section on 'Allocation of Captive Mines to Steel Makers' in Chapter 7.

Exploration Licences

1.38 The MMDR Act provides for a two-tier exploration licence system, viz. RP and PL. Section 3(h) of the Act defines 'Reconnaissance operations' as:

any operations undertaken for preliminary prospecting of a mineral through regional, aerial, geophysical or geochemical surveys and geological mapping, but does not include pitting, trenching, drilling (except drilling of boreholes on a grid specified from time to time by the Central Government) or subsurface excavation;...

Section 3(ha) of the Act defines 'Prospecting operations' as

any operations undertaken for the purpose of exploring, locating or proving mineral deposits;

1.39 While the two-tier system of RP and PL is well recognised in modern exploration practices the world over, it was represented to the Committee that the approach in India to reconnaissance is now inadequate and out of date. The primary intent of reconnaissance operations (or regional exploration) is to identify areas in which ore bodies occur rather than to actually locate and delineate ore bodies. The latter falls in the realm of detailed exploration or prospecting. The purpose of RPs is to cover as wide an area by the activities mentioned in Section 3(ha) of the Act. Therefore, in the first instance, under modern mining laws RPs are generally non-exclusive, that is, there is no limit on the number of permits that can be issued over the same area. Secondly, RPs do not give rise to any preferential or absolute right to a PL or ML. This non-exclusive approach allows for various parties to undertake reconnaissance over large areas so as to identify the areas for prospecting in a more competitive environment. Given that the first-come-first-served concept is used in granting the PL, the RP holder in non-exclusive cases will naturally want to be the first to identify mineral occurrences for putting in his PL application and this will introduce an element of urgency in the RP holder's search operations. Thirdly, when RPs are issued on a non-exclusive basis, such RP operations are least regulated and no further obligation is imposed on the RP holder beyond submission of data of work done, while also keeping the application

fee high enough to discourage nuisance applications. This is in order to give a fair chance to everybody interested in locating the right areas for detailed prospecting. Finally, and most importantly, non-exclusive RPs restrain the tendency among exclusive RP holders to actually cross over to detailed prospecting activity over a smaller area at the expense of regional exploration, which is the main purpose of the RP.

1.40 In the current dispensation, RPs are issued on a mutually exclusive basis with area restrictions at the state level. While 202 RPs have been granted for an area of about 270,000 sq. km since the introduction of the concept in 1999, data filed by the RP holders with GSI covers an area of 61,765 sq. km only. There is also a huge potential for regional exploration in areas where RPs have not been applied for and where GSI has not done any work by way of regional exploration. Out of the country's geographical area of 3.20 million sq. km, as much as 1.82 million sq. km is hard rock area and potentially mineral bearing. Regional exploration through geochemical and geophysical mapping has been completed by GSI and other government agencies for not more than 12 per cent of the land most likely to bear minerals (about 570,000 sq. km) on the basis of the geological environment. Further, there are also areas where GSI has given up work or which have been relinquished by RP holders under the relinquishment requirements but in which other explorers may have interest. Therefore, in areas where no one has applied for an RP and/or which have been relinquished by GSI or other RP holders and are not covered by any current exclusive concession, an 'open sky' policy for granting non-exclusive RPs would be appropriate. Such a non-exclusive RP would neither entail much regulation nor entitle the holder to any automatic right to obtain a PL. In order to provide sufficient incentive-cum-security to such non-exclusive RP holders, they have to be assured strict application of the first-in-time principle in the grant of PL under the MMDR Act. This is the only return that they would be getting for the investment made by them in conducting reconnaissance operations and hence a seamless transition from RP to PL would be a crucial aspect of this policy. As a measure of liberalisation, non-exclusive RPs may be granted by the states directly without prior approval of the Centre, even in respect of Scheduled minerals. However, copies of these must be sent to IBM and the Central government to enable checking of whether the area restrictions have been rigorously followed or not.

1.41 It was represented to the Committee that the RP should have shallow pitting, trenching, and surface drilling (excluding subsurface/underground excavations) as

permissible activities in order to make the reconnaissance operation more conclusive. Section 3 of the MMDR Act specifically excludes pitting, trenching, subsurface excavation, or drilling (except drilling of bore holes as specified by the Central government) from the definition of reconnaissance operations. The Committee headed by the Additional Secretary, Ministry of Mines, mentioned in paragraph 4 of the Introduction, was in agreement with the view that some amount of pitting, trenching, and surface drilling needs to be allowed. However, there is also the view that RPs that permit too much exploration are counter-productive in that they tend to be used as PLs on smaller areas while leaving large areas unexplored. For this reason, prospecting activities such as pitting and trenching were excluded from the RP from the beginning. Clearly, RPs that permit any activity beyond regional exploration (such as pitting, trenching, and surface drilling) cannot be non-exclusive in nature as this would tend to produce anarchy on the ground with a number of parties trying to prospect at or near the same spot at the same time. Further, there are certain technologies now available for more intensive regional exploration such as deep imaging and electromagnetic probing, which are very expensive and not likely to be used by a non-exclusive RP holder. It is, therefore, necessary to balance the pros and cons of a non-exclusive RP *vis-à-vis* an exclusive concession. In this background, it is proposed that in addition to the non-exclusive RP the earlier concept of an exclusive LAPL be reintroduced, with the conditionality of exploration technology and expenditure being not only severe but also laid down in great detail in the MCR and applied rigidly. In such LAPLs, not only would pitting, trenching, and surface drilling be automatically permitted (as they are PLs meant for detailed exploration) but also the use of other expensive technical innovations for regional and detailed explorations would be automatically encouraged. This could include aerial survey using technologies superior to those used by GSI. Thus, while LAPLs may not be granted for entirely greenfield areas (except on technology considerations) the reconnaissance data to be furnished need not go beyond GSI's P2-level data. The MCR will need to lay down data requirements in rigorous detail. It goes without saying that in the case of the LAPL holder also the transfer to a ML will have to be seamless and assured as long as it is based on work done by the LAPL holder in his area. The issue of differential treatment in respect of area and duration required for the LAPL is dealt with in subsequent paragraphs.

1.42 Since the purpose of the RPs is to supplement the regional exploration work of GSI and other public sector agencies, such RPs would be given for areas on which GSI has not done any exploration work at all (except geological mapping) or has abandoned the work

after the P1 or P2 stage. LAPLs, meant for those who would like to collect additional data by way of exploration before applying for a ML or who would like to undertake regional as well as detailed exploration using expensive technologies, hence would normally be given not only for greenfield areas (on technology considerations) but also for areas given up by GSI and/or RP holders even after work upto the E1 level.

1.43 As regards PLs in RP held areas, in the current dispensation the exclusivity clause ensures that no application for a PL can be entertained where a RP is in operation. However, it is argued that such exclusivity militates against the basic concept of RP, which was introduced mainly to invite private sector initiative and investment into regional exploration and, thereby, supplement and add to the work done by GSI. If RPs are granted for areas where GSI or a government agency has already completed regional exploration and generated adequate data warranting detailed exploration then a RP for that area would become counter-productive in that it would not only duplicate reconnaissance work where this has already been done but also hold up the detailed exploration work for the duration of the RP in the RP-held area. Conversely, it is argued that the work of regional exploration done by GSI is too sketchy to enable an investor to take the decision to invest in detailed exploration and the technologies available for geological information collection are now so advanced that GSI data is too inadequate at the end of a regional exploration exercise (even up to E2 level) to warrant a PL. While the concept of LAPL can resolve this issue to some extent it is also suggested that an applicant be allowed to apply for a LAPL or a PL directly in the non-greenfield areas allotted to one or more RP holders under the 'open sky' policy. Non-greenfield areas refers to those areas that are given up by GSI after P1 or P2 work and also to areas relinquished by other RP holders whose data is put into the public domain after the lock-in period. Since a PL applicant has to prove the existence of a mineral occurrence not only in law but also to justify the investment in prospecting no investor will risk an RP activity in an area which has already been adequately explored by GSI, just as no LAPL/PL applicant will risk investment unless adequate regional exploration data is available. It follows that the protection afforded to the LAPL/PL holder would need to be very considerable. This is dealt with later in the subsection dealing with security of tenure.

1.44 In the light of the discussions above, the following changes in respect of exploration licences are recommended:

- (i) The current two-tier system of RP and PL should be replaced by a three-tier system of RP, LAPL, and PL.
- (ii) As regards RPs, an 'open sky' policy should be adopted by granting non-exclusive RPs without any preferential or automatic right to a PL but also without much regulation, i.e. by relaxing most of the conditions mentioned in Rule 7 of the MCR and Form F-1. In fact, a fresh memorandum of understanding (MOU) and Permit Form will need to be prepared for this purpose. The 'open sky' RP policy would apply not only to areas that are greenfield areas, i.e. where no work has been done by GSI or any other public agency, but also to areas where GSI and/or RP holders have given up work without identifying any workable prospect for detailed exploration. For the first few years, non-exclusive RPs can only be granted for areas that are not held under current RPs, which have been granted and are operational as per the present scheme, or for areas relinquished by existing RP holders. This will give impetus to investment in regional exploration where a vast amount of work still needs to be done. The only obligation on the RP holder would be to periodically file data of the work done with appropriate lock-in arrangements for the same. Non-exclusive RPs may be granted by the state governments without prior approval of the Centre, even in respect of Scheduled minerals.
- (iii) The RP holder would be entitled to a LAPL/PL on the basis of first-in-time principle and not merely on the priority principle currently in use. This right will be automatic with no discretion to either the state government or the Centre to refuse or hold back the LAPL/PL, thus assuring a seamless transition from RP to PL for the first-in-time non-exclusive RP holder. However, fulfilment of the data requirement as laid down in the MCR as a condition precedent to the grant of LAPL/PL to the RP holder would have to be rigorously ensured.
- (iv) RPs for an area would not be restricted to one permit holder or one mineral. Under the 'open sky' policy, RPs can be granted for the same area to more than one applicant on non-exclusive basis. Since the first-in-time principle would be applicable for converting RPs into LAPLs/PLs, this multiple permit system will encourage RP holders to complete their regional exploration work expeditiously.

- (v) Existing RP holders would continue to be governed by the existing law of priority for PL until the duration of the RP runs out.⁶
- (vi) The concept of an exclusive LAPL should be reintroduced. The LAPL holder would automatically be able to do shallow pitting, trenching, and surface drilling, as these are activities that go beyond regional exploration but fall short of detailed exploration. Considering that these activities would involve drawing of samples, specific provisions would have to be made in the existing Section 3 of the MMDR Act for LAPL holders. This exclusive concession (LAPL) would be available to those who are ready to incur heavy expenditure on intensive regional exploration work as also on high technologies such as electromagnetic probing and deep imaging. The MCR will spell out the conditionality relating to the work to be done and technologies to be used and also the regional exploration data required to be submitted for getting the concession. LAPLs may be granted for areas where no detailed exploration work has been done, areas that are greenfield areas but where the applicant proposes to incur heavy expenditure and use high technology, areas relinquished by RP holders, areas where regional exploration data has been filed and the lock-in period is over, and areas not prospected by GSI beyond P2 level.
- (vii) A LAPL/PL can be granted directly in an RP-held area to a non-RP holder if the application for a LAPL/PL is filed by the non-RP holder before an application is filed by the RP holder. However, the LAPL/PL applicant will have to either (a) show basic geological information (reconnaissance) data on the basis of which the concession is sought, which means that this facility will be available only for areas relinquished by GSI/RP holders/DMG; or (b) show the desire and ability to use superior technology that a non-exclusive RP holder would not be inclined to use. In both cases, the applicant must satisfy the authorities about the accuracy and genuineness of the data.
- (viii) The fees should be significantly higher than the prescribed rates (as of 30 June 2006) for all the concessions, viz. RP, LAPL, and PL, in order to prevent nuisance applications, especially applications that attempt to pre-empt genuine explorers. Also, the penalties for LAPL and PL holders who do not explore as

⁶ The Committee is of the view that such prospective applicability of the changes in the law should be the rule for PLs and MLs also.

per plan should be significantly higher than the prescribed penalties (as of 30 June 2006).

Mining Leases

1.45 MLs cannot not be given unless there is ample evidence of an adequately prospected ore body, i.e. data describing in detail the entire ore body which is the end product of a successful PL operation. However, the current dispensation does not lay down this requirement clearly, except Section 5(2)(a) of the MMDR Act, which requires only proof of mineral occurrence resulting from a RP (simple reconnaissance or regional exploration exercise). Of course, the requirement of a mining plan takes care of this issue to a certain extent but the Act needs to clearly lay down this requirement and the MCR should lay down in detail the nature of data to be provided in respect of each parameter. It may be mentioned that this is one of the main reasons why a large number of leases have remained non-operational. MLs that have been given on the basis of RP data instead of PL data cannot be operated as prospecting (detailed exploration) is still to be completed. ML holders who are mostly in the small and medium enterprise (SME) sector have neither the knowledge nor the funds required for detailed exploration and hence the MLs remain idle.

1.46 MLs are granted in two kinds of areas, viz. areas prospected by a PL holder and areas prospected by State agencies with well-delineated, i.e. fully prospected, ore bodies ready for mine development and mineral extraction. The issues concerning the former are dealt with in paragraphs 1.58 and 1.59 below, which deal with security of tenure. The issue of granting MLs in respect of ore bodies fully prospected by public agencies at public expense has also been discussed earlier in paragraph 1.32 above. It has been proposed in the interest of transparency and for augmenting state revenues that the free distribution of such mineral resources may be done away with and that the ore bodies be disposed of through a tender/auction process as a matter of policy. For the tender/auction process to be introduced, it will be necessary to amend the MMDR Act to grant the power to make disposals and also amend the rules to provide a transparent procedure for such disposals. At present, the disposal of such ore bodies is done along with other areas on a simple first-come-first-served basis [Section 11(2)] or where an area is notified in terms of Section 11(4) by inviting applications and selecting one among several applications on the broad parameters mentioned in Section

11(3) of the MMDR Act. However, in all cases, the state governments, and in some cases even the Centre, are authorised to bypass these provisions at their discretion.

1.47 It is, therefore, recommended that:

- (i) The MMDR Act be amended to exclude ore bodies fully prospected by public agencies at public expense, as mentioned in paragraphs 1.32 and 1.46 above, from the purview of Section 11 of the MMDR Act;
- (ii) A fresh provision be introduced requiring the Central government, through the GSI (for GSI-prospected areas) and through IBM (for other than GSI-prospected areas), to notify all areas that have been prospected (detailed exploration) by State agencies and are ready for mining within a time-bound framework;
- (iii) The state governments, through their Directorates in respect of non-Schedule I minerals and in consultation with IBM in respect of Schedule I minerals, may be charged with the task of disposing of the ore bodies in such notified areas through a transparent tender/auction process. In the case of iron ore and bauxite, which are fully prospected, the disposal may be through the state governments with the association of IBM.
- (iv) Detailed rules and procedures for such disposal by tender/auction be laid down in the MCDR.
- (v) However, in the interest of overall development of the state, the state government may waive the tender/auction procedures for ore bodies occurring within the state and grant the lease to an applicant who is otherwise qualified in terms of criteria (a) to (c) of Section 11(3) of the Act but who is also willing to set up the downstream industry within the territorial limits of the state. In case of more than one applicant offering to set up such industry within the state, the state government may grant the ML for such an ore body to the applicant which it adjudges to be the most deserving in terms of criteria (a) to (d) of Section 11(3) of the Act. In such cases, the full cost of exploration by the public agency should be recovered from the lessee.

Duration of Concessions

1.48 In the MMDR Act, the durations for which RPs, PLs, and MLs may be granted or renewed are as follows:

7. (1) The period for which [a reconnaissance permit or prospecting licence] may be granted shall not exceed three years.

(2) A prospecting licence shall, if the State Government is satisfied that a longer period is required to enable the licensee to complete prospecting operations be renewed for such period or periods as that Government may specify:

Provided that the total period for which a prospecting licence is granted does not exceed five years;

8. (1) The maximum period for which a mining lease may be granted shall not exceed thirty years:

Provided that the minimum period for which any such mining lease may be granted shall not be less than twenty years.

(2) A mining lease may be renewed for a period not exceeding twenty years.

1.49 At present, the maximum period allowed for exploration is eight years, of which three years is for reconnaissance (RP) and five years is for prospecting (PL). It has been represented to the Committee that five years is not enough for doing proper detailed exploration work, especially when dealing with deeper or hidden ore bodies. This is a disincentive as the PL holder runs the risk of a wasted investment, as he has to stop work at the end of the PL period even if more exploration is warranted. In a study into the prospecting records of 52 mines worldwide, the average length of time required to explore for and develop a mine was found to be in excess of 10 years.⁷ Investors in exploration have, therefore, been requesting that the initial term of the RP be increased to five years, with the right to apply for an extension for a further period of five years. However, the concern has also been expressed that an unduly long RP could lead to an area being held up without serious exploration work being done. Besides, mine development is expected to be done as a part of the ML rather than PL and hence a period of 10 years may not be warranted.

1.50 In view of the above, the Committee recommends that while the total period of exploration under RP/PL or RP/LAPL may remain the same, i.e. a maximum of eight years,

⁷ James Otto and John Cordes (2002), *The Regulation of Mineral Enterprises: A Global Perspective on Economics, Law and Policy*, Rocky Mountain Mineral Law Foundation 9191, Sheridan BLVD Street 2003, Westminster, CO 80031, USA.

an RP holder who completes reconnaissance in less than three years and applies for and obtains a PL may be allowed to use the saved period in the latter concession as an additionality so that even while the combined duration under RP/PL remains eight years the maximum period of the PL could stretch beyond five years for an RP holder who completes reconnaissance and obtains a PL before his three-year RP period runs out. This kind of flexibility would not only address the need for the longer time sought for the PL but would also encourage faster overall exploration. The duration of the exclusive LAPL would be six years, extendable by another two years but with suitable and matching relinquishments as mentioned in paragraph 1.54 below. Since the total duration is not to exceed eight years, the duration of a LAPL applied for by a non-exclusive RP holder would be six years extendable by another two years but the total period of eight years would be reduced by the used-up period of the three-year RP. As far as extensions are concerned, non-exclusive RPs may be routinely extended for the next three years in respect of areas not claimed by a LAPL/PL applicant. LAPLs may be extended beyond the two years mentioned above but such extension shall only be in exceptional circumstances, e.g. where an ongoing project warrants additional work for sound technical reasons, etc.

Size of Area

1.51 The maximum area for which a RP, PL, or ML may be granted in a state at present under the MMDR Act is as follows:

6. (1) No person shall acquire in respect of any mineral or prescribed group of associated minerals [in a State] –

(a) one or more prospecting licenses covering a total area of more than twenty-five square kilometres; or

[(aa) one or more reconnaissance permit covering a total area of ten thousand square kilometres:

Provided that the area granted under a single reconnaissance permit shall not exceed five thousand square kilometres; or];

(b) one or more mining leases covering a total area of more than ten square kilometres;

Provided that if the Central Government is of opinion that in the interests of the development of any mineral, it is necessary so to do, it may, for reasons to be recorded by it, in writing, permit any person to acquire one or more prospecting licences or mining leases covering an area in excess of the aforesaid total area;

1.52 The concept of RP was introduced to facilitate mining companies to engage in large-scale regional exploration of minerals and, therefore, the maximum area allowed under RP is

10,000 sq. km in a state. This has attracted several world-renowned mining companies into exploration in India. However, these companies are now facing the problem of scaling down their exploration work to the 25 sq. km limit if they want to apply for a PL after completion of the RP exercise. It is argued that reducing their exploration activities suddenly to 25 sq. km from a size as big as 10,000 sq. km is detrimental to scientific exploration. It is also argued that the steep initial drawdown prescribed in respect of a RP could lead to some areas actually remaining un-surveyed or inadequately explored, creating a false perception that such relinquished areas have no mineral potential and are not worth prospecting further. Therefore, RP holders have been asking for an increase in the area limits of their PLs well above the current limit of 25 sq. km.

1.53 It has been proposed in some of the representations that the area limit of a PL could be increased either in terms of keeping it as a percentage of the RP or a fixed limit of 500–1000 sq. km. The rationale behind the demand is that an RP of 10,000 sq. km often yields data warranting detailed work on a much larger scale than the meagre 25 sq. km now permitted. The data is locked in for a period of three years during which time no prospecting can be done. Even subsequently, it is not fair that the generator of the data be treated no differently than other users who have accessed the data from the public domain. It has also been suggested that the case of a PL applicant who held an RP prior to applying for the PL may be distinguished from that of one who directly applies for a PL on the basis of existing exploration data. The Committee headed by the Additional Secretary, Ministry of Mines deliberated on this issue at length and suggested that the ceiling on the PL area be increased from 25 sq. km to 500 sq. km for RP holders who have undertaken at least an aerial survey of their entire RP area and filed their data with GSI or IBM. We consider the suggestion of the Committee headed by the Additional Secretary, Ministry of Mines to be appropriate. The limit for direct PL applicants is proposed to be increased from 25 to 50 sq. km in a state. However, for RP holders who obtain PLs for more than 100 sq. km (i.e. up to 500 sq. km), the relinquishment process should apply so as to scale down the PL area to 100 sq. km at the end of the first three years of the PL period. Strong obligations for working on the PLs should be imposed on PL holders, including expenditure commitments on an escalating scale, which should be incorporated as an important condition into the licence.

1.54 In the case of LAPLs, where, unlike in the case of RPs, the expenditure commitments as well as adherence to work done will be closely monitored, the area of 5000 sq. km may be

retained with relinquishments down to 500 sq. km (or less) at the end of the first three years and to 100 sq. km (or less) at the end of the next three years. This would be compatible with the RP/PL duration format. Additional areas for LAPL (above 5000 sq. km) could be considered in very exceptional situations to be spelt out clearly in the MCR, such as for sound technical reasons or where multiple minerals are being prospected and where no pending application exists. Of course, in cases where LAPLs are granted in RP areas to RP holders, the relinquishment down to 500 sq. km will be after a three-year period that will include the period expended in the RP.

1.55 In the presentations before the Committee, it has also been submitted that the maximum area for MLs in a state may be increased from the present 10 sq. km to 20–50 sq. km, as the development of world-class ore bodies require larger areas, especially if the mineral type is such that it covers large surface areas. In international mining laws, there is generally no upper size limit based on cumulative lease area. The size of the ML should be such as to allow for an area suitable for scientifically mining the entire deposit/ ore body. Therefore, ideally the maximum area held under a PL for detailed exploration should be the maximum area from which the lessee is entitled to extract. PL holders should have the right to mine complete ore bodies explored by them in detail and found to be worthy of mining. Since the limit of the PL is being proposed at 100 sq. km at the end of the third year (out of the five-year period), the maximum area for a ML for a PL holder may also be kept at 100 sq. km in a state. For direct PL applicants, the limit for ML would be 50 sq. km, coterminous with their PL area.

1.56 The MMDR Act grants flexibility to government to consider cases where larger areas are sought under PL and ML over and above the prescribed limits. The government may grant the same at its discretion. This creates uncertainty in the minds of the investors, as they are unable to plan for prospecting and/or mining in advance during the reconnaissance/LAPL stage itself. It is necessary to remove this uncertainty in the interest of promoting prospecting and mining over as large an area as possible.

1.57 In the light of the above discussions, the Committee recommends the following changes:

- (i) The limit for a direct PL applicant should be increased from 25 to 50 sq. km.

- (ii) The maximum total area under PL in a state be increased from the present 25 sq. km to 500 sq. km in the case of an RP holder. This would be subject to an escalating fee structure, minimum expenditure commitment, and relinquishment of area so that the area held is brought down to 100 sq. km. at the end of three years. Where no aerial surveys have been undertaken, the PL area would be 50 sq. km instead of the current 25 sq. km.
- (iii) The LAPL may be granted for an area of 5000 sq. km for eight years, with relinquishment down to 500 sq. km after the fifth year and 100 sq. km after six years. This will bring the LAPL area on par with the RP/PL area. The LAPL will be subject to severe conditionality in terms of work to be done and expenditures to be incurred on an escalating scale with appropriate penalties for failure. For LAPLs in RP areas, the relinquishments will be as mentioned in paragraph 1.54 above, i.e. down to 500 sq. km after three years of the total RP/LAPL duration of 8 years and down to 100 sq. km after six years.
- (iv) For LAPL/PL holders the maximum area of MLs in a state may be increased from the present 10 sq. km up to the area held in the LAPL/PL at the time of applying for the ML. This means that a LAPL/PL holder would be entitled to MLs for the entire area of 100 sq. km in a state, which is the limit to which the LAPL/PL area is to be brought down at the end of the third year of the five-year PL or the sixth year of an eight-year LAPL. For the PL holder who holds only 50 sq. km. in his PL, the maximum area limit for a ML should remain at 50 sq. km only.

Security of Tenure

1.58 At present, Section 11(1) of the MMDR Act provides for ‘preferential’ rights to RP holders for getting PLs in the areas where they have done reconnaissance work and to PL holders for getting MLs where they have done detailed exploration. However, it is argued that a preferential right for conversion from one form of concession to the next does not guarantee an exclusive or absolute right to a concession holder to prospect or mine any mineral deposit found within the area covered by his RP or PL. This creates uncertainty about returns on the investment made during the exploration stage. For security of tenure to be assured, it is necessary that investors are able to move from one form of concession to the next smoothly in a seamless and speedy process. The right of a holder to move to the next form of concession should be a statutory right and not subject to discretion. If the holder meets the

criteria under Section 11(1)(a) to (d) and has adhered to the terms and conditions of the licence then the conversion should be automatic. No additional conditions that have not already been mentioned in the MCR should be levied.

1.59 Additionally, there are serious reservations about certain provisions of the MMDR Act and Rules, viz. Sections 4(A)1 and 31 of the Act and Rules 26(1), 27(1)(b), 27(1)(m), 27(3), and 34 of the MCR. These provisions are perceived as giving wide discretionary powers to the state government and militating against the concept of security of tenure. The reasons for the reservations are listed as under:

- (i) Section 4A(1) of the MMDR Act, which provides for premature termination of a mineral concession, gives discretionary powers to the state government to terminate leases prematurely for such vague and wide ranging reasons as 'in the interest of Regulation of Mines and Mineral Development, conservation of mineral resources and such other purposes, as the Central government may deem fit'. Such powers for the government would be reasonable if they were limited to the need for national security or public works.
- (ii) The powers with the Central government under Section 31 of the Act to completely bypass, ignore, or alter all or any of the provisions of the MCR for the purpose of searching for and extracting minerals in the interest of mineral development militates against the concept of security of tenure and also transparency.
- (iii) The blanket powers with the state government to refuse grant and renewal of MLs under Rule 26(1) of the MCR is in stark contrast with the priority clause and negates the incentive to invest, which is provided by the latter. Simply recording the reasons in writing does not neutralise the arbitrary nature of this power.
- (iv) Rule 27(1)(b) does not provide an automatic right to mine associated minerals not mentioned in the PL that may be found in the course of operating a PL.
- (v) Rule 27(1)(m) of the MCR gives the state government the right to pre-empt a miner's minerals at all times subject to the fair market price being paid to the lessee. This right, which can be exercised at any time regardless of the miner's marketing commitments, increases the uncertainty surrounding the project. Since the state is protected in different ways, the need for such pre-emption can

be obviated if the lease deed is exhaustive and includes all minerals and associated minerals.

- (vi) Rule 27(3) of MCR is discretionary in that it allows the states/Centre to put restrictive conditions in MLs, which have not been spelt out in advance. A prospector needs to know the terms and conditions on which a ML will be granted to him before he starts investing in prospecting operations. Section 27(2) should be enough to take care of environmental and other concerns listed there. The ability of the government to impose additional obligations in the lease without specifying them in advance means that applicants would not know the obligations imposed upon them until they obtain the lease.
- (vii) Rule 34 of MCR, which empowers the state government to exclude or reduce any area from the licensed area, also contributes to uncertainty arising out of the arbitrary powers of the state government. Concessionaires who may have invested large sums in a risky venture on the understanding that they would be allowed to mine an ore body discovered and identified during exploration are exposed to the uncertainty of the area being reduced or a portion excluded.

1.60 The Committee was unanimous on the point that providing security of tenure to the investor was a precondition for stimulating investment in mining activity. Investors should have the guarantee that if in the course of exploration a deposit is discovered, the exclusive right to mine it would vest with them and that they would not be deprived of it under some pretext or the other. Although the MMDR Act provides for a preferential right to the PL holder this provision is not sufficient to assure investors of security of tenure because it is qualified by a number of discretionary powers of the state, which make the preference illusory. In view of the above, the Committee recommends that:

- (i) RP (non-exclusive) holders should have an automatic right to a PL on first-come-first-served basis, provided they fulfil the requirement for submission of data and satisfy all eligibility conditions. The provision of preferential right to existing RP holders should, however, continue until the duration of the RP runs out.
- (ii) Where a LAPL/PL has been granted in respect of a land the licensee shall have the exclusive right to obtain a ML in respect of that land over any other person

on fulfilling the requisite conditions under the Act or as prescribed under the Rules and as incorporated in the terms and conditions of the lease.

- (iii) In Section 4A(1), the phrases ‘of regulation of mines and mineral development’, ‘or for conservation of mineral resources’, and ‘such other purposes, as the Central government may deem fit’ should be deleted and the words ‘in the interest of national security and public works’ added.
- (iv) In Section 31, the sweeping powers given to the Central government for circumventing any of the provisions of the MCR and MCDR, and that too in a non-transparent manner, need to be circumscribed, so that intervention of the Central government affecting security of tenure of the concessionaire, if at all necessary, is possible only in narrowly defined circumstances. It is not enough for the Central government to record the reasons in writing.
- (v) Rule 26(1) of MCR, which gives the state government the authority to refuse an application for a ML, should be amended to ensure that it does not come in the way of a smooth and seamless transfer from one concession to another.
- (vi) Rule 27(1)(b) should be amended to give an automatic right to the miner to mine associated minerals discovered in the course of mining subject to a suitable fee being paid and the mining plan being amended with the approval of IBM.
- (vii) Rules 27(1)(m) and 27(3) of MCR, giving the authority to the state to pre-empt minerals and put restrictive conditions, should be deleted. The lease deed form should be exhaustive and should include all minerals and associated minerals for which applicants may have applied and to which they may be entitled. The form should also contain additional conditions imposed by the state governments on captive miners and value adders.
- (viii) Rule 34 of MCR, authorising the state to reduce or exclude an area from the entitlement of a PL holder to a ML, should be deleted except in the case of specified public purposes.
- (ix) Mineral concession holders should have the right to renewal of the concession if they have met the obligations of the concession. As the term ‘renewal’ is used to mean fresh grant in judicial parlance, the word ‘extension’ should be used instead of ‘renewal’ wherever it occurs in the Act or Rules. Extension of the ML should be automatic until the exhaustion of the deposit or voluntary

relinquishment of areas by the lessees, whichever is earlier, subject, however, to the fulfilment of the conditions of the lease.

Criteria for Grant of Mineral Concessions

1.61 The criteria for grant of mineral concessions are laid down in Section 11 of the MMDR Act. Section 11(1) deals with preferential rights of RP and PL holders to PLs and MLs respectively. Section 11(2) gives preferential right to the first-in-time applicant for RPs, PLs, and MLs. Section 11(3) states that in areas notified by state governments inviting applications for concessions and where multiple applications are received the following criteria be considered:

- a. any special knowledge of, or experience in, reconnaissance operations, prospecting operations or mining operations, as the case may be, possessed by the applicant;
- b. the financial resources of the applicant;
- c. the nature and quality of the technical staff employed or to be employed by the applicant;
- d. the investment which the applicant proposes to make in the mines and in the industry based on the minerals;
- e. such other matters as may be prescribed.

Section 11(4) gives discretion to the state government to award a mineral concession after considering the above criteria. Section 11(5) gives discretion to the state government not to follow the first-in-time principle.

1.62 The mining industry has raised its concern on the above criteria primarily on the following counts:

- (i) The first-come-first-considered principle is being violated by using the discretionary powers given under Section 11(5) of the MMDR Act. As the special reasons to be recorded are not specified or prescribed under the Act or in the Rules, it is easy for a state authority to discriminate in favour of a company that is not a prior applicant. In fact, there are instances of early applications being kept pending for a decision till a favoured applicant applies for and is granted a mineral concession using this discretionary provision;

- (ii) Areas are notified by state governments under Section 11(4) even when applications have been received and should rightly have been disposed of on the basis of the first-in-time criteria;
- (iii) The criteria under Section 11(3) of the MMDR Act are being applied by the states in a selective and subjective manner. Selection of applicants for grant of mineral concession in multiple application cases is almost always disputed, giving rise to litigation and delays. Between January 2001 and December 2005, out of 509 approvals given for the mineral sector in Part C of Schedule I of MMDR Act, 1957, 146 revision applications were filed.

1.63 The Committee feels that it is important to ensure strict adherence to the tried and tested and globally adopted first-in-time principle in the mining sector. In view of the fact that the Committee is recommending an ‘open sky’ policy for grant of non-exclusive RPs, which would not give the RP holders any priority in getting PLs, the only incentive offered to such RP holders would be the assurance offered by the first-in-time principle. Therefore, for the confidence of investors in such RPs, strict application of the first-in-time principle would be imperative. Not granting PL for an area to the RP holder who is the first to discover mineral occurrences in that area will discourage reconnaissance operations from being undertaken, turn away investors, and lead to areas remaining unexplored. Therefore, the first-in-time principle has to be made strictly applicable in the grant of PLs in non-exclusive RP cases and there is a need to delete discretionary provisions such as Section 11(5) of the MMDR Act.

1.64 As regards MLs, the Committee is proposing a separate dispensation in respect of ore bodies that have been fully prospected by public agencies such as GSI, Mineral Exploration Corporation Limited (MECL), and the state Directorates, which may be seen in paragraph 1.47. For the rest, the first-come-first-served approach is well tested in most progressive mining regimes. In cases where the holder of a LAPL/PL applies for a ML, the holder has to be given the exclusive right to mine the prospected deposit. There cannot be any scope for exceptions or exemptions and Section 11(5) will have to be deleted as mentioned earlier.

1.65 However, in cases where the area for which a ML is applied for is not under PL and also not covered by the special dispensation for ore bodies emerging out of publicly funded exploration programmes, the first-come-first-considered principle would still need to be used

to give priority to the prior applicant. As already stated, MLs should not be given without detailed prospecting data delineating the ore body to be mined. This is possible only from data gathered by a LAPL or PL holder (other than data prospected by a public agency at public expense). In rare situations where such data has become available from a credible private prospecting source, such as areas prospected fully by an ex-LAPL/PL holder but not followed up with an ML application and where both the PL and lock-in period have expired or where non-promotional work has been done by MECL or any state PSU for a client, prioritisation can be considered as per Section 11(2) of the Act. The preference should be, of course, to put such ore bodies into the public domain and auction them (subject to the exceptions mentioned in Chapter 5) rather than dispose of them directly.

1.66 As regards Section 11(3), the Committee has stated earlier that details of all areas should be made available on an open website to be maintained by IBM. This website should give details of areas currently held under a concession, areas being explored by GSI or other state agencies at public expense, and areas available for exploration, including relinquished areas. This will make the notifications under Sections 11(2) and 11(4) of the Act and Rule 59(2) of the MCR 1960 redundant. It should be the responsibility of the state governments to dispose of any application received for a concession in a time-bound manner. Regardless of whether a single application or multiple applications are received the application/s should be disposed of on the basis of Section 11(3), which provides the criteria to be considered. However, it is necessary that these criteria should be elaborated in detail in the MCR itself, thus minimising the scope for subjective interpretations. For example, the kind of geological information required relevant to each type of concession should be spelt out. So too should the level of technical capabilities, finance, investment in downstream industry, etc. be laid down in detail in the MCR itself.

1.67 The Committee finds that the discretionary provision under Section 11(5) of the MMDR Act is not in line with the international practice. The provision creates apprehensions in the minds of genuine investors and serves no useful purpose. To provide uniformity and transparency in the criteria used and to prevent any abuse of discretionary powers in the grant of mineral concessions, the following measures are recommended:

- (i) Section 11(1) may be modified so that a non-exclusive RP holder has the right to obtain a PL on first-come-first-served basis rather than 'a preferential right'. A

LAPL/PL holder shall have the exclusive right to obtain the ML. These rights would of course be subject to the fulfilment of conditions in the MCR, including those relating to furnishing of data.

- (ii) Section 11(2) may be modified such that all persons applying for a RP are entitled to it, provided they are eligible as per pre-determined criteria for proving their credibility and genuineness. A RP will be for all minerals and associate minerals (with exceptions specified where GSI or State agencies have already done some work) and may run concurrently with or overlap other RPs, both in terms of time and area. The RP holder who is first-in-time shall have the right to be granted a PL.
- (iii) Grant of the exclusive LAPL should be on the basis of well-defined criteria and again on the first-in-time principle. Where a LAPL/PL is applied for directly by two or more persons, the applicant whose application was received earlier shall have a preferential right to be considered for the grant of the PL, regardless of whether he holds an RP or not. The applications should be disposed of by the state government within a stipulated time limit. Where two or more applications are received for a LAPL/PL before the expiry of the time limit, the matter shall be decided by taking into consideration the criteria mentioned in Section 11(3) of the Act, including the criterion of value addition as detailed in Chapter 5. However, the eligibility criteria will be laid down in the MCR for all RP and PL applicants so as to ensure that only genuine and credible applicants apply. To ensure that LAPLs/PLs are not obtained by speculators who have no intent to prospect on the basis of a time-based mining plan, a rule should be prescribed with heavy penalties for violation. Similarly, a minimum expenditure limit per square kilometre should be imposed on an escalating scale so as to discourage such speculators.
- (iv) In the case of multiple applications, all the criteria mentioned in Section 11(3) of the Act should be taken into consideration while evaluating applications for establishing comparative merit. The applicant must fulfil a minimum qualification regarding experience of mine-related activity, financial resources, and nature and quality of staff before being considered for grant of application on the basis of the proposed investment in the mine or in the industry based on the mineral. (See Chapter 5 for more detailed treatment of preference that can be given to value adders.)

- (v) Rules should be prescribed in the MCR for interpreting precisely the criteria provided under Section 11(3) of the MMDR Act, laying down the benchmarks to the extent possible so that there is clarity and objectivity in the application of these criteria.
- (vi) Until IBM is ready with its information website the concept of notifications will need to continue. Section 11(4), relating to the treatment to be given to concession applications in notified areas, will need to be modified to take non-exclusive RPs out of its purview and bring LAPLs within its purview. Notifications will be restricted to LAPLs and MLs. The former will be for greenfield areas or areas mentioned in paragraph 1.44 (vi) above. ML notifications will be restricted only to areas fully prospected by GSI or government agencies and shall be for granting MLs on tender/auction basis. PL applications are expected to emerge either from freely available RPs or from the reconnaissance data put out by GSI and government agencies.
- (vii) Section 11(5), which grants overriding discretion to the state government to bypass the priority principle in any situation, should be deleted.

Transferability of Prospecting Licences

1.68 It has been argued in the context of the Canadian model (see paragraphs 1.30 and 1.31) that for exploration firms the ability to transfer a PL or a ML based on prospecting done by them is vital. Stand alone exploration companies who specialise in exploration do not mine. Their goal is to discover a deposit and then to transfer their interest in that deposit for a royalty, cash payment, etc. to a company that specialises in mining. Large mining companies are also interested in transfer rights because if they discover a rich but small deposit that is too small for their portfolio, they would like to be able to sell their interest to a smaller firm. In most countries where transfers of prospecting rights/MLs are permitted by law, the most common restriction is that the entity to which the right is being transferred must qualify to hold the right by meeting defined competency requirements. To ensure efficient and timely handling of a request for the transfer of an exploration right it is necessary that the regulations and rules be clearly stipulated, detailing the procedures to be followed by both the applicant and the government agency involved with minimal discretion to the regulatory authority.

1.69 In India, a PL is transferable but instead of a provision in the MMDR Act the right is mentioned in the licence document (MCR Form F, Part IV, Rights of Licensee/Licensees).

The actual process of transfer is not transparent. Rule 14(vii) of MCR states that transfers shall be subject to the sanction of the state government. MCR Form P is the format in which a transfer deed is to be executed. MCR Form F (Model Form of PL) contains a provision, Part IV(1) that summarises some of the requirements for a transfer. Rule 50 of MCDR requires that a notice of transfer be sent to the Controller General, the Controller of Mines, and the Regional Controller and Rule 52 of the MCDR requires a notice to be sent to the state government in a prescribed form, namely MCDR Form L. Rule 51 of MCDR specifies that certain records must be transferred to the new licence holder and that a list of such records must be sent to specified officials. Other Rules such as 46, 48, and 49 of MCR are also applicable to transfers.

1.70 Representations have been made before the Committee that most exploration companies find the provisions of India's MMDR Act and its Rules pertaining to transfer of PLs confusing. The requirements are scattered and the actual transfer procedure is unclear. In most new mining laws, the important right to transfer a PL is specified directly in the statute but in the Indian system, the right arises from the licence. The need to obtain government approval prior to transfer introduces an element of uncertainty, as the approval may be either withheld or be slow to come. That the government has a duty to approve a transfer if specified requirements are met by the transferor and the transferee is not clearly stated. If investment in prospecting by prospecting firms is to be encouraged then discretion to deny a transfer should be limited to a finding that the transferee does not meet predetermined qualifications. The uncertainty arises out of the fact that there is no obligation on the authority to approve a transfer if all requirements have been met, the approving authority is not required to inform an applicant for a transfer of the reasons for denying the transfer, and guidance is not provided regarding a time frame for approval/disapproval.

1.71 The Committee, therefore, recommends that the right to transfer a PL should be explicitly stated in the MMDR Act (and not left to the mining rules or the licence instrument). Greater transparency can be achieved by stating in the MMDR Act that a prospecting licensee has the right to transfer his licence to a qualified entity. A single approving authority should be named. The Rules should provide in a single section a detailed description of the procedure, requirements that must be met, the circumstances under which an application can be denied, and a requirement for the approving authority to give reasons for denying an application. The Rules already provide that a transferee assume and be

responsible for all rights, liabilities, and duties incurred by the transferor under the PL prior to the transfer.

1.72 What applies to PLs also applies to MLs that have been obtained by PL holders. Rule 37(2) of MCR will need to be modified and the negative approach of the entire Rule 37 rectified insofar as such licences obtained by prospecting companies are concerned. The third proviso in Rule 37(2) of MCR will need to be deleted.

Reservation Provisions and Special Powers

1.73 Promotional detailed exploration is carried out by MECL and state Directorates through public funding. Some state and Central PSUs, including MECL, also carry out commercial prospecting on behalf of their clients. Therefore, the field of exploration and mining in India is open to both public and private sectors. However, certain provisions under the MMDR Act give primacy to the public sector *vis-à-vis* the private sector. The relevant provisions under the MMDR Act that give special powers to the Central and state governments to undertake reconnaissance, prospecting, or mining operations in certain areas after reserving them exclusively for the public sector are contained in Sections 4(3), 17(2), 17(4), 17A(1A), and 17A(2).

1.74 These provisions run counter to the spirit of level playing field, which is essential if private investment, especially FDI, is to be attracted to the mining sector. Given the fact that expenditure on exploration in India is a small fraction of world expenditure there is need for not only increasing public spending in exploration but also attracting private investment, including FDI, into exploration and mining. It was pointed out to the Committee that the reservation powers have been and are being used by the states to stall private sector initiative and it was argued that there should be a level playing field between the public and private sectors and that the government should adopt an arm's-length approach. It may be mentioned here that it is necessary to distinguish between the State's role as a promotional explorer and as a commercial explorer/miner. The work done by GSI, state Directorates, and a certain part of the work done by MECL (paid for by government) is mainly promotional in nature. No business interests are involved here as the output is available to the public at large for carrying out the next stage of operations. On the other hand, commercial operations of PSUs

are similar to operations of private sector entities and no ostensible public purpose is served by giving PSUs an overriding priority.

1.75 The Committee headed by the Additional Secretary, Ministry of Mines that went into this issue had observed that the reservation provision not only had led to blocking off large areas from being explored and mined, but had also been used to circumvent other provisions of the Act, such as the ‘first-come-first-served’ principle or prioritisation entitlement of concession holders. This is through the mechanism of so-called JVs or MOU-based sub-contract arrangements between PSUs and individual private parties. It has been argued that if government entities want to get into detailed exploration or mining ventures as business propositions then they should be treated as any other party without any special dispensation, and if they are interested in a JV they could make such arrangements prior to staking a claim for a particular area.

1.76 The Committee agrees that it is necessary to provide a level playing field to the private sector but this has to be accomplished without disturbing the primacy of promotional work done by national agencies. At the same time, it is also necessary to allow the PSUs to pursue their core competence albeit in a competitive atmosphere. The following recommendations are, therefore, made:

- (i) The emphasis on both public and private sector investment in exploration, especially regional exploration or reconnaissance, needs to continue. However, looking at the need for private investment in these activities it is necessary that PSUs of the Central and state governments be treated at par with private sector companies in the grant of mineral concessions. The reservation provisions for PSUs for exploration and mining should be modified so as to limit the scope of such reservations to specified purposes such as to meet the requirement of SMEs for raw material. Besides, promotional work at public expense need not be undertaken if the private sector is willing to spend and invest on the same work.
- (ii) Where detailed exploration/prospecting is undertaken by state or Central organisations like GSI, MECL, or state-level Directorates as promotional work (i.e. at public expense) and mining based on such prospecting is to be undertaken by a third party, then such areas/blocks should be farmed out for mining on a tender/auction basis. This would not only ensure that transparency is maintained,

but also the revenue generated from such auctions would help augment the resources of the states. This would also help small miners (SME sector) who do not have sufficient resources to take up prospecting singly by themselves but can do so collectively or even outsource the work.

Chapter 2

Procedures for Granting Mineral Concessions

(Term of Reference no. 2)

To review the existing procedures for granting reconnaissance permits, prospecting licences and mining leases and suggest ways for their streamlining and simplification

2.1 In this chapter, we deal with the second term of reference, which relates to the procedural issues. The main points to come out of the Committee's interaction with the stakeholders relate to delays inherent in complex procedures and decision making at multiple levels.

PROCEDURAL COMPLEXITIES

2.2 Procedural complexities resulting from the need to obtain clearances from a number of different authorities under different statutes and rules are identified as a major deterrent in the way of mining investment in India. One representation made by Geomysore Services (India) Pvt. Ltd. (a division of the Australian Indian Resources Group of Companies) revealed that a PL application by a RP holder has to pass through 77 desks. The procedures, which involve statutory and non-statutory clearances from multiple agencies, take a minimum of 485 days. In addition to clearances required both at the Central and state levels under the MMDR Act, 1957, MCR, 1960, and MCDR, 1988, clearances are also required again at both levels under the Forest (Conservation) Act, 1980 (FCA) and Environment (Protection) Act, 1986 (EPA) before a ML can be executed.

2.3 MCR, 1960 provides for each state government to follow its own procedures while processing applications for mineral concessions. In most states, applications are accepted in the office of the District Collector since all mining operations are land related in a fundamental way. After being examined at the District Collectorate and field levels (tehsil, village) the application is forwarded to the office of the Director of Mining and Geology. The proposal is examined in the DMG and then sent to the Mining Department of the state

government at the Secretariat. A letter of intent is issued after the minister concerned has approved the individual application on file. If Central approval is required the proposal is sent to the Central government where the Ministry of Mines may obtain verification from GSI/IBM and then obtain orders of the minister on file. The approval is then sent to the state government for executing the lease. If any query is raised at any level in this entire chain the papers may be sent back down the chain and reprocessed again up the same ladder.

2.4 While acceptance of applications at the Collectorate instead of the Directorate or Secretariat may have the advantage of quicker consideration it complicates matters in cases where the area applied for, though contiguous, is spread over more than one district. Most RPs are for large areas and are invariably covered by more than one district. With LAPLs and PLs of 500 sq. km now contemplated, this problem of multiple applications for a single concession can only become more complicated.

2.5 Most state governments, especially governments of prominent mineral producing states, have independent Departments of Mining and Geology. At the Secretariat, the Department is headed by a full-time Secretary. In some states, the Department may be a part of another Department such as the Industries or Labour Department. Below the Secretariat, there are field-level organisations in the form of DMGs headed by a Director. In some states, there may be separate Directors in-charge of Mines and of Geology. The field formation of the Directorate is constituted by District Mining Officers (DMO) and Sub-divisional Mining Officers, assisted by Mining Inspectors. In some states, there are Deputy Directors of Mining and Geology as well, who are in charge of a group of districts.

APPLICATION PROCESSING: TIME AND MOTION ANALYSIS

2.6 An applicant for RP/PL/ML is required to file an application in the prescribed format accompanied by the requisite fees and other documents as prescribed in the office of the DMO of the concerned district. The DMO, though reporting on technical matters to the Deputy Director or Director, is in many states administratively a part of the District Collector's office and works on behalf of the District Collector for the mining sector. A Time and Motion analysis conducted in 2004 by IBM shows that the receiving clerk in the

Collectorate takes at least one or two days to make an entry in the Register¹ before passing on the papers to the dealing hand who prepares the file for processing. He then puts it up to the DMO who passes an order for verification by a Mining Inspector. The Mining Inspector may take one week to a fortnight to verify if the area applied for is available for mining, if it has been prospected earlier, whether there is evidence of the existence of minerals, etc. He also verifies details of the land applied for from the relevant revenue records available in the office of the concerned Revenue Officer under the District Collector. He then submits the report to the DMO, routing it through the Sub-divisional Mining Officer, if any, depending on the route prescribed by the District Collector and the DMO.

2.7 The examination of the report in the office of the DMO starts with the dealing hand giving his views with reference to the rules and regulations, government instructions, and precedents, taking at least one week in the process. He then puts up the file to the Section Officer (SO) who takes another two to three days before the matter is placed before the DMO. Though there are specific provisions in the MMDR Act and the Rules as well as government guidelines and instructions on how to process an application for RP/PL/ML, the quality of examination of a particular application depends on the dealing hand and the subordinate officials. The time taken in the process depends on the attitude of the persons involved in the exercise. Assuming that the DMO is satisfied with the proposal, he will put up the file to the District Collector for his order before the matter is sent to the state government. With the approval of the District Collector, the DMO transmits the proposal to the DMG.

2.8 In the Directorate, the application along with the district level report passes through the full chain of dealing assistant, SO, and the Deputy or Assistant Director before it reaches the DMG. Even after the field functionaries, including the DMO and the District Collector, have found a particular proposal in order, the matter is scrutinised *de novo* with reference to the rules and regulation, procedures, and precedent at the state government's DMG.

2.9 If the office of the Head of the Department is amalgamated with the Secretariat Department, the file itself moves from the DMG to the Deputy Secretary or Joint Secretary and onwards to the Secretary of the Department. If every official is prompt in disposal and the proposal is in order, it takes a minimum of three months before the file reaches the

¹ This process of entry of receipts in a register is repeated in the office of the DMG and again in the Secretariat (in the case of non-amalgamated office), leading to delays at each level.

Secretary. If the Directorate is independent of the Secretariat Department, there will be further delay, as the Director of Mining and Geology will submit the proposal in the form of a letter to the government. If there is any query at any level there can be further delays depending on the nature of the query and information available to satisfy such query.

2.10 If the Secretary to the state government comes to the conclusion that the proposal is in order, he obtains the approval of the minister-in-charge of the Department. The matter may not end with the approval of the minister on the file if the Rules of Business of the state government require that matters relating to the grant of licence for RP/PL/MLs be put up to the Cabinet for decision. Once the approval at the appropriate level has been obtained, in the case of non-Scheduled minerals, where no relaxation from the provisions of the MMDR Act or the Rules is required, the matter is ready for issuance of government order and execution of the agreement in the office of the DMG. In the case of Scheduled minerals, or in the case of non-Scheduled minerals, where a relaxation from the provisions of the MMDR Act or the Rules is proposed, once approval of the state government has been obtained, the proposal goes to the Central government for prior approval. The Time and Motion analysis referred to in paragraph 2.6 shows that a period of 6 months to one year may elapse between the date of receipt of application and the date of final disposal/referral to the Centre.

2.11 If the proposal is complete in all respects, the examination in the Ministry of Mines may not take much time. However, in most cases clarifications are required to be obtained from the concerned state government because of incomplete documentation or non-adherence to rules or lack of clarity in the proposal. Sometimes correspondence between the Ministry and the state government may go on for a long time and pendencies in the Ministry beyond one year are not unknown. Once all the information and clarifications have been received the file is processed for the approval of the minister-in-charge for according prior approval, passing through the Under Secretary, Deputy Secretary, Joint Secretary, and Secretary in the process. It may be mentioned here that prior to 1992, decisions for according Central approval were taken at the level of the concerned Joint Secretary but since then this power is being exercised by the minister-in-charge of the Ministry of Mines.

OTHER CLEARANCES

2.12 After the grant of the mineral concession, various clearances are required from different agencies. For example, in the case of RPs where clearance is required for

undertaking aerial surveys, the exercise involves clearances from the Directorate General of Civil Aviation (DGCA), Ministry of Defence, Ministry of Home Affairs, Department of Atomic Energy (DAE), GSI, National Remote Sensing Agency (NRSA), and Department of Telecommunications. At present, after the Ministry of Mines conveys the approval for grant of RPs, the applicant is entitled to file his application with the DGCA for permission for airborne surveys. (However, in most cases the applicant waits for the Letter of Intent to be issued by the state government concerned before applying for permission for the airborne survey. This is primarily because the applicant prefers to keep the state government involved throughout.) After the application for airborne survey is received, the DGCA routinely sends off copies to various Departments. While the Ministry of Defence normally takes about 45 days to complete its internal examination, which primarily involves obtaining comments of individual Divisions and Departments, the Ministry of Home Affairs takes about 30 days for the purpose. The final decision is taken on the files of the Ministry of Civil Aviation and is conveyed to the applicant by the DGCA. Clearances are also required from the Ministry of Environment and Forests (MOEF) separately from the environment and forest angle. The Forest and Environment clearances are particularly complex and have been dealt with separately in Chapter 3.

SINGLE WINDOW: CO-ORDINATION-CUM-EMPOWERED COMMITTEE APPROACH

2.13 It can be seen that the present procedures are lengthy, cumbersome, and lacking in transparency. The Committee headed by the Additional Secretary, Ministry of Mines, established in 2005, recommended a single window for approval/recommendation so as to bring greater transparency and reduce procedural complexities and consequential delays. However, since both at the Centre and the states a number of authorities and departments are involved, a single window in the form of a competent authority delegated with all the requisite powers cannot be created without extensive changes in the law, rules, and procedures. A multi-departmental Coordination-cum-Empowered Committee approach is the closest arrangement to a single window clearance that can be contemplated.

2.14 The Committee recommends that in order to streamline procedures and minimise delay, Coordination-cum-Empowered Committees should be set up at the state and Central government levels for taking decisions on applications for RP, LAPL, PL, and ML. Further details of recommended procedures are given below:

- (i) All applications for mineral concessions should be accepted at the state headquarters office of the DMG of the state government and not at its district office or at the District Collectorate.
- (ii) The applications should be sent by the DMG simultaneously to designated officers at the district level of all the concerned departments, viz. mining, revenue, forests, Panchayati Raj (rural development), etc., for scrutiny of the proposals in relation to the records and applicable rules for the area for which the concession is being sought. Copies of the applications should be sent to the concerned secretariat departments for information and follow-up. The district-level officers should send their responses to the DMG within a time-bound framework under intimation to their respective secretariat departments. As against the present system in which the applicant applies for environmental and forest clearance after having received the clearance for LAPL/PL or ML, and for aerial reconnaissance after grant of RP, the applicant should have the possibility of making all these applications simultaneously, with copy to the DMG.
- (iii) The state government should set up a Coordination-cum-Empowered Committee at the state level, headed by the Chief Secretary with state-level representatives from all the concerned Departments (Mining, Forest, Environment, and Revenue, and where necessary, Industry and Panchayati Raj) as members. The Coordination-cum-Empowered Committee should be serviced by the DMG and meet at least once in two months. The main function of the Committee would be to provide oversight of clearance of the applications by various departments and act as a pressure point on the departmental representative for securing timely clearance. The applicants could also be informed of their applications being listed for review at a particular meeting, and if they so desire, they could be given the opportunity for furnishing clarifications, where necessary, to the Coordination-cum-Empowered Committee.
- (iv) The state-level Coordination-cum-Empowered Committee should also be delegated powers to approve grant of mineral concessions in cases below a specified area or quantum of mineral deposit for non-Scheduled minerals when all departmental and statutory clearances have been received. In other cases, the

recommendations made by the state-level Coordination-cum-Empowered Committee for the grant of mineral concessions may be put up to the minister-in-charge of the state government or to the Cabinet, according to the Rules of Business. In the case of Scheduled minerals, where prior approval of the Central government is required, the recommendations of the Coordination-cum-Empowered Committee, duly approved at the appropriate level, should be forwarded to the Ministry of Mines.

- (v) At the Central government level, the Coordination-cum-Empowered Committee should be set up headed by the Secretary, Ministry of Mines, with representatives from GSI, IBM, the MOEF (separately for environment and forests), DGCA, Ministry of Defence, Intelligence Bureau and/or Home Ministry, Ministry of Finance (Department of Expenditure), and the state government concerned. The terms of reference of the Committee would also be oversight of departmental clearances. The Committee should perform the important function of monitoring clearances by individual Departments/Ministries and ensuring timely completion of internal procedures and prompt decision by them. The Committee could also be empowered to accord approval on behalf of the Central government once the necessary departmental and ministerial clearances, including statutory clearances, have been received. It could also follow up on other clearances that need to be obtained even after the application for RP/LAPL/PL/ML have been granted, such as permission for aerial reconnaissance and forest and environmental clearances. For transparency, the applicants could also be informed that their applications were being listed for review in a particular meeting, and if they so desire, they could be given the opportunity for furnishing clarifications, where necessary, to the Coordination-cum-Empowered Committee.
- (vi) The Central Coordination-cum-Empowered Committee should grant prior approval in cases of Scheduled minerals for areas/quantum of mineral deposit up to a specified level. The recommendations of the Central Coordination-cum-Empowered Committee in respect of cases beyond the power delegated may be submitted to the minister-in-charge for grant of prior approval.
- (vii) The DMG in each state should maintain a website in which the position of each application should be indicated. As and when clearances are received from each agency/Department, an entry to that effect should be made against the

application. A similar website should be maintained by the Ministry of Mines for showing the position of each case from the time that the reference is received from the state government for according prior clearance.

- (viii) Simplification of procedures as suggested in paragraph 2.27 below will also reduce the time taken by the DMO and the DMG for determining the availability of areas. In addition, the Committee has made a number of recommendations in Chapter 3 for expediting forest and environmental clearances.

ADHERENCE TO TIME SCHEDULES FOR CONSIDERATION OF APPLICATIONS FOR RP, LAPL/PL, AND ML

2.15 The issue of delays in disposal/approval of mineral concession applications has been a major concern of the mining industry. Recognising the deterrent effect of such delays on mining investment in India, Rule 63A of the MCR lays down the following time limits within which applications for various types of concessions should be finalised:

- a) Reconnaissance Permit—within six months from the date of receipt;
- b) Prospecting License—within nine months from the date of receipt;
- c) Mining Lease—within twelve months from the date of receipt;

Provided the applications are complete in all respects;

Provided also that in case the State Government is not able to dispose of the application within the period as specified, the reasons for the delay shall be given in writing.

In the light of the recommendation made in Chapter 1 for making the grant of RP non-exclusive it may not be necessary to give a time of more than three months for such permits.

2.16 A proviso in Rule 63A of MCR provides that ‘in case the State Government is not able to dispose of the application for reconnaissance permit, prospecting licence or mining licence within the period as specific above, the reasons for delay shall be given in writing’. In reality, neither the time schedules are being observed nor the reasons are being given in writing. Delays of 14–60 months are not uncommon. This is because there are no provisions in the MMDR Act giving teeth to the time schedules by way of remedial action in case the time limits are not adhered to. The Committee attaches great importance to the need to remedy this deficiency.

2.17 Section 30 of the MMDR Act, which gives the power of revision to the Central government, reads as follows:

Section 30: Power of revision of Central Government: The Central Government may, of its own motion or on application made within the prescribed time by an aggrieved party, revise any order made by a State Government or other authority in exercise of the powers conferred on it by or under this Act with respect to any mineral other than a minor mineral.

2.18 While this section could be invoked in cases in which the state government has passed an order there is no provision that could be invoked for providing relief in cases in which the time limits are not adhered to and the state government has not passed any order at all or where the order has been issued (with or without reasons) but the time limits have not been adhered to.

2.19 In order to redress the situation described in the previous paragraph, the Committee would recommend that Section 30 of the MMDR Act be amended to give jurisdiction to the Central government to entertain applications from aggrieved parties and take a final decision thereupon in the event of failure of the state government to take a decision within the time frame envisaged in Rule 63A of MCR 1960. The revised Section 30 would read as follows:

Section 30: Powers of the Central Government: The Central Government may of its own motion or on application made within the prescribed time by an aggrieved party:

- i. revise any order made by a State Government or other authority in exercise of the powers conferred on it by or under this Act with respect of any mineral other than a minor mineral, or
- ii. Where no such order has been made by the State Government or other authority (in exercise of the powers conferred on it by or under this Act with respect to any mineral other than a minor mineral) within the time prescribed therefore (under Rule 63A), pass such order that it may think fit and appropriate in the circumstances:

Provided that in cases covered by clause (ii) above, the Central Government shall, before passing any order under this clause, give an opportunity to the

concerned State Government (or other authority) as well as other concerned and/or aggrieved parties of being heard.

Furthermore, the Committee suggests that the third proviso of Rule 63A of the MCR 1960 should be deleted and a new Rule 54A should be added as indicated below:

54A: Where the State Government (or other authority) has not passed an order under Rule 63A:

- (a) for a non-exclusive RP within four months from date of receipt of an application of RP,
- (b) For a PL/LAPL within ten months from the date of receipt of an application for PL, and
- (c) For a ML within 13 months from the date of receipt of an application for ML,

the aggrieved party may apply to the Central Government to exercise its powers under Section 30 of the MMDR Act within 90 days of the expiry of the periods mentioned above.

2.20 The Committee is of the view that the amendments proposed in the previous paragraph would not take away or whittle down the powers of state governments in respect of minerals owned by them. Instead they would only serve to secure adherence to the time limits already set and imposed under the existing law. The Committee also recommends that necessary change should be made in the laws to provide that where the Centre does not grant prior approval in cases referred to it by the state government within the specified period, such prior approval should be deemed to have been granted. Further, in the applications received under Section 30 of the Act in situations in which no order has been made by the state government there should be a time limit imposed on the Centre for disposal of the application within such time limit. A solution should also be found to ensure that the Centre adheres to the time limit.

2.21 During the deliberations of the Committee, doubts were raised on the constitutional validity of the proposal to amend Section 30 of the MMDR Act. In making its

recommendation, the Committee relied on the legal opinion obtained by FIMI from the noted jurist Fali S. Nariman, a copy of which is appended as Annexure 2. The Committee's understanding was that this opinion would be reconfirmed by making a reference to the Attorney General before the GOI takes a decision on this recommendation. Some of the members representing the states also raised the point that in the interest of fair play, time limits should also be imposed on the Central government. This too was agreed to, as mentioned in paragraph 2.20 above. However, after the final meeting of the Committee had been held on 30 June 2006, four members representing the state governments of Chhattisgarh, Jharkhand, Karnataka, and Orissa sent a note of dissent on 3 July 2006, which is appended as Annexure 3.

SIMPLIFICATION OF PROCEDURE FOR ASCERTAINING AVAILABILITY OF AREAS

2.22 A major handicap for potential investors in mining and prospecting is the lack of basic information regarding the areas available for different types of mineral concessions in India. Apart from the areas currently held under a mineral concession, there are areas that are under state exploration, areas held by state organisations under lease, areas notified as reserved for the state or its agencies, areas not explored at all or greenfield areas available for reconnaissance, and areas where adequate geological information is available with state agencies for carrying out further prospecting.

2.23 The MMDR Act and Rules thereunder contain the following provisions for maintenance of registers of mineral concession:

12 (1) The State Government shall cause to be maintained in the prescribed form

- (a) a register of applications for prospecting licences;
- (b) a register of prospecting licences;
- (c) a register of applications for mining leases;
- (d) a register of mining leases;
- (e) a register of applications for reconnaissance permits; and
- (f) a register of reconnaissance permits;

In each of which shall be entered such particulars as may be prescribed.

(2) Every such register shall be open to inspection by any person on payment of such fee as the State Government may fix.

Further, Rule 7D of the MCR specifies the forms of the registers of RP applications and RPs to be maintained; Rule 21 of the MCR does the same for PL applications and PLs; and Rule 40 of the MCR for ML applications and MLs. The standardised forms for the registers are specified in the Rules. These forms contain information on permit/licence/lease location and size of area, ownership, transfers, duration, expiry, etc. However, there is no recognition of a mineral title atlas requirement.

2.24 While the above provisions provide for registers of mineral titles these do not contain all the data needed by investors for decision making. Investors want an established and easily accessible mineral titles system (cadastre) to provide adequate transparency while choosing areas for mineral concessions, as it becomes a daunting task to find out which area is open and which area is not. Under the provisions, the applicant for a PL is required to describe the area applied for in the MCR Form B (Application for Prospecting Licence). The system is not based on a geographic grid/block system but instead relies on drawing borders on official maps, if available, hand sketches, etc. A description of the area granted, and where available a map of the area, is attached to the PL [MCR Form F (Model Form of PL) Schedule A].

2.25 International literature on mining shows that almost all resource-rich nations today maintain on-line registers (cadastres) that contain a digitised record of actual mineral titles as well as available greenfield and relinquished areas. These registers generally are open for public inspection (accessible on-line) and provide a means not only to determine if the land is already under some sort of mineral title but also to provide other geological information (meta data) in respect of that land so as to enable investors to identify opportunities for investment. Many mining laws require the maintenance of a mineral title atlas, which is much easier to use than a mere sequential registry. Many nations have already, or are now implementing, computerised Geographical Information System (GIS) that link maps with registry records and geological databases and previous prospecting reports. This type of GIS system is being rapidly introduced worldwide. Most nations with such systems have introduced block based exploration areas on the basis of geographical coordinates in their various types of exploration titles. Consideration needs to be given to requiring applicants to apply for concessions for areas based on blocks tied to a geographical coordinate system. Almost all new mining laws provide for such a system. Block based systems allow for efficient determination of area availability and reduce or eliminate conflicts between

applications where borders are disputed. Such a system also allows for ease in disseminating an accurate picture of all lands applied for or currently under licence to all offices where application can be lodged, thus better informing potential new applicants about what is and is not available. Many of the systems even provide for on-line applications. Specialised software packages have been developed and are now available for adaptation and use by client states. The current Indian system is inadequate and antiquated, and given India's Information Technology (IT) standing, international investors are astonished at the complete lack of IT application in the mining tenement registry system in India. The Committee recommends that the entire cadastre system be overhauled and an on-line registry be prepared on a campaign basis focusing on about 500,000 sq. km out of the hard rock area that has a geologically favourable environment.

2.26 Rule 59 of MCR provides that the area previously held under a RP or a PL or a ML should not be granted to another person unless the availability of the area is notified in the official Gazette. It is found that areas relinquished by the RP or PL holders are not becoming available for grant for long periods after the relinquishment simply because states are unable to meet this statutory requirement of gazetting a notification within a reasonable time. Although GOI has stipulated that such areas be notified within 60 days of relinquishment the time limit is not being adhered to and consequently such areas are not made available to prospective investors. Moreover, there are different gazetting procedures in different states. For example, in Andhra Pradesh, the notification appears in the District Gazette through a District Officer, whereas in Karnataka not even the Director has the power to notify relinquished areas in the official Gazette. Moreover, it is not possible to expect every one to access such official publications easily.

2.27 The Committee is of the opinion that the availability of a spatially represented, easily accessible registry of all pending and granted exploration titles is a key part of a modern regulatory system. Therefore, the Committee recommends the following:

- (i) Modernise the present registry system by creating a digitised on-line mineral atlas, which will show mineral titles on a spatial map and would be accessible to the public via the Internet. Investment of a large magnitude required by the mining sector in India cannot come in unless such a system is in place. The Committee suggests that the modernisation programme may be taken up in

mission mode through, *inter alia*, the institutional upgradation of IBM and the regulatory divisions of the state Directorates, the latter being incentivised by the Centre and implemented by the states.

- (ii) Introduce block/grid based exploration area for applications for the exploration titles of RPs, LAPLs, and PLs so that areas are clearly demarcated and the need for hand-drawn maps is eliminated.
- (iii) Provide facility for on-line application system for mineral concessions.
- (iv) Amend Section 12(1) of the MMDR Act to provide that in addition to the registers of applications for RP/PL/ML and registers of RP/PL/ML that are current, registers should also be maintained for relinquished areas in each case. Further, introduce a new Section 12(3) to require the concerned authorities to maintain the entire data of Section 12(1) digitally and to provide on-line access to the public.
- (v) Put the coordinates of areas granted, applied, as well as relinquished on the website of the state Mines and Geology Departments and IBM.

PROCEDURE FOR DISPUTE RESOLUTION

2.28 As noted earlier, Section 30 of the MMDR Act provides for powers of revision to the Central government regarding disputes arising from the decision of a state government to grant or reject a particular concession. Rule 54 of the MCR also states that any person aggrieved by any order by the state government or other authority in exercise of the powers conferred on it by the MMDR Act or Rules may apply to the Central government for revision of the order. The Central government has constituted a two-member committee comprising Joint Secretary/ Director of the Ministry of Mines and Joint Secretary, Ministry of Law to exercise powers under Section 30 of the MMDR Act on its behalf. Although the arrangement could be deemed to be the nucleus of the dispute resolution machinery, it cannot be regarded as meeting the requirement of an independent dispute settlement machinery. Concern has been raised regarding the neutrality of the committee since approval to the grant of concessions in respect of First Schedule minerals is also given at the Ministry of Mines. There is also the issue of delay in decision making due to officers in the ministry being involved in their regular work.

2.29 The Committee recommends that the MMDR Act and Rules be amended to enable the powers of the Central government to be exercised by an independent tribunal so that appropriate arm's length is maintained between the Ministry of Mines as a regulator and that Ministry as an involved party. The tribunals should have experts in mining administration and mining laws as members. Independence of the tribunal should be ensured by appointing members on the basis of the recommendations of a selection committee, with a high-level Chairman and outside experts serving on such a committee. Members of the tribunal should be given security of tenure by being appointed for a fixed term. Such an independent and dedicated tribunal will also ensure timely disposal of revision cases and will find better acceptability among the investors. Furthermore, the tribunal should also have jurisdiction for revising the orders of the Central government.

Chapter 3

Forest Conservation and Environment Protection

(Term of Reference no. 3)

To review the procedures for according clearance to mineral exploration and mining projects under the Forest (Conservation) Act, 1980 and the Environment (Protection) Act, 1986 and suggest ways for speeding them up

NEED FOR SUSTAINABLE DEVELOPMENT

3.1 Exploration, development, production, and disposal of minerals affect the environment and ecology of the mined area. Mining has to be done in a way that causes least damage to natural resources such as air, water, soil, and biomass. The two statutes mentioned in the TOR, viz. FCA and EPA, impose certain restrictions on prospective miners. Clearances are required under these statutes to ensure that the mining operations of the prospective miners are carried out in such a way as to conserve forests and protect the environment. The delays that occur in the grant of these clearances mainly relate to the assessment of measures designed and proposed to be undertaken by prospective miners to achieve these ends. Before dealing with the adequacy and efficacy of the assessment methodology it would be worthwhile to review the best practices internationally in the area of environment management. If conditions in India are aligned to these best practices the delays can be eliminated.

3.2 Internationally, there are two separate but linked developments that need to be examined. First, the International Institute of Environment Development and the World Business Council for Sustainable Development jointly completed a study known as the 'Mining, Minerals and Sustainable Development' (MMSD) Project and published its results in 2002 in the report 'Breaking New Ground'.¹ This report has set the benchmark for all natural capital related issues connected with mining anywhere in the world. Secondly, the International Council of Mining and Metals (ICMM) in dialogue with the World

¹ 'Breaking New Ground: Mining, Minerals and Sustainable Development', The Report of the MMSD Project, Earthscan Publications Ltd, London and Sterling VA.

Conservation Union (International Union for the Conservation of Nature and Natural Resources) (IUCN) has developed a Sustainable Development Framework (SDF) drawing upon the landmark MMSD Report. The framework comprises 'ten principles' of mining, a Global Reporting Initiative (GRI) to enable verification of the implementation those principles by miners across the world, and good practice guidelines in the form of a Mining and Metals Sector Supplement containing relevant indicators that will allow mining companies to track their performance against the ten principles and the GRI guidelines.

3.3 The MMSD Report recognised that one of the greatest challenges facing the world today is integrating economic activity with environmental integrity, social concerns, and effective governance systems. The goal of that integration is sustainable development. The report stipulates that in the context of the mineral sector the goal is to maximise the mining sector's contribution to the well-being of the current generation and at the same time to ensure an equitable distribution of its costs and benefits without reducing the potential for future generations to meet their own needs. This is based on the Brundtland Commission's definition of sustainable development.² The report states: 'i[I]n the mining and metals sector, this means that investments should be financially profitable, technically appropriate, environmentally sound and socially responsible'. Thus, while the role of mineral wealth in maximising human well-being should be acknowledged it is also important to acknowledge that wealth should be managed in a way that protects the environment and other social and cultural values. The MMSD Report identified key challenges facing the mineral sector, representing the most pressing issues that need to be addressed. Of these, the challenges concerning forests and environment are dealt with below.

CONTROL, USE, AND MANAGEMENT OF LAND

3.4 Mineral development is one of a number of competing land uses. Due to lack of planning and other frameworks to balance and manage possible uses there are problems and disagreements in the matter of control, use, and management of land. Exploration and mining pose significant challenges in terms of land access and management. The most appropriate use of land is best decided within an integrated land planning framework that balances competing interests such as between national and local levels or between mining and

² In its report published in 1987, the World Commission on Environment and Development (Brundtland Commission) defined sustainable development as 'development that meets the needs of the present without compromising the ability of future generations to meet their own needs'.

conservation. There are trade-offs that may be made in order to generate benefits in one domain, but decisions on these should not be taken without inclusion of and negotiation with all those likely to be directly affected. A broad consensus must be achieved on the management of protected areas (e.g. forests) and the trade-offs involved. The local stake in the success of protected areas and resources available to manage them needs to be ensured. The decision whether or not to mine a certain area should be undertaken through a democratic decision-making process and be based on an integrated assessment of ecological, environmental, economic, and social impacts. The planning process will be more effective in the presence of equitable and inclusive rules of tenure, compensation schemes for those affected, and strong governance, including mechanisms for arbitration where necessary.

MINING ACTIVITIES AND THE ENVIRONMENT

3.5 Mining activities have a significant environmental impact. Managing this impact effectively requires dealing with issues such as handling of immense quantities of waste, acid drainage, environmental impact assessments (EIAs) and environment management systems (EMS), effective mine closure planning, and restoration of the ecological balance. Modern practices in mining operations represent a great improvement over the past but these have not spread to all parts of the industry and the world. The objective of best practice is to ensure that critical natural capital is maintained, that eco-systems are enhanced where possible, and that mineral wealth contributes to net environmental continuity. Mining produces very large quantities of waste and decisions about where and how to dispose of the waste are among the most important in the mineral cycle. In this context, the mining plan becomes vital in that it must not only enable optimal mining to prevent wastage of national resources but ensure that extraction processes do not damage the environment. The best way to obtain protection of the environment is to ensure the development of a mine closure plan at the outset of operations. This can guide individual decisions taken during mining itself to ensure that they are oriented towards this end. EIAs are perhaps the most widely used tool of environmental management in the mineral sector. EIAs, as part of EMS, have to integrate environmental responsibilities into everyday management practices through changes in organisational structure, procedures, and processes. Loss of biodiversity is loss of natural capital and is irreversible. The Convention on Biological Diversity provides the mineral sector with a sound basis for taking appropriate steps for preserving and enhancing biodiversity in its areas of operation and engaging in constructive dialogue and partnership with the biodiversity community. The

MMSD Report recognises it as a key instrument of the global programme for sustainable development.

LOCAL COMMUNITIES AND MINING ACTIVITIES

3.6 Land is often used without the consent of the indigenous people. Mining companies should act as if consent to gain access to land is required even when the law of the land does not require this. In making decisions, the cultural circumstances of the local people and loss of access to common resources should be kept in mind. Where resettlement takes place, companies need to ensure that living standards are not diminished, that community and social ties are preserved, and that they provide fair compensation for loss of assets and economic opportunity. Responsibility for ensuring the long-term well being of resettled communities needs to be defined and monitored. Environmental mining and other interests should be considered along with the interests of the poor and politically marginalised who live in these areas.

3.7 Mineral development can bring benefits to the local level. However, the relationship between mining companies and local communities has a legacy of abuse and mistrust. Widespread community demands for direct and sustained benefits from mineral wealth are a relatively recent phenomenon. In areas of weak or bad government, the communities often turn to the operating companies to provide development services in return for the social licence to operate. However, new initiatives which have just started emerging, require that the focus should be on improving the capacity of the local government and other local institutions to provide the benefits from mining instead of the companies themselves seeking to take on governmental functions. Non-governmental organisations (NGOs) and other civil society groups can act as mediators to enable communities to partner with companies and governments in development. Supporting local businesses, preferential procurement policies towards local suppliers and distributors, employment of locals, and skills training are important means of benefiting local communities and building human and financial resources. A broader role in community health programmes and participation in social infrastructure such as schools and hospitals are some of the other areas in which mining companies need to become active.

ICMM AND SDF

3.8 The ICMM membership comprises many of the world's leading mining and metals companies as well as regional, national, and commodity organisations. Membership of ICMM binds its members to a commitment to improve their sustainable development performance and to the responsible production of mineral and metal resources needed by society. ICMM's vision is a viable mining, minerals, and metals industry that is widely recognised as essential for modern living but is simultaneously a key contributor to sustainable development. The MMSD Report is the basis on which the ICMM has designed the SDF comprising the ten principles, the GRI reporting system, and the Supplement mentioned in paragraph 3.2 above. Five of the ten principles are given below:

- (i) Integrate sustainable development considerations within the corporate decision-making process;
- (ii) Uphold fundamental human rights and respect cultures, customs, and values in dealings with all those who are affected by mining activities;
- (iii) Seek continual improvement of environmental performance;
- (iv) Contribute to conservation of biodiversity and integrated approaches to land use planning;
- (v) Contribute to the social, economic, and institutional development of the communities in which miners operate.

3.9 The GRI is a multi-stakeholder process and independent institution whose mission is to develop and disseminate globally applicable sustainability reporting guidelines. These guidelines are for voluntary use by organisations for reporting on the economic, environmental, and social dimensions of their activities, products, and services. The GRI incorporates the active participation of representatives from business, accountancy, investments, environmental, human rights research, and labour organisations around the world. Started in 1997, GRI became independent in 2002, and is an official collaborating centre of the United Nations Environment Programme (UNEP). The GRI-ICMM multi-stakeholder smaller working group drew together 20 members from industry, finance, labour, and social and environmental NGOs, who developed the Mining and Metals Sector Supplement to accompany the GRI 2002 guidelines. The Supplement was made available in draft form for public comment and 39 comments were received from representatives from

industry, labour, academics, and NGOs from North and South America, Europe, Australia, and South Africa. Following the working group's fourth meeting in September 2004 and approval from the ICMM, the Supplement was made available for use. Highlights of the GRI guidelines and the Supplement may be seen at Annexures 4–6.

3.10 In this background, we can now examine the extent to which the provisions of the two statutes, viz. FCA and EPA, fulfil the standards set by the MMSD and the ICMM's SDF. All the presentations made before the Committee acknowledged the importance of environment and forestry in the mining areas. There is unanimity on the imperative for maintaining the environment, restoring ecological balance, and preserving and adding to the forest wealth of the nation. Almost 20 per cent of all mineral occurrences in the country are in forest areas, and in the bulk mineral-rich states of Chhattisgarh, Jharkhand, and Orissa, the percentage of minerals occurring in forest areas rises to 40 per cent. Nevertheless, if the mineral wealth of the nation is to be exploited in the interest of overall development, then conservation has to be pursued consistently with the needs of development. It was clear from the presentations to the Committee that the industry recognised that mining intervention should not only ensure the least damage to the environmental and ecological balance but also proactively add to the natural capital by such measures as regeneration of flora and fauna along with all other depleted resources such as water and soil in areas affected by the intervention. This is clearly possible in all situations given the sophistication of technologies now available, as shown by MMSD and the ICMM/IUCN's SDF framework.

3.11 In India, at present, the specificity of the issue of sustainable development in the mining sector is not fully reflected in the two statutes, viz. FCA and EPA. The focus provided by ICMM on the mining sector-specific issues in the context of sustainable development and the vast potential for action in this regard is missing. This has led to a lack of appreciation of the potential for advancing mining within the framework of sustainable development, on the one hand, and the absence of conservation and environmental measures outside the two statutes, on the other. A close look at the issues arising out of the two statutes reveals that the preoccupation is mainly with two concerns, namely, compensation for diversion in various forms, including compensating afforestation, and the need for EIA studies prior to grant of environmental clearances. While the importance of the regulatory aspect of sustainable development cannot be underplayed, it is necessary to recognise that the global level dialogue currently underway has taken the entire issue of sustainable development in mining to a much

higher level. The basic approach is that (i) the miners can and should enrich rather than deplete biodiversity as a corollary to their intervention in the ecology of their area of activity; and (ii) mining can and should contribute to the economic, social, and cultural well-being of indigenous host populations and local communities, particularly by creating stakeholder interest in mining operations for the project affected persons (PAPs). This Committee would recommend that the Ministry of Mines and MOEF should jointly set up a working group to prepare a SDF specially tailored to the context of India's mining environment, taking fully into account the work done and being done in ICMM and IUCN. The Indian SDF comprising of principles, reporting initiatives, and good practice guidelines unique to the three sectors in Indian mining, i.e. SME, captive, and large stand alone, can then be made applicable to mining operations in India and a separate structure set up to ensure adherence to such framework, drawing from both IBM and the field formations of MOEF.

3.12 Setting up a special working group and drawing up a suitable SDF appropriate to the Indian situation as proposed above will naturally be a time-consuming affair and can only be conceived as a long-term solution. The group will have to take into consideration not only the obligations enjoined on miners by the Samatha judgment (see paragraph 1.34) in respect of the facilities to be provided to the tribals and the judgement dated 26 September 2005 in T. N. Godavarman Thirumulkpad vs. Union of India and others (Writ Petition (C) No. 202 of 1995) in the matters of afforestation and environment, but also devise ways in which the obligations cast by the ten principles, which go somewhat further than the legal obligations flowing from the two judgements, can be built into the SDF. In the meanwhile, it is also necessary to consider whether certain short-term measures that can be pointers towards the eventual SDF, especially in respect of Scheduled areas where the PAPs are local tribal populations, can be thought of, keeping in mind all the time the legal obligations imposed by the Hon'ble Supreme Court. At the outset, we may look at the existing Relief and Rehabilitation (R&R) packages prepared by some of the states and the work actually done on the ground *suo moto* by Indian mining companies in the area of environment management and rehabilitation. Taking up the former first, two of the most advanced packages for PAPs are those prepared in Orissa and Andhra Pradesh.

RELIEF AND REHABILITATION

3.13 In the Orissa model (announced vide Government of Orissa, Revenue Department, no. 18040/R, R & REH-1/06, dated 14 May 2006), the basic objectives are listed as follows:

- (i) To avoid displacement wherever possible and minimise it exercising available options otherwise.
- (ii) To recognize voices of displaced communities emphasising the needs of the indigenous communities, and vulnerable sections;
- (iii) To ensure environmental sustainability through participatory and transparent process; and
- (iv) To help guide the process of developing institutional mechanisms for implementation, monitoring, conflict resolution, and grievance redressal.

To this end, the Orissa package offers various types of assistance to families that have been displaced or affected by different types of projects. For those affected by mining, project assistance includes: employment to one family member in the project or cash assistance ranging from Rs 1 lakh to Rs 5 lakh with option for 50 per cent of cash assistance in the form of convertible preference shares; training for self-employment; homestead land subject to availability or Rs 50,000 for relocation elsewhere; a house or housing assistance up to Rs 150,000; and shops or service units to those who opt for self-employment with preference to handicapped persons, ST and Scheduled Castes (SC). In addition to assistance specific to mining projects, certain types of assistance common to PAPs of all projects have also been listed. These include: maintenance allowance of Rs 2000 per month per family for one year; assistance of Rs 10,000 for a temporary shed; and transportation allowance of Rs 2000 in lieu of free transport to habitation site. For tribal PAPs this would also include preferential allotment of land and resettlement as far as possible in compact areas.

3.14 The Andhra package has been put out in the form of a Policy on Resettlement and Rehabilitation of Project Affected Families (PAFs), 2005, and issued vide GO no. 68 of Irrigation and Command Area Development (CAD) (Project Wing-LA IV- (R&R) Department, dated 18 April 2005. The objectives are listed as follows:

- (i) To minimize displacement and to identify non-displacing or least displacing alternatives;
- (ii) To plan resettlement and rehabilitation of Project Affected and Displaced Families (PAFs/PDFs), including special needs of Tribals and vulnerable sections;
- (iii) To provide better standard of living to PAFs and PDFs; and
- (iv) To facilitate harmonious relationship between the Requiring Body and PAFs through mutual cooperation.

The package includes: for those whose houses have been acquired, a free house site of 150 sq. metres in rural areas and 75 sq. metres in urban areas; one-time financial assistance of Rs 40,000 for constructing the house; land allotment in lieu of land acquired and financial assistance of Rs 10,000 per hectare for development of land and Rs 5000 per PAF for agriculture production. Allotment of government land is restricted to the extent of land acquired from the PAF or 2.5 hectare wetland or 1.25 hectare of dryland, whichever is less. In addition, grants are envisaged for cattle shed (Rs 3000), for transportation of material (Rs 5000), and for construction of working shed or shop by self-employed persons (Rs 25,000). A PAF that becomes landless and has no land allotted in lieu of the acquired land would get cash equivalent to the minimum agricultural wage for 750 days. If the PAF becomes a marginal farmer, the compensation would be for 500 days, and in the case of a small farmer it would be for 375 days. A landless labourer would get minimum wages equal to 625 days. A PAF who is also a displaced person will additionally get one-time assistance equivalent to minimum wages of 240 days. For tribal PAPs, the package also offers a special dispensation, including preferential allotment of land, additional financial assistance of 500 days wage equivalent for loss of customary rights/ usages of forest produce, settlement in compact blocks close to their natural habitat, and 25 per cent higher R&R benefits if settled outside the district/ tribal districts.

3.15 The package given to PAPs in Chhattisgarh specifically for mining is also comparable. Every member of the displaced family has to be given free training and then employed. A *pucca* house of equivalent or larger size in a newly built colony with all amenities has to be provided to every family. One-time cash assistance has to be provided to enable the PAP to shift to the new settlement. Compensation for land acquisition has to be not less than Rs 50,000 per acre for fallow land, Rs 75,000 per acre for single crop, and Rs

100,000 per acre for double crop. In addition, the state government envisages that the mining company would set apart up to 3 per cent of its Net Annual Profit for undertaking welfare activities/development works in the villages around the mining project. The activities/works include education, health, roads, community buildings, skill upgradation facilities, and other development work required for the area.

3.16 The existing packages in the states are generally common to all kinds of projects, including mining projects. It can be observed from the SDF worked out by ICMM that major mining projects can improve the life of indigenous communities significantly. From the SDF, the working group proposed in paragraph 3.11 would have to build on the existing packages and take fully into account the SDF standards worked out by ICMM and World Conservation Union (WCU) to develop the norms for compensation to PAPs as well as the benefits that must accrue to the communities living in the villages around the mining area. The Samatha judgment lists the facilities to be provided to persons in the Scheduled areas, i.e. the tribals, in paragraph 113 of the Order. These include maintenance of roads and communications in the Scheduled areas, supply of potable water to the tribals, establishment of schools for imparting primary and secondary education and vocational training, providing employment in the project, establishment of hospitals and camps providing free medical aid, maintenance of sanitation, and construction of houses. The judgment further states, in paragraph 114, that 20 per cent of the profits should be set aside by the miner for these activities. This 20 per cent excludes payments for forest and environment related compensation [compensatory afforestation and net present value (NPV)], which is dealt with in the Godavarman judgement. The main thrust of the ICMM's SDF is on a holistic development of the indigenous populations (tribals) that can be catalysed by a mining intervention. Hence, it is not only a question of providing jobs or financial assistance for opening shops and plots and some funds for making houses, etc. Where resettlement takes place, companies are required to ensure that living standards are not diminished, that community and social ties are preserved, and that they provide fair compensation for loss of assets and economic opportunity. Responsibility for ensuring the long-term well-being of resettled communities has to be defined and monitored. As mentioned earlier, companies are required to adopt as a matter of policy such measures that will support local businesses through preferential procurement from local suppliers and distributors, prioritise employment of locals, and arrange for skills training and generally build human and financial resources in the local community. More importantly, international best practice includes giving a stake to the

affected PAPs in the mining operation, for example in the form of cashless equity. The Government of Orissa has made a beginning in this direction by offering convertible preference shares in lieu of cash compensation but ICMM requires mining companies to proactively participate in long-term compensatory measures rather than merely depend on the local governments. The dominant thinking is now in terms of offering a direct financial stake to indigenous communities in the success of the mining venture, recognising the ownership aspect, and thereby, enabling the tribals to directly access a percentage share of the profits.

SOCIAL RESPONSIBILITY AND THE MINING SECTOR

3.17 Apart from compensation to PAPs, an important component of the SDF is the issue of Corporate Social Responsibility (CSR) on the part of the mining companies. In the presentations before the Committee, it was stated that some of the miners in India have been contributing to local communities through the creation of social infrastructure facilities such as schools and hospitals. The Goa Mineral Foundation has set up a fund, into which a certain amount per tonne is deposited by each member mining company, which is then used for building social infrastructure in the area such as schools and hospitals. Sesa Goa runs community and social development programmes, providing drinking water to surrounding villages, training local youth in maintenance and operation, community health and first aid, etc. The Tata Group of companies have for long been investing extensively in social infrastructure in their mining areas. Their Tribal Cultural Society works in 80 habitats and the Tata Steel Rural Development Society works in 710 villages, running balwadis (kindergarten school), granting scholarships in schools and colleges, running adult literacy programmes, giving vocational training, assisting self-help groups with microfinance credit, promoting micro enterprises, running cultural heritage centres, and implementing a number of health and hygiene programmes. Essel Mining's Aditya Birla Center for Community Development has adopted 19 villages in the vicinity of its mines in the tribal dominated and backward areas. The initiatives include primary health, education through primary schools and literacy programmes, drive against superstition, family welfare programmes, setting up of self-help group for the empowerment of women, etc. Maihar Cement of Madhya Pradesh (limestone miners) has been arranging free medical camps in the villages surrounding its mines and carrying out immunisation programmes, as well as running three schools in addition to providing ambulance and fire tender services to these villages. There are several examples

where miners have taken CSR initiatives in the interest of local communities and indigenous people.

3.18 However, these are unorganised ad hoc initiatives that are voluntary in nature and for which there is no accountability to outside agencies. The ICMM model calls for a commitment not only to the ten principles of the SDF but also to a reporting initiative where the mining majors submit regular reports in respect of prescribed standards and seek certification of adherence. The aspect of social infrastructure in the form of schools, hospitals, drinking water arrangements, etc. needs to be addressed within a formalised framework on the lines of the ICMM model. The Samatha ruling, requiring mining companies to spend a set percentage of their profits on model programmes for meeting local needs through a pre-determined commitment, is one option for the country as a whole. Another option could be to require the mining companies to spend a percentage, say three per cent, of their turnover on the social infrastructure in the villages around the mining area. The working group mentioned in paragraph 3.11 above may take this into consideration when preparing the Indian SDF and determining the percentage that mining companies could be advised to set aside. However, rather than the government it is the company, through the intermediation of NGOs etc., that implement the R&R and social infrastructure plan. The crucial point that this Committee would like to highlight is that both aspects of the current debate, viz. tribal development and afforestation–environment protection, have a more enlarged scope in the context of a mining project *vis-à-vis* other development projects such as irrigation or road projects. A mining intervention can provide genuine development opportunities for indigenous populations because of the direct streams of revenue generated by the mineral production, which is not necessarily the case with infrastructure projects. The ICMM model of SDF is vital to ensure that it becomes possible to garner this revenue and to pass on substantial benefits sustainably to local populations.

FOREST AND ENVIRONMENT CLEARANCES

3.19 While the approach embodied in the two statutes can be examined in the context of international best practices by the proposed joint working group, in the Committee's assessment there is scope for expediting the processing of applications for clearances by individual mining operators even within the existing framework. Inordinate delays, spreading over several years, can and are becoming counter-productive in the sense that the benefits

that a well-regulated and responsible mining operation can bring within the framework of sustainable development are not available to the indigenous/local people, the region, and the economy. These delays are a disincentive to mining and must bear their share of responsibility for the failure of greenfield investment, especially FDI, to come into this sector. It was represented to the Committee that enormous difficulties were being faced by mine operators in getting the requisite clearances under the FCA and EPA. As mentioned earlier, the absence of a smooth and transparent process for granting these clearances has a twofold effect. First, it keeps genuine miners, capable of best practice and willing to accept regulation and adhere to SDF, away from the industry and, secondly, it leaves the field open to unregulated, often illegal, mining operations, with all the attendant risks of damage to conservation, environment, and governance. What cannot be denied is that with a soft state apparatus amounting to a virtual absence of mining policing currently being the reality in most states the chances are that if an ore body is known to exist it will be exploited. If the laws do not permit regulated exploitation, then unregulated exploitation will happen. Let us now examine the specific issues relating to each of the two statutes.

FOREST (CONSERVATION) ACT, 1980

3.20 The National Commission on Agriculture (NCA), in its report of 1976, came out with the startling fact that between 1950 and 1976 about 43 lakh hectares of forest land was diverted for non-forestry use. The report also clearly indicated that more than half the diversion was for agricultural purposes pursuant to GOI's policy to grow more food. The Commission, in consonance with the international concern for loss of forest cover, suggested various remedial measures. Till 1976, forestry as a subject was in the State List and state governments were responsible for the conservation and development of forests. Being a State subject, GOI had no statutory power to intervene. In 1976, the Central government first issued guidelines to all the states to consult GOI before diverting more than 10 hectares of forest land to non-forest use. However, the guidelines, being non-statutory in nature, were ignored by the states, and diversion of forest lands continued at almost the same rate as before. Recognising the gravity of the situation, GOI brought about a constitutional amendment and the subjects of forests and wildlife were brought under the 'Concurrent List'. Immediately thereafter, in 1980, the FCA was enacted. The FCA prohibited the states from de-reserving or diverting any forest area without prior approval of the Central government. The legislation was intended to stop indiscriminate diversion of forest lands into activities

such as agriculture, housing, industry, mining, etc. In October 1992, guidelines were issued under the FCA, detailing the terms and conditions subject to which diversion could be allowed. One of the essential conditions was that the user agency would adequately compensate for forest loss by raising compensatory afforestation in non-forest land of equivalent area.

3.21 As per the FCA guidelines, all mining, including underground mining, requires prior approval of the Central government (MOEF). The FCA applies not only to the surface area that is used in mining but also to the underground mining area beneath the forest. Renewal of an existing ML in a forest area also requires prior approval of the Central government. The guidelines provide that prospecting of any mineral done under a PL granted under the MMDR Act, 1957 that requires collection/removal of samples from the forest land would be treated as a stage between survey and investigation (reconnaissance) and grant of ML and, therefore, permission under FCA would be required. However, test drilling upto 10 bore holes of maximum 4 inches diameter per 100 sq. km for prospecting, without felling of trees, did not attract the provisions of the FCA. In all other cases involving drilling of bore holes, prior permission of the Central government under the FCA would be required. It has been clarified that the permission to survey, explore, or prospect would not *ipso facto* imply any commitment on the part of the Central government for grant of a ML in forest land. However, such a stipulation militates against the seamless transfer dispensation that the Committee would like to promote to attract investment into mining. The Committee would, therefore, propose that the conditionality for environmental clearance for eventual grant of ML may be spelt out in advance and a prospector who meets the conditionality may be assured of FCA clearance eventually. The essential difference between a mining intervention and other interventions is that the miner eventually leaves the land and can recreate or even improve upon the forest as it existed before commencement of operations. The guidelines also provide that:

- (i) Investigations and surveys carried out in connection with development projects such as transmission lines, hydro-electric projects, seismic surveys, exploration for oil drilling, mining, etc. will not attract the provisions of the Act as long as these surveys do not involve any clearing of forest or cutting of trees, and operations are restricted to clearing of bushes and lopping of tree branches for purpose of sighting.
- (ii) If, however, investigations and surveys involve clearing of forest area or felling of trees, prior permission of the Central Government is mandatory.

- (iii) Notwithstanding the above, survey, investigation and exploration shall not be carried out in wildlife sanctuaries, national parks and sample plots demarcated by the Forest Department without obtaining the prior approval of the Central Government, whether or not felling of trees is involved.

3.22 As mentioned earlier, the guidelines issued under FCA stipulate *inter alia* that compensatory afforestation will be required to be carried out in exchange for the area diverted for non-forest purposes and a comprehensive scheme to that effect has to be formulated by the state governments and submitted to the Central government in respect of each project. Separately, the Supreme Court, in its Order dated 30 October 2002, directed that a Compensatory Afforestation Fund (CAF) should be created and all the monies received from the user agencies towards compensatory afforestation, additional compensatory afforestation, penal compensatory afforestation, Catchment Area Treatment Plan Fund, etc. should be deposited therein. In addition to compensatory afforestation charges, the Supreme Court, in the same Order, further directed that the user agency shall also pay into the CAF the NPV of the forest land diverted for non-forest purposes at the rate of Rs 5.80 lakh per hectare to Rs 9.20 lakh per hectare depending on the quantity and density of the forest land converted to non-forest use. This was because it was noted that while the states did collect the CAF charges for compensatory afforestation from the user agencies, these funds were not adequate to create compensatory forests to replace the forests lost. The Order of the Hon'ble Supreme Court in Writ Petition (C) No. 202 of 1995 dated 26 September 2005 has extensively dealt with the issue of calculation of NPV but the matter is still to receive finality, and the Kanchan Chopra Committee appointed by the Hon'ble Court has submitted its report in May 2006. The Kanchan Chopra Committee has recommended that compensatory afforestation charges should not be payable over and above the chargeable NPV and ground rent, and this recommendation is under consideration of the Hon'ble Court. While the final decision on the liability of mining lessees for use of forest land would be taken by the Hon'ble Supreme Court, the Committee would like to make the following two recommendations with a view to lightening the burden on the lessees:

- (i) the NPV should be payable in instalments in proportion to the land broken in accordance with the pre-submitted mining plan;
- (ii) The lessee should not be asked to pay NPV each time a lease is renewed.

3.23 The fact that the FCA has served its objective is reflected in the drastic reduction in the rate of diversion, which came down to 10–15 thousand hectares per year in the post-FCA

period as compared to 1.5 lakh hectares per year between 1950 and 1980. Despite this, it is estimated that more than 10,000 cases have been approved for various developmental activities since 1980, involving diversion of more than 6 lakh hectares of forest land. (These approvals include pending cases from the period prior to 1980.) This shows that the government has tried to maintain a balance between the needs of conservation and the needs of development. However, the mining industry has argued that during the last few years this balance has got tilted towards conservation because the interpretation of certain provisions in the FCA by both state and Central governments, and consequently also by the courts, has become narrower and more severe and exceeded the needs of conservation as perceived by them. The narrow interpretations, combined with inordinate delays in the grant of clearances in the states and to some extent in the MOEF, have made mining an uneconomic activity for large-scale investors. This is one of the reasons why mining in India has remained mainly a SME activity.

3.24 The Hon'ble Supreme Court, in its Order dated 12 December 1996 in the matter of T. N. Godavarman Thirumulpad vs. Union of India & Others, extended the applicability of the FCA to 'forest' in the dictionary sense. Prior to this, FCA was applicable to only such areas which were notified as 'forest' under the Indian Forest Act or which were recorded as 'forest' in the records. The industry has represented that the dictionary meaning of 'forest' leaves great scope for subjective interpretation and the custodians of forest, that is the forest officers, need to uniformly adhere to any one meaning in deciding whether a particular piece of land should be treated as 'forest' in the dictionary sense or not. In such a scenario, mining entrepreneurs are unable to ascertain whether the land they want to mine is a forest land or not. The safe course available to them is to actually apply for clearance in every case and let the forest officer decide whether clearance is needed. Since environmental clearances are obtained only after the concession itself is granted entrepreneurs will be loath to risk the huge investment needed in prospecting and obtaining MLs, only to be told subsequently that the land is a forest land. It is necessary to mention here that the above order of the Supreme Court was interim in nature and by the same Order, the Supreme Court directed all the state governments to constitute an Expert Committee to specifically identify such forest lands. Almost all the state governments have submitted the reports of their Expert Committee to the Supreme Court and a final decision is awaited. The Kanchan Chopra Committee referred to above has also made recommendations on the definition of 'forest'. Against this background, the Committee would recommend that once the Hon'ble Court has passed orders in this

regard, all 'forest' land must be notified in the official Gazette so that there is no scope for subjectivity in interpretation.

3.25 While suggesting changes in the procedures, the Committee is conscious that both conservation as well as development are of paramount importance and a balance has to be struck so that sustainable development ensuring integration of environmental, economic, and social considerations is possible. The environment needs to be fully protected and the flora and fauna have to be preserved and restored using the best available technologies and even brought to a state that is superior to the original state.

3.26 It may be relevant to mention that when the FCA was enacted in 1980, the Forest Department in each state was headed by Chief Conservator of Forest (CCF), supported by Conservator of Forest (CF) and Divisional Forest Officer (DFO). Since then, two more levels have been added in the Forest Departments and the full structure is as follows:

- Principal Chief Conservator of Forest (PCCF)
- Additional Principal Chief Conservator of Forest
- Regional Chief Conservator of Forest (RCCF)
- CF
- DFO.

Since in all proposals the comments of all the officers listed above are sought, the number of desks through which the papers have to pass has thus increased. In addition, another office of Additional Chief Conservator of Forest to support wildlife has been created in almost all the states, and clearances from that office are also sought from the angle of wildlife in the forest areas proposed for diversion.

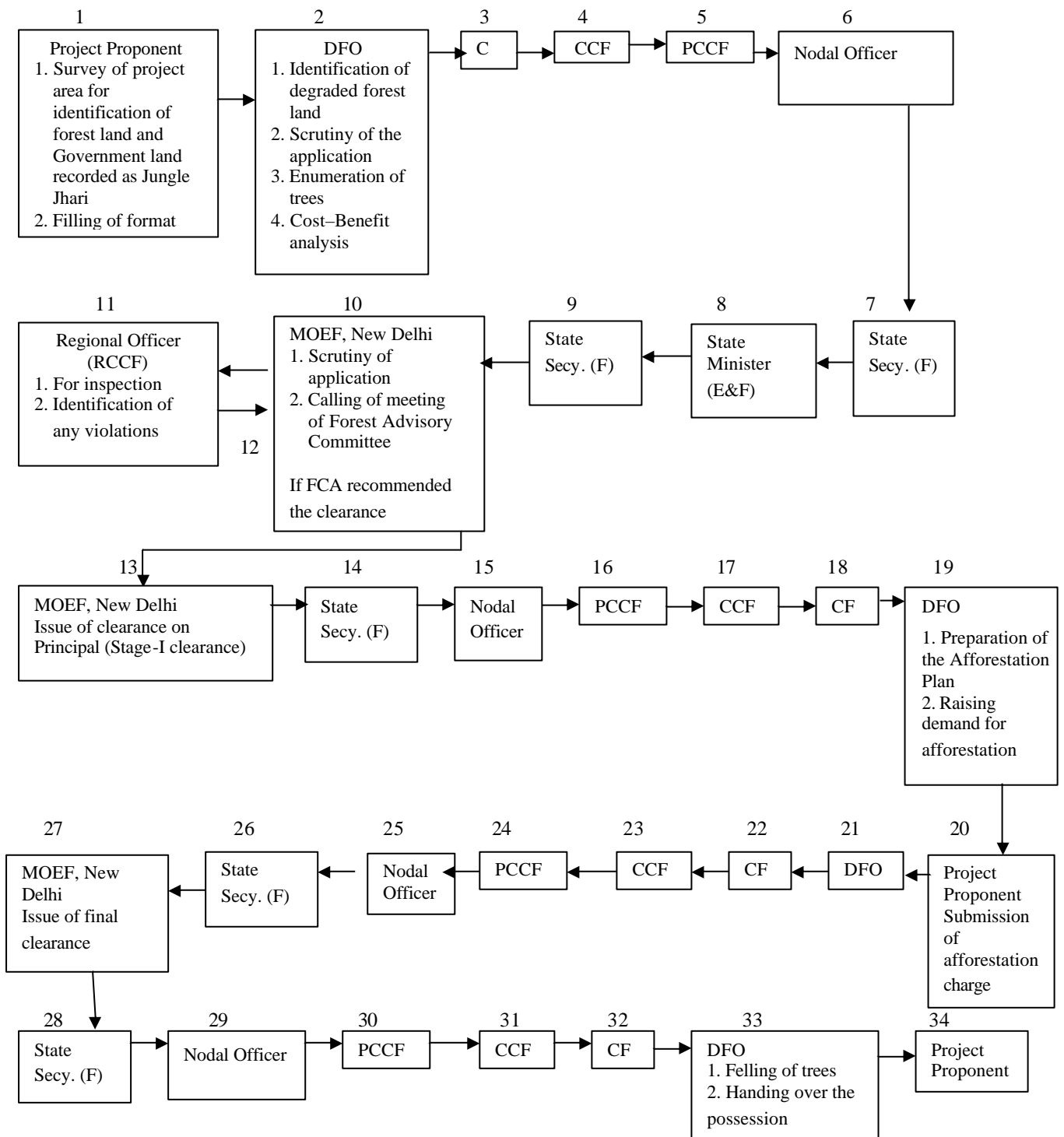
3.27 As per the procedure prescribed in the Forest (Conservation) Rules (FCR) in 1981, as amended in February 2004, a user agency has to apply for diversion of forest land for mining purposes (in Form-A if it is a new proposal, Form-B if the proposal is for renewal) to the nodal officer of the concerned state government who is located in the Forest Department of the state government. The user agency also has to endorse a copy of the proposal along with a copy of the receipt obtained from the office of the nodal officer to the concerned DFO and/or CF, Regional Office of the MOEF, as well as to the monitoring cell of the Forest

Conservation Division of the MOEF. The nodal officer, if the proposal is complete in all respects, has to forward the same to the DFO within a period of 10 days from its receipt. The DFO or the CF shall examine the feasibility of the proposal within a period of 90 days and send it back to the nodal officer. The nodal officer has to then send the proposal to the PCCF who has to forward it to the state government within a period of 30 days. Finally, the state government has to forward the complete proposal along with its recommendations to the MOEF as well as to its Regional Office within a period of 60 days of the receipt of the proposal from the nodal officer. In all, Rule 6(3) of FCR stipulates that the state government shall process and forward its proposal to the Central government within a period of 210 days from receipt, including the transit period.

3.28 If investment in mining activity is to be encouraged on a large scale then the problem of procedural delays and time overruns will need to be addressed. It is more than two and a half decades since the FCA came into operation and discussions that have taken place in various fora to streamline the procedures for forest clearance have been largely in vain. In the Committee's view, immediate action is now required. Internationally, applications are cleared within a period of about six months and India cannot expect significant FDI in the minerals sector unless it falls in line with international norms.

3.29 Figure 3.1 shows the various stages in the processing of proposals for obtaining permission to mine in forest land. The industry representatives pointed out that the time frame envisaged in the FCR is observed more in breach than in compliance. It takes a minimum of three to four years and sometimes even five to seven years for proposals to come to the Central government. The maximum delays take place at the level of the DFO in the process of evaluation of the cost/benefit of the proposal, involving also enumeration of trees. The time overruns apply not only for fresh grants but also to renewals since as per the Supreme Court judgment, renewals are to be treated as fresh grants. The Committee feels that to minimise delays at the level of the DFO, the cost-benefit analysis of the proposal, including the enumeration of trees, should be outsourced by the DFO to competent private sector consultants. The Forest Department of the state government should maintain a panel of recognised consultants for this purpose.

Figure 3.1: Procedure for Processing of Application for Mining in Forest Land



Note: In case of a query raised by any officer, the proposal moves backwards in the chain all the way to the project proponent, leading to further delays.

3.30 Minerals are the property of the states, as are the forests too. Proposals for mining concessions for Schedule I minerals (MMDR Act) have to receive prior approval from the

Central Government in the Ministry of Mines. However, in the case of forestry, all proposals require clearance from the MOEF (upto 40 hectares from the Regional Chief Conservators of Forest of MOEF stationed at Bangalore, Bhubaneswar, Bhopal, Shillong, Lucknow, Chandigarh, and Ranchi, and above 40 hectares directly from the MOEF at New Delhi). It is, therefore, suggested that, in pursuance of the single window clearance recommended in Chapter 2, the Coordination-cum-Empowered Committee of the state governments in the case of non-Schedule I minerals and the Coordination-cum-Empowered Committee at the Centre in the case of Schedule I minerals should be the final authority to grant or recommend clearance under the FCA. The Committees should have a representative from the MOEF as member, who should be responsible for conveying the views of the MOEF to the Empowered Committees. These views will be binding on these Committees. Once the clearance for an area is communicated to the Coordination-cum-Empowered Committees by the representative of MOEF, the Coordination-cum-Empowered Committees can take a view on the application. In this way, the State Mines Department can grant leases or renewals in mineral bearing areas in forest lands, and such leases or renewals will include the clearance under FCA. This procedure will cut down delays drastically by incorporating the MOEF's FCA clearance within the single window system without in any way impinging on the right of MOEF to be the final arbiter. The MOEF may continue to get FCA clearances internally and only the final view may be brought to the Coordination-cum-Empowered Committee. The High Level Committee would recommend that the regional offices of MOEF convey the views of MOEF to the Coordination-cum-Empowered Committees in the states as proposed above so that the State Coordination-cum-Empowered Committees can take decisions expeditiously. An important difference between this and the current dispensation will be that unlike at present, the processing of an application for obtaining clearance under the FCA can start simultaneously with the processing of the lease application, and the application under FCA does not have to wait till the ML is granted.

3.31 Currently forest clearances are accorded in two stages. In the first stage, 'in principle' approval is accorded, which usually covers conditions relating to transfer, mutation, declaration as reserved/protected forest (RF/PF), and provision of equivalent non-forest land for compensatory afforestation. After the receipt of the compliance report from the state government in respect of these conditions, the second stage (formal) clearance is granted by MOEF. The Committee would suggest that once 'in principle' approval is obtained from the MOEF it should not be necessary to go to the MOEF again and the State Mines Department

should be authorised to grant or renew the ML to the individual lease holder subject to the fulfilment of the conditions stipulated in the 'in principle' approval, such as transfer and mutation of non-forest land in favour of the Forest Department, payment for compensatory afforestation and NPV, and such other stipulations as are normally put in by MOEF before conveying the formal (second stage) clearance. This would reduce the procedural steps in obtaining clearances. The state governments can report to the Central government on the compliance of the conditions mentioned in the 'in principle' approval by the user agency. In other words, the Committee would recommend that the second stage clearance may be delegated to the state governments. Further, in the case of renewals of existing leases, if the MOEF has already given its approval under FCA, there is no rationale for going through the whole process again when the lease becomes due for renewal. Unless there are serious adverse effects on the forest and wildlife or environment in an area or there is violation of the conditions mentioned in the initial letter of approval, the approval of applications for renewal should be no more than a formality.

3.32 When proposals for renewal of MLs are submitted for clearance under the FCA, 1980, the state governments often resort to arbitrary reductions in the lease area without assigning any reasons for the same. The industry has proposed that since factors such as depth of mine and consistency of ore body decide the area required for mining a viable deposit, the area applied for mining should not be arbitrarily reduced while according forest clearance or at the time of renewal of the MLs. The Committee recommends that ad hoc reductions in the area applied for renewal under forest clearance be done away with.

3.33 Mining being a site-specific activity, diversion of forest land for mining should be considered for a longer period of, say, 50–100 years or till the exhaustion of the ore body. The Committee recommends that existing leases should be automatically renewed till the ore in the deposit lasts, provided that periodic monitoring reports of the Regional Officers of the MOEF during the lease period indicate compliance with the conditions stipulated during grant of the diversion permission. If approval of MOEF is required in the case of renewals, the same should be granted without having to go through the whole process of submitting a fresh proposal.

3.34 Compensatory afforestation charges are prescribed by the state governments. These charges vary widely across the states, and the criteria for fixing such charges are arbitrary. In

order to have uniformity of approach, it has been suggested that compensatory afforestation charges be fixed by the Central government based on the forest area and topography of each state. Further, the compensatory afforestation charges should be staggered over the entire lease period and collected on a yearly basis. It is suggested that there should be no differentiation in the stipulation of compensatory afforestation charges in the leases of low-value and high-value minerals.

3.35 The State Forest Departments of some of the states have issued instruction that for movement of minerals in the forest area, mining companies have to obtain a Transport Permit from the forest authorities by paying an additional royalty for specified major and minor minerals. The mining industry is already burdened with various forest levies, from NPV to compensatory afforestation charges. Any additional levies for transportation in the forest area can have an adverse effect on the viability of mining operations.

3.36 Presently the processing takes place at multiple levels, making the forest clearance process extremely time consuming. In order to avoid unnecessary delays in the processing of applications for diversion of forest land for mining, it is suggested that the levels at the state government be reduced to three, i.e. District Forest Officer, Nodal Officer, and Secretary, State Forest Department.

ENVIRONMENT (PROTECTION) ACT, 1986

3.37 Mining projects of major minerals of more than 5 hectares lease area require environmental clearance as per the Environmental Impact Assessment (EIA) Notification dated 27 January 1994. After the Supreme Court judgment of 18 March 2004 [in the matter of Writ Petition (civil) 4677 of 1985 M. C. Mehta Vs. Union of India and Others] the said EIA notification was amended on 28 October 2004 to include all mining projects of more than 5 hectares that had until then not obtained environment clearance and they were required to obtain the same at the time of the renewal of the lease. Thus while the 1994 notification dealt with prospective applications the Supreme Court judgment extended this to all outstanding leases as well.

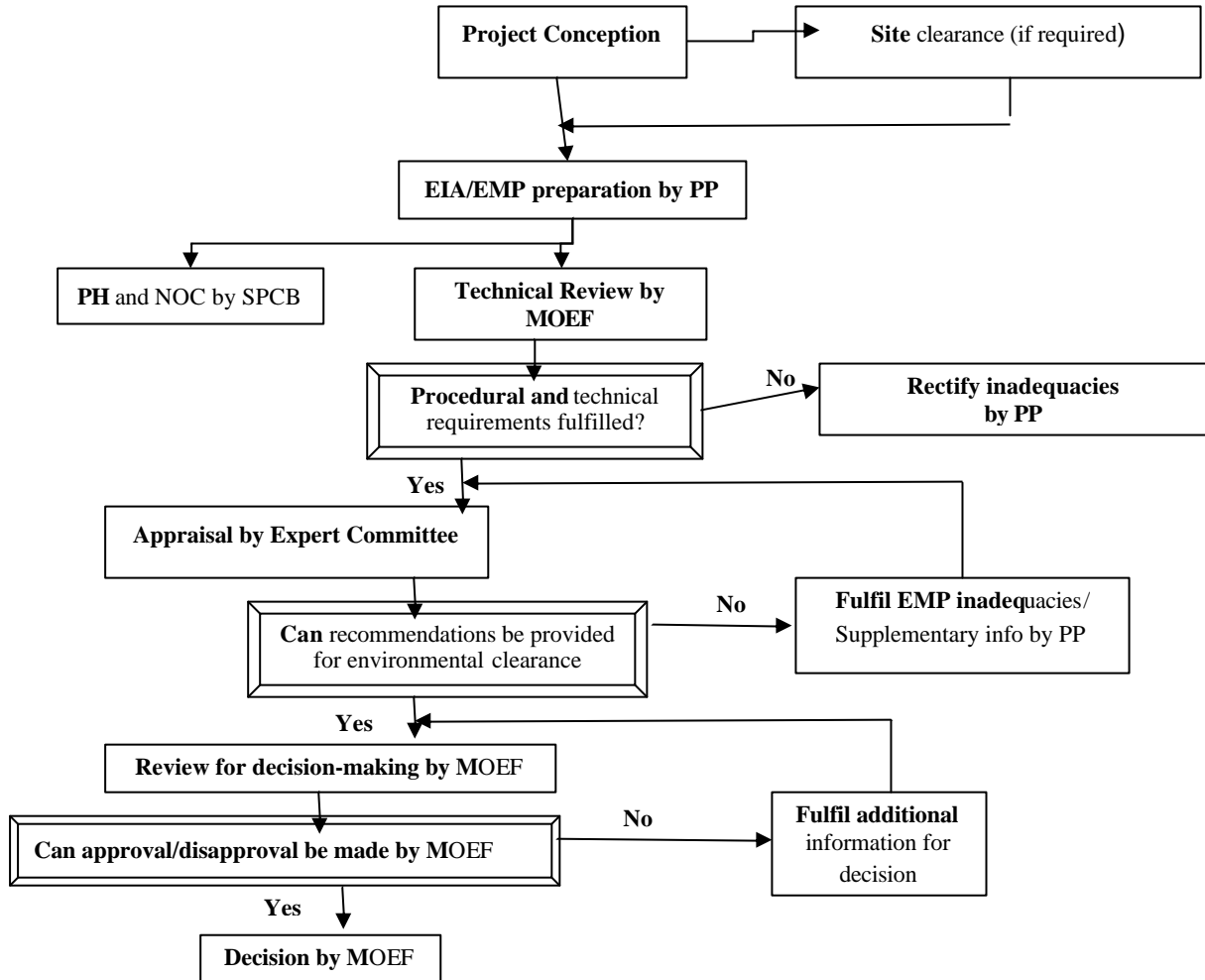
3.38 Environmental clearance procedure has three components. First, an EIA study has to be submitted as part of the clearance procedure and there are special rules relating to the

formulation and appraisal of the EIA. Second, a public hearing has to be conducted and the procedure for the same is laid down in detail. Third, an EMP has to be submitted and clearance for the same separately obtained.

3.39 As per the 1994 Notification, the nodal department for routing applications for environmental clearance for new lease area, expansion in lease area, or renewal of lease area is the state Mines and Geology Department. Central public sector companies have to route their applications through their respective ministries in the Central government. However, since January 1994 if a project has already been accorded environmental clearance once by the MOEF no such routing is required at the time of renewal or expansion and the application for these purposes can be sent directly to MOEF. In the case of state PSUs, routing of applications through the administrative departments concerned is also not required if IBM has approved the mining plan for the total lease area/project, regardless of whether the application is made for the first time or is for renewal or expansion.

3.40 The broad picture of the procedures involved in obtaining environmental clearance can be seen from Figure 3.2.

Figure 3.2: Flow Chart for Existing Environmental Clearance Process (GOI Level)



3.41 Recognising the need to make the existing environment clearance procedure time bound and more transparent, the MOEF first brought out a draft notification on 15 September 2005 proposing a number of changes in the 1994 notification and inviting comments from stakeholders. The MOEF has further prepared a revised version of the draft notification of 2005 after receiving responses as above and has circulated it in May 2006. It is expected that the MOEF will finally bring out a new notification to replace the existing notification of 1994 based on the responses received on the September 2005 and May 2006 drafts.

3.42 The new draft notification of May 2006 categorises mining projects into two categories, viz. category A and category B. All mining projects with ML areas of more than 50 hectares have been kept in category A. Mining operations on lease areas of more than 5 hectares but less than 50 hectares are kept in category B. Mineral beneficiation activity of more than 0.1 million tonnes per annum has been included in category A. Mineral beneficiation of less than 0.1 million tonnes per annum is kept in category B. All projects or activities of category A, including expansion and modernisation of existing projects or activities and changes in product mix, would require prior environmental clearance from the MOEF. Projects and activities of category B, including expansion, modernisation, or change in product mix, would require prior environment clearance from the State Environment Impact Assessment Authority (SEIAA). Category B has further been divided into B1 and B2. Projects requiring an EIA report are categorised as B1. The MOEF expects to issue separate guidelines for the treatment of the sub-categories B1 and B2.

3.43 The environmental clearance processes is proposed to comprise four stages. These are Screening (only for category B projects/activities), Scoping (for deciding TOR of EIA exercise) Public Consultation, and Appraisal. Time limits have been prescribed for each stage.

3.44 During detailed discussions, it transpired that the draft rules contained some improvements as well as some stricter norms. After detailed discussions, the Committee makes the following recommendations:

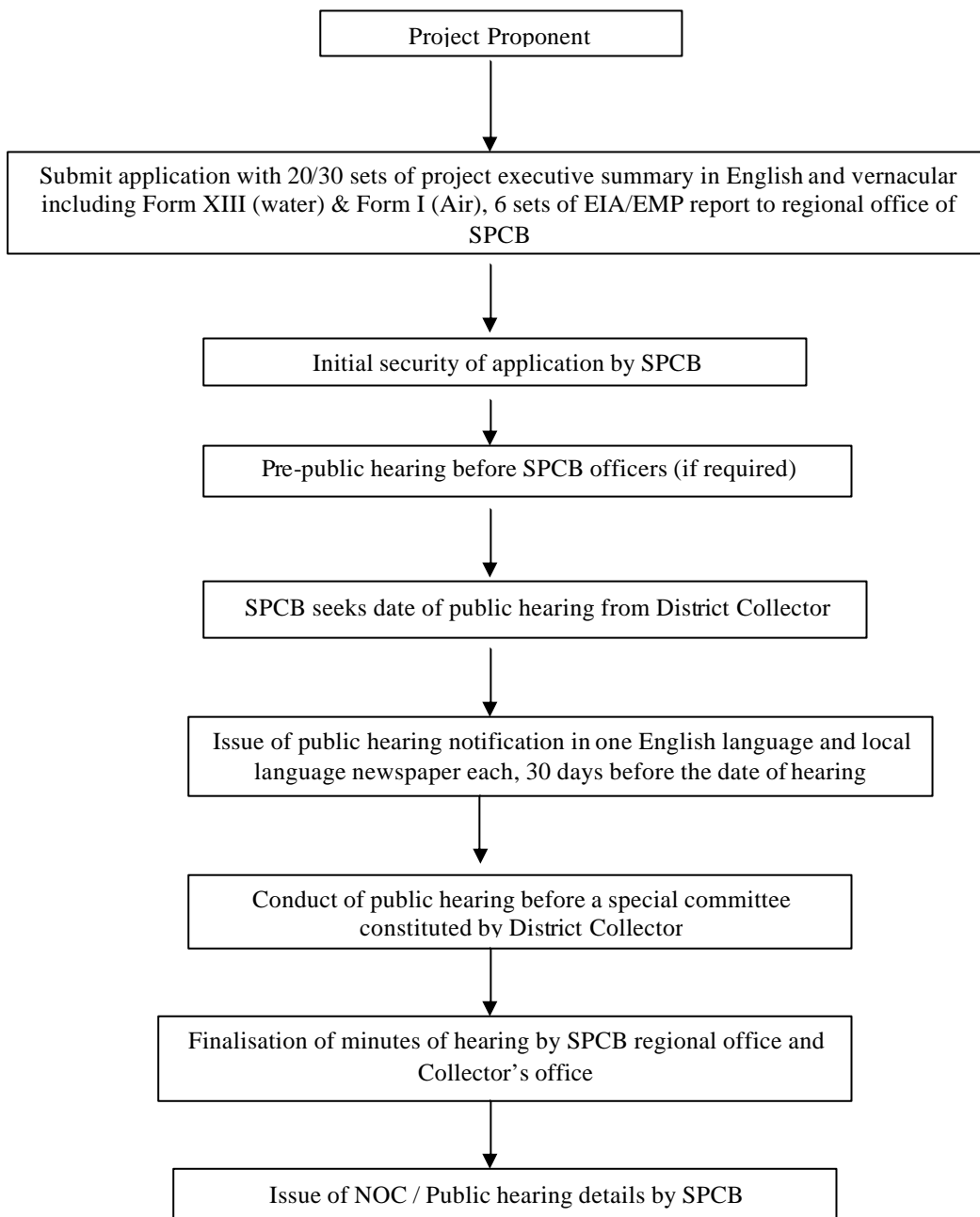
- The time frame proposed in the draft notification of the MOEF of May 2006 works out to 232 days, even after excluding the time required for preparation of EMP and the final report. This proposed time frame is too long and is well beyond

the international norm of upto 6 months (180 days) for granting environment clearances. There is scope for reducing this time frame.

- As in the past, no environmental clearance is required for grant of RP. For prospecting there are ambiguities in the latest notification. The Committee feels that the level of waste-generation is very minimal at the prospecting stage as well and that there is no basis for requiring environmental clearance. It, therefore, recommends that prospecting should be exempted from such clearance.

3.45 The most major reason for delays in the grant of clearances under the EPA is the procedure followed for public consultations. An idea of the processes involved for public hearing can be had from Figure 3.3.

Figure 3.3: Public Hearing/NOC from SPCB



3.46 In the Committee's view, the following suggestions in respect of public hearings need to be considered by the MOEF before finalising the draft notification.

- Public hearings were earlier not required for mining operations below 25 hectares. Now even a 5-hectare ML may require a public hearing, which is a retrogressive

step since small miners do not have such large impacts on the environment as to warrant public hearings.

- Public consultations should be dispensed with for areas less than 50 hectares and also for renewal of leases.
- Public hearing should be strictly limited to issues arising out of the EIA report. The proposed notification should specifically spell this out, as unrelated issues tend to delay the processing of applications. Furthermore, public hearing should be limited only to the people living in the area or to the legislators representing the area or NGOs registered in that area, and outsiders should not be allowed to participate. Contributions and suggestions of outsiders should be restricted to written comments from 'other concerned persons', which are already contemplated in the procedures as a part of 'public consultations'.

3.47 An EMP has to be prepared under the MCDR and got approved by IBM. However, this EMP is not acceptable to the MOEF. The miner has to prepare two EMPs separately—one for IBM and another for MOEF. The Committee suggests that IBM and MOEF should prepare guidelines for a composite EMP so that IBM can approve the same in consultation with MOEF's field offices. This will eliminate anomalous situations where increase of even a few tonnes in production requires project authorities to get a fresh EMP approved from the MOEF although the IBM allows a grace of ± 10 per cent, keeping in view the fluctuations in the market situation and process complexities. If a single EMP is accepted in principle such anomalies can be resolved in advance. The Committee feels the MOEF should also have a cushion of ± 10 per cent in production while giving EIA clearance.

3.48 The country has gained considerable experience in matters relating to protecting the environment and there is much awareness of the need to work towards a clean and pollution free environment. It is, therefore, necessary that the environmental standards are codified by the government after taking into account the ground realities and if some deviation becomes essential in view of the topography of the area, and the nature and behaviour of the deposits, there should be an appropriate mechanism to assist the mine owner to take corrective steps. In this regard, the ICMC's SDF, the GRI system, and the Supplement should be the basis on which such codification can be undertaken. Preparing such a code may be one of the main TORs of the joint working group proposed in paragraph 3.11.

Chapter 4

Infrastructure Needs and Financing

(Term of Reference no. 4)

To prioritise the critical infrastructure needs of the Indian mining sector and make recommendations on ways to facilitate investment to meet these needs

4.1 Unlike any other industrial project a mining project cannot be set up at a place of the entrepreneur's choice. The mine has to be located at the place where the ore body lies. For promoting industrial development we have the option of first setting up infrastructure [e.g. industrial estate or Special Export Zone (SEZ)] and then inviting industrial units to establish therein. In the case of mining, the mine operator first identifies the ore body, then locates the site where the mine is to be developed, and then builds the infrastructure needed to set up and operate the mine and evacuate the ore. In other words, the mine does not go to the infrastructure, the infrastructure has to come to the mine. The infrastructure needs of the mining sector can be classified into two categories. First, infrastructure needed to develop and operate a mine; and second, infrastructure needed to evacuate the mineral bearing ore to the processing site or port either as raw ore or as a value added product after the raw ore has been processed at or near the pit mouth. Examples of such value addition are metal-in-concentrate (MIC) in the case of copper and sizing, blending, and pelletising in the case of iron ore.

LINKING INFRASTRUCTURE FOR MINING ACTIVITIES

4.2 Infrastructure needed to set up the mine requires access to the mine site by men and material (mining equipment). Infrastructure required to operate the mine includes colonies for housing people and meeting their needs (social infrastructure) and power and telecommunications to run the equipment and meet the needs of the habitations. If the mines are not large, such as those in the SME sector, or if the equipment is high-tech and labour saving, the human resource related infrastructure required may not be very much. However, power is required for carrying out mining operations and further processing activities that have to be necessarily carried out near or at the mine site. Infrastructure needed to evacuate

the ore (raw or processed) is mainly the road and/or railhead from where the mineral is to be transported to the site of the processing unit, e.g. refinery or smelter. If the ore is to be exported, then the infrastructure includes road or rail connection to the port and the port itself where adequate handling and shipping (berthing, loading, draught, etc.) capacity is needed. Other utilities, such as a water source, would be specific to the project. It is, therefore, essential that adequate infrastructure facilities, viz. roads and railways, power, port facilities, and water and other utilities are available to the miner. Without these the resources cannot be accessed, extracted, and marketed.

4.3 Roads and utilities within the mining areas are generally constructed and maintained by the mining companies themselves, even in the SME sector. Road and rail links for the transportation of minerals from the mined areas to the nearest railhead, national highway (NH), or state highway (SH) are the primary infrastructure requirement before a mine can be operated. In the absence of such links the growth potential of the mining sector in the country is seriously handicapped. The infrastructure issue has to be seen in two different contexts, viz. needs of the mining majors, on the one hand, and the needs of the SME sector mines, on the other. Mining majors or large-scale stand alone mines tend to construct their own linking infrastructure. Publicly funded infrastructure is needed mainly for the SME sector mines since their ability to build linking infrastructure is limited by the scale of their operations.

4.4 While in most parts of the world there is not much mining in the SME sector, the mining operations in India are largely confined to the SME sector. This is because the Indian laws and procedures have so far been somewhat biased against large stand alone mines that require concessions over a large area for economies of scale. The Indian large mines are mainly of iron ore, bauxite, copper, zinc, manganese, gold, and limestone (bulks) and are mostly in the captive segment. There are 11 relatively large stand alone iron ore mines (see Annexure 11), two copper mines with Hindustan Copper, one zinc mine cluster with Hindustan Zinc, one manganese ore mine with Manganese Ore (India) Limited (MOIL), and a gold mine with Hutti Gold. There is no kimberlite (deep) diamond mining in India nor are there any beach sand mineral (BSM) mines in the large-scale sector. Since mining proper in most parts of the world is mainly a large-scale non-captive activity the mining world tends to regard India as a country without a developed mining sector. The only exception is dimension stone (granite, marble) which is an activity both in the large-scale as well as in the SME sector and is located in coastal areas and is primarily export-driven.

4.5 Logistics is the key to access and evacuation. As stated above, large mining majors the world over create their own infrastructure. Resource companies such as CVRD, Rio Tinto, and BHP Billiton¹ own and operate dedicated infrastructure including railways and ports. BHP Billiton runs the highest axle load railway in the world with single lines capable of carrying more than 100 million tonnes. In fact, all mining majors establish and run dedicated heavy haul freight railways. CVRD's logistics division carries 37 per cent of Brazil's rail cargo. Port Hedland, which is run by BHP Billiton, is capable of shipping 110 million tonnes of iron ore, and Port Lambert, which is operated by Rio Tinto, ships 50 million tonnes of iron ore a year. India's major port, Visakhapatnam port, ships around 50 million tonnes of all commodities. The Indian stand alone mining community (with individual production capacity above 3 million tonnes) has also started looking at infrastructure as an area of investment for increasing product value through better access to markets and saving on costs, especially transportation costs—for example, roads built and maintained by mining companies in Goa and Bellary, and in the east, railway lines from Haridaspur to Paradip, cutting the distance between the two destinations from 123 km to 82 km, partly financed by mining companies in Orissa. If cluster mining is encouraged as proposed elsewhere in this report, such infrastructure can be expected to cover even wider areas with large mining companies taking interest in smaller deposits. Apart from the build–operate–transfer (BOT) model, mining majors can also contribute to infrastructure creation through other models in the public–private partnership (PPP) mode. A roadway or railway for dual use can receive capital funding from mining majors in return for guaranteed movement of cargo of fixed or flexible quantities for fixed or flexible durations. Mining majors can contribute to infrastructure Special Purpose Vehicles (SPVs) jointly with state or Central PSUs run on professional lines.

4.6 Thus, as far as the large-scale mining companies are concerned, the issue is mainly of institutional support by the state and Central agencies to the miners, enabling them to put infrastructure in place. As and when the mining sector is opened up to mining majors, both foreign and domestic, they would look for putting up road and rail linkages, power infrastructure to access the grid, and social infrastructure in terms of habitations for the worker population. This will require an enabling environment by way of support from local

¹ CVRD is located in Brazil, Rio Tinto in the UK, and BHP Billiton in Australia.

administration in terms of facilitating access to land, interlocution with the local population for surface rights, and general receptivity for mining activity as a constructive intervention in the growth process. Designing an agency that can perform these tasks is one of the challenges before us.

INFRASTRUCTURE NEEDS OF THE SME SECTOR

4.7 The current situation is that in the main, India's non-captive mining is in the SME sector. Table 4.1 gives the distribution of the current levels of production of minerals in India between mining majors and the SME sector. Iron ore, bauxite, and limestone account for the largest part of mining activity in the country. A major part of the large-scale sector production is under captive mining, which have their own dynamics in terms of technology used and ore extracted as these are driven by the requirements of specific downstream units rather than by the economics of demand, supply, and prices in the industry as a whole. Table 4.2 provides a view of the mining sector proper. Iron ore, limestone, and bauxite, being the most easily explored minerals, account for the largest mining activity in both the large-scale as well as the SME sectors. However, both in quantitative terms as well as in percentage terms, the share of the SME sector dominates across the board in the main minerals. If we leave aside captive mining, then in terms of production, area covered, and the number of leases, the SME sector far outweighs the large-scale sector. India's SME sector is too insignificant to count as a mining activity of substance. SME sector mining exists only in user countries that do not have large resource bases and is akin to primitive mining because technologies require scale. India's rather antiquated exploration technology has thrown up a number of small deposits and these deposits are picked up by SME sector operators. The infrastructure problems of the SME sector in India are also unique to the Indian situation and require location-specific solutions.

Table 4.1: Mineral Production in India, 2004–05

Mineral	Production	Large-scale				SME sector	
		Captive	Non-captive	Total	% of total production	Total	% of total production
Copper Concentrate (tonnes)	145,664	145,664	Nil	145,664	100	Nil	Nil
Zinc Concentrate (tonnes)	666,972	666,972	Nil	66,6972	100	Nil	Nil
Lead Concentrate (tonnes)	81,635	81,635	Nil	81,635	100	Nil	Nil
Nickel	Nil	Nil	Nil	Nil	Nil	Nil	Nil
Gold ore 6(tonnes)	589,877	589,877	Nil	589,877	100	Nil	Nil
Diamond (carats)	78,315	Nil	Nil	Nil	Nil	78,315	100
Iron ore ('000 tonnes)	142,711	35,040	50,000	85,040	60	57,671	40
Bauxite ('000 tonnes)	11,697	8575	Nil	8575	73	3122	27
Limestone ('000 tonnes)	161,462	150,065	Nil	150,065	93	11,397	7

Note: In the case of iron ore mines, only the 11 major stand alone mines are considered in case of large-scale non-captive mines. All SME mines are non-captive mines.

Source: Indian Bureau of Mines, Nagpur.

Table 4.2: Non-captive Production in Large-scale and SME Sector

Mineral	Non-captive production	Large-scale		Leases (As on 31 March 2004)		SME	
		production	% of total production	No.	Area (ha)	production	% of total production
Copper Concentrate (tonnes)	Nil	146,966	100	17 (5)	10,589.86	Nil	Nil
Zinc Concentrate (tonnes)	Nil	581,136	100	12 (6)	8221.35	Nil	Nil
Lead Concentrate (tonnes)	Nil	71,274	Nil	Nil	Nil	Nil	Nil
Nickel	Nil	Nil	Nil	Nil	Nil	Nil	Nil
Gold ore (tonnes)	Nil	608,230	100	9 (3)	6683.12	Nil	Nil
Diamond (carats)	78,315	Nil	Nil	2 (2)	576.51	78,315	100
Iron ore ('000 tonnes)	91,693	72,420	60	474 (270)	79,041.71	49,120	40
Bauxite ('000 tonnes)	2924	7905	73	266 (191)	24,592.93	2924	27
Limestone ('000 tonnes)	11,485	145,440	93	1411 (571)	106,260.41	11,485	7

Note: 1. IBM provides area only for number of leases and not for operating mines.

Also, IBM does not give leased area data separately for captive, non-captive, and large-scale and small-scale mines.

2. Number of operative mines in 2004–05 is given in brackets.

3. Number of mines is common for lead and zinc.

4. Area is in hectares.

Source: IBM, Nagpur.

4.8 The infrastructure needs of the SME sector operations are different mainly because their scale of operation does not permit miners to put up their own infrastructure. Therefore, SME sector mines usually tend to come up where some form of public infrastructure already exists. Since existing roads and railways are already overburdened, the needs of mining are difficult to satisfy and have to be met at the expense of other users. Where more than one SME sector operation comes up the existing infrastructure is put under strain. Mineral extraction activity could in such circumstances damage the infrastructure through excessive use, depriving other users for whom the infrastructure was created in the first place. It is

necessary, therefore, that in infrastructure projects in areas where SME sector mining is significant the requirements of the miners are factored into the design of the projects. Stronger infrastructure is needed to withstand the load imposed on public utilities by the mines in the area. It may be mentioned here that when mining majors build infrastructure specially suited to the needs of carrying minerals, viz. rail tracks and roadways of much higher carrying capacity, the unit cost of transportation decreases with higher volumes. Transportation by railways in Brazil, where mining majors are active, costs US\$ 3-4 per tonne while the cost in India is Rs 800 per tonne (about US\$ 18 per tonne). In roadways too, while Indian roads can at best accommodate dumpers of 40-50 tonne capacities, the roads in Brazil and Australia are designed for dumpers of upto 200 tonnes.

4.9 The critical infrastructure needs of the mining sector in the country may be seen in the short term as well as in the long term. In the short term, these are the specific needs, such as power, roads, railways, ports, etc., highlighted by problems being currently faced by the mining industry, which is driven by the SME sector. In the long term, looking at the huge mining potential of the country as one of the few untapped resource countries of the world and the low level of mining activity currently underway, the focus has to be on setting up institutional arrangements for facilitating infrastructure development, which will act as an incentive to the growth of the sector by attracting large stand alone mines that will mine efficiently, optimally, and on a sustainable basis. These arrangements need to be devised in such a way that the absence of infrastructure is seen not as a bottleneck to be overcome but as an opportunity for investment by the mining community by itself.

4.10 Short-term infrastructure needs with some suggestions were highlighted by industry in the presentations before the Committee. These mainly concern the movement of iron ore and dimension stone from mine sites to ports. This is only to be expected because significant non-captive mining activity as a whole in India is mainly in respect of these minerals and is largely confined to SMEs. The road and rail systems servicing the SME sector are overburdened and struggle to cope with the increasing tonnages being transported, resulting in freight increases and supply disruptions, in turn resulting in higher delivery costs. The immediate critical requirements for the movement of iron ore and stone (granite and marble) have been identified and are detailed below.

INFRASTRUCTURE NEEDS IN IRON ORE BELTS

BELLARY–HOSPET REGION

4.11 The Bellary–Hospet sector is endowed with rich iron ore deposits of about 1.5 billion tonnes and this sector currently produces more than 35 million tonnes annually. Since there are very few large user industries (steel mills) due to water and power shortages most of the iron ore is exported. Around 20–25 million tonnes is exported to China, Japan, and South Korea, the balance being sold to the domestic pig and sponge iron units in the region. This ore is exported through the ports of Mangalore, Chennai, Goa, Visakhapatnam, Kakinada, Karwar, and Belkeri. Therefore, improvement in service by providing connectivity through shortest distance and modernising the handling equipments is called for in these ports to reduce the transportation cost and turnaround time of the vessels. The quality of roads is not good enough to meet with the heavy traffic requirements of iron ore trucks from the mines to the loading stations. Improving road conditions will reduce cost by reducing truck breakdowns, less fuel consumption, and smoother travel.

GOA AND KARNATAKA REGION

4.12 Export of iron ore from Goa region is equally important. Of the 78.14 million tonnes of iron ore exported from the country during the year 2004–05, more than 40 per cent, i.e. about 31.40 million tonnes, was routed through Goa. There are certain bottlenecks in the inadequacy of the present railway connection to the port. There is limited line capacity with the railways to transport iron ore from Karnataka to Goa. The rail and road connectivity needs improvement by doubling of the line and four-laning the NH. At Goa Port there is a need to refurbish the mechanical iron ore handling plant and to introduce mechanical handling facilities for railway wagons.

EASTERN SECTOR: CHHATTISGARH, JHARKHAND, AND ORISSA REGION

4.13 The eastern sector, comprising Chhattisgarh, Jharkhand, and Orissa, is endowed with high grade iron ore reserves amounting to 45 per cent of the total reserves of the country. Export of iron ore from the above states through Haldia port has increased from 0.35 million tonnes to 4.96 million tonnes and through Paradip port from 2.73 million tonnes to 9.05 million tonnes within a period of five years from 2000–01 to 2004–05. Rail and road linkages

to the ports of Haldia and Paradip are the main short-term infrastructure requirements in the eastern sector.

INFRASTRUCTURE NEEDS OF DIMENSION STONE INDUSTRY

4.14 Internationally, more than 90 per cent of the movement of dimension stones (marble and granite) to ports and internal destinations is by rail, this being the cheapest mode of transportation. In the absence of rail transport facilities on the scale required, Indian stone miners depend entirely on high cost road transport for the movement of dimension stones. However, trucks can carry weight only upto a limit. Being heavyweight cargo, transportation of granite blocks by trucks has its problems. Single dimension blocks of 15–30 tonnes, which are required for export markets as well as for large factories within the country, have to be transported by trucks but most of the trucks in India can legally carry only 12-tonne loads. In China, South Africa, and Zimbabwe, transportation of large dimension stones receives support from the railways. Compared to the facilities in these countries, the Indian dimension stone industry has practically no support from the railways.

TRANSPORT INFRASTRUCTURE: ROADS, RAILWAYS, AND PORTS

4.15 A number of NHs and one SH were identified in the presentations before the Committee as being of critical importance to the mining sector. These are listed below:

- (i) Rajamunda–Barbil (NH-215): 60 km
- (ii) Barbil–Panikoili (NH-215): 189 km
- (iii) Chandikhol–Paradip (NH-5A): 77 km
- (iv) Jamshedpur–Haldia (NH-33, NH-6, and NH-41): 200 km
- (v) Jaintgarh–Chaibasa–Haldia (SH): 100 km

4.16 The position regarding NH-215, two stretches of which are listed at serial nos. (i) and (ii) above, is that the NH starts at Panikoili and ends at Rajamunda, and the entire 269-km highway falls within Orissa. Improvement of NH-215 has been included under National Highway Development Projects (NHDP) Phase-IIIA for a length of 249 km from Panikoili to Roxy. The remaining length of 20 km from Rajamunda to Roxy is also included under NHDP Phase-IIIA and the proposal is likely to be considered shortly. The Detailed Project Report (DPR) has been received by NHAI and the work is likely to be awarded in December 2006 and completed in December 2009.

4.17 NH-5A from Chandikhol to Paradip has already been taken up for four-laning in 2004 and 34 per cent of the work has been completed. The entire NH-5A falls in Orissa and was taken up as a port connectivity project. The project is scheduled to be completed in June 2007.

4.18 As regards serial no. (iv) above, the part from Kharagpur to Kolaghat has been taken up under the Golden Quadrilateral project (linking Delhi, Mumbai, Chennai, and Kolkata) and the portion from Kolaghat to Haldia under the port connectivity schemes. Portions of NH-33 and NH-6 falling in Jharkhand have not been taken up for improvement. In serial no. (v) above, the portion from Jaintgarh to Chaibasa is NH-75E and from Chaibasa to Jamshedpur is a SH.

4.19 Thus, most of the identified roads are already under improvement under various NH projects. The identified roads not yet taken up are NH-33 and a small segment of NH-6 falling in Jharkhand as well as NH-75E. The Committee recommends that these sections of the route from Jaintgarh via Chaibasa and Jamshedpur to Haldia that have not yet been taken up for improvement should be taken up under the NHDP Phase-III project. In the Committee, there was support also for declaring the small portion of the SH between Chaibasa to Jamshedpur as NH although the representative of the Ministry of Surface Road Transport and Highways (MOSRTH) pointed out that a decision had been taken not to declare any more state roads as NH for the time being.

4.20 It was mentioned in the presentations that several SHs and link roads from the mines to the NH or SH or to the railhead would also need to be taken up for construction to make it easier for the SME mine owners to transport the minerals. The general issue of future financing of road projects is taken up later in this Report.

4.21 Minerals, being bulk commodities, are transported over long distances over land mainly by the railways the world over. This is the case in India too and mineral transport from the mines to the ports or to the factories takes place by rail. The presentations had identified a number of segments of railway lines of critical importance for transportation of minerals. Most, if not all, of the identified projects have already been taken up, the latest additions being made by the Report of the Committee of Secretaries on Road Rail

Connectivity of Major Ports, brought out in 2006. In fact, several railway projects other than those identified in the presentations before the Committee that are relevant for the mining sector are also under execution.

4.22 The present position of the railway projects relevant for mining, including those that were identified, is described in Table 4.3.

Table 4.3: Current Position of Railway Projects Relevant for Mining

Sl. No.	Name of project	Km	Approx. cost (Rs crore)	Likely date of completion
1	Banspani–Keonjhar–Daitari: New line	155	800.69	October 2006
2	Dalli Rajhara–Rowghat Jagdalpur: New line	235	457.0	Not fixed
3	Haridaspur–Paradip: New line	82	594.34	December 2008
4	Mahanadi Bridge: Doubling	3	109.56	June 2008
5	Angul–Skinnda Road: New line	90	344.0	March 2009
6	Kottur–Harihar: New line	65	135.55	December 2011
7	Hubli–Ankola: New line	167	997.58	October 2009
8	Obulavaripalli–Krishnapatnam: New line	113	426.34	October 2010
9	Banspani–Padapahar: Doubling	27.21	99.55	March 2009
10	Jharsugda–Sambalpur: Doubling	48.66	127.04	March 2009
11	Sambalpur–Titlagarh: Doubling	182	474.25	March 2011
12	Guntakal–Hospet: Doubling	115.4	350.21	March 2007
13	Guntakal–Renigunta: Doubling with electrification	151	538.26	December 2008
14	Vizianagaram–Kottavalasa: Third line	34.70	167.67	December 2009
15	Goilkera–Manoharpur: Third line	40	186.92	December 2009
16	Bhatapara–Urkura: Third line	110	375.42	October 2008
17	Bilaspur–Anuppur: Doubling	127	409	December 2009

In addition to the above, the following projects that are mainly intended to facilitate the movement of minerals are in the survey stage:

- Doubling of track from Hospet to Vasco
- Doubling of track from Rajagoda to Haldia
- Attiputtu–Puttur: New Line
- Doubling of track on Kirandul–Kttavalsa line
- Third line from Kharagpur to Panskura
- Doubling of track on Raipur–Titlagarh line.

During the meetings of the Committee, the Railways representative clarified that these projects would be taken up eventually only on the basis of traffic projections.

4.23 The export of iron ore has increased from 37.27 million tonnes in 2000–01 to 78.14 million tonnes in 2004–05, i.e. a growth of more than 100 per cent in a span of five years. Port-wise exports of Indian iron ore are indicated in Table 4.4.

Table 4.4: Port-wise Exports of Indian Iron Ore
(million tonnes)

Port	2000–01	2001–02	2002–03	2003–04	2004–05 (p)
Chennai	6.79 (18.22)	7.43 (17.84)	7.98 (16.62)	8.23 (13.15)	9.54 (12.21)
Haldia	0.35 (0.94)	1.62 (3.90)	2.69 (5.60)	3.74 (5.98)	4.96 (6.35)
Goa	17.56 (47.12)	18.90 (45.39)	21.97 (45.75)	30.72 (49.10)	31.42 (40.21)
Mumbai-FL	---	---	0.15 (0.31)	0.04 (0.06)	0.05 (0.06)
New Mangalore	4.43 (11.89)	4.86 (11.67)	5.62 (11.71)	6.86 (10.97)	9.40 (12.03)
Paradip	2.73 (7.32)	3.19 (7.66)	4.13 (8.60)	5.48 (8.76)	9.05 (11.58)
Visakhapatnam	5.41 (14.51)	5.64 (13.54)	5.48 (11.41)	6.89 (11.01)	8.65 (11.08)
Karwar	---	---	---	0.50 (0.80)	0.80 (1.02)

Note: p: provisional figures. Figures in parentheses indicate the percentage to the total exports.

Source: Goa Mineral Ore Exporters' Association (GMOEA), Kudremukh Iron Ore Company Limited (KIOCL), National Mineral Development Corporation (NMDC), Minerals and Metals Trading Corporation (MMTC), private mine owners.

4.24 In the course of the presentations made by the stakeholders, a number of shortcomings were identified in the port sector. However, it was found that the ambitious port development plan taken up by the Ministry of Shipping already includes these projects, and some of them have even been completed as described below:

- (i) The wagon tippers in Chennai Port have already been revamped and replaced as per the requirements of the iron ore exporters;
- (ii) Ennore Port plans to take up within a year the development of an iron ore berth through public–private partnership to handle 12 million tonnes of iron ore;
- (iii) At Mangalore, the port already has the depth for receiving vessels with a draught of 14 metres and is proposing to increase it to receive vessels of 17 metres draught. The port is also planning for mechanical unloading and stacking;

- (iv) At Visakhapatnam Port, all the three tippers are working and the port is planning to deepen the approach channel to receive 2.25 lakh dead weight tonnage (DWT) vessels during the course of the Eleventh Five-Year Plan;
- (v) Kolkata Port has already initiated action for the preparation of a deep sea port south of the Haldia Dock Complex;
- (vi) Paradip Port has already invited expression of interest for construction of an iron ore berth for handling 1.25 lakh DWT vessels and also implementing the project for deepening of approach and entrance channels and turning basin;
- (vii) The industry wanted the stockpiling area for unloading and loading to be increased and the turnaround capacity to be improved. It was pointed out that since the landing facilities in the back-up area behind the port are minimal, increase in stockpiling would be difficult and the industry should try to evacuate cargo from stack-yards. Further, the port authority is planning to have wagon tipper system behind the berth.

4.25 The Committee recommends that the projects related to roads, railways, and ports proposed in paragraphs 4.15–4.24 should be implemented most expeditiously as they would address the immediate problems of exporters and lead to reduction of freight costs and make Indian iron ore more competitive *vis-à-vis* Australian and Brazilian iron ore. The infrastructure projects identified in future should be taken up in PPP mode wherever possible. The deficiencies at the ports, the long linkage from the mining area to the port through road and rail, and lack of long-term planning by exporters are some of the factors responsible for the current situation where the per tonne landed cost at a Chinese port of India's high grade ore is US\$ 65 compared to US\$ 62.90 for Brazilian ore and US\$ 50.99 for ore from Australia. Although, India is much closer to China than Australia or Brazil the freight cost from Australia is US\$ 10 per tonne while from India it is US\$ 13 per tonne. A clearer picture will emerge from Table 4.5.

Table 4.5: Iron Ore: Cross-country Comparison of FOB Cost
(US\$ per tonne)

Country	Name of mine	Mining costs and overheads	Transport and port handling	Royalty	FOB cost
Australia	Robe River	1.87	2.24	0.60	4.71
Brazil	Carajas	3.23	2.22	0.21	5.56
South Africa	Beeshoek	4.35	4.46	0	8.81
India	Bailadila	6.11	9.72	0.49	16.32

Source: FIMI.

4.26 As far as other utilities are concerned, viz. water and power, the Rural Water Supply Scheme of the Central government could be extended to the mining areas to meet the water supply requirement of the small- and medium-sized mines. With reforms in the electricity sector, supply of electricity to the remote areas will improve. The government should make a conscious decision to make electricity available to the mine sites also, especially for small- and medium-sized mines.

INFRASTRUCTURE FINANCING

4.27 NHAI, Railways, and the Port authorities should give priority to and expedite the NH, railway and port projects identified in this Report as being of interest to the mining sector. The railway projects, NHs, and the port projects that have been identified have already been or can be accommodated within the existing schemes of the GOI that are being implemented with the approval of the Committee on Infrastructure. The infrastructure projects that are identified in future can also be taken up similarly as many of them would be suitable for being taken up as PPP projects and the GOI is committed to such projects being taken up within the existing programmes. The success of PPP projects depends upon the collection of user charges that provide a stream of revenue that is adequate to service the payment of interest and repayment of debt as well as to provide a reasonable return to the private investors, in addition, of course, to the upkeep of the facility. The mining community and the representatives of the state government maintained that large-scale investment in infrastructure was required in the mineral-rich states, which were all very backward as far as the development of infrastructure was concerned. In these states, a large majority of the road and railway projects could not be taken up on PPP basis. It was pointed out that the Railways had not committed themselves to take up the projects that were at the survey stage and MOSRTH also had stated that they could not declare new state roads as NH. The Committee

was of the opinion that while the mining majors could be expected to take the responsibility for infrastructure in their areas the SME miners depended on the government for it.

4.28 Even if we leave aside the larger NH, railway, and port projects to be taken up on PPP basis under the current programmes of the GOI, the remaining infrastructure tasks—in terms of improvement of link roads from the mines to the NH, SH, or railhead, railway projects to open up new areas to mining, and projects for provision of water and power would also be very substantial. For undertaking the task of building the infrastructure in mining areas the Committee would recommend the creation of a Mineral Development Fund (MDF) in each state with major mining activity by setting apart 15 per cent of the royalties collected every year on minerals mined in the states. In Chapter 6, we recommend measures for augmentation of revenue, particularly by converting specific rates of royalties into *ad valorem* rates. Since the augmentation is likely to be substantial there may not be much problem in earmarking a small proportion of the royalties collected for the creation of this Fund. The Committee also recommends matching contribution from the GOI of an equal amount from the Plan funds, every year for the duration of the Eleventh Five-Year Plan. The capital cost of water and power projects (to access the main grid) for the SME sector may have to be borne by the state government through outright grants from the MDF. If the Rural Water Supply Scheme of the Central government could be extended to the mining areas to meet the water supply requirement of the small- and medium-sized mines it would alleviate the strain on the resources of the MDFs. Similarly, if a conscious decision is taken by the state government to make electricity available to the mine sites also, especially for small- and medium-sized mines, the need for financing electricity projects from MDF would diminish.

4.29 Where the infrastructure projects can be taken up in the PPP mode, recourse to the following two schemes established by the GOI in January 2006 can increase the availability of funds:

- (a) Viability Gap Funding Scheme of the GOI notified by the Ministry of Finance, Department of Economic Affairs vide O.M. No 1/5/2005-ppp dated 12 January 2006. This scheme envisages a capital grant of up to Rs 200 crore for each project, subject to a maximum of 20 per cent of the project cost (with the possibility of a capital grant of another 20 per cent from the state government concerned). Proposals can be made under this scheme for making a PPP project commercially viable;

- (b) Scheme for financing viable infrastructure projects through a SPV called the India Infrastructure Finance Company Limited (IIFCL) notified by the Ministry of Finance, Department of Economic Affairs vide O.M. No. 10/12/2005-INF dated 4 January 2006. This scheme provides longer-term debt for financially viable projects, including those that have received capital grant under the Viability Gap Funding Scheme described in (a) above.

INSTITUTIONAL FRAMEWORK

4.30 For planning and promoting the development of mine-related infrastructure it would be necessary to put in place an appropriate institutional framework. In the major mining states we already have mineral development corporations, which are at present involved in prospecting and mining operations. It is necessary to enlarge the mandate of these corporations to include development financing and promotion of mining infrastructure projects and rename them as Mineral Infrastructure Development and Finance Corporations (MIDFICs).² Further, state governments should be encouraged to divest from these corporations so that they become joint sector organisations, with participation from mining companies and financing institutions, commercial banks, and non-banking financial companies (NBFCs).

4.31 The MIDFICs would take up mining infrastructure projects by *inter alia* promoting implementing entities in the form of JVs/SPVs. In appropriate cases, the MIDFICs could meet their bridge financing and/or viability gap funding needs either from the Viability Gap Funding Scheme of the Ministry of Finance or from the MDF of the state government concerned and further tie up loans from the financial institutions. Longer term debt for financially viable projects would also be available for the purpose from IIFCL. The Committee also recommends that consideration should be given to an alternative arrangement whereby allocations would be made to the Ministry of Mines to enable it to allocate funds directly to the MIDFICs for undertaking mining infrastructure projects. In order to facilitate

² In the past, there has been a tendency in some states, in the context of parties expressing an interest in taking up prospecting and exploration activity, for the state government to require the party to enter into a JV arrangement with that state's Mining Corporation. In most cases, the parties are reluctant to enter into such JVs and there have been instances in which the requirement has deterred them from pursuing the proposal for exploration altogether. The Committee has envisaged that the State Mining Corporations would be transformed into MIDFICs, undertaking infrastructure development rather than continuing with prospecting and mining activities. Even if the states decided that the state mining bodies should also continue with their exploration and mining activities, the Committee would strongly recommend that they should not try to compel applicants to accept JVs with such bodies.

such an arrangement, the Ministry of Mines would have to set up a small specialised body in the form of a corporate entity for appraising projects, routing funds, and providing the requisite expertise.

Chapter 5

Value Addition

(Term of Reference no. 5)

To examine the implications of the policy of mineral-rich states to make Value Addition within the state a condition for grant of mineral concessions and make appropriate recommendations in this regard

5.1 At the outset, it is necessary to distinguish between the concepts of value addition and captive mining in the context of issues raised before the Committee. Value addition requirement is imposed by the state governments when they want the concession holder to ensure that the industrial unit that uses the mineral from the allocated mine is set up within the boundaries of the state in which the mine is located. There is no such location specificity in captive mining and only a supply linkage between the mine and the unit is required. This has implications for mining concessions claimed by value adders from adjoining states. Furthermore, in value addition the price at which the mineral is available to the user industry is not material. As long as the product at the time of leaving the state is in value added form, e.g. primary metal or secondary metal instead of the mineral, the condition of value addition is met. In captive mining, the raw material extracted from a captive mine is available to the industrial unit at cost rather than at market price. The economics of captive vs. non-captive mining is dealt with in Chapter 7 of this Report. Here we look at the pros and cons of value addition as a condition of the mineral concession without going into the captive mining aspect.

5.2 As mentioned earlier, the benefit of economic liberalisation in the country has not flowed into the mining sector. The enthusiasm initially shown by internationally reputed companies for survey and exploration as well as mining has by and large evaporated. Statutory and procedural bottlenecks seriously impede entrepreneurial initiative in the high risk areas of reconnaissance and prospecting, and consequently there has been little investment in mining projects. The policy of some mineral-rich states (Chhattisgarh, Jharkhand, and Orissa, in particular) to require value addition in a downstream industrial project within the state as a precondition for granting a mineral concession has added to the problem. The industry has pointed out that while the world over the mining industry is

developed, controlled, and run by stand alone prospectors and miners, the policy of these states is proving to be a substantial dampener on the investment and growth prospects of the mining sector. The Committee carefully examined the presentations from the mineral-rich states in support of the conditionality of value addition as well as the submissions from the industry opposing the approach. The policy is also objected to by those states that are deficient in mineral resources but provide an environment more conducive for the establishment of end-use industry. For releasing the vast potential of India's mining industry it is important to resolve this issue.

PROS AND CONS OF VALUE ADDITION AS A CONDITION FOR MINING CONCESSION

5.3 The arguments in favour of the requirement for value addition can be summarised as follows. Minerals belong to the state in which they occur. It so happens that India's main mineral-rich states are relatively less industrialised than others. The poor but mineral-rich states would like to maximise the economic return from their mineral resources by using mineral concessions as a tool for attracting industry. For many years, states have been competing with each other for attracting industry by granting various incentives, mainly in the form of sales tax concessions. With the introduction of state Value Added Tax (VAT), the sales tax exemption option for granting incentives has been closed and states are struggling to find other ways in which industries can be incentivised to get established within their territories. Mineral concessions, especially MLs for exploiting proven ore bodies explored by state agencies at public expense, can be leveraged to locate an industrial unit in the state where the resource is mined.

5.4 Another important argument in favour of value addition within the state is that mineral-owning states need to find a way in which they can increase their financial resources from the exploitation of minerals. The current dispensation allows virtually free mineral concessions and the royalty paid is very meagre. Downstream industries not only generate additional economic activity and employment but also widen the base for collection of taxes. This issue is dealt with in detail in Chapter 6, which suggests various ways in which the states' revenues should be augmented.

5.5 The mining industry and the non-mineral-rich states have their own viewpoints. First, setting up an industry is a commercial decision based on a host of factors, of which the availability of the main raw material is only one. Other factors that are vital include assured and reasonably priced availability of power, other physical and social infrastructure, proximity to markets, and skilled manpower. In the case of a smelter, for example, power, comprising 60 per cent of the cost, is more important than the mineral. In the case of a steel mill, the availability of coal and filler materials is as important as availability of iron ore. An entrepreneur will not set up an industrial unit on the sole consideration of the local availability of mineral resources. The mining industry and the non-mineral-rich states argue that if the value addition condition is insisted upon there is a good chance of neither the mining operations fructifying nor the industrial unit coming up. Secondly, mining activities by themselves bring considerable economic benefits to the state in terms of tertiary sector spin-offs, even in the absence of manufacturing activities. For example, it is estimated that during 2003–04, mining provided direct employment to one million persons in mining operations and indirect employment to about 10 million persons in ancillary activities in the country. Such ancillary activities include overburden removal, crushing/grinding, beneficiation and upgradation of ores, sizing and washing, downstream refining, loading/unloading at mines/railway site, truck transportation, waste dump stabilisation, rehabilitation, canteens, rest houses and crèches, housing for mine workers, maintenance workshops, watch and ward staff, hospitals/medical facilities, etc. The ratio of direct to indirect employment in the mining sector is 1:10. Thirdly, mining is a full-fledged industry in itself, requiring specialisation and expertise. A certain amount of value addition is already involved at each stage of mining. One cannot use ore in the form in which it comes out of the earth. Subsequent to extraction, value is added to all minerals in various stages and no mineral can be used in manufacturing without some value addition. In the case of some metals such as copper, lead, and zinc, where the percentage of metal in the ore is low, it is economical to undertake certain operations such as converting the ores into concentrates near the mines. It may also be commercially viable to beneficiate iron ore and convert bauxite into alumina near the mines in most cases. However, it may not always be economical to do the smelting operations near the mines. If it is not economical to set up an industry locally and the states still pursue the policy of value addition as a condition for mineral concessions, the mineral resources would most likely remain unexploited. Finally, states that are not mineral-rich have argued that mineral resources belong to the country as a whole and should not be

subject to overt and covert restrictions on interstate movement. Fragmentation of the single economic space within the country could lead to misallocation of resources.

5.6 The arguments of both the mineral-rich states and the mining industry and states that are not mineral-rich undeniably have some logic from the economic and socio-economic perspectives. In the interest of the development of India's mining sector, it is necessary to resolve this debate to the maximum possible satisfaction of all sides or, if possible, on the basis of Pareto optimality. A policy of value addition within the state in which the mineral is extracted can potentially bottle up altogether economic activities in relation to the mineral deposits. If a downstream industry is not viable at a particular location such a policy could result in a situation in which there is neither downstream industry nor mining activity. This would not only deprive the country of the benefits that can flow from resource exploitation for industry and trade but would also deprive the state of the benefits that a large mining project can bring. These include employment benefits, tertiary sector spin-offs, infrastructure development, etc. It is better for the mineral-rich state to get mining activities going and another more suitable state to get the industry rather than neither getting anything at all.

5.7 On the other hand, if it is possible to get both industry and mine within a state without sacrificing the economic viability of the latter there is no reason why the applicant should not be offered *inter se* preference *vis-à-vis* projects of stand alone miners. Minerals belong to the state, and as long as there is no wastage of resources or elements of hidden subsidisation, value addition within the state should be welcomed. The *caveat* here is that the best judge of economic viability is the market and not the state. It would not make sense for the state to hold back an application for LAPL/PL or ML simply because none of those interested in mining are interested in putting up a downstream unit. However, if there are multiple applicants for a LAPL/PL or ML for a particular ore body in the public domain then preference may be legitimately given to the applicant whose mining operations will also lead to a downstream unit that uses the mineral from that mine coming up in the state itself.

5.8 The procedures for obtaining PLs or MLs in respect of land in which the minerals vest in the government, as laid down in Section 11 of the MMDR Act, contain some ambiguities that enable state governments generally to hold back applications for RP, PL, and ML that do not envisage the establishment of downstream units. Section 11(1) provides that where a RP or PL has been granted for any land, the holder shall have a preferential right to a PL or ML,

as the case may be, over any other person, provided the state government is satisfied that the permit holder or licensee has undertaken reconnaissance or prospecting operations to establish mineral resources in the land and has fulfilled certain other conditions. There is no provision specifying the conditions that must be fulfilled for grant of RP and PL initially. In situations in which no notification has been made, Section 11(2) stipulates grant of RP, PL, or ML on a first-come-first-served basis. At the same time, it envisages that upon the issuance of a notification the applications received earlier but not disposed off would be considered together with the applications that are received in response to the notification. Section 11(3) lists out four criteria that should be taken into consideration for grant of RP, PL, or ML in the event of multiple applications, viz. knowledge or experience, financial resources, technical competence of staff, and the proposed investment in the mine and in the industry based on the minerals. It is apparent that it is not only legitimate, but also necessary, for state governments to apply the first three criteria also in situations in which there are single applications for RP, PL, or ML.

5.9 The ambiguities pointed out above have been somewhat deepened by the insertion in the MCR of two Rules—Rule 27(3) and Rule 35—in January 2000. The new additions in the MCR are quoted below:

27(3) The State Government may, either with the previous approval of the Central Government or at the instance of the Central Government, impose such further conditions as may be necessary in the interests of mineral development, including development of atomic minerals.

[35. Preferential rights of certain persons: – Where two or more persons have applied for a reconnaissance permit or a prospecting licence or a mining lease in respect of the same land, the State Government shall, for the purpose of sub-section (2) of Section 11, consider, besides the matters mentioned in clauses (a) to (d) of sub-section (3) of Section 11, the end use of the mineral by the applicant.]

While Section 11(3) lists investment in industry based on the mineral as one among several factors to be considered while selecting one from multiple applications, Rule 27(3) appears to allow the imposition of any conditionality, including the condition of value addition, not only in respect of applications received pursuant to notifications but also when no such notification has been issued and the applications have to be decided on a first-come-first-served basis. Rule 35 also gives scope to the state governments to argue that the language (particularly the use of the words ‘shall consider’) enables them to give overriding

consideration to the end use of the mineral by the applicant over the other criteria listed in Section 11(3) in granting concessions. With reference to this Rule the point was also made that when the Act already enables the state governments to consider ‘the investment which the applicant proposes to make in the mines and in the industry based on the mineral’ as one of the matters to be considered in selecting an applicant, it is redundant for Rule 35 to add that the ‘end use of the mineral by the applicant’ will be another criterion. These provisions have resulted in delays in disposal of the applications for PL and ML, as state governments have preferred to wait until such times as they get an applicant who proposes to set up an industry as well. The point was also made in the Committee that while Section 11(3)(d) enables the state government to attach weight to the proposal for investment in industry based on the mineral there is no provision in Rule 27 that enables the state government to attach the condition pursuant to that provision in those cases in which weight has been attached to such proposal. Another point that was made during the deliberations of the Committee was that while investment in the industry based on the mineral is a criterion in Section 11(3)(d) an equally important criterion that cannot be ignored is Section 11(3)(a) that attaches importance to expertise in mining. In rare cases, the mining company itself may have the additional expertise to set up industrial units (steel plants in the case of iron ore), but the more common situation would be of tie-ups between the mining company and the end-user industry. The scope of Section 11(3)(d) needs to be broadened in order to cover not only those cases in which the applicant company itself proposes to make an investment in industry based on the mineral but also those cases in which the applicant has a tie-up with other companies (with the necessary industrial experience) to establish an industrial unit in the state.

5.10 There is also the question whether the weight or preference for value adders can apply only to applications for ML or also to those for LAPL or direct PL. Applicants for direct PL or LAPL could also offer to undertake commitments to establish industry based on the mineral in the event they move on to the next stage of ML and may be granted the PL or LAPL on the strength of such a commitment. In some cases, holders of such concessions, particularly large integrated firms, may like to apply for ML after completing the prospecting work and actually engage in mining operations. In other cases, such as those of juniors who specialise in exploration activity, they may like to transfer the PL or LAPL along with the results of prospecting activity to firms specialising in mining operations. Such holders of the PL or LAPL should be entitled to transfer their right without any hindrance at any stage, on

the condition that both the right for ML and the obligation to establish industry would pass on to the transferee together.

5.11 The issue relating to the grant of ML in respect of ore bodies delineated by public agencies was debated intensively in the Committee and it was agreed that the auction procedures could be waived in situations in which the applicant was willing to make a commitment to establish an industry based on the mineral within the state. In such cases, the full cost of exploration by the public agency concerned should be recovered from the lessee.

5.12 The guiding principle in respect of value addition should be that where among multiple applicants for LAPL/PL or ML there are applicants proposing to set up an industry based on the mineral, preference may be given to such applicants, but where none of the applicants is willing to set up an industry their applications should be considered under Section 11(3) within the time limits laid down in Rule 63A of the MCR, and not kept pending or rejected in the hope that value-adders would make an application in future. Equally, applications of sole applicants should not be kept pending on the ground that the application does not envisage the setting up of an industry based on the mineral.

STRIKING A BALANCE

5.13 In light of the above and taking into consideration the proposals that have been outlined in Chapter 1 on non-exclusive RP, LAPL, and unbundling of mineral concessions, the Committee recommends that Section 11 of the MMDR Act be modified so as to provide as follows in cases in which no notification has been made:

- (i) Applications for non-exclusive RP should be freely granted, with somewhat light scrutiny of the applicant on the basis of the parameters (a) to (c) in existing Section 11(3);
- (ii) Once non-exclusive RP has been granted, the progression to LAPL by the RP holder should be seamless (on the basis of first-in-time principle as mentioned in paragraph 1.41), provided the non-exclusive RP holder gives the data of reconnaissance operations establishing mineral resources in the area; at this stage, the scrutiny of the LAPL applicant against the

parameters laid down in existing parameters (a) to (c) should be more rigorous;

- (iii) For single applicants for direct PL or direct LAPL, only the parameters (a) to (c) in existing Section 11(3) should be applied. In deciding among multiple applicants for direct PL or direct LAPL, preference may be given by the state government to the applicants who are qualified under the criteria (a) to (c) in existing Section 11(3) and, in addition, propose to make investment not only in mining operations but also in industry based on the mineral within the state when they eventually move to the next stage of ML. In such cases, transfer of the preferential right to grant of ML would be allowed to holders of PL or LAPL without any hindrance but in such transfers, the right to grant of ML would be passed on together with the obligation regarding value addition.

5.14 In the case of applications received pursuant to notifications, the amended Section 11 should provide as follows:

- (i) For single applications for LAPL only, the criteria in (a) to (c) in existing Section 11(3) should be applied;
- (ii) In the case of multiple applicants for LAPL/PL, where applicants are found to be qualified under criteria (a) to (c) in existing Section 11(3), preference should be given for the proposed investment in mine and industry based on the mineral within the state in the event of the applicant moving eventually to the next stage of ML;
- (iii) In cases in which ore bodies fully prospected by public agencies are to be auctioned as envisaged in Chapter 1, the states would have the right to waive the tender/auction procedures in cases in which the applicant proposes to set up the industry based on the mineral within the state. In such cases, the full cost of exploration by the public agency should be recovered from the lessee.

5.15 In the case of multiple applicants referred to in paragraphs 5.13(ii), 5.14(ii), or 5.14(iii), if there is more than one applicant proposing to set up an industry in the state based on the mineral and also satisfying the criteria mentioned in Section 11(3) (a) to (c), the state

government may grant the LAPL/PL or ML to the applicant adjudged by it to be the most deserving in terms of criteria (a) to (d) of Section 11(3) of the Act.

5.16 In addition to the above, the Committee recommends the following changes:

- (i) Section 11(3)(d) should be amended to provide not only for the applicant to propose investment in industry but also for the applicant to have a tie-up with an associate company with necessary experience to make such investment;
- (ii) Rule 35 should be deleted as it is redundant;
- (iii) As proposed in Chapter 1, Rule 27(3) should be deleted. In its place, a rule should provide that where an application had been accepted on the strength of the proposal for investment in industry based on the mineral, a condition could be imposed to ensure that the concessionaire abides by the commitment.

Chapter 6

Augmenting State Revenues

(Term of Reference no. 6)

To examine ways of augmenting State revenues from the mineral sector

REVENUE TO STATES FROM MINING SECTOR

6.1 Augmentation of their own sources of revenue has been a major concern of the state governments. The share of own tax receipts of states in the GDP has remained stagnant at around 5–6 per cent. Non-tax receipts (including royalty from minerals) have also been stagnating at around 3–4 per cent of the GDP. With ever increasing expenditure and growing revenue deficits, the states are searching for means to augment their revenue receipts. It is natural for states owning minerals to expect a fair share of revenue and economic benefits from the mining sector.

6.2 The major revenue accrual to the state governments from the mining sector is by way of royalty on minerals extracted from the mines within the state. Besides royalty, dead rent also accrues to the states from lessees who have not been operating their mines for any reason and thus not paying any royalty. In addition to royalty and dead rent, the states also get some revenues from the initial application fee payable by a concession seeker, annual fee payable by RP/PL holder on the basis of the area held, surface rent, sales tax or VAT, local area tax (e.g. Panchayat tax), and stamp duty. Some states, for example, Orissa and West Bengal, have also imposed a cess as well as a surcharge on minerals in the belief that they have the necessary powers to levy taxes under entries 49 and 50 in List II of the Seventh Schedule. However, revenues from all these sources are meagre, even in comparison with the modest returns from royalty and dead rent.

6.3 Conceptually, royalty is a payment made by the mining lessee to the state as owner of the mineral as a consideration for the mineral extracted and sold by the lessee. Dead rent is a charge to be paid by the lessee for that area included in the ML from which minerals are not

extracted. The main purpose of levying dead rent is to discourage the lessee from keeping the mineral property idle. The existing rates of dead rent are based on the area of the lease and the value of minerals. Accordingly, the dead rent applicable is higher for the higher value group of minerals. There is also a provision under the MMDR Act that if there is a difference in the amount of royalty payable on the minerals extracted from an area and the amount of dead rent payable for that area, the mine owner will be required to pay the higher of the two amounts.

6.4 Annexure 7 gives the total collection of revenue from royalty on minerals in the years 2002–03, 2003–04, and 2004–05 in states with significant mining activities. Annexure 8 gives figures of mineral-wise collections from royalty in the major mining states of the country, viz. Chhattisgarh, Jharkhand, Karnataka, Madhya Pradesh, Orissa, and Rajasthan. This statement brings out the following significant features: (a) coal constitutes the major proportion of the royalty revenue of four of the six major mining states, accounting for 70–95 per cent of the royalty revenue in 2004–05; (b) royalty collection from minerals other than coal (Annexure 8) accounted for modest amounts of Rs 139.79 crore, Rs 38.33 crore, Rs 172.49 crore, Rs 118.11 crore, Rs 303.05 crore, and Rs 144.37 crore in Chhattisgarh, Jharkhand, Karnataka, Madhya Pradesh, Orissa, and Rajasthan, respectively, in the same year; (c) the significant minerals contributing to royalty revenue in 2004–05 were limestone (Rs 119.95 crore) for Madhya Pradesh, iron ore (Rs 23.52 crore) and bauxite (Rs 10.54 crore) in Jharkhand, and iron ore (Rs 42.33 crore) and limestone (Rs 62.06 crore) in Chhattisgarh; Orissa has a fairly diversified mineral sector and the main minerals contributing to royalty revenue in 2004–05 were iron ore (Rs 72.85 crore), chromite (Rs 44.03 crore), bauxite (Rs 29.05 crore), manganese (Rs 11.18 crore), and limestone (Rs 10.35 crore). Rajasthan's revenue from royalties in 2004–05 is the highest, and their main income is from lead and zinc (Rs 151.23 crore), limestone (Rs 116.56 crore), and rock phosphate (Rs 30.84 crore); Rajasthan has substantial royalty collection from minor minerals with marble (Rs 96.48 crore), masonry stones (Rs 24.66 crore), and sand stone (Rs 38.96 crore) as the main minerals. Karnataka's main royalty revenue in 2004–05 was from iron ore (Rs 79.75 crore), limestone (Rs 54.24 crore), and gold (Rs 8.32 crore). A concern of the major mining states is to increase their revenue from the mineral sector, which is at a very low level. Since four of the major mining states are also industrially underdeveloped, their concern is also that if end-use of the minerals is made in other states a major proportion of the economic benefits is appropriated by those states. The revenue generation by the mineral sector thus gets linked to

the value addition question considered in Chapter 5. If the major mining states were assured of a substantial increase in their royalty revenue it would mitigate to some extent their concern about not getting their fair share of economic benefit from their mineral deposits.

METHODOLOGY FOR CALCULATION OF ROYALTY

6.5 For calculation of royalty three systems are prevalent worldwide. These are: quantity based or rate per tonne, *ad valorem* or percentage of revenue, and profit based or percentage of profit.

6.6 Quantity based royalty, also known as specific rate royalty, is charged on the basis of a unit of quantity such as weight, e.g. \$ or Rupees per tonne. This system is easy to administer but is inefficient in fiscal terms as the collection of royalty revenue is a function of the quantity extracted, and rising prices do not get reflected in the receipts. It is generally used for low-value and high-volume minerals. An *ad valorem* or value-based royalty is calculated by applying a percentage rate to the gross sale value. This is usually 'ex-mine' or pithead value (sale realisation) less allowable expenditure. In the profit-based system, royalty is a percentage of the net profit earned by the miner. This system is usually project-based, and profit is calculated by obtaining all project revenues and deducting all project costs from them. A pure profit-based royalty is more equitable and has less effect on company investment decisions on exploration and mining than the other two systems described above. However, the major drawbacks of the profit-based system are uncertainty in yield and problems in administration.

PRESENT ROYALTY REGIME IN INDIA

6.7 The royalty rates for major minerals are fixed by GOI and levied on the minerals consumed or removed from the lease area as per Section 9 of MMDR Act, 1957. The rates in respect of each are specified in the Second Schedule of the MMDR Act. Section 9A of the Act provides for levying dead rent for the area included in the ML from which minerals are not extracted. The dead rent rates are specified in the Third Schedule of the MMDR Act. A lessee has to pay either royalty or dead rent, whichever is higher. Enhancement in the rates of royalty is allowed once in three years. The revenues on account of royalty, as fixed by the Central government, for the major minerals are collected and retained by the state

governments. In the case of minor minerals, state governments have powers both to fix and collect royalty and dead rent.

6.8 Annexure 9 gives the present rates of royalty on minerals, including coal, as reflected in the Second Schedule of the updated MMDR Act. In all, there are 51 minerals in the Schedule. While the regime has been moving towards *ad valorem* rates over the years, as many as 22 minerals still attract specific rates. Of these 22, for six minerals, namely coal, iron ore, limestone, china clay, asbestos, and graphite, different rates apply for different grades. Iron ore is the most important among these, accounting for more than 50 per cent of the value of major non-energy minerals produced. The specific rates of royalty vary widely from as low as Rs 4 per tonne (for iron ore concentrates) to as high as Rs 800 per tonne (chrysotile asbestos). In order to assess the tax burden on minerals resulting from royalty, the *ad valorem* incidence of specific rates has to be looked at. As will be seen later, the *ad valorem* incidence of the specific rates of duty on iron ore was low in 2004–05, being in the range of 1–2 per cent. On the other hand, in the case of limestone, the specific rates work out to 25–35 per cent on the basis of the price prevailing in the domestic market in the years 2001–02, 2002–03, and 2003–04. For 39 items, the rates are fixed in *ad valorem* terms, ranging from as low as 1 per cent (manganese concentrates) to as high as 20 per cent (gypsum). A unique feature of the Second Schedule of the MMDR Act is that for minerals corresponding to base metals as well as precious metals the rates are in terms of a fixed percentage of the value of the metal content on the basis of the London Metal Exchange price. In the calculations made in the Planning Commission, the *ad valorem* incidence on bauxite and zinc ore works out to 20 and 12 per cent, respectively. The rates of royalty and dead rent can be revised not more than once every three years as provided in Section 9(3) of the MMDR Act. A study group, with members from the state governments and industry, is constituted every three years for making recommendations in this regard. The last revision in the rates of royalty and dead rent was notified by the Central government on 14 October 2004, and the next revision is due in October 2007. The Ministry of Mines should set up a study group to work out detailed rates of royalty, dead rent, and other levies on the basis of recommendations made by this Committee.

6.9 Internationally the *ad valorem* royalty system is more commonly used. It has the basic advantage of providing buoyancy to revenues in line with rises in the price of minerals. The system also has the advantage that the rates are price neutral and unaffected by its rise or fall.

In a system of *ad valorem* rates of royalty, revision of rates become necessary only when fundamental changes take place in the mineral economy, justifying a review of the rates. In India, there is unanimity among the states now in the demand that royalty rates should be shifted from tonnage to *ad valorem*. The main problem with *ad valorem* royalty is the determination of 'price' or value on which the royalty rate is to be applied. In the case of metals such as aluminium, gold, silver, copper, lead, zinc, and tin, which are traded at international commodity exchanges (London Metal Exchange), the determination of value of the corresponding mineral may not be very difficult but for others where no such benchmark is available the determination of value for the purpose of royalty is problematic.

6.10 In India, this problem is being faced in the case of minerals that do not have international benchmark prices. Although, IBM publishes national and state level monthly average values of different minerals for calculation of *ad valorem* royalty the system is not foolproof. This is because IBM merely picks up the figures from the returns filed by the miners and the values given there are invariably based on pit mouth sales reported by the miners themselves in their returns filed with IBM. These could well be under-reported. Further, in mines owned by the processing industry, there could be a problem of transfer pricing and the price shown in the books of account cannot be said to be the arm's-length price.

6.11 Nevertheless, there is a strong case for the royalty regime in India to move strongly towards the *ad valorem* system to augment revenues of the states. In the case of some minerals, international prices have increased several folds over short time periods. Unless royalty is fixed on an *ad valorem* basis, governments do not benefit from the increase in the price. Iron ore prices in the international market in particular have risen steeply and the *ad valorem* incidence of the specific rates has fallen to 1–2 per cent in 2004–05 from 5–10 per cent prevailing in the years 2002–04. It is the *ad valorem* incidence of royalty that determines the capacity of the mining company to bear the taxation. Moreover, the state governments are considerably short-changed by a system of specific rates in situations of rapid rise in price, as have existed in minerals in the last few years. If the *ad valorem* rates were fixed at 7.5 per cent for all grades of iron ore, the revenue from the level of production of 142 million tonnes would have been about Rs 1600 crore, assuming Rs 1500 per tonne as the average sale price or value. On the same assumption, the royalty revenue from iron ore would have been Rs 260 crore instead of Rs 42 crore in Chhattisgarh, Rs 180 crore instead of Rs 23 crore in

Jharkhand, Rs 456 crore instead of Rs 72 crore in Orissa, and Rs 418 crore instead of Rs 79.75 crore in Karnataka.

ROYALTY RATES IN OTHER COUNTRIES AND IMPLICATIONS FOR INDIA

6.12 The benefits that could be derived from conversion of specific rates to *ad valorem* have been demonstrated above. The desire of the state governments to see a quantum jump in revenue from royalties raises the question of whether an across-the-board increase in the rates of royalty can be considered. Here it must be borne in mind that the primary aim of the government in granting mineral concessions is to stimulate sustainable utilisation of the country's mineral resources to enable wealth creation and employment generation. While a too high level of royalty may impact adversely on investment and trade and limit the commercial exploitation of minerals, a too low level may result in the revenue yielding potential not being tapped fully. The challenge is to set the royalty rates at the optimum level, which is not too high for the investor but which maximises returns at the same time. For minerals that are exported either as ore or as processed products it is manifest that our royalty rates have to be such that the product does not become uncompetitive in the international market. Even for products that are not exported it must be borne in mind that India is rapidly integrating itself into the world economy and trade barriers have been lowered considerably and would be lowered further in the future. Indian manufacturers are living in a rapidly globalising world and have to compete with their foreign counterparts, not only in the external markets but in the domestic markets as well. In such a situation, it would not be wise to set a royalty rate that is out of tune with the rates in other countries. As it is, the transport infrastructure in India is not of world standard and adds to the cost of exports from the country. Furthermore, India has to compete with other mineral producing countries in attracting FDI in mining. One of the factors that mining companies take into account for their investment decisions is certainly the fiscal regime, in particular the rate of royalty. The Indian rates have to be competitive from this perspective as well. Mineral production is the culmination of a complex, risk-taking sequence of expenditure incurred to discover and develop a mine. Before discovery of the mineral deposit, the company incurs cost on exploration and prospecting operations. Once discovered and developed, the company incurs extraction or operating costs and needs to provide funds also for mine closure and environmental restoration of the site. Sales of extracted minerals over the mine's lifetime

must provide revenues sufficient to cover all these costs, pay taxes, and provide the investor with a competitive rate of return on investments.

6.13 Annexure 10 provides a comparative picture of the royalty rates prevailing in India and in other countries, drawn up by the Royalty Rates Study Group in 2004, duly corrected to take into account the latest information available from Australia, which is one of the major mining countries of the world. Three of the countries with major or significant mining activity—Canada, Chile, and South Africa—do not levy any royalty. In Australia, each of the seven states has its own royalty rates. In all the states, the rates are predominantly in *ad valorem* terms, largely in the range of 2.5–5 per cent. In a few cases in the major mining state of Western Australia, the rate is 7.5 per cent for some important minerals such as iron ore lumps, manganese, bauxite, diamonds, and precious stones. One state, the Northern Territories, is an outlier in having a uniform rate of royalty of 18 per cent for all products. One feature of the royalty rates in Western Australia is that the *ad valorem* rates are lower for beneficiated iron ore.

6.14 In Asia, two countries, viz. China and Indonesia, have significant mining activity. In China, the royalty rates are predominantly 2 per cent, some of the major exceptions being gold and precious stones at 4 per cent. In Indonesia, the royalty rates are mostly in the range of 3–5 per cent, except for diamond, for which the royalty rate is 6.5 per cent. In Central Asia, Kazakhstan and Uzbekistan are two important mineral states. In Kazakhstan, for most important minerals the rates are established through negotiations for each contract depending upon the viability of the project. In Uzbekistan, the rates are generally very low, except for copper (7.9 per cent), diamond (24 per cent), tungsten concentrate (8 per cent), and kaolin (7.9 per cent). African countries generally have low royalties, except for diamond and precious stones, for which the rate is 10 per cent generally.

6.15 A study of the royalty rate systems in other countries shows some other features as well. In some countries, each mineral type is taxed at a different rate (such as in the application of a royalty assigned to each mineral type) or minerals are grouped and each group is uniformly taxed (typical groupings include industrial and construction materials, fertiliser minerals, precious metals, precious stones, base metals, non-petroleum energy minerals, etc.). To some extent, the level of discrimination may depend on whether the mineral is destined for a globally competitive market or for the local market. For example,

base metals are often taxed at a lower rate than low-value bulk commodities like sand and gravel, reflecting the fact that investment in base metals is highly dependent on foreign investors who have many countries to choose from when making their investment decisions, compared to sand and gravel, where mainly domestic investors are active. Governments may also adjust their tax systems in an attempt to impose higher taxes on minerals, such as diamonds, which are expected to generate higher profit levels. In fact, in addition to *ad valorem* royalty, profit based royalty may also be imposed on a diamond mine in order to get a better share of revenues from such ventures.

6.16 Judged from the angle of internationally competitive royalty rates there would appear to be scope for upward revision only in a few minerals such as manganese ore and iron ore. In several products, the Indian royalty rates are higher than those of other countries. This does not necessarily mean that the rates should be considered for lowering, as the comparative cost of mining operations in India should also be taken into account. Only in those cases in which there is evidence that the rates are inhibiting mining operations should such a step be considered.

6.17 When rates are fixed in *ad valorem* terms the question arises as to how the value of the mineral should be determined for applying the percentage rates. Box 6.1 gives the methods of valuation in vogue in Western Australia, for which full details of the practice are available.

Box 6.1: Methods of Valuation of Royalty in Western Australia

Assessed Value	=	Normal market value assuming normal processing and transportation cost to port
Gross Proceeds	=	Quantity * price (or gross revenue) above \$30,000
Ex-mine Value	=	Mineral value once mined and brought to the surface less treatment costs
Free on Board/Rail	=	Free on Board/Rail
Net Value	=	Net Value of the saleable mineral commodity sold or removed without sale from a production unit in a royalty year
MCV	=	Mine Concentrate Value
Metal Value	=	Value of the recoverable metal within the extracted ore
Net Realisation	=	Operating profit after production costs, certain capital and exploration costs with a \$50,000 Net Value general exemption threshold. It is equivalent to an <i>ad valorem</i> rate of approximately 3–4 per cent of sales value
Realised Value	=	Value realised except for gold, which is based on the average market price for the last quarter
Sales Value	=	Value as sold less any costs directly incurred with the sale
<i>Ad valorem</i> and profit-based	=	<i>Ad valorem</i> and profit-based combination according to the formula:
		$R\$ = \frac{0.016N^2 + 0.35P^2}{N},$
		where R\$ is the royalty payable, P is annual profit, and N is annual net sales

Source: 'State Taxes and Charges Applicable to Mining in Australia', Department of Minerals and Energy Corporate Policy, Planning and Finance Division, Perth, Western Australia.

In India, IBM publishes *Monthly Statistics of Mineral Production*, giving the state-wise, mineral-wise, and month-wise quantities and values of minerals produced, and these statistics are used as the basis for determining the value for royalty purposes. The publication is based on the returns of the pit mouth value filed by the mine operators. The state-wise average

value of different individual minerals as published by IBM in *Monthly Statistics* is considered as the benchmark for the calculation of royalty by the concerned state government in respect of minerals produced during that month. For the purposes of computation of royalty, the state governments add 20 per cent to the benchmark value for domestic sales. This mark-up is intended to take into account the assessed difference between the sale price and the pit mouth value reported by the mine operator, as the study group set up in May 2002 had found a difference of 20–22 per cent between the sale price and pit mouth value. For captive mines, for minerals not sold to others a notional cost is computed on the basis of the cost of production, which includes exploration costs, mining and beneficiation costs, overhead costs, depreciation, interest, research and development (R&D) charges, etc. In the case of captive mines, it is not clear if any mark-up is made on the reported price. For export consignments, the value is based on the FOB price less the sum of transportation cost from the pithead to the port and the loading and unloading charges at the port.

6.18 The Committee would recommend that the method of fixation of rates of royalty should move forward decisively on the basis of *ad valorem* rates. For retaining specific rates for any mineral a very strong rationale should be required. The first step for the change should be conversion of the specific rates recommended by the study group set up in May 2002 into *ad valorem* rates on the basis of the price data for the period taken into consideration by the study group, i.e. 2001–02 and 2002–03. In considering raising the *ad valorem* rates further, the rates prevailing in Western Australia would be taken into consideration as a point of reference as the Committee feels that the rates prevailing in Western Australia are a good benchmark for determining the competitiveness of royalty rates. If the Western Australian rates are higher than the rates applicable in India there should be no hesitation in raising the rates to that level, unless special factors are brought forward such as the cost of mining operations. If the *ad valorem* rates work out to higher rates than those obtaining in Western Australia the existing rates should continue for the next three-year period as well. In such cases, a lowering of rates could be considered only in those cases in which there is evidence to show that the royalty rates are inhibiting mining operations and mineral production is registering a downward trend. The rates that are already on *ad valorem* basis should be also revised on the basis of the same yardsticks—i.e. as a norm, consider raising the rates to the level in Western Australia unless there are factors justifying a lower rate in India, and leave the rates unchanged if the rates are higher than those in Western Australia unless there are indications that the existing rates are inhibiting mining operations.

Another point to be borne in mind by the Study Group is that the royalties on base metals, noble metals, and precious stones need to be at low levels as an incentive for exploration in these minerals in which the country is grossly deficient.

6.19 The Committee considers that the valuation of the mineral for the purposes of royalty should be based on the transaction value and should include the profit element over and above the unit cost of production. For export consignments the system is quite appropriate as the FOB price is taken as the basis and the transport cost from the pithead to the port as well as the loading and unloading charges and the port charges are deducted therefrom. For domestic sales also, the sale price rather than the pit mouth value should be taken into consideration. Thus the profit element must be added to the cost of production. The ideal would be to use the sale price to the end-user as opposed to the middleman as the basis for determining the valuation. From the sale price the element of transport and loading and unloading costs must be deducted as in the case of FOB price for export consignments. In the absence of the sale price, the present system of 20 per cent mark-up on the pit mouth value could continue on an ad hoc basis. For captive mines, the reported price is suspect and should not be used as the basis for calculating the average monthly value. It should be ensured that the IBM takes into account only arm's-length transactions in recording the monthly state-wise and mineral-wise prices.

IMPLICATIONS OF ILLEGAL MINING

6.20 If the aim is to augment the revenue of states from royalties on mineral products a review of the structure of royalty rates and the method of collection is not the only avenue open to state governments. Prevention of illegal mining is equally important for augmenting revenue from the mining sector. Illegal mining is known to be widespread not only in major minerals but also in minor minerals for which the state government is competent to frame its respective Minor Mineral Concession Rules (MMCRs). Not only is mining taking place at many places without a valid lease, but even where there are valid leases there are instances of the government being duped by clandestine and undeclared removal of extracted minerals. In such cases, illegal mining also has other undesirable consequences as listed below:

- (i) Unscientific mining;
- (ii) Environmental and ecological degradation;
- (iii) Illegal felling of trees and destruction of the forest cover;

- (iv) Exploitation of workers without proper safety, health, and welfare measures;
- (v) Increased role of anti-social elements and criminals;
- (vi) Profiteering by miners without any obligations to the society.

6.21 For checking illegal mining there can be no substitute for improved standards of governance. However, it must be acknowledged that the otherwise well-intentioned mining policy adopted by the states can also become a contributory factor to illegal mining, as indicated below:

- (i) By keeping well-known deposits unexploited by not notifying the area or not granting leases despite there being demand for these deposits;
- (ii) Refusal to grant renewal of lease by the state governments despite the mine not having been exhausted;
- (iii) Denying permission to work or an arbitrary reduction of lease area in forest lands especially at the time of renewal. Consequently, many of the areas opened up for mining remain unworked and thus attract illegal mining;
- (iv) State and Central PSUs and captive miners have been granted MLs over extensive areas far beyond the ceiling limits. The state governments have used their special rights under the Act and Rules for this purpose. The lessees have, however, not even bothered to obtain surface right of the areas granted to them. This is because they have taken for granted their right to retain these large areas without extracting the minerals. A fallout of this approach is that known deposits in these lands are subjected to illegal mining.

If a mineral is easily mineable in an area and if MLs are not granted due to the area being either protected or reserved it is likely that the area will fall prey to illegal mining activities. This is particularly likely in the interior, backward, and tribal areas where unemployment is pervasive and the minerals are the only potential source of livelihood for the local population.

6.22 The Committee would, therefore, recommend that effective deterrent action should be taken to stop illegal mining. The deterrents in law at present have not worked mainly because of the lack of teeth. The penalties should be increased several fold and so should the punishments. Illegal mining amounts to stealing of public property and should be a non-

bailable, cognisable criminal offence, for which, in the mineral-rich states, there should be special courts.

FISCAL REGIME AND ITS STABILITY

6.23 Developing a long-life mine is a high-cost high-risk venture. Mining involves huge investments and high risk undertaken in the context of uncertain market and geological conditions. Uncertain conditions demand a higher return on investment than do investments that are more risk free. If high taxation and other imposts reduce that return, investment will not take place regardless of geological potential. Therefore, one of the important factors in the decision making process for investment is the fiscal regime in a country. It was for this reason that the MMDR Act provides that the royalty rates should not be revised in less than three years. Sudden imposts in the period between revisions of royalty can significantly undermine the profitability of a project. The Committee is of the view that royalty and dead rent are the main imposts on minerals and neither the state nor the Centre should seek to levy additional burdens on mining activity. Cess was levied by Orissa at the high rates of 20 per cent for bauxite and 15 per cent for iron ore. The constitutionality of the issue of whether the state can impose such a cess on any mineral for which a royalty has been prescribed is currently *sub judice*. The Committee nevertheless observes that lack of fiscal stability can adversely affect the investment environment in the mining sector. In considering the imposition of such a cess in future, state governments should bear in mind the adverse impact on the investment environment in the state.

6.24 Though the NMP of 1993 states that fiscal measures will be so designed as to promote exploration and development and encourage beneficiation, there is no significant incentive by way of tax breaks currently obtaining to give effect to this policy apart from the lower royalty fixed for beneficiated iron ore. Representation has been made before the Committee that a more meaningful provision is needed such as by providing for deduction of expenditure incurred on reconnaissance and prospecting from profits at the mining stage. It has been stated that under the Income Tax Act, 1961, deduction of expenditure incurred during only four years prior to the commencement of commercial production is allowed although the reconnaissance and prospecting stages could take as long as eight years. Development of mines takes another two years. In such situations, the expenditure incurred in the previous six years is not allowed for deduction. Further, under the present dispensation the deduction of

expenses have to be made in equal instalments in the first 10 years of commercial production. The suggestion has been made that the mining companies should be given the option of deduction either in the first 10 years or over the life of the mine. It has also been pointed out that the ambiguities in Section 35E of the Income Tax Act, 1961 allowing set-off of unsuccessful exploration costs need to be removed. The Committee feels that there is merit in these representations and suggestions.

6.25 To encourage exploration, which is a pre-mining activity, the Committee would recommend that the current restriction of four years for allowing deduction of expenditure on exploration and development from the income tax should be eliminated. All expenditure on exploration and development in the preceding 10 years before the commencement of commercial production should be allowed for deduction in mining operations. Further, the mining companies should be given the option to claim deduction either in the first years of commercial production or during the useful life of the mine. Clarity also needs to be brought in Section 35E of the Income Tax Act, 1961 for set-off of unsuccessful exploration cost.

OTHER SOURCES OF REVENUE

6.26 The Committee would recommend the following:

- (i) A conscious decision needs to be taken to encourage physical value addition which improves ore quality and usage at pit mouth such as concentration, beneficiation, calibration, blending, etc. Wherever the miner adds value through these processes the royalty may be charged on the ore at pit mouth on the cost of extraction before processing. Alternatively, the *ad valorem* rate for beneficiated or concentrated ore should be proportionately lower, as in the case of beneficiated iron ore in Western Australia.
- (ii) The penalty for non-payment of royalty is cancellation of the concession. A moratorium or a suitable structure for deferment of royalty payment to support investment in deserving cases, to be spelt out clearly in MCR, could also be permitted in deserving cases.
- (iii) Rates of dead rent should be rationalised so that they act as an effective deterrent against a mine owner who does not undertake mining as per the approved mining plan and prefers to keep large areas idle and keeps the mineral resources undeveloped. In other words, an escalating scale of dead rent should

be worked out. This should be stringently applied to captive miners and PSUs as well.

- (iv) The state governments would get revenues from the disposal of the ore bodies that have been explored earlier at public expense by an open tender/auction system as explained in Chapter 1.
- (v) Transfer fees should be levied on PLs and MLs sought to be transferred. As mentioned in Chapter 1, the unbundling of prospecting from mining is likely to bring in investment in the form of FDI into prospecting along with advanced technology. When the PL or ML of a prospected area is transferred for a premium by a prospecting firm in favour of a mining firm or if the firm itself is taken over or acquired by a mining firm for a consideration, a transfer fee as a percentage of the premium or consideration may be levied. Such a step would be in line with international practice. The rates of transfer fee should be suggested by the next study group set up for making recommendations on royalty rates.

Chapter 7

Other Issues

(Term of Reference no. 7)

To examine any other issue relevant for stimulating investment flows and inducting state-of-the-art technology into the sector

7.1 In this chapter, we deal with the following four issues, which are not specifically included in the TOR but whose resolution is crucial for stimulating investment and technology flows:

- (i) Raising funds for prospecting;
- (ii) Allocation of captive mines to steel makers;
- (iii) Restrictions on the export of iron ore; and
- (iv) Policy on beach sand minerals.

RAISING FUNDS FOR PROSPECTING

7.2 When dealing with the Canadian model in paragraphs 1.30 and 1.31 it was proposed that unbundling of the currently integrated activities of exploration and mining will help to attract FDI and technology into prospecting and mine development, which are recognised as stand alone economic activities. The model can also be extended to cover the strategies for fund raising adopted by Canadian and Australian prospecting and development companies. At the outset, it is necessary to recognise that large-scale prospecting can be a high-risk and high-return venture and only specialist funds that have a penchant for high risk will seek investment opportunities in prospecting companies. These companies lack tangible assets or cash flows that can be used to raise debt funds and expand activities, their only attributes being that they possess the rights to prospect for a potentially viable resource and the geological/prospecting knowledge and skills of their management. On the other hand, traditional capital market structures require companies to reach a minimum size of operations for them to be listed on a stock market. This restricts the ability of exploration/prospecting companies to raise resources through capital market listing.

7.3 Considering the high-risk nature of investment in prospecting a new type of investor has emerged in different parts of the world. For prospectors to access funds from those interested in investing in such ventures a unique window is required for lenders and borrowers in the financial market place. The Australian and Canadian bourses traditionally permit prospecting companies to list on their exchanges and offer equity to such risk-oriented investors. With appropriate exit routes in place it is possible for prospecting companies to be bought over or acquired [in different forms of mergers and acquisitions (M&A)] by mining majors. Once a find is announced and verifiable data is offered for sale with or without a ML and the market cap of the junior rises, such transfers are the next step. This provides the spectacular capital gains that risk funds need to cover for the lack of returns from investments in prospecting projects that do not result in recoverable finds.

7.4 This arrangement is a special feature of the Toronto Stock Exchange (TSX) and London Stock Exchanges, which have set up a separate sub-segment on the Stock Exchanges to deal with early stage companies. Notable among these are the Toronto Venture Exchange (TVE) in Canada and the Alternative Investment Market (AIM) of the London Stock Exchange in the UK. The logic for setting up these sub-segments is the understanding that the early stage companies cannot afford the stricter listing guidelines that are applicable to the existing large companies, and applying the same guidelines to them will restrict their ability to raise capital and stunt their growth. Therefore, the London Stock Exchange and TSX have floated different segments in their markets (AIM and TVE, respectively), which focus on early stage companies only. The listing norms for these markets are different to the main market segments.

7.5 Table 7.1 shows the differences in admission criteria between the London Main Market and AIM.

Table 7.1: Admission Criteria for the Main Market and AIM

Main market	AIM
Minimum 25 per cent share in public hands	No minimum shares to be in public hands
Normally 3-year trading record required	No trading record requirement
Prior shareholder approval required for substantial acquisitions and disposals	No prior shareholder approval for transactions*
Pre-vetting of admission documents by the United Kingdom Listing Authority (UKLA)	Admission documents neither pre-vetted by Exchange nor by the UKLA in most circumstances. The UKLA will only vet an AIM admission document where it is also a Prospectus under the Prospectus Directive
Sponsors needed for certain transactions	Nominated adviser required at all times
Minimum market capitalisation	No minimum market capitalisation

*Not applicable to reverse takeovers or disposal resulting in a fundamental change in business

Source: 'Joining AIM—A Professional Handbook', published by the London Stock Exchange in association with Faegre & Benson LLP, Citigate Dewe Rogerson, W. H. Ireland and Grant Thornton.

7.6 These relaxations in AIM listing criteria are well suited to the needs of exploration/prospecting companies also. TVE has divided the companies approaching for listing into five broad industry categories, namely Mining, Oil & Gas, Technology or Industrial, Research and Development, and Real Estate and Investment. The listing requirements for the Mining Issuers are as in Table 7.2.

**Table 7.2: Minimum Listing Requirements for Mining Companies
on Toronto Venture Exchange**

	Tier 1	Tier 2
Net Tangible Assets	\$2,000,000	No requirement
Property or Reserves	Material interest in a Tier-1 property	Significant interest in a qualifying property or at the discretion of the Exchange, hold rights to earn a significant interest in the qualifying property
Prior expenditures	No requirement	\$100,000 on the qualifying property in last 3 years by applicant issuer or sufficient expenditures incurred such that the property is a Tier-1 property
Recommended work programme	\$500,000 on the Tier-1 property (as recommended by Geological Report)	\$200,000 on the qualifying property (as recommended by Geological Report)
Working capital and financial resources	Adequate for: work programme + 18 months G&A + 18 months property payments to keep Tier-1 property and exploration 'principal properties' in good standing + \$100,000 unallocated	Adequate working capital and financial resources including: work programme + 12 months G&A + 12 months property payments to keep qualifying property and 'principal properties' in good standing + \$100,000 unallocated
Earnings or revenue	No requirement	No requirement
Distribution, market capitalisation, and public float	\$1,000,000 held by public shareholders, 1,000,000 free trading public shares, 200 public shareholders with a Board Lot and no resale restrictions, 10% public float, minimum 20% of issued and outstanding shares in the hands of public shareholders	500,000 public free trading shares, \$500,000 held by public shareholders, 200 public shareholders with a Board Lot and no resale restrictions, 10% public float, minimum 20% of issued and outstanding shares in the hands of public shareholders
Other criteria	Geological Report recommending completion of work programme or positive feasibility study or production levels exhibiting a likelihood of positive cash flow. Programme Sponsor Report may be required	Geological Report recommending completion of work programme. Sponsor Report may be required.

Note: G&A: General and Administration.

Source: TSX Venture Exchange Policy Corporate Finance Manual - Policy 2.1, available at http://www.tsx.com/en/listings/venture_issuer_resources/finance_manual.html.

Thus, in the case of mining companies, the regulations specifically require the companies to have a geological report (recommending completion of work programme) or positive feasibility study or production levels exhibiting a likelihood of positive cash flows. Since these are particular disclosure requirements suitable for mining companies only, it helps investors in evaluating a mining company on different parameters compared to other companies. For example, while existing companies are valued on the basis of profit earning multiples or enterprise value to EBITDA (earnings before interest, tax, depreciation and amortisation) multiples, mining companies can be valued on the basis of their proved, indicated, or inferred reserves. Unless separate disclosures of geological data are mandated by the exchange, the investors may not be able to obtain the data on their own and invest accordingly.

OPTIONS FOR RAISING FUNDS FOR INDIAN EXPLORATION/PROSPECTING COMPANIES

7.7 The Indian market segments that potentially can provide funds to Indian exploration/prospecting companies in the mining sector are the Indian private equity market and the Indian stock exchange.

Private Equity Market

7.8 The Indian private equity market has shown a rapid growth over the last few years. Private equity fund investors have invested US\$ 1.7 billion in India in 2004 and are estimated to have invested a further US\$ 2.2 billion in 2005. Private equity investors invest in a variety of companies across their maturity stage:

- (i) Start-up capital: They provide start-up capital to early stage companies. The typical size of their investment is in the range of US\$ 1 million to US\$ 5 million. Currently, about 5 per cent of the private equity funds in India are invested in such early stage companies.¹ Most of these investments are in Information Technology (IT) and IT-enabled services (ITeS), media and entertainment, and pharmaceutical sectors, and not in the mining sector. Globally, there are Special Mining Funds that invest in mining companies

¹ Source: *Business World*, 27 March 2006.

only. Such funds have not set up shop in India yet, due to lack of opportunities.

- (ii) Growth capital: Providing capital to existing companies for expanding their operations. The typical size of the investment is in the range of US\$ 5 million to US\$ 20 million. Growth capital accounts for almost 80 per cent of the investments made in India.² Some of these investments have gone into listed metal companies.
- (iii) Buy-out: This involves buying out the existing shareholders so that the private equity investor takes the management control.

7.9 The private equity market can open up to Indian exploration/prospecting companies if enough opportunities arise to encourage global commodity/mining funds to start looking at investing in the country. The key issue for developing this market will be a regulatory scenario that promotes the following:

- (i) Exploration/prospecting as a stand alone opportunity, so that Indian and global entrepreneurs are tempted to take up the activity on a much higher scale than at present ;
- (ii) A clear, transparent, and time-bound road map for an exploration/prospecting company so that they can, upon finding and developing an attractive ore reserve, either graduate to the next stage of mining or are able to sell their equity/deposit to other mining companies.

7.10 The private equity industry is still in its infancy in India and, if the right environment is provided, it can attract foreign equity funds to set up shop in the country. The classical US model, along which lines the private equity funds can be expected to grow, is well suited for the risk–return profile of prospecting ventures and mining companies. Here medium- to long-term finance is provided in return for an equity stake in potentially high growth unlisted companies. This basically means investment in companies that require growth or expansion capital and buy-out and is the type of investment that can go to mining companies that buy data and MLs from prospectors, sometimes along with a buy-out of the company itself. Venture capital, which is a separate segment of private equity and implies *inter alia*

²Source: *Business World*, 27 March 2006.

investment in early stage companies, is appropriate for prospecting companies. Most private equity firms are structured as specialist funds which do private investment in either the growth or the buy-out phases.

Indian Stock Exchanges

7.11 The Indian stock markets have gone through rapid changes in the past few years and the listing norms of stock exchanges have also been revised. Guidelines for Initial Public Offerings (IPOs) by unlisted companies issued by the Securities and Exchange Board of India (SEBI) (Disclosure and Investor Protection Guidelines) include the following:

- a. The company has net tangible assets of at least Rs. 3 crores in each of the preceding 3 full years (of 12 months each), of which not more than 50% is held in monetary assets;
- b. Provided that if more than 50% of the net tangible assets are held in monetary assets, the company has made firm commitments to deploy such excess monetary assets in its business/project;
- c. The company has a track record of distributable profits in terms of Section 205 of the Companies Act, 1956, for at least three (3) out of immediately preceding five (5) years;
- d. Provided further that extraordinary items shall not be considered for calculating distributable profits in terms of Section 205 of Companies Act, 1956
- e. The company has a net worth of at least Rs. 1 crore in each of the preceding 3 full years (of 12 months each);
- f. In case the company has changed its name within the last one year, at least 50% of the revenue for the preceding 1 full year is earned by the company from the activity suggested by the new name; and
- g. The aggregate of the proposed issue and all previous issues made in the same financial year in terms of size (i.e. offer through offer document + firm allotment + promoters' contribution through the offer document), does not exceed five (5) times its pre-issue net worth as per the audited balance sheet of the last financial year.

An unlisted company not in compliance with the above guidelines can still undertake an IPO if the issue is made through the book-building process and at least 50 per cent of the offer is allotted to the Qualified Institutional Buyers (QIBs) or if financial institutions (FIs) and banks subscribe to at least 15 per cent of the issue and another 10 per cent is allotted to QIBs. In

addition, the minimum post-issue face value capital of the company has to be Rs 10 crore unless market makers undertake to offer buy and sell quotes for a minimum of 300 shares and to ensure that the spread never exceeds 10 per cent. QIBs include public FIs as defined in Section 4A of the Companies Act 1956, scheduled commercial banks, mutual funds, foreign institutional investors (FIIs) registered with SEBI, multilateral and bilateral development financial institutions (DFIs), state industrial development corporation (SIDC), venture capital funds registered with SEBI, and foreign capital venture capital investors registered with SEBI.

7.12 It will be clear from the above that Indian laws make it very difficult for new or freshly registered companies to list whereas prospectors would like to float project-based companies and raise equity based on the risk relative to a particular project. A changed mining regulatory dispensation that permits transfer of concessions can attract stand alone prospecting companies from Canada, Australia, and elsewhere. To encourage transfer of prospecting technology to India-based firms there is a need to create an enabling environment for such firms to come up in India in the first place, probably as a JV with foreign prospectors in the initial stages. Transparency regulations will have to be put in place whereby prospectors who wish to raise equity from risk funds would have to share the precise nature of the geological data available with them and also enable rating agencies to spell out the magnitude of risk. Similarly, risk funds that wish to invest in prospecting ventures will need to spell out their policies in their prospectuses. In this regard, the Joint Ore Reserve Committee (JORC) Code of the Australian Stock Exchange (ASX) is commended. The code creates a practical but effective set of minimum reporting standards and guidelines for the mining industry. The purpose of the JORC Code, incorporated into the ASX listing rules, is to ensure that mining and resource companies adhere to minimum standards in reporting of exploration results, resources, and reserves—in other words, all the information that investors and stockbrokers would need in order to come to an understanding of the results and estimates of the company.

7.13 The ASX gives a special dispensation to mining juniors by adjusting key capital raising settings in the listing rules with a view to reducing the cost of raising capital. This includes reduction in the shareholder's spread of IPOs, lowering minimum listing price of stock and the percentage (15 per cent) of capital that can be raised without shareholder approval. ASX assists to improve liquidity in junior mining stocks through investor

communications and equity research. ASX also gives appropriate index support to the mining sector. This is done by refining industry classification to exclude non-mining companies from the index so that investors can take informed decisions.

7.14 In the light of the above discussions, the Committee is of the opinion that the Ministry of Finance (Department of Economic Affairs) in consultation with SEBI and the major stock exchanges examine the possibility of providing a special dispensation for mining sector companies on the lines of ASX, AIM, and TSX's TVE so that investment in prospecting companies is encouraged. ASX-type assistance by way of improving investor communications, equity research, and appropriate index support to the mining sector would help attract private equity funds to this sector. The sectoral focus of private equity, including venture capital, and the financial markets generally is at present on identified emerging growth sectors, viz. IT, ITeS, media, telecom, lately commercial real estate, etc. With excellent growth potential appearing on the horizon on account of the new mining dispensation it is imperative that the fund-raising environment for prospectors and miners moves in step to bring about the growth of mining.

ALLOCATION OF CAPTIVE MINES TO STEEL MAKERS

7.15 Captive mining of iron ore refers to the allocation of iron ore mines to steel makers so that they can extract iron ore according to the needs of the steel unit and utilise the same in steel making without the intermediation of stand alone mining companies. There are four clear interest groups in the debate on whether captive mining should receive priority in the allocation of iron ore mines *vis-à-vis* stand alone mines, viz. the steel mill owners with captive mines, steel mill owners without captive mines, stand alone mines, and the SME sector.

7.16 The first group is comprised of steel mill owners who already have captive mines with reserves enough to meet their requirements for 10–30 years or more. The Steel Authority of India Limited (SAIL) and Tata Steel belong to this group. This group argues that iron ore bodies should be reserved for steel makers because iron ore is a limited resource and the indigenous steel industry should have the benefit of iron ore at extraction cost rather than at market prices. The 'limited resource' theory is built primarily on the argument that the proven reserves of haematite iron ore, being very limited, will not last beyond 40–50 years,

and hence this ore should be conserved and allotted only to local steel mills to ensure long-term supplies. Another justification given is that there is a need to balance the disadvantages faced by the steel industry in respect of freight costs, financial costs, and the cost of the other two raw materials used in steel making, viz. coking coal and energy. Coking coal has to be imported at international prices, which are currently at a high level. The cost of energy in India is much higher than the cost of energy abroad. It is argued that the higher costs in India need to be neutralised by giving direct access to steel mills to the mines so that such mills can get iron ore supplies at the cost of extraction (US\$ 5–10 as compared to the peak market price of US\$ 50). It is stated further that the value added by the steel mill to the economy as a whole far outweighs the price advantage obtained by it by getting the raw material at cost rather than at market price. As the steel industry is the engine that drives manufactures in some key areas such as automobile, machinery, white goods, appliances, and construction, it is necessary that the production of steel benefits from supplies of cheap iron ore and finished steel is made available in turn at international prices to manufacturers and builders. The group has drawn attention to the report of the Dang Committee set up by the Ministry of Steel in 2005 for framing guidelines on preferential allocation of leases for iron ore mines. The Dang Committee had made detailed recommendations concerning captive and non-captive mines, giving priority to steel producers over commercial miners. We shall return to the recommendations of Dang Committee later. The group further argues that historically, steel production has developed in Western countries on the basis of captive mining. Steel production first started in the US and Europe on the basis of captive mines for iron ore and coal. New mines were developed in Australia, Brazil, and other countries and the process of commercial exploitation of iron ore and coal started. Looking at countries that have got iron ore and coal and a sizeable domestic market, the Committee finds that their steel producers have captive mines, for example Baosteel (China); Defasco (Canada); Severstal (Russia); Kirivorog (Ukraine); and Companhia Siderurgica Nacional (CSN) (Brazil). Companies that do not have captive mines or have small holdings that are not adequate for their production/expansion are going in for acquisition of iron ore mines in other countries. Arcelor, until recently the second largest steel company in the world, has acquired Companhia Siderurgica de Tubarao (CST) (Brazil) and Defasco (Canada), both of which have captive iron ore mines. Mittal Steel has acquired Krivoyrog for its iron ore mines. Thyssenkrupp (Germany) has acquired Companhia Siderurgica do Atlantico (CSA) (Brazil). Pohang Steel Company (POSCO) has now come to India in search of captive mines. Thus, in the view of this group, captive mining is a growing phenomenon.

7.17 This group adds that in India, SAIL and Tata Steel follow modern and scientific methods of mining while many non-captive miners do not follow good practices. Of the total iron ore mined in the country, only about 50 per cent is beneficiated. This is done by companies such as SAIL, Tata Steel, Kudremukh Iron Ore Company Limited (KIOCL), National Mineral Development Corporation (NMDC), and Goan mining companies such as Sesa Goa Ltd, Chowgule and Company Limited, and Salgaocar Mining Industries. The rest 50 per cent comes mostly from stand alone / SME mining companies that neither beneficiate nor follow scientific mining practices. The work done by captive miners for preservation of environment, development of social infrastructure in mining areas, and for tribals in neighbouring areas has been recognised in international forums such as the United Nations' Global Compact.

7.18 The second interest group is that of steel mill owners who do not have captive iron ore mines or have very few of them and would like to own captive mines, as is done by the first group. At present, this group of steel makers is served by the iron ore mines of the NMDC, which sells iron ore to them at the international market price, much above the cost of extraction. Owing to their capacity expansion plans, this group is unsure that NMDC will continue to service their enhanced iron ore needs, as the NMDC's expansion plans are much lower than theirs. While this group does not agree with the claim that steel making is non-viable without iron ore at extraction cost from captive mines their main ground for seeking captive mines is that a level playing field is necessary between steel makers who own captive mines and those without captive mines. The group strongly argues in favour of captive mining *per se* in the belief that iron ore resources are limited and they should be reserved for steel makers.

7.19 The third interest group is that of the stand alone miners who wish to develop iron ore mines as independent industrial units. According to them, but for a few exceptions such as Baosteel (China), Mittal (CIS), and Arcelor (through acquisitions in Luxembourg), which are partly served by captive mines, stand alone mining is the model followed all over the world and the major steel producing countries such as Korea and Japan source their iron ore from iron ore producing countries, including Australia, Brazil, and to some extent, India. This group argues that reliance on captive mining in iron ore would be detrimental to the full development and growth of the mining sector as well as the economy as a whole, as captive

miners distort the market for their (miners') product by paying less than market prices for the ore extracted by them. This shrinks the size of the free market for iron ore and inhibits the growth not only of the mining industry but also of the steel industry, which develops along fundamentally unsound lines based on preferential access to iron ore at cost. They argue that this amounts to a hidden subsidy at the expense of the mining sector. It is also argued that captive miners do not normally mine efficiently and only extract the best and most easily extractable iron ore, leaving low grade ores to go waste. Stand alone miners, on the other hand, utilise all the run of mines and undertake value addition activities such as calibration, beneficiation, pelletisation, and blending, thereby making the best use of mineral resources. This group argues that iron ore resources are not limited as a number of haematite mineral belts are yet to be explored in detail and the country also has vast resources of magnetite iron ore that can be beneficiated and used, as is done in some other countries, especially in China. Finally, it is argued that stand alone mines or resource companies invest in resource augmentation (exploration and prospecting), create their own infrastructure, and have a stake in ecology and community development. In the main, this group argues that in today's global scenario it is world resources that matter and not national resources. There are enough iron ore resources in the world for steel makers of the future as long as they are willing to pay international prices. India's downstream steel using industry will also not suffer because there is enough steel making capacity in the world and if local steel makers cannot supply at international cost then steel can be accessed from elsewhere. Thus, the group argues there is no need to give preferential access to steel makers to iron ore mines. An essential part of this argument is that domestic steel is being sold at international prices to Indian downstream steel users and the benefit of preferential access to iron ore is not passed on to it. Implicitly subsidised supply of iron ore to steel mills in the country merely covers up other diseconomies of some of the major steel makers. The group points out that in most cases, energy supplied to steel mills is also subsidised through captive power plants with assured coal linkages at less than the market price. This group is particularly against captive mines to multinational steel makers.

7.20 The fourth interest group is that of the SME sector miners of iron ore, especially in the states of Karnataka and Goa. For various reasons such as lack of power, water, and other infrastructure, these states have not been able to attract steel mills in a significant way and if iron ore mines are reserved for captive users, as the steel makers have proposed, then the mines in these states will remain undeveloped. Representatives of this group, such as the Goa

Mineral Foundation, have argued that iron ore mining is a major industrial activity in these states, employing lakhs of people directly and indirectly, and if iron ore is to be reserved exclusively for captive miners, the local economy would be drastically affected. The first three groups are all against SME mining, arguing that in the absence of economies of scale, mining activities of SMEs result in suboptimal mining, greater pressure on existing public utilities, and environmental degradation.

7.21 As mentioned earlier, in 2005 the Ministry of Steel had set up a committee chaired by R. K. Dang for framing guidelines for preferential allocation of iron ore MLs to steel makers and the Committee submitted its Report in August 2005. The Committee was of the view that iron ore was a scarce commodity, and for that reason iron ore mines should be allocated to steel producers in accordance with a hierarchy, with PSUs at the top followed by existing private sector producers, new private sector players, foreign investors, and stand alone mining companies, in that order. FIMI, which was represented on the Committee, had submitted a note of dissent, arguing that the approach of rationing out mines among users was a reversion to the licence–permit system that the country had given up after the introduction of economic reforms in 1991–92. In its view, there was no shortage of iron ore either nationally or internationally and for a thriving steel industry there was no need to give access to iron ore at extraction cost. FIMI has also pointed out that the Ministry of Mines did not associate itself with this committee. In fact, while the Ministry of Steel has supported the Dang Committee report the Ministry of Mines submitted a copy of its Policy Paper in September 2005 on the Allocation of Iron Ore Mines prepared by a committee headed by the Joint Secretary, which included representatives from the GSI and IBM. The Policy Paper has dealt with both the issue of resources and also the concept of captive mining. This paper took the view that on the present reckoning, iron ore is not a scarce commodity in the long term because a great deal of exploration work is still to be done. It disagreed with the Dang Committee’s recommendation of rationing out ore bodies explored by GSI and MECL to steel makers and recommended that all those engaged in mining should be treated as miners regardless of whether they are stand alone or captive and the end use of their produce should be determined by the forces of demand and supply rather than by the government. It also argued that cheap iron ore to some steel makers through captive mining as a special dispensation was not justified since all iron ore is only used for steel making and steel makers should buy their iron ore from the open market by paying market prices. It did not recommend any change in the current dispensation, which treats all miners alike.

7.22 The current law does not make investment in industry based on the mineral a necessary condition for grant of a ML, nor does it mandate any outright preference to be given to metal producers. It does, however, envisage that investment in industry based on the mineral should be one of the factors influencing the decision to grant a ML in favour of a particular applicant when one among multiple applicants is to be selected. Thus, in the framework of the current law it is possible to grant MLs for captive mines provided the applicant separately fulfils the condition of special knowledge or experience of operations connected with mining, as laid down in Section 11(3)(a) of the MMDR Act. The scheme of the MMDR separately envisages that a RP/PL applicant would get priority when a PL/ML is to be granted in the applicant's area and that if an area is not notified by the state government inviting applications for concessions then the first-in-time principle is to be followed. It is after an area is notified that all applications are to be treated as equal, and in such cases, Section 11(3)(d) of the MMDR Act lays down that among the factors that a state government should consider before granting a lease would be '...the investment which the applicant proposes to make in the mines and in the industry based on the minerals'.

7.23 The MMDR Act does not rule out captive mining and such mining, while not dominant, is a reality in the country. Table 7.3 shows the production figures separately for public and private sectors and of captive and non-captive mines. It can be seen that of the total estimated production of 143 million tonnes in 2004–05, about 25 per cent was from captive mines. In the public sector, the percentage of captive mine production was 39 per cent whereas in the private sector it was about 15 per cent. For the year 2003–04, the corresponding figures were 27 per cent, 41 per cent, and 15 per cent respectively. Thus, more than 75 per cent of the iron ore mining industry is in the non-captive segment.

Table 7.3: Iron Ore Production by Sectors: Captive vs. Non-captive
(million tonnes)

Sector	2002-03			2003-04			2004-05 (p)		
	Captive	Non-captive	Total	Captive	Non-captive	Total	Captive	Non-captive	Total
Public Sector	20.45 (41.16)	29.24 (58.84)	49.69 (100)	23.43 (40.72)	34.11 (59.28)	57.54 (100)	22.30 (39.01)	34.87 (60.99)	57.17 (100)
Private Sector	9.53 (19.30)	39.85 (80.70)	49.38 (100)	10.06 (15.41)	55.24 (84.59)	65.30 (100)	12.74 (14.89)	72.80 (85.11)	85.54 (100)
Total	29.98 (30.26)	69.09 (69.74)	99.07 (100)	33.49 (27.26)	89.35 (72.74)	122.84 (100)	35.04 (24.55)	107.67 (75.45)	142.71 (100)

Note: p: provisional figures; Figures in parentheses indicate the percentage contribution of captive and non-captive by public and private sectors respectively in the total production.

Source: Indian Bureau of Mines, Nagpur.

7.24 For taking a view on whether it would be appropriate for the mining policy and laws to allocate MLs exclusively for captive mining, the Committee found it necessary to examine the position of iron ore resources in the country and also to look closely at the benefits of stand alone mining. It is also necessary to look at the possible impact on the SME sector if a change in the policy were to be effected. Finally, it is necessary to consider whether captive mining of iron ore is essential for the viability of the steel industry and whether such mining enables the steel industry to contribute more to the GDP through the multiplier effect and value addition than it would if there were no captive mining. We deal with these issues below.

IRON ORE RESOURCES

7.25 Five per cent of the earth's crust contains iron. Geological surveys have surmised that though deposits of iron ore exist in more than 58 countries, 70 per cent of the world's huge iron ore resources are distributed in about eight large pockets, some of which are in the northern hemisphere and some in the southern hemisphere. The northern hemisphere comprising China, Russia-Kazakhstan-Ukraine, Sweden, and USA-Canada have a geological setting which is different from the southern Gondwanaland setting, comprising Australia, India, Southern Africa, and Brazil. The main differentiating feature between the two is that much of the iron ore in the southern hemisphere is superior grade haemetite with iron (Fe) content of 62 per cent or more. With the exception of Sweden, the northern iron ore

is mostly of low grade magnetite. Hence, India is among the few countries in the world with very large pockets of high grade iron ore deposits.

7.26 As per the United Nations Framework Classification (UNFC) system, resources are divided into reserves and remaining resources. Reserves are further classified as proven reserves and base reserves. For discovering resources, regional exploration is required. For converting resources into base reserves and proven reserves, detailed exploration is required. The world's resources and reserves are not static and have been growing over the years. According to the United States Geological Survey, the world's reserve base of iron ore is 370 billion tonnes and the reserves (ready for recovery) are 160 billion tonnes. The current rate of consumption being one billion tonne a year, the reserves can last for 160–370 years. Countries with steel mills can access iron ore from countries with iron ore. The steel mills of Japan and Korea, two of the main producers of steel, access their iron ore from Australia and Brazil, two of the main producers of iron ore.

7.27 Indian resources and reserves of iron ore, which have now been made compatible with the international UNFC classification, have also not been static and have been increasing over the years. The resource position as on 1 January 1980, 1 April 1990, and 1 April 2000 is shown in Table 7.4.

Table 7.4: Iron Ore Resources and Production, 1980, 1990, and 2000
(million tonnes)

Grade	Resources as on 1 January 1980	Production during 1980–90	Resources as on 1 April 1990	Difference in resources between 1980 and 1990	Production during 1990–2000	Resources as on 1 April 2000*	Difference in resources between 1990 and 2000
Iron ore	11,469		12,197	+728		(a)Reserves: 6025 (b) Remaining resources: 6881** Total: 12,906**	+709
Magnetite	6095		10,590	+4495		(a)Reserves: 286 (b) Remaining resources: 10,396 Total: 10,682	+92
Total	17,564	470	22,787	+5223	656	(a)Reserves: 6311 (b) Remaining resources: 17,277** Total: 23,588**	+801

Note: * Reassessed as per UNFC; **Includes 1480 million tonnes of prospective resources

Source: Indian Bureau of Mines, Nagpur.

It can be observed from Table 7.4 that while resources as on 1 April 2000 were estimated at 23.58 billion tonnes, between 1980 and 1990 iron ore reserves rose by 5.22 billion tonnes and between 1990 and 2000 by another 0.801 billion tonnes. In other words, despite having mined 1.12 billion tonnes of iron ore, the resources increased from 17.56 billion tonnes in 1980 to 23.58 billion tonnes in 2000. Thus, the new finds actually amounted to 7.15 billion tonnes during the 20-year period, averaging a little over 257 million tonnes a year. The average production in India during 2000–01 to 2004–05 was around 100 million tonnes, and in 2004–05 it was 142.71 million tonnes, which implies that new discoveries have been greater than production.

7.28 The steel industry has argued that the figure of 23.58 billion tonnes should not be the basis for determining the useable reserves, and instead mineable reserves should be taken into account, as for a number of reasons all the reserves may not be accessible to mining. Particular mention is made by it of the fact that iron ore reserves occurring in dense and reserve forests, national parks, sanctuaries, and ecologically fragile areas (Western Ghats, Kudremukh, etc.) may not be available for mining. The industry has drawn attention to the problem faced in Kudremukh where mining operations had to be closed down for environmental reasons.

7.29 On the other hand, it was brought to the notice of the Committee that unlike Australia and Brazil, in India there have been no exploration programmes undertaken for locating new additional deposits of iron ore since the mid 1980s. The example of Australia shows that advances in the technology of exploration have led to increased reserves. The Australian resources in 1960 were established at 400 million tonnes. In 1966, the Australian mining sector opened up and vigorous exploration programmes were taken up. Between 1960 and 2004, Australia produced 3.95 billion tonnes of iron ore and yet today Australia's reserves are estimated at 40 billion tonnes. The reason is that in Australia more and more finds came up as superior technology for exploration was used. In India, GSI and MECL are the main survey and exploration agencies and the technology used by them is near obsolete. The technologies used by resource companies for reconnaissance surveys, prospecting, drilling, and geochemical analysis in laboratories have improved vastly. In this context, attention is also drawn to paragraph 1.13 where it has been stated that a number of iron ore belts are still unexplored and no formal resource assessment has been attempted since the early 1980s.

Most magnetite findings are entirely incidental and since, unlike haematite, magnetite does not occur with specified groups of rocks, not even an estimate is available. It has been argued before the Committee that India's current resource estimates were based on a 50 metre (Max) Type-II series horizon. With the advent of satellite imagery, aero-magnetic data techniques, modern core-drilling methodology, a Type-I + Type-II series horizon of up to 500 metres and taking into account beneficiation potential of bw grades, the resources can rise up to 40–50 billion tonnes, matching that of Australia and Brazil.

7.30 In the UNFC system, the cut-off grade for estimating haematite resources has been taken as 55 per cent Fe component and above. If the cut-off grade is reduced to say 45 per cent Fe, the iron ore resources will increase. With the modern beneficiation technology used for improving the quality of magnetite ore, it should also be possible to utilise haematite iron ore of 45 per cent Fe and above through beneficiation. Therefore, the resources would be higher than shown above.

7.31 At this point, we may also deal with the issue of magnetite vs. haematite. As mentioned above, the main distinguishing feature of magnetite ore is that the Fe content is low. Most of China's huge reserves are magnetite and the average Fe content is only 35 per cent. Yet China uses all its magnetite ore by beneficiating it to the grade required for making steel. The cost of beneficiated magnetite ore locally produced in China is not too far above the cost of imported haematite iron ore from Brazil, Australia, and India. Instead of persisting with existing technologies and depending on haematite ore, the Indian steel industry of the future is likely to recognise the vast potential for magnetite in the country and make the necessary adjustment in the production processes. Besides, only about 20 per cent of the country's hard rock area is under forest cover and in any case, the SDF proposed in Chapter 3 should make it possible to overcome the problem of extracting iron ore from areas under forest cover.

7.32 The Committee recognised that all 23.58 billion tonnes of resources may not turn out to be mineable, but it took into account the fact that with exploration, particularly exploration on the basis of improved techniques, which would become available in India once the suggested changes in the law and policy is carried out, the resources would increase. The resource estimates would also increase for haematite if the Fe content cut-off is lowered from 55 per cent to 45 per cent. For the present, it would be quite safe to take 23.58 billion tonnes

as the basis for determining the adequacy of resources in the country. However, to determine the adequacy of resources the demand side also needs to be looked at. The demand for iron ore is a function of the demand for steel. The thumb-rule for ratio of iron ore to steel is 1.6:1. The world produces 1 billion tonnes of steel a year, for which it needs 1.6 billion tonnes of iron ore. The world's iron ore reserves are estimated to be 370 billion tonnes. So even ignoring the aspect of new finds, the world has resources for 230 years at current levels of production. Similarly, according to the National Steel Policy document, India produced 35 million tonnes of steel, for which it needed 54 million tonnes of iron ore. At 110 million tonnes of steel as envisioned by the Ministry of Steel for 2020, India will need 176 million tonnes of iron ore every year for the local industry. At the 2004–05 rate of production of 142 million tonnes per annum, the depletion of iron ore reserves would be about 2 billion tonnes until 2020, leaving a balance of 21.58 billion tonnes. If the domestic production grows and the exports also rise to 100 million tonnes by that year the level of resources would be about 21 billion tonnes in 2020. On the basis of these estimates, the annual depletion of reserves would be 276 million tonnes beyond 2020. At this rate, in 2020, India would have enough reserves for about 75 years. In this calculation, we do not take into account either the further increase in domestic steel capacity or the new finds of reserves beyond 2020.

7.33 Consumption of steel rises with the demand for housing, other commercial construction, and infrastructure. The consumption pattern of steel in India, China, and South Korea is shown in Table 7.5.

Table 7.5: Steel Consumption Pattern in India, China, and South Korea

(per cent)

Sector	India	China	South Korea
Construction	61	55	40
Capital Goods/Machinery	11	17	11
Consumer Durables	5	2	7
Automobiles	8	5	20
Ship building	--	--	18
Others	15	21	4
Total	100	100	100

Source: Papers presented in INDIA/IISI/OECD Workshop, New Delhi, 16 and 17 May 2006.

It is argued that once the construction boom in the country is over then its steel requirement stabilises, as it mainly needs steel for maintaining its housing and industrial base. In 2003, the per capita consumption of steel in the US was 337 kg, in Europe (16 countries) it was 361 kg,

in UK 206 kg, and in China it grew from 97 kg in 2000 to 178 kg in 2003.³ The world average per capita consumption of steel was 149 kg. In India, in 2004–05 the per capita consumption of steel was about 30 kg, of which the urban consumption was 77 kg and the rural consumption was only 2 kg. The Ministry of Steel has estimated that consumption per capita can increase to 70 kg by 2020 if infrastructure takes off, if rural demand is stimulated, and if a compound annual growth rate (CAGR) of 7.43 per cent for steel production is achieved. It is, of course, possible to posit an argument that steel demand may surge well beyond the estimation of the Ministry of Steel and follow the Chinese path where production has risen to 350 million tonnes. This may well happen if India achieves a sustained growth in GDP at or above 10 per cent, as China has done. If the indications during the next 10 years or so are that such a situation is likely to emerge the policy on exploitation of natural resources, including iron ore, would have to be reviewed. In the meantime, however, it would be prudent to rely on the projections made by the Ministry of Steel and base our policy on the present estimate of resources and the projected rise in domestic demand/production of steel. As seen above, on this basis India would still have enough resources to last up to the end of the century. Being overcautious in exploiting the resources of iron ore may result in a situation in which the mineral resource is being overtaken by developments in technology and reduced in economic value. It is well known that India had and has the largest deposits of mica sheet (80 per cent) in the world but the mica mines were not developed in the 1960s when mica was in great demand and the prices were high. With six different synthetic substitutes of mica now available, the demand has fallen to a tenth of what it was in the 1960s. The demand having disappeared, India's mica, still under the ground, is of little value now. There is already credible talk of titanium becoming the metal of the future and replacing steel 50 years from now.

7.34 The Committee concludes that on the basis of current assumptions of demand and supply of iron ore in the country and of the growth in both, India would have enough resources to last until the end of the twenty-first century and there is no basis for basing policy changes on the exhaustion of these resources in the near future. However, the position would need to be kept under review and adjustments made in it in light of the emerging situation from time to time. The Committee recommends that the first review take place after a period of 10 years, i.e. in 2016–17.

³As per *Steel Statistical Yearbook, 2004*, International Iron & Steel Institute, Brussels.

BENEFITS OF LARGE-SCALE STAND ALONE MINING

7.35 It is claimed by the mining companies that globally mining is an independent industry and iron ore mining is no different. The idea of making iron ore mining a handmaiden of local steel makers as a matter of policy is unique to India. By doing this, the country deprives itself of a number of optimalities that stand alone mining brings, such as investment in mining and exploration leading to new finds, efficiency, and high technology in both mining and beneficiation, mining (linking) infrastructure because of the need to transfer the produce from mine to market, and environment management in the mining sector as a specialised activity. The steel industry, on the other hand, maintains that captive mining is a globally rising trend and is needed to promote competitiveness.

7.36 While there was agreement in the Committee on the benefits of large-scale stand alone mining, it was pointed out that the large-scale captive miners also could deliver many of these benefits. As far as detailed exploration is concerned, there is not much to choose between captive miners and India's nine large-scale (those with production more than 3 million tonnes per annum) stand alone miners. What is true of prospecting is also true to some extent of mining efficiency, infrastructure creation, and environment management. In this context, it is necessary to distinguish stand alone mining in the large-scale sector from the SME sector. While the latter is found to be lacking in all these aspects it cannot be said that iron ore mining by SAIL and Tata Steel is less efficient or technically inferior than iron ore mining by the nine large stand alone miners in India. India's large stand alone and captive miners are, however, not in the same league as the mining majors of the world and by world standards a mining company with a production of 3 million tonnes of iron ore is not big enough to be described as a mining major. Mining majors in all parts of the world are involved in prospecting on a large scale, deploy the latest technology, and create mining infrastructure on a massive scale. They are also in the forefront of setting and following sustainable development standards for mining. The issue is, therefore, to decide whether mining majors should be encouraged to enter the Indian iron ore sector. Some of the advantages that could result from this are discussed below.

7.37 Modern resource companies use the latest 'state of the art' technologies in exploration and mining. Billiton's Falcon airborne gravity gradiometer (developed in collaboration with Lockheed Martin), with its specially developed system software, has made the discovery of new iron ore deposits in both greenfield and mature settings possible. It is claimed that this technology can delineate major undiscovered high grade iron ore deposits to a depth of 90

metres. The use of down hole drill cameras that detect faults behind pit walls, showing details in millimetres, is now possible. Radar technology is used for monitoring pit wall stability and to improve productivity and safety in the mines.

7.38 The same also applies to value addition activities through beneficiation, blending, and calibration. Iron ore yields can be of different grades in terms of iron (Fe) content. Lower grade ores are required to be upgraded by way of beneficiation. Blending and calibration are processes that lead to the creation of customised ore of the exact type, size, and grade required by a specific steel mill. This is not only value addition for the miner but also leads to more cost-effective steel making. However, sometimes captive miners may not optimise their mining operations due to market considerations, leading to accumulation and even wastage of low grade ores, especially of the non-lumpy category. The stand alone miners in India also do not always beneficiate, calibrate, or blend because they are mainly servicing the export market and these processes are undertaken at the importers' end. Their scale of operations does not permit them to spend the requisite time, effort, and investment to add this value. Thus, lower grade ores remain in the ground, leading to wastage of national resources. This may be contrasted with the international scenario where major resource companies have developed high technologies for beneficiating, calibrating, and blending and are thus able to mine optimally and add value to the ore itself. Presentations to the Committee revealed that Billiton's customised proprietary IT systems in mining yields information on all elements of ore available, guides geologists in blending different ores, and eliminates disruption in blends with shift changes. It has been seen in some cases that recoverable reserves at market grade have been uplifted by 38 per cent by beneficiation alone and by using the appropriate blending technology the resource uplift may be made up to 156 per cent, thereby enhancing the total recoverable reserves by as much as 188 per cent. Thus the use of technology not only gives resource optimisation but also leads to overall resource augmentation.

7.39 As regards infrastructure and environment management, the issue of infrastructure has already been dealt with in Chapter 4. It has been mentioned in that chapter that the large mining companies of the world have been responsible for investment in and creation of infrastructure on a massive scale. The concept of environmental management in mining is becoming increasingly sophisticated and environmental management has become a highly professional activity requiring great expertise. The focus on sustainable development requires that the mined area be brought back to the same or better state after mining operations are over than it was at the outset. Mining operations are required to be planned in such a way as to mitigate the impact on flora and fauna, minimise land degradation during the life of the

mine, reduce dust generation and air pollution during the mining operations, and control water contamination and pollution. The mining majors have set up the International Council for Mining and Metals (ICMM) which is an arm's length body for researching, setting standards, and monitoring sustainable development in the mining sector in close association with the World Conservation Union (WCU).

IMPACT OF CAPTIVE MINING ON THE SME SECTOR

7.40 It will be seen from Table 7.3 that 75.45 per cent of India's 142.71 million tonnes of iron ore was produced in the non-captive private sector. Of this, the 11 large miners (Annexure 11) produced 50 million tonnes, implying that as much as 57.7 million tonnes came from the SME sector. Of this, 41.5 million tonnes or 72 per cent was produced in the western states of Goa and Karnataka. The entire SME mining sector is in the non-captive mining segment and any policy reserving iron ore deposits for captive miners will have an immediate and destabilising effect on SME mining. Admittedly, SME mining is not efficient in terms of any of the parameters, viz. exploration, efficiency of use, technology, infrastructure, and environment. However, the SME sector has emerged, primarily in the south-western part of India, comprising Karnataka and Goa, for the reasons outlined below.

7.41 First, the possibility of many more large integrated steel plants coming up in the south-western region is limited mainly because of inadequate availability of power and water. Movement of iron ore to the steel plants in eastern and central India is not attractive because the long haul makes the operation economically unviable. As a result, small sponge/pig iron/pellet plants in the SME sector are being established. These industries cannot be expected to invest in and operate captive mines on any significant scale but instead rely on supplies from the SME miners. Secondly, there are a large number of small deposits in the region that are too small to be mined by captive miners. If stand alone SME miners are not allowed to exploit these deposits they would remain unexploited. For these reasons captive mining cannot be prioritised in the south-western region. Jindal Steel Works (JSW) is the only major steel plant in the region and it proposes to increase its steel making capacity from 3.8 million tonnes to 7 million tonnes per annum by 2009–10. The company was earlier purchasing iron ore from the NMDC at formula based rates but is now purchasing ore at market rates. Although this has not affected its profits the company seeks a level playing field with other captive miners.

7.42 Despite the fact that SME mining is suboptimal, puts pressure on public utilities, and is not environment friendly, the SME sector represents almost 40 per cent of the current iron ore mining industry. Therefore, the SME sector comprising stand alone miners will have to be helped to overcome bottlenecks so that they become efficient miners. This can be done through a combination of regulatory and development measures. Unless stand alone miners are encouraged to produce and sell ore to local users in the market, both SME miners as well as the downstream SME operations (sponge/pig iron units) will suffer.

VIABILITY AND THE MULTIPLIER EFFECT

7.43 As mentioned in paragraph 7.16 above, it has been claimed before the Committee by the Indian Steel Alliance⁴ and steel producers that iron ore at extraction cost yields substantial savings, which are required for setting off against the high cost of infrastructure, freight, and energy to make steel making a viable operation in India. However, this claim is contested by steel makers who do not have captive mines and have to buy their iron ore at market prices but are still operating viably and making good profits. Their support for captive mines is driven more by the need for a level playing field than by any need for cheap or free iron ore. Even if it is true that there are steel mills in the world that have captive mines the Committee is also aware that the large steel makers of Japan and Korea purchase their iron ore on long-term contracts from countries such as Australia and Brazil and are highly efficient in the production of steel. Hence the Committee concludes that viability of steel mills in general cannot be linked to captive mining.

7.44 As mentioned in paragraph 7.16, it is argued that the downstream use of steel is fundamental to much of manufacturing and infrastructure and if the multiplier effect of steel on downstream industry is considered then the value addition potential of steel is immense. However, the concern of the downstream user is not so much with the source from which the steel comes as with the price at which it comes. If the price at which steel is sold is the (international) market price then it does not matter to the downstream user as to who produces the steel and whether the steel is imported or purchased locally. Thus the multiplier effect cannot be an argument for allocation of iron ore mines exclusively to steel mills.

⁴ A representative body of the five primary steel producers in the country, namely SAIL, Tata Iron and Steel Co Ltd (TISCO), Essar Steel, Jindal Vijayanagar Steel, and Ispat Steel.

7.45 Finally, the argument presented is that steel makers with captive mines add much greater value than stand alone miners. A basic reality is that iron ore cannot be used for any purpose other than steel making and its intermediates like pig iron and sponge iron. Stand alone miners must also sell their product to steel makers and pig iron and sponge iron producers. These steel makers and sponge/pig iron producers add the same value as the steel makers with captive mines. In evaluating the value addition argument, the comparison has to be of like with like. The value added by stand alone miners has to be compared with the value added by captive miners in their mining operations only and not in their steel making operations. The value added by steel makers with captive mines has to be compared with the value added by the steel maker without captive mines and not with stand alone miners. From this perspective, there does not appear to be any rationale for reserving iron ore mines for captive operation.

7.46 From the above discussion, the Committee concludes that a case has not been made for allocation of iron ore mines to the steel plants for captive mining. The example of the steel mills in East Asia and the mills in India that do not have captive mines show that captive mining is not a prerequisite for efficient production of steel. A thriving steel industry does not need to rely on captive mining. However, captive mines are a reality in India, and many of them are run efficiently. At the same time, there are benefits that large-scale stand alone mining can bring that the country cannot afford to ignore, such as induction of advanced technology in exploration as well as optimum mining operations. It would be in the country's interest to have a mining regime in which space exists for both captive and stand alone mines.

FINDING THE MIDDLE GROUND

7.47 In the light of the discussions above, the Committee would recommend the following:

1. Stand alone mining and captive mining should continue to co-exist in the country. The position should be reviewed in 2016–17 in light of the emerging situation of establishment of steel capacity in the country, on the one hand, and accretions to the level of iron ore resources in the country, on the other. A view can be taken at that time on whether the balance of advantage in the grant of LAPL/PL/ML should be changed in favour of steel mills.
2. Through appropriate changes in Section 11(3)(d) it should be clarified that in a situation of multiple applications for grant of iron ore LAPL/PL/ML, the existing investment in steel plants that have exhausted their current captive mines should

also be a consideration. However, the applicant must independently qualify under other criteria, including Section 11(3)(a) relating to prior experience. This is necessary to ensure efficient mining.

3. Existing captive mines should be renewed if they have complied with the conditions of the lease and the life of the steel plant so warrants taking into account existing and planned capacities. In the case of new capacities, the recommendations of Chapter 5 will apply.
4. Steel making capacities already in existence on 1 July 2006 that do not have captive mines may also be given preferential allocation of adequate iron ore reserves within the state without the need to go through the process of tender/auction, as a one-time measure to provide a level playing field. These existing steel companies would have to enter into tie-ups with experienced mining companies so that they become eligible in terms of Section 11(3)(a) of the MMDR Act. Due regard should be given to the size of the steel making capacity when considering allocation of a specific ore body.
5. Scientific and vigorous prospecting in the country should be encouraged. LAPLs and PLs for magnetite may be freely given to both stand alone and captive miners, whether Indian or foreign. LAPLs for haematite may be given only after strictly ensuring that GSI or another state agency has not already done the requisite exploration.
6. Captive iron ore mines allotted to steel makers should use the ore from these mines for their own steel and should not sell the same either in India or abroad.

RESTRICTIONS ON THE EXPORT OF IRON ORE

7.48 In the current EXIM policy, exports of higher grades of iron ore (above 64 per cent Fe content, whether lumps or fines) are canalised through a State Trading Enterprise, the Mineral and Metals Trading Corporation (MMTC). Exports of iron ore with lower Fe content are free and do not need a licence. Exports of iron ore of Goa origin for certain destinations (China, Europe, Japan, South Korea, and Japan) and of Redi origin for all destinations are also free from export control, irrespective of Fe content. Separately, as envisaged in paragraph 2.11 of the chapter on the General Provisions on Imports and Exports in the EXIM Policy, export licences are issued by the Department of Commerce from time to time to mining companies, which hold MLs, for direct exports of iron ore of grades above 64 per cent Fe content. The NMDC, which is a Central PSU under the administrative control of the Ministry of Steel and has been exporting through MMTC, has decided that exports of NMDC

of higher grade would be under a quantitative limit of 6.8 million tonnes per annum from its Bailadila mines in Chhattisgarh. However, actual quantities made available for exports by NMDC of the higher-grade iron ore have been below this ceiling. These features of the export licensing policy are evaluated in paragraphs 7.59 to 7.63 below. First we take up the concerns of the stakeholders in regard to the export policy.

7.49 The steel industry in the country is against exports of any category of iron ore altogether, and would like the iron ore resources of the country to be reserved for the exclusive use of the domestic industry in future. Their demand is based principally on two arguments. First, in their assessment the iron ore resources are limited both in India and the world. They argue that if iron ore is allowed to be exported India's limited reserves would get exhausted and thereafter the Indian steel industry would have to depend on importing it from other countries, and this would not be in its best interest. Secondly, it is necessary to ensure perennial supplies of cheap iron ore to local steel makers because of the multiplier effect of value addition on the economy. The steel plants constitute the core of the secondary sector and lay down the foundations for industrialisation and urbanisation, with whole townships coming into being. They also leverage technology, capital resources, and energy-intensive industries. Production of each tonne of steel creates seven to ten times more value addition than the iron ore used in the process. While there are no forward linkages for the iron ore mined for the external market, production of steel creates the highest amount of forward linkages in the economy in the secondary sector. Moreover, mining and steel production taken together create five times more direct and permanent employment than just mining alone. In terms of foreign exchange earnings, a tonne of steel earns seven to ten times more than the 1.6 tonne of iron ore that goes into its production. The steel industry also generates 10 times more government revenue than iron ore. The steel industry argues that taking all these aspects into account, it would be better to add value through production of steel within the country than to export iron ore. If export earnings are the objective it is more advantageous to export steel after adding value to iron ore than to export iron ore.

7.50 The mining industry gives its own arguments against any restriction being imposed on the exports of iron ore. The stand alone miners would like to be able to sell iron ore produced by them at the best international prices. In their view, it is not necessary to ban exports to ensure availability of iron ore to the domestic industry. If steel makers are willing to pay the price at which iron ore is purchased across the world there is no reason for stand alone miners not to sell the iron ore to the domestic user-industry. If exports are banned the market would shrink to about one-third of its current size. This would exercise a downward pressure on the

price, reduce profitability, and put many of the mines, particularly those in the SME sector, out of business. The mining sector would like the user industry to pay international prices for iron ore. It has been argued that iron ore is not in short supply regardless of how fast the demand for steel grows because conversion of resources into proven reserves is simply a function of exploration which will inevitably occur if demand for iron ore rises. They also argue that supply of iron ore at prices lower than international prices is not necessary for the steel industry to flourish, as is proved by many steel makers in India and the steel industry as a whole in the world. They further argue that value addition and the multiplier effect have no relation to export because a steel industry based on iron ore at market prices will inevitably come up if the demand for steel so dictates. It is not necessary to give up export earnings, jobs, and revenues from the mining sector because once steel units come up exports will automatically fall and the value addition from steel units with all its attendant benefits will follow.

7.51 The mining industry also draws attention to the important regional implications of export policy, especially on employment. A very substantial proportion of the iron ore produced in the south-western states of Karnataka and Goa is exported. There are impediments in the establishment of steel mills in that region on a significant scale because of infrastructure problems. Transportation to the eastern region where the steel plants are located is not economical because of the long haul, and much of the steel capacity there already has access to captive mines. The mining industry also believes that the current demand for exports is due to a surge in China's demand and a spot market has got created because of a temporary boom in that country. Iron ore fines are lying in dumps in the country for lack of domestic demand and the temporary boom presents a good opportunity to dispose of the surplus.

7.52 The Committee carefully weighed the arguments of both sides and, in making its recommendations on export controls on iron ore, took a number of considerations into account, as detailed below.

SCARCITY OF RESOURCES ARGUMENT

7.53 While the Committee recognised that iron ore resources are finite and exhaustible it took into account the conclusion reached in the previous section that on the present assumptions of demand and supply and the expected rate of growth, the resources in the country would last until the end of the twenty-first century. It is possible that the demand

projections of the Ministry of Steel do not prove valid and the country replicates the rate of economic growth of China and the domestic demand for steel grows much more rapidly than what can be visualised today. In that event, a review of the policy would be called for. For the present, there does not appear to be justification for prohibiting exports of iron ore from the perspective of availability or rate of depletion of reserves. According to the National Steel Policy, 2005 document, annual export of iron ore, which is currently at 78 million tonnes, is likely to grow to about 110 million tonnes by 2020. If this estimation holds good the depletion of iron ore resources resulting from exports 10 years from today, after which we have suggested a review, would be between 0.8 and 1.0 billion tonnes, out of the current resources of 23.58 billion tonnes.

VALUE ADDITION ARGUMENT

7.54 While it cannot be denied that value addition from steel is more than value addition from iron ore alone there is no basis for comparing these two value additions because they are not mutually exclusive. All iron ore extracted is used for steel making, so the value addition in producing steel is over and above the value addition in the extraction of iron ore. If local iron ore demand rises, exports will automatically fall, but if there is no increase in local demand and export restrictions are put in place then there will be no value addition either from steel making or from mining. The value addition argument of the steel industry could have been supported if there were no value addition in mining at all. However, this is obviously not the case. There is value addition and employment generation in mining and related processing and in transportation activities flowing from mining operations. In fact, if the value addition per unit of capital employed in mining were estimated, it is likely that productivity in iron ore mining would be higher than in steel making. Nevertheless, if it were a clear choice between exporting iron ore or finished steel at the same point in time there would be no doubt where the policy choice should fall. However, the argument really is also that iron ore should not be exported today so that more steel can be exported tomorrow. By the same token it could also be argued that we should not be producing steel for exports today and wait until we can add value further and export automobiles or white goods or products of other industries that can add value to steel. The problem is that there is a need to stimulate economic growth, provide employment, and also look for opportunities for earning foreign exchange today. The mining sector must grow if the country has to reach a GDP growth rate above 8 per cent. After many decades of stagnation, international iron ore prices have been at a historically high level over the last two years or so, and the time is not opportune for putting a ban on exports of the commodity.

IMPACT ON DOMESTIC IRON ORE PRICES OF POSSIBLE BAN ON EXPORTS

7.55 The Committee found substance in the argument of the mining industry that a ban on the exports of iron ore would have an adverse impact on domestic prices of the commodity and, consequently, on the development of iron ore mining as a whole. Economic theory tells us that if exports are restricted leading to excess local supplies, the price will fall to the point when marginally profitable units may shut down. In the case of iron ore, as in other minerals, the adverse consequences of a ban on exports can be even more far-reaching as it would affect prospecting. The Committee feels that it would not be appropriate for government to make a trade policy intervention that increases the profitability of one sector and lowers that of another, and that too when the steel industry is earning high profits. Restriction on exports of any mineral would constitute a further disincentive for the flow of FDI into the mining sector, at a time when the country needs it most for exploration using the latest technology and also for efficient mining operations. As mentioned earlier, the economics of mining is a little more complicated than that of industry in general, because investment for mining operations can flow only after success in prospecting, and prospecting itself needs finance in the nature of venture capital with the appetite for risk. Mining itself is a long-term operation of 20–30 years with a gestation lag of more than two to three years. An investment of Rs 100 crore is required for mining one million tonnes per year. For meeting the requirement of the domestic steel industry, which is expected to produce 110 million tonnes of crude steel by 2020 and needs 175 million tonnes of iron ore (as against the current requirement of about 64 million tonnes), the Committee estimates that fresh investment in mining of about Rs 12,000 crore would be required. While this could come from the indigenous mining community it would also need to be supplemented by FDI. The Committee is of the view that imposing further restrictions on exports would send a wrong signal to prospective investors in mining and would make the target of 110 million tonnes of steel production unachievable. Investors like freedom to seek returns to their investment from all markets, both in the country and abroad.

IMPACT ON EMPLOYMENT OF POSSIBLE BAN ON IRON ORE EXPORTS

7.56 Iron ore production in India in 2003–04 was 122.84 million tonnes (pre-revised: 120.60 million tonnes). Of the total production, 44.97 million tonnes was used by indigenous steel units to produce 34.25 million tonnes of crude steel. Of the balance, 62.57 million tonnes was exported and 15.30 million tonnes remained surplus. For 2004–05, iron ore production was 142.71 million tonnes, out of which exports were 78.14 million tonnes.

Annexure 12 gives the production and export figures for 2002–03, 2003–04, and 2004–05. It would be seen that for 2004–05 exports amounted for as much as 50.94 per cent of the production and a significant part of the exports is from the south-western region. A restriction on exports would straightaway hit half the iron ore mining industry, and many mines, particularly in the south-western region, may have to close down. Paragraphs 7.40 and 7.41 above deal with the regional aspect of the issue in greater detail. A special mention has also been made there of Jindal Steel Works, which advocates a ban on exports from the region so that assured iron ore becomes available to it in the future. However, as mentioned earlier, a shortage scenario based purely on proven reserves of haematite is not warranted at this stage of development of the country's mine and steel development. For the nation as a whole the non-captive segment in the mining industry accounts for 75.44 per cent of the total production, and if we leave aside PSUs such as Orissa Mining Corporation (OMC) and NMDC and the 11 large stand alone miners then the rest of iron ore mining is entirely in the SME sector. According to the National Steel Policy document too, the indigenous demand for iron ore will take more than 11 years to reach the level of 145 million tonnes. In addition, export of iron ore provides employment on a large scale to the people of Goa, Karnataka, as well as in the SME and larger mines in the eastern and central parts of the country and is a significant catalyst of socio-economic development in the backward and tribal belts. As will be seen from Annexure 13, the increase in production over the last three years has been mainly from the non-captive SME mines and is export-driven. Since steel production has increased marginally, there is only a small increase in domestic consumption. As against this, the states of Goa, Karnataka, and Orissa, which have a large number of non-captive mines, have seen a surge in the production of iron ore. Apart from mining proper, associated sectors such as transportation, ore handling, minor and major ports, and service providers such as shipping lines and vessel yards all gain from the export activity. Employment-wise, if exports are banned 70,000 persons will become jobless, and due to tertiary sector linkages, at least half a million more would lose their livelihood. For this reason alone, any severe restriction or ban on exports of iron ore is not conceivable.

THE CASE FOR EXPORT OF FINES

7.57 Out of the total iron ore exports from India of 78 million tonnes in 2004–05 as much as 65 million tonnes or 83 per cent was exported in the form of fines. Domestic demand for fines is only to the extent of the sintering and pelletisation capacity available. If surplus fines are not exported, they will go waste. If exports were further restricted in any manner, its main impact would be on fines. In that event, SME miners, especially in south-western India, will have no market left for their fines.

7.58 Export of iron ore fines on a significant scale is a recent phenomenon, which has become possible because of the unexpected and huge demand from China. The major steel plants in China, Japan, and South Korea have long-term contracts with resource miners in Australia and Brazil and to some extent South Africa and India for their iron ore supplies, for which they negotiate prices every year. If the Chinese demand declines, Indian miners will find their markets for fines dwindling. The SME sector mines will once again reduce their operations or become inactive. It is, therefore, in the national interest to promote pelletisation, calibration, beneficiation, and blending for exports on a large scale and to attempt to compete with Brazil and Australia in the export market. This needs to be done especially in the south-western region where the fines have a limited outlet. Some new technologies in steel making that may make the distinction between fines and lumps irrelevant are being developed. Examples are corex, finex, and hismelt, where the blast furnace may be capable of accepting ores of various types directly. However, the commercial application of these technologies is not yet certain. All these aspects have to be borne in mind while reviewing the export regime for iron ore.

EXPORT REGIME FOR IRON ORE

7.59 The current export control regime has been summarised in paragraph 7.48. The MMTC has subsisting Long Term Agreements (LTAs) with one Korean and five Japanese steel companies to supply iron ore of higher grades. These agreements are basically framework agreements indicating quantities and the price is negotiated every year. The government attaches importance to the implementation of these agreements as the buyers have been purchasing iron ore from India for many decades, when iron ore prices were low. The canalisation helps the MMTC to implement these LTAs. Apart from this, MMTC also carries out export operations on behalf of small miners who do not have the wherewithal to enter international operations by themselves.

7.60 As stated earlier, the export licences are separately issued by virtue of the provision in paragraph 2.11 of the chapter on the General Provisions on Imports and Exports in the Exim Policy, which enables the government to issue licences even where a particular commodity has been canalised for import or export. The Department of Commerce issues such licences on the basis of applications filed by individual miners after ascertaining the position of production and domestic demand from the Ministries of Steel and Mines and after checking

that the requirements of MMTC for exports under LTAs have been met. These licences have been freely given, and generally actual exports have been lower than the quantity authorised.

7.61 It is clear from the description of the export licence regime given above that it is GOI's intention to restrict exports of iron ore with Fe content higher than 64 per cent, with a view to ensuring that the exports do not take place at the cost of supplies to domestic steel producers. Exports of Goa and Redi origin are free because it is not economical to move the ore from these origins to the plants in the eastern and central parts of the country. Control on exports of Goa origin to certain destinations is perhaps meant to ensure that the implementation of LTAs with Japanese and Korean companies is not hampered. However, the Committee feels that if the objective is to restrict exports the means adopted to achieve this objective are not optimal. The MMTC helps smaller exporters of higher-grade iron ore to export and these quantities escape any government check to ensure that they are surplus to the needs of the domestic steel industry. Furthermore, the check for ensuring supplies to domestic users is only after ascertaining the current production, which can rise and fall on the basis of current demand. There is no check against the availability of resources, which is plentiful as shown elsewhere in this report. The policy of canalisation appears to have been dictated primarily to enable implementation of the LTAs. The Committee finds it anomalous that exports are regulated through a dual mechanism of canalisation as well as export licensing.

7.62 The Committee notes that the export regime for iron ore of higher grade does not make any distinction between fines and lumps although, as noted earlier, fines are particularly in surplus in the country. The rationale for the 64 per cent cut-off of Fe content is also not clear, as the cut-off in IBM classification is 65 per cent.

7.63 In light of the above analysis and particularly the assessment regarding availability of iron ore resources in relation to current domestic production, and the appraisal of the impact of export controls on the health of the mining industry and its attractiveness for investment, the Committee has concluded that there is no need to impose any quantitative restrictions on exports but that the position should be revisited after 10 years. However, by way of abundant precaution, the Committee recommends that an export duty may be levied on exports of iron ore in lump form with Fe content above 65 per cent. The system of licensing and canalisation currently in operation should be discontinued. Also captive miners should not be allowed to export either fines or lumps. They should sinter the former and use the latter in their own blast furnaces.

POLICY ON BEACH SAND MINERALS

7.64 BSMs, counted amongst atomic minerals in the MMDR Act, are minerals found in the sands of the beaches along the 6000 km coastline of the country. Regional exploration has been carried out by the Atomic Minerals Directorate for Exploration and Research (AMD) over 2546 km, detailed exploration has been completed over 1000 km, and actual mining is carried out over 100 km. BSMs mainly include seven minerals that are of significance. Three of these are titanium bearing, viz. ilmenite, rutile, and leucoxene. The other four are zircon, monazite, garnet, and sillimanite.

7.65 Of these, ilmenite is commercially the most important mineral and constitutes about 65–70 per cent of the total beach sand deposits. Ilmenite yields titanium dioxide and titanium sponge for metal and alloys. Titanium dioxide is used mainly in pigments but also in ceramics, chemicals, papers and plastics, and pharmaceuticals. Almost 95 per cent of the worldwide use of titanium dioxide is for the production of white pigment. Titanium metal and alloys are the basic raw material for aircraft and aerospace and are increasingly being used in chemical industries, iron and steel industries, and Fast Moving Consumer Goods (FMCG) generally. Titanium is recognised as a strong metal of light weight, non-corrosive, and able to withstand temperature extremes (melting point of 1800 °C). Titanium being as strong as steel and twice as strong as aluminium, its strength-to-weight ratio is superior to that of any other metal known today. In fact, titanium is often referred to as the metal of the future, and could even replace steel in the next 50 years.

7.66 Of the other four BSMs, viz. zircon, monazite, sillimanite, and garnet, only garnet is of great commercial significance. Regarding the other two, zircon is used in foundries, refractories, ceramics, glazed tiles, and white wares. Zirconium is obtained from zircon and is primarily used in nuclear reactors due to its resistance to corrosion and low absorption cross-section for thermal neutrons. Monazite is the primary source of thorium for the third stage of India's nuclear programme. It also yields thorium nitrate, which is used in the gas mantle industry, thorium oxide which is used in fluorescent tubes and starters, and uranium oxide which is used exclusively for nuclear industries. Monazite is the only radioactive substance among BSMs. The monazite content of BSM ranges from 0.1 percent to 2 percent, with isolated patches up to 10 per cent. Background radiation levels where monazite is present are high and radiological hazards increase due to higher concentration of monazite after separation of other minerals.

7.67 It would be seen that out of the seven BSMs, two are atomic minerals, viz. zircon and monazite, and two minerals are of commercial importance, viz. ilmenite and garnet. Of the former, zircon has dual use and is of relatively lesser strategic importance. Compulsions of security drive the policy towards monazite and zircon and those of economics drive the policy towards ilmenite and garnet. While strategic considerations should guide the policy for mining zircon and monazite, commercial considerations must prevail for determining the policy in respect of mining of ilmenite and garnet. However, it must be recognised that some titanium alloys are also of strategic importance in the aerospace and defence sectors.

7.68 Mining and separation of BSMs is essentially a simple process by which each mineral is separated from the sand with separators, taking advantage of the difference in their physical, electrical, and magnetic properties. However, when a particular mineral is separated from the sand it leaves behind tailings that contain the other minerals. Thus, if garnet is separated then the tailings will contain ilmenite, zircon, and/or monazite. If ilmenite is further separated the tailings will contain zircon and monazite. The problem lies in the dichotomy inherent in the need to exploit the commercially important minerals, on one hand, and the imperative to control the strategic minerals, on the other. Physically, access to one mineral entails access to all others. A complicated regulatory system is, therefore, put in place in respect of the tailings containing the strategic minerals that remain after the commercial minerals have been extracted. This is done by the Atomic Energy Regulation Board (AERB) and the AMD, and during the presentations on the subject, the complicated and severe procedures of AERB and AMD for licensing were cited as a distinct disincentive to beach sand mining. We return to this issue later (see paragraph 7.88).

EVOLUTION OF POLICY AND LAW ON BSM

7.69 The Atomic Energy Act, 1948 introduced the concept of 'Prescribed Substances', which referred to substances that could be used for the production or application of atomic energy or research. In 1953, the government notified the Atomic Energy (Control of Production and Use) Order, 1953, according to which no person could acquire, treat, possess, use, dispose of, export, or import any Prescribed Substance except under a licence. Ilmenite and zircon, which were earlier notified as Prescribed Substances, were again included as Scheduled minerals along with monazite and rutile. Also in 1953, another order known as Ilmenite (Control of Export) Order, 1953 was notified, by which export of ilmenite was put under a licensing regime, requiring further a certificate that the ilmenite to be exported did

not contain more than 0.1 per cent of monazite (subsequently enhanced to 0.25 per cent). A new Atomic Energy Act was legislated in 1962, which expanded on the definition of Prescribed Substances as substances that may be used for the production or use of atomic energy or research into matters connected therewith and included uranium, plutonium, thorium, beryllium, deuterium, or any of their respective derivatives or compounds or any other materials containing any of the aforesaid substances. Thereafter, in 1984, the government notified the Atomic Energy (Working of Mines, Minerals and Handling of Prescribed Substances) Rules, 1984. These rules provided that no person shall mine, mill, process, and/or handle any ore, mineral, or other material from which any one or more of the Prescribed Substances can be extracted, without obtaining a licence from the licensing authority and except in accordance with the terms and conditions of such licence. The DAE has since then been notifying the list of Prescribed Substances from time to time. The list of Prescribed Substances notified in 1995 included thorium with monazite, zirconium with zircon, and titanium ores with ilmenite, rutile, and leucoxene. This left out garnet and sillimanite among the BSMs that are major (non-Scheduled) minerals under the MCDR and out of the purview of the Atomic Energy Act and rules thereunder. However, since their tailings contain the Prescribed Substances, the separation process and disposal are regulated.

7.70 According to the IPR of 1956 and the Industrial Policy Statement of 1991, the activity of mining and separating BSMs was reserved for the public sector. However, keeping in view the liberalisation of the economy in the early 1990s and opening up of various hitherto reserved sectors to private investment, the DAE also formulated a new policy that was notified in October 1998. The policy was mainly driven by the realisation that despite India having large resources of BSMs, the production to reserve ratio (PRR) is the lowest in the world. The need for promoting a primary titanium industry was also keenly felt in view of the country having the largest estimated reserves of ilmenite in the world, and also on account of the strategic importance of the metal. The 1998 policy, therefore, permitted the entry of wholly Indian owned companies from the private sector in each of the three activities, viz. mining, mineral separation, and value addition. FDI was permitted in pure value addition projects (without mining and mineral separation) as well as in integrated projects comprising mining, mineral separation, and value addition, subject to certain conditions. As a result of this change, some private sector entities did enter the beach sand mining industry but the scale of operations and the total number of investors were far from significant.

7.71 A Conference on Beach Sand Mineral Policy organised by DAE in January 2005 for reviewing the working of the policy notified in October 1998 recommended that minerals like

ilmenite, rutile, and zircon be removed from the list of Prescribed Substances for achieving the full potential through development of industries in this field. According to the provisions of the Atomic Energy (Working of Mines, Minerals and Handling of Prescribed Substances) Rules, 1984 read with the list of Prescribed Substances as notified in March 1995, it is necessary for all entities to obtain a licence from the DAE for undertaking any activity relating to those minerals that are notified as Prescribed Substances. At the conference, it was represented that four of the seven BSMs notified as Prescribed Substances (ilmenite, rutile, leucoxene, and zircon) can have many routine applications and the licensing procedures under the Atomic Energy Act as also the terms and conditions prescribed for concession holders were too severe and militated against investor confidence. It was also represented to the DAE that the 1995 list of Prescribed Substances was of generic nature and did not define threshold limits and specifications. As a result, universal control was being exercised for handling of any quantity of the Prescribed Substances, irrespective of their nuclear or strategic applications.

7.72 The DAE finally decided to revise the list of Prescribed Substances for three reasons: first, to fall in line with international practices with respect to classification of material as source material, special fissionable material, and other material; second, to harmonise the list of Prescribed Substances with national export controls and the export control lists and guidelines of the Nuclear Suppliers Group (NSG) and the Missile Technology Control Regime and the consequential notification issued by the Directorate General of Foreign Trade (DGFT) amending the list of Special Chemicals, Organisms, Materials, Equipment and Technologies (SCOMET) as in Appendix 3 to Schedule 2 of ITC (HS) Classification of Export and Import Items, 2004–09; and third, some of the existing Prescribed Substances are found to be not directly related to nuclear energy while some others have come to be used in industries not related to nuclear energy. In the revised list of Prescribed Substances, four BSMs, viz. ilmenite, rutile, leucoxene, and zircon, will cease to be Prescribed Substances and will be outside the purview of the licensing requirement under the Atomic Energy (Working of Mines, Minerals and Handling of Prescribed Substances) Rules, 1984. However, handling and disposal of any radioactive material, arising from processing of BSMs or any other minerals having radioactivity attract the provisions of the Atomic Energy (Radiation Protection) Rules, 2004 and will continue to be subject to regulation by the AERB. Similarly, certification of export consignments of ilmenite by the AMD for its monazite content will continue.

7.73 On 18 January 2006, the DAE notified the new list of Prescribed Substances. Four BSMs, viz. ilmenite, rutile, leucoxene, and zircon, will cease to be Prescribed Substances from the date the MMDR Act is revised to fall in line with the new policy or from 1 January 2007, whichever is earlier. The MMDR Act contains the First Schedule, which is a list of specified minerals under Sections 4(3), 5(1), 7(2), and 8(2). The Schedule is divided into three Parts: A, B, and C. Part B contains a list of 'Atomic Minerals'. This list corresponds to the list of Prescribed Substances under the Atomic Energy Act although the linkage is still to be formalised. Once the four minerals mentioned above are deleted from the list of Prescribed Substances, they will need to be deleted from Part B of the First Schedule as well. The DAE proposed that three of the four minerals, viz. ilmenite, rutile, and leucoxene, should be shifted from Part B to Part C of the First Schedule, which means that they will not be atomic minerals any longer but will be treated as Scheduled major minerals, for which the approval of the Ministry of Mines is required while granting concessions. The DAE also proposed that the fourth mineral, viz. zircon, should continue to be categorised as an atomic mineral under the MMDR Act even though it is removed from the list of Prescribed Substances under the Atomic Energy Act. The implication is that mining concessions for zircon will be granted only on the recommendation of the DAE. The DAE further recommends that the policy of granting concessions in respect of ilmenite should continue to be restrictive in that only Indian companies should be allowed to mine ilmenite and foreign companies should not be allowed to mine ilmenite unless they also agree to add value. The DAE would like to see a titanium industry established in India so that titanium dioxide and titanium sponge start getting produced in the country. The technology for making titanium is stated to be closely held and the thinking is that the raw material, viz. ilmenite, should be used to bring that technology to India.

ISSUES RELATED TO BSM POLICY

7.74 In the light of the above, the issues to be discussed and determined for arriving at a suitable BSM policy and changes required in the mining laws and rules are as follows:

- (i) The implications of shifting titanium bearing minerals (ilmenite, rutile, and leucoxene) to Part C of the First Schedule of the MMDR Act as recommended by DAE;
- (ii) The implications of continuing zircon as an atomic mineral although it is no longer a Prescribed Substance;

- (iii) Whether value addition should be insisted upon while granting concessions for ilmenite;
- (iv) What should be the export policy for ilmenite?
- (v) Whether AMD should continue to give certification for monazite content of export consignments;
- (vi) What should be the arrangement for AERB licensing and the role of AERB and AMD in the disposal of tailings containing radioactive monazite?

Shifting Titanium Bearing Minerals (Ilmenite, Rutile, and Leucoxene) to Part C of the First Schedule of the MMDR Act

7.75 As regards shifting ilmenite, rutile, and leucoxene to Part C of the First Schedule, we may look at the objective sought to be achieved by the move and then see whether that objective is served by the proposed shift. The DAE recognises that there is so much natural wealth in the country that instead of keeping these minerals locked up efforts should be made to encourage their exploitation for improved economic growth. Clearly, the delisting of these minerals (from the list of Prescribed Substances) by the DAE is prompted by the need to promote their utilisation in civil industry. The realisation has dawned that since the strategic importance of these minerals is not great, it would be in the national interest to de-list them so that licensing under the Atomic Energy Act is done away with. Eliminating the licensing requirement will result in the removal of an unnecessary irritant. Nevertheless, it is still felt necessary to have some Central control over these minerals and hence it is proposed to shift them to Part C of the First Schedule so that they remain under the purview of the Ministry of Mines.

7.76 As seen in Chapter 1 of this report, Part C minerals are being gradually reduced and have decreased in number from 38 in 1986 to 10 in 2005. This is in line with the policy of delegating the maximum possible authority to the states to which the minerals belong. Approval of the Ministry of Mines is required under Section 5(1) of the MMDR Act before concessions are granted in respect of these 10 minerals only. There is a demand from the states to do away with Part C approvals altogether because it is another time-consuming procedure to be followed by the applicant. As long as these were Prescribed Substances there was sense in routing the applications to DAE through a single point, viz. the Ministry of Mines, so that the DAE did not have to deal with the states. Now that they are no longer Prescribed Substances and the need to delist them is mainly to enable their exploitation and use by civil industry, the first reaction is that they should not remain in the First Schedule. However, the reason for retaining the power to approve the mining of Scheduled minerals

with the Centre is mainly to ensure that states do not deviate from the policy laid down by the Centre in respect of these minerals which are of multi-state significance in terms of both resource availability and their use. The 10 minerals currently listed in Part C are asbestos, bauxite, chrome ore, copper, gold, iron ore, lead, manganese ore, precious stones, and zinc. Asbestos is of environmental significance and its mining has to be severely regulated; bauxite and iron ore are India's main bulks and required by the steel and aluminium industry, which are the main drivers of downstream growth and infrastructure in the country. The base metals, viz. copper, lead, and zinc, are of vital national significance and are required for basic industry. Gold and diamonds are consumed mostly in India and mining of chrome and manganese ore is required to be developed in a planned manner along with iron ore. As DAE has delisted ilmenite, rutile, and leucoxene as Prescribed Substances these minerals would have to be deleted from Part B of the First Schedule. However, in view of the potential of titanium becoming a metal of the future, a case could be made for treating the three titanium bearing minerals, viz. ilmenite, rutile, and leucoxene, on par with the existing 10 minerals listed in Part C. For this reason, the Committee would recommend that the three titanium bearing minerals, viz. ilmenite, rutile, and leucoxene, should be treated to be minerals of national importance and put in Part C of the First Schedule.

Continuation of Zircon as Atomic Mineral

7.77 The DAE informed the Committee in its presentations and during discussions that it proposed to remove zircon from the list of Prescribed Substances but would like it to be retained as an atomic mineral in Part B of the First Schedule of MMDR. This proposal was based on the need for DAE to retain control over concessions granted to prospectors and miners of zircon. Normally, only Prescribed Substances are included in Part B of the First Schedule. In the presentations before the Committee, DAE argued that zircon is the basic mineral used for production of nuclear grade zirconia, zirconium sponge, and various alloys of zirconium, which find extensive application as structural materials in the core of nuclear power reactors. The advantage of retaining control over zircon is that it would enable DAE to keep track of production of zircon in the country and thereby also derive data on its exploitation. The Committee was not in a position to make a final recommendation on the issue of the future status of zircon in relation to the First Schedule and came to the conclusion that the matter should be resolved through the process of interdepartmental consultations.

Value Addition to Ilmenite

7.78 The technology for conversion of ilmenite into titanium dioxide and titanium metal and alloys is not widely available, and is in fact closely held. As will be seen from Table 7.6, India is one of the few countries with large deposits of ilmenite along with the other resource countries such as Australia, South Africa, and Canada.

Table 7.6: World Ilmenite Reserves

Country	Reserves (million tonnes)	Share of total (%)
India	461.37	30.42
Norway	244	16.13
Canada	200	13.22
Australia	180	11.90
South Africa	162	10.71
China	142	9.39
USA	82.2	5.42
Others	42	2.81
Total	1512	100

Source: As per presentation made by Transworld Garnet (India) Pvt. Ltd before High Level Committee.

The issue is whether to allow mining of ilmenite and permit free exports of the mineral or to insist on value addition by way of conversion to titanium dioxide and titanium metals and alloys within the country. The issue of value addition in respect of ilmenite is not very different from that of iron ore and bauxite. Ilmenite is required for titanium just as iron ore is required for steel and bauxite for aluminium. The matter has been dealt with in Chapter 5 and also, to some extent, in paragraphs 7.15 and 7.16 above on captive mining. In the above discussions, the Committee has concluded that while some additional weightage might be given to value adders when there are multiple applications, including applications from value adders, minerals should not be kept under the ground awaiting an application from a value adder. Here the question to be examined is whether there are any distinguishing features that require special treatment for ilmenite as the main raw material for titanium.

7.79 The two end-use segments of ilmenite feedstock are: (i) titanium dioxide for pigment production; and (ii) titanium sponge production for metal and alloys. The annual growth rate of the pigment industry is about 3 per cent and of titanium sponge is about 0.8 per cent. The demand and supply figures show that the gap in supply and demand of pigment and titanium sponge may not accommodate too many players in the long run to manufacture these products either at Indian or at global levels. Currently, the estimated global consumption of pigment is about 5 million tonnes, valued at US\$ 8 billion, and that for sponge is about 70,000 tonnes, valued at US\$ 2.66 billion. A survey by MECON Limited (a Government of

India enterprise) reported that the demand was in excess of the supply of titanium dioxide pigment in India by about 51,000 tonnes during 2005–06 but this could decline to 42,000 tonnes by 2009–10 due to brownfield expansions by existing manufacturers. However, with DuPont’s 100,000 tonnes per year capacity of pigment plant with an investment of US\$ 1 billion in China expected to go into commercial production by 2007, there could be oversupply of the pigment worldwide thereafter.

7.80 Table 7.7 shows the titanium sponge capacity and production in 2005 in selected countries.

Table 7.7: Titanium Sponge Capacity and Production

(tonnes)

Country	Capacity	Production
USA	8940	Withheld*
China	9500	6500
Japan	37,000	29,000
Kazakhstan	22,000	19,000
Russia	28,000	25,000
Ukraine	8100	8100

*Withheld to avoid disclosing company proprietary data

Source: US Geological Survey, Mineral Commodity Summaries, January 2006, available at <http://minerals.usgs.gov/minerals/pubs/mcs/>.

The world has a sponge capacity of only 110,000 tonnes. Presuming full capacity utilisation in the US, the production in 2005 was 96,940 tonnes. Thus, unlike in the pigment sector, there is excess capacity in the sponge sector. The Indian titanium sponge requirement is about 8000 tonnes. Kerala Minerals and Metals Ltd. (KMML), using technology from Defence Metallurgical Research Laboratory (DMRL) (indigenous), is setting up a sponge production facility with an installed capacity of 500 tonnes, investing about Rs 1220 million (US\$ 27 million) to cater exclusively to the needs of the Indian Space Research Organisation (ISRO), the major consumer of titanium sponge in India today. KMML is of the view that the technology developed by DMRL is not cost-effective. Development of a titanium sponge industry in India is possible only if technology can be accessed. For this, a climate favourable to FDI will have to be created. Alternatively, R&D efforts in the country could be intensified for the development of indigenous technology. The new mining regime that has been proposed in the earlier chapters, particularly Chapters 1 and 5, envisages that while in granting LAPL/PL or ML, preference can be given to those among multiple applicants who propose to add value, particularly in the state concerned, the mines cannot be left unexplored and unexploited in the absence of value adders. Decisions by entrepreneurs on the location of

manufacturing cannot be swayed by denying prospecting or mining licences, particularly in a situation in which plentiful supplies of ilmenite are available in the world. The prospects for establishment of a processing industry are also dampened by the facts that there could soon be excess capacity worldwide for titanium products, and that the cost of energy in India, is very high. Making grant of PL/ML for ilmenite or other titanium bearing minerals conditional on the establishment of industry in which there is an emerging situation of oversupply would not be wise and would also be inconsistent with the architecture of mining regime that we have proposed earlier.

7.81 The Committee concludes, therefore, that, like other minerals, mining of ilmenite, rutile, and leucosene should be subject to the general mining regime whereby while preference may be given to value adders among multiple applicants in the grant of PL/ML, where applicants are willing to set up industry based on ilmenite, such licences must not be denied on the ground that there are no applicants proposing to set up an industry based on the mineral. In the latter case such licences should be freely granted on the basis of the provisions of the MMDR Act, particularly Section 11 thereof. India's reserves of ilmenite are very large and as will be seen in the next subsection, production for exports has the potential not only to boost earnings from exports but also to increase employment, which are gains that the country should not be deprived of while waiting for an entrepreneur who may be willing to set up an industry in the country based on the mineral to turn up.

Ilmenite Export Policy

7.82 India has an estimated reserve of 461.37 million tonnes of ilmenite, a major proportion of which is considered as sulphate grade except the Chavara deposits in Kerala and Manavalakurichi deposits in Tamil Nadu. The sulphate grade is what most of the world has and the Chavara and Manavalakurichi deposits are unique in that they have much higher titanium dioxide content. Much of the supply from countries other than India is of low-grade ilmenite, with titanium dioxide content of less than 50 per cent, while the exports from India have more than 50 per cent titanium dioxide content. The use of the sulphate grade ilmenite is limited to production of titanium dioxide pigment (through sulphate route) and to titanium dioxide slag by smelting in the electric furnace. Though the technology to treat sulphate grade ilmenite exists, its viability depends on the cost of power and of the mitigating steps needed to tackle the environmental fallout. Moreover, alternatively, technology such as

chloride process pigment technology is tightly held (by DuPont), is technically complex, and also requires low cost energy to be economically viable. It is in this context that the need to further liberalise the BSM sector is to be seen.

7.83 During the early part of this decade, Indian exports of ilmenite were approximately 5 lakh tonnes per annum valued at US\$ 30 million. Mandatory value addition requirement has been the sole deterrent in the establishment of new projects for mining and mineral separation and exports (there being no indigenous market). Table 7.8 gives a comparative picture of the PRR in various countries.

Table 7.8: Reserves and Production of Ilmenite in India *vis-à-vis* Other Countries

Country	Reserves (million tonnes)	Production (million tonnes)	Production to reserve ratio
(1)	(2)	(3)	(4=3/2)
Australia	180	1.89	0.011
Brazil	6.4	0.13	0.020
Canada	200	1.8	0.009
China	142	0.84	0.006
India	461.37	0.39	0.001
Malaysia	2	0.18	0.09
Norway	244	0.87	0.004
Sri Lanka	14.8	0.08	0.005
South Africa	162	2.12	0.013
USA	82.2	0.53	0.006

Source: As per presentation made by DAE before the High Level Committee.

It was argued before the Committee by industry that if export of raw mineral ilmenite is encouraged, India, which has huge ilmenite reserves, could grab a significant share of the world market. If India's present PRR of 0.001 is increased to 0.005 [i.e. even half that of Australia (0.01) or Canada (0.009)], India's export earnings from ilmenite would jump five-fold to US\$ 150 million at the current export price levels. This order of increase of exports would boost direct and indirect employment by 50,000.

7.84 We have argued earlier that the value addition requirement as a condition of grant of PL/ML for ilmenite must be eliminated in order to stimulate investment in mining. Since the industry based on the mineral has not found India attractive for investment, the objective of stimulating mining activity cannot be realised unless exports of ilmenite are allowed without

any quantitative restriction.. If ilmenite mining is to be permitted without imposing a condition for value addition a corollary is that exports would have to be freely permitted. However, in view of the fact that some of the Indian ilmenite deposits are unique in being of much higher grade than what is available in the rest of the world, the Committee would propose the levy of export duty on high-grade ilmenite (with titanium dioxide content of 56 per cent and above). A part of the collections from the levy could be used for promoting R&D activities on titanium and minerals bearing the metal.

AMD Certification of Monazite

7.85 Under the Ilmenite (Control of Export) Order, 1953, licences were issued for export of ilmenite subject to the condition that samples of ilmenite to be exported had been examined and certified to contain less than 0.1 per cent of monazite to prevent clandestine export of monazite. This limit was subsequently enhanced to 0.25 per cent of monazite. At present, the export consignments of ilmenite are examined and certified by AMD. This was reviewed by DAE and it was found essential to retain monazite testing, and such testing continues to be carried out by AMD on behalf of AERB under the Atomic Energy (Radiation Protection) Rules, 2004. Many countries refuse to use any ilmenite containing more than 75 parts per million (ppm) of uranium and thorium, as it poses an environmental threat when used for the production of value added materials. Hence, analysis of ilmenite for its monazite content by AMD is a service that would be needed by exporters, and could be continued as a charged service to be availed of on a voluntary basis.

AERB Licensing and the Issue of Disposal of Tailings

7.86 The radiological issues in beach sand mining arise due to the presence of monazite, which gives rise to high natural background radiation levels in areas where BSMs exist. During the course of separation of minerals, changes in radiation levels take place. When commercially important minerals such as ilmenite or garnet are removed, the remaining material gets concentrated in monazite, leading to increased radiation levels. The material remaining after separation, i.e. tailings containing monazite, if stored inside the plant, will lead to increase in radiation levels inside the plant. The dust generated during the separation process contains radio nuclides (having long half-life) of thorium and uranium present in monazite, and in the absence of appropriate measures for radiation protection, radiation exposures of occupational workers can sometimes exceed the limits prescribed. If the tailings

are disposed of in the mined-out area or at other locations on the beaches, the background radiation in those areas will increase. On the other hand, the tailings resulting from the initial concentration of heavy minerals from raw sand through wet operations, i.e. spiral separation, generates primarily silica sand (80 per cent), and back filling of these tailings into the mined-out areas will have a net positive impact as far as radiological aspects are concerned.

7.87 The concerns of radiological safety and the enforcement of the Atomic Energy (Radiation Protection) Rules, 2004 are addressed by AERB. Mineral separation and processing activities of BSMs need to be monitored so as to prevent exposure to radiation both of occupational workers and the public in the mining area during operational as well as post-operational periods. For this purpose, AERB stipulates the radiological safety requirements and enforces them through appropriate regulatory mechanisms. According to the current dispensation, the tailings containing monazite are to be stored and disposed of by the concerned company at its own cost and in accordance with the rules and regulations framed by AERB. This condition is contained in the licence given by the DAE under the Atomic Energy Act.

7.88 As mentioned earlier (paragraph 7.68), in the industry presentation to the Committee it was stated that the procedures prescribed by AERB in the DAE licence are very complicated and severe. The reality on the ground does not call for such excessive action, which is a disincentive to mining of BSMs. It is true that tailings will get enriched in monazite concentration consequent to the separation of values such as ilmenite, rutile, zircon, garnet, sillimanite, etc. and disposal of such tailings back into the mined-out areas could result in some increase in the background radiation levels in these areas. However, in most cases, such increases in the background radiation levels are not significant. This is due to the fact that there is a sizeable variation in the radiation background levels in these areas from location to location, even within short distances. The increased background radiation levels on account of tailings disposal are in many cases within the prevailing variations in the existing radiation background levels. Also, many of the locations where beach sand mining and tailings disposal is being carried out presently are not inhabited areas. In the few cases where tailings disposal can give rise to significant increase in background radiation levels, appropriate disposal methods such as placing the tailings in a dug-out pit and providing a cover of fresh soil can be specified.

7.89 After the delisting of ilmenite as a Prescribed Substance, DAE has proposed that since in the new dispensation there will be no licensing by DAE and since the work of radiation monitoring has to continue, the Ministry of Mines should obtain licence/NOC from AERB under the Atomic Energy (Radiation Protection) Rules, 2004 before granting approval of the Central Government (as required for First Schedule, Part C minerals). According to the proposal of DAE, the MLs to be issued by the state governments must be subject to conditions imposed by AERB. This procedure is necessary to enable AERB to examine the proposals on a case-by-case basis and work out appropriate guidelines for tailings disposal for each proposal as part of the licence issuing process. Further, possible radiation exposures, both external and internal, have to be evaluated by AERB while examining proposals for use of the tailings in road construction, civil construction, etc. Such applications should be forwarded by the state government to AERB. DAE maintains that it is difficult to have effective post closure control/surveillance over waste disposal practices and therefore sufficient safeguards have to be put in place. Some of the radio nuclides in the tailings have a long half-life and the lease given to the operators may be of comparatively shorter durations. When the operation of a private sector facility ceases, the operator may close down the facility and abandon the premises. In such cases, the authority issuing ML/industrial licence must be in a position to take over the responsibility of the facility as well as the site that had been subjected to the tailings disposal, if so specified by AERB. Appropriate mechanisms to ensure this capability need to be put in place.

7.90 It has been recommended in paragraph 7.76 that the three titanium bearing BSMs could be put in Part C of the First Schedule, so that approval by the Ministry of Mines is necessary before any licence for prospecting or mining is granted. Irrespective of the position in this regard, the current arrangement in respect of clearances under the Forest Conservation Act (1980) and the Environment Protection Act (1986) could be quite easily followed in respect of these BSMs. All concessions are issued by the state governments subject to the applicant obtaining the requisite clearances from the concerned authorities under the above-mentioned statutes. In this case also, the state governments should be required to issue the licenses/leases subject to the applicants obtaining clearances under the Atomic Energy (Radiation Protection) Rules, 2004 and under the Atomic Energy (Safe Disposal of Radioactive Wastes) Rules, 1987 from AERB. As recommended in paragraph 2.14 in respect of forest and environmental clearances, the PL/ML applicant could apply simultaneously to the AERB to obtain the clearance from the radiation point of view. Further, states should be

directed to ensure that the AERB/AMD guidelines are strictly followed in the disposal of wastes, viz. waste disposal monitoring is carried out properly and applications for use of tailings are finalised only after the approval of the AERB. IBM can be asked to approve mining plans and mine closure plans of BSMs in consultation with AERB/AMD and help State Directorates/ State Pollution Boards to build up the requisite expertise.

7.91 The Committee also observes that AERB could go into the licensing procedures carefully to see how best they can be simplified. Keeping in mind the importance of the control activity, ways may be devised to ensure that the control mechanism does not act as a disincentive for investors in BSMs.

Chapter 8

Conclusions and Recommendations

This chapter lists the main conclusions and recommendations of the Committee. The numbers of the paragraphs in the preceding Chapters from which these have been drawn are indicated in parentheses.

NATIONAL MINERAL POLICY AND MMDR ACT

POLICY ISSUES

- In the Committee, there was a strong sense that the NMP would have to be revised to attune it to the current realities in the world economy in which barriers to international trade and investment flows have been rapidly dismantled. The policy would have to provide for the mining laws and practices to evolve in order to adapt to international best practices. While the GSI and MECL need to be strengthened to enlarge their activities using state-of-the-art techniques, much of the investment needed for exploration and mining would have to come from the private sector. To induce investment flows, the policy environment would have to change. The procedures for grant of RP/LAPL/PL/ML would need to be made seamless and the holders of these permits and licences accorded security of tenure. The policy should also envisage unbundling of reconnaissance, prospecting, and mining activities to maximise private investment. The policy would have to require an arm's length to be maintained between the State as a regulator and the State as a commercial entity engaged in mining activities. While enacting legislation and drawing up rules and guidelines the states should ensure harmony with Central laws and national policy. The policy should provide for disposal of fully prospected ore bodies through public tender/auction to the extent possible. Equally importantly, the Policy should provide for environmental concerns and the needs of local communities to be fully taken into account in mining operations. While comprehensive changes in the NMP document

would have to be carefully drafted in order to reflect these ideas, the Committee agreed to the following specific textual changes in the NMP to embody some of them:

(i) Chapter 1: Preamble

- In paragraph 1.2, delete the first sentence. Also delete the words ‘in times of international strife’ at the end of the third sentence and add the following text as the fourth sentence:

‘At the same time, it is essential that search is made in the country for more mineral resources through scientific exploration using state-of-the-art techniques, and for this the policy environment must continue to be improved so that it is conducive for investment and technology flows.’

(ii) Chapter 2: Regulation of Minerals

- Add the following text as paragraph 2.3:

‘In order to make the regulatory environment conducive to private investment the procedures for grant of mineral concessions shall be seamless and security of tenure shall be guaranteed to the concessionaires.’

(iii) Chapter 3: Objectives

- Replace 3(c) by the following: ‘to promote use of state-of-the-art exploration techniques and mining technology’.

(iv) Chapter 4: Role of the State in Mineral Development

- Insert the following sentence at the end of the existing text:

‘In line with the current economic policy, in future the core functions of the State in mining will be facilitation of exploration and mining activities of investors and entrepreneurs, provision of infrastructure, and regulation and tax collection.’

Where it is deemed necessary for the State to continue in mining activities, there shall be arm's length between State agencies that explore and mine and those that regulate. There shall be transparency in the allocation of ore bodies for mining.'

(v) Chapter 5: Survey and Exploration

- Replace the last sentence of paragraph 5.1 by the following:

'While these government agencies may continue to perform the tasks assigned to them for exploration and survey, in future the private sector would be the main source of investment in reconnaissance and exploration. For this to be accomplished, the regulatory regime would ensure clarity, fair play and security of investment.'

- In paragraph 5.2, insert the words 'by government agencies' after the word 'given' so that the paragraph reads as follows:

'In conducting exploration for minerals, special attention will be given by government agencies to the development of strategic minerals through systematic investigation of various potential sources of their supply.'

- Delete paragraph 5.3.
- In paragraph 5.4, add the words 'by government agencies' after the words 'Coordination of exploration work'. Also redraft the last sentence as follows:

'The existing arrangement shall be reviewed periodically with a view to bringing about coordination among the survey and exploration agencies of the government, taking into account the exploration work undertaken by the private sector.'

(vi) Chapter 6: National Inventory of Mineral Resources

- After the first sentence in paragraph 6.1, replace the remaining text by the following:

‘In coordination with the Geological Survey of India, the Indian Bureau of Mines will maintain a database in accordance with the latest version of the UNFC system. The database would comprise both physical and resource inventory and include a Tenement Registry with details of greenfield areas, brownfield areas and relinquished areas, including areas given up by the GSI as not worth pursuing. The data would be maintained online, giving instant information to prospective investors on what is available for reconnaissance, prospecting and mining.’

(vii) Chapter 7: Strategy of Mineral Development

Conservation and Mineral Development

- In paragraph 7.1.2, redraft the third sentence as follows:

‘A thrust is to be given to exploitation of mineral resources in which the country is well endowed so that the needs of domestic industry are fully met, keeping in mind present and future needs, while at the same time exploiting the external markets for the minerals .’

Mining Equipment and Machinery

- Replace the existing text of paragraph 7.6 by the following:

‘Use of equipment and machinery that improve the efficiency, productivity, and economics of mining operations and safety and health of the persons in the mines and surrounding areas shall be encouraged.’

Linkages

- Replace the first two sentences of paragraph 7.8 by the following:

‘Mining contributes to the generation of wealth and creation of employment independently and should therefore be treated as an economic activity in its own right and not merely as an ancillary activity of the manufacturing industry. Domestic processing industry receives supplies of mineral resources produced by the mining industry at market prices prevailing from time to time. In order to be assured of uninterrupted supply of the mineral raw material from domestic

sources, the user industry should develop long-term linkages with the mineral producing units.’

Infrastructural Facilities and Regional Development

- Insert a new sub-paragraph in paragraph 7.10 to read as follows:

‘For the improvement of infrastructural facilities, particularly transport facilities, in mining areas, financial resources available with government should be leveraged to the maximum extent possible through recourse to public–private partnership arrangements, wherever possible.’

Financial Support for Mining

- In paragraph 7.11, the first sentence of the second sub-paragraph should be replaced by the following:

‘Induction of foreign technology and foreign participation in exploration and mining shall be encouraged.’

- Delete the remaining part of the second sub-paragraph and the third and fourth sub-paragraphs altogether.

Small Deposits

- Add the following text at the end of the paragraph 7.12:

‘Efforts would also be made to grant mineral concessions to consortia of small-scale miners and users who are otherwise qualified, for a cluster of small deposits so that the benefits of economies of scale are reaped.’ [1.36]

STATUTORY ISSUES

All recommendations mentioned below are subject to the exceptions mentioned in Chapter 5 and the section on ‘Allocation of Captive Mines to Steel Makers’ in Chapter 7. [1.37]

Exploration Licences

- The current two-tier system of RP and PL should be replaced by a three-tier system of RP, LAPL, and PL. [1.44]
- As regards RPs, an ‘open sky’ policy should be adopted by granting non-exclusive RPs without any preferential or automatic right to a PL but also without much regulation, i.e. by relaxing most of the conditions mentioned in Rule 7 of the MCR and Form F-1. In fact, a fresh memorandum of understanding (MOU) and Permit Form will need to be prepared for this purpose. The ‘open sky’ RP policy would apply not only to areas that are greenfield areas, i.e. where no work has been done by GSI or any other public agency, but also to areas where GSI and/or RP holders have given up work without identifying any workable prospect for detailed exploration. For the first few years, non-exclusive RPs can only be granted for areas that are not held under current RPs, which have been granted and are operational as per the present scheme, or for areas relinquished by existing RP holders. This will give impetus to investment in regional exploration where a vast amount of work still needs to be done. The only obligation on the RP holder would be to periodically file data of the work done with appropriate lock-in arrangements for the same. Non-exclusive RPs may be granted by the state governments without prior approval of the Centre, even in respect of Scheduled minerals. [1.44]
- The RP holder would be entitled to a LAPL/PL on the basis of first-in-time principle and not merely on the priority principle currently in use. This right will be automatic with no discretion to either the state government or the Centre to refuse or hold back the LAPL/PL thus assuring a seamless transition from RP to PL for the first-in-time non-exclusive RP holder. However, fulfilment of the data requirement as laid down in the MCR as a condition precedent to the grant of LAPL/PL to the RP holder would have to be rigorously ensured. [1.44]
- RPs for an area would not be restricted to one permit holder or one mineral. Under the ‘open sky’ policy, RPs can be granted for the same area to more than one applicant on

non-exclusive basis. Since the first-in-time principle would be applicable for converting RPs into LAPLs/PLs, this multiple permit system will encourage RP holders to complete their regional exploration work expeditiously. [1.44]

- Existing RP holders would continue to be governed by the existing law of priority for PL until the duration of the RP runs out.¹ [1.44]
- The concept of an exclusive LAPL should be reintroduced. The LAPL holder would automatically be able to do shallow pitting, trenching, and surface drilling, as these are activities that go beyond regional exploration but fall short of detailed exploration. Considering that these activities would involve drawing of samples, specific provisions would have to be made in the existing Section 3 of the MMDR Act for LAPL holders. This exclusive concession (LAPL) would be available to those who are ready to incur heavy expenditure on intensive regional exploration work as also on high technologies such as electromagnetic probing and deep imaging. The MCR will spell out the conditionality relating to the work to be done and technologies to be used and also the regional exploration data required to be submitted for getting the concession. LAPLs may be granted for areas where no detailed exploration work has been done, areas that are greenfield areas but where the applicant proposes to incur heavy expenditure and use high technology, areas relinquished by RP holders, areas where regional exploration data has been filed and the lock-in period is over, and areas not prospected by GSI beyond P2 level. [1.44]
- A LAPL/PL can be granted directly in an RP-held area to a non-RP holder if the application for a LAPL/PL is filed by the non-RP holder before an application is filed by the RP holder. However, the LAPL/PL applicant will have to either (a) show basic geological information (reconnaissance) data on the basis of which the concession is sought, which means that this facility will be available only for areas relinquished by GSI/RP holders/DMGs; or (b) show the desire and ability to use superior technology that a non-exclusive RP holder would not be inclined to use. In both cases, the applicant must satisfy the authorities about the accuracy and genuineness of the data. [1.44]

¹ The Committee is of the view that such prospective applicability of the changes in the law should be the rule for PLs and MLs also.

- The fees should be significantly higher than the prescribed rates (as of 30 June 2006) for all the concessions, viz. RP, LAPL, and PL, in order to prevent nuisance applications, especially applications that attempt to pre-empt genuine explorers. Also, the penalties for LAPL and PL holders who do not explore as per plan should be significantly higher than the prescribed penalties (as of 30 June 2006). [1.44]

Mining Leases

- The MMDR Act should be amended to exclude ore bodies fully prospected by public agencies at public expense, as mentioned in paragraphs 1.32 and 1.46, from the purview of Section 11 of the MMDR Act. [1.47]
- A fresh provision should be introduced requiring the Central government through the GSI (for GSI-prospected areas) and through IBM (for other than GSI-prospected areas) to notify all areas that have been prospected (detailed exploration) by government agencies and are ready for mining within a time-bound framework. [1.47]
- The state governments, through their Directorates in respect of non-Schedule I minerals and in consultation with IBM in respect of Schedule I minerals, may be charged with the task of disposing of the ore bodies in such notified areas through a transparent tender/auction process. In the case of iron ore and bauxite, which are fully prospected, the disposal may be through the state governments with the association of IBM. [1.47]
- Detailed rules and procedures for such disposal by tender/auction be laid down in the MCDR. [1.47]
- However, in the interest of overall development of the state, the state government may waive the tender/auction procedures for ore bodies occurring within the state and grant the lease to an applicant who is otherwise qualified in terms of criteria (a) to (c) of Section 11(3) of the Act but who is also willing to set up the downstream industry within the territorial limits of the state. In case of more than one applicant offering to set up such industry within the state, the state government may grant the ML for such

an ore body to the applicant which it adjudges to be the most deserving in terms of the criteria (a) to (d) of Section 11(3) of the Act. In such cases, the full cost of exploration by the public agency should be recovered from the lessee. [1.47]

Duration of Concessions

- While the total period of exploration under RP/PL or RP/LAPL may remain the same, i.e. a maximum of eight years, an RP holder who completes reconnaissance in less than three years and applies for and obtains a PL may be allowed to use the saved period in the latter concession as an additionality, so that even while the combined duration under RP/PL remains eight years the maximum period of the PL could stretch beyond five years for an RP holder who completes reconnaissance and obtains a PL before his three-year RP period runs out. This kind of flexibility would not only address the need for the longer time sought for the PL but would also encourage faster overall exploration. The duration of the exclusive LAPL would be six years, extendable by another two years but with suitable and matching relinquishments. Since the total duration is not to exceed eight years, the duration of a LAPL applied for by a non-exclusive RP holder would be six years extendable by another two years but the total period of eight years would be reduced by the used-up period of the three-year RP. As far as extensions are concerned, non-exclusive RPs may be routinely extended for the next three years in respect of areas not claimed by a LAPL/PL applicant. LAPLs may be extended beyond the two years mentioned above but such extension shall only be in exceptional circumstances, e.g. where an ongoing project warrants additional work for sound technical reasons, etc. [1.50]

Size of Area

- The limit for a direct PL applicant should be increased from 25 sq. km to 50 sq. km. [1.57]
- The maximum total area under PL in a state may be increased from the present 25 sq. km to 500 sq. km in the case of an RP holder. This would be subject to an escalating fee structure, minimum expenditure commitment, and relinquishment of area so that the area held is brought down to 100 sq. km. at the end of three years. Where no aerial

surveys have been undertaken, the PL area would be 50 sq. km instead of the current 25 sq. km. [1.57]

- The LAPL may be granted for an area of 5000 sq. km for eight years, with relinquishment down to 500 sq. km after the fifth year and 100 sq. km after six years. This will bring the LAPL area on par with the RP/PL area. The LAPL will be subject to severe conditionality in terms of work to be done and expenditures to be incurred on an escalating scale with appropriate penalties for failure. For LAPLs in RP areas, the relinquishments will be down to 500 sq. km after three years of the total RP/LAPL duration of eight years and down to 100 sq. km after six years. [1.57]
- For LAPL/PL holders, the maximum area of MLs in a state may be increased from the present 10 sq. km up to the area held in the LAPL/PL at the time of applying for the ML. This means that a LAPL/PL holder would be entitled to MLs for the entire area of 100 sq. km in a state, which is the limit to which the LAPL/PL area is to be brought down at the end of the third year of the five-year PL or the sixth year of an eight-year LAPL. For the PL holder who holds only 50 sq. km. in his PL, the maximum area limit for a ML should remain at 50 sq. km only. [1.57]

Security of Tenure

- RP (non-exclusive) holders should have an automatic right to a PL on first-come-first-served basis, provided they fulfil the requirement for submission of data and satisfy all eligibility conditions. The provision of preferential right to existing RP holders should, however, continue until the duration of the RP runs out. [1.60]
- Where a LAPL/PL has been granted in respect of a land the licensee shall have the exclusive right to obtain a ML in respect of that land over any other person on fulfilling the requisite conditions under the Act or as prescribed under the rules and as incorporated in the terms and conditions of the lease. [1.60]
- In Section 4A(1), the phrases ‘of regulation of mines and mineral development’, ‘or for conservation of mineral resources’, and ‘such other purposes, as the Central

government may deem fit' should be deleted and the words 'in the interest of national security and public works' added. [1.60]

- In Section 31, the sweeping powers given to the Central government for circumventing any of the provisions of the MCR and MCDR, and that too in a non-transparent manner, need to be circumscribed, so that intervention of Central government affecting security of tenure of the concessionaire, if at all necessary, is possible only in narrowly defined circumstances. It is not enough for the Central government to record the reasons in writing. [1.60]
- Rule 26(1) of MCR, which gives the state government the authority to refuse an application for a ML, should be amended to ensure that it does not come in the way of a smooth and seamless transfer from one concession to another. [1.60]
- Rule 27(1)(b) should be amended to give an automatic right to the miner to mine associated minerals discovered in the course of mining subject to a suitable fee being paid and the mining plan being amended with the approval of IBM. [1.60]
- Rules 27(1)(m) and 27(3) of MCR, giving the authority to the state to pre-empt minerals and put restrictive conditions, should be deleted. The lease deed form should be exhaustive and should include all minerals and associated minerals for which applicants may have applied and to which they may be entitled. The form should also contain additional conditions imposed by the state governments on captive miners and value adders. [1.60]
- Rule 34 of MCR, authorising the state to reduce or exclude an area from the entitlement of a PL holder to a ML, should be deleted except in the case of specified public purposes. [1.60]
- Mineral concession holders should have the right to renewal of the concession if they have met the obligations of his concession. As the term 'renewal' is used to mean fresh grant in judicial parlance, the word 'extension' should be used instead of 'renewal' wherever it occurs in the Act or Rules. Extension of the ML should be

automatic until the exhaustion of the deposit or voluntary relinquishment of areas by the lessees, whichever is earlier, subject, however, to the fulfilment of conditions of the lease. [1.60]

Criteria for Grant of Mineral Concessions

- Section 11(1) may be modified so that a non-exclusive RP holder has the right to obtain a PL on first-come-first-served basis rather than ‘a preferential right’. A LAPL/PL holder shall have the exclusive right to obtain the ML. These rights would of course be subject to the fulfilment of conditions in the MCR, including those relating to furnishing of data. [1.67]
- Section 11(2) may be modified such that all persons applying for a RP are entitled to it, provided they are eligible as per pre-determined criteria for proving their credibility and genuineness. A RP will be for all minerals and associate minerals (with exceptions specified where GSI or State agencies have already done some work) and may run concurrently with or overlap other RPs, both in terms of time and area. The RP holder who is first-in-time shall have the right to be granted a PL. [1.67]
- Grant of the exclusive LAPL should be on the basis of well-defined criteria and again on the first-in-time principle. Where a LAPL/PL is applied for directly by two or more persons, the applicant whose application was received earlier shall have a preferential right to be considered for the grant of the PL regardless of whether he holds an RP or not. The applications should be disposed of by the state government within a stipulated time limit. Where two or more applications are received for a LAPL/PL before the expiry of the time limit, the matter shall be decided by taking into consideration the criteria mentioned in Section 11(3) of the Act, including the criterion of value addition as detailed in Chapter 5. However, the eligibility criteria will be laid down in the MCR for all RP and PL applicants so as to ensure that only genuine and credible applicants apply. To ensure that LAPLs/PLs are not obtained by speculators who have no intent to prospect on the basis of a time-based mining plan, a rule should be prescribed with heavy penalties for violation. Similarly, a minimum expenditure limit per square kilometre should be imposed on an escalating scale so as to discourage such speculators. [1.67]

- In the case of multiple applications, all the criteria mentioned in Section 11(3) of the Act should be taken into consideration while evaluating applications for establishing comparative merit. The applicant must fulfil a minimum qualification regarding experience of mine-related activity, financial resources, and nature and quality of staff before being considered for grant of application on the basis of the proposed investment in the mine or in the industry based on the mineral. (See Chapter 5 for more detailed treatment of preference that can be given to value adders.) [1.67]
- Rules should be prescribed in the MCR for interpreting precisely the criteria provided under Section 11(3) of the MMDR Act, laying down the benchmarks to the extent possible so that there is clarity and objectivity in the application of these criteria. [1.67]
- Until IBM is ready with its information website the concept of notifications will need to continue. Section 11(4), relating to the treatment to be given to concession applications in notified areas, will need to be modified to take non-exclusive RPs out of its purview and bring LAPLs within its purview. Notifications will be restricted to LAPLs and MLs. The former will be for greenfield areas or areas mentioned in paragraph 1.43 (vi). ML notifications will be restricted only to areas fully prospected by GSI or state agencies and shall be for granting MLs on tender/auction basis. PL applications are expected to emerge either from freely available RPs or from the reconnaissance data put out by GSI and state agencies. [1.67]
- In cases where the holder of a LAPL/PL applies for a ML, the holder has to be given the exclusive right to mine the prospected deposit. There cannot be any scope for exceptions or exemptions and, therefore, Section 11(5), which grants overriding discretion to the state government to bypass the priority principle in any situation, should be deleted. [1.64, 1.67]

Transferability of Prospecting Licences

- The right to transfer a PL should be explicitly stated in the MMDR Act (and not left to the mining rules or the licence instrument). Greater transparency can be achieved

by stating in the MMDR Act that a prospecting licensee has the right to transfer his licence to a qualified entity. A single approving authority should be named. The Rules should provide in a single section a detailed description of the procedure, requirements that must be met, the circumstances under which an application can be denied, and a requirement for the approving authority to give reasons for denying an application. The Rules already provide that a transferee assume and be responsible for all rights, liabilities, and duties incurred by the transferor under the PL prior to the transfer. [1.71]

- What applies to PLs also applies to MLs that have been obtained by PL holders. Rule 37(2) of MCR will need to be modified and the negative approach of the entire Rule 37 rectified insofar as such licences obtained by prospecting companies are concerned. The third proviso in Rule 37(2) of MCR will need to be deleted. [1.72]

Reservation Provisions and Special Powers

- The emphasis on both public and private sector investment in exploration, especially regional exploration or reconnaissance, needs to continue. However, looking at the need for private investment in these activities it is necessary that PSUs of the Central and state governments be treated at par with private sector companies in the grant of mineral concessions. The reservation provisions for PSUs for exploration and mining should be modified so as to limit the scope of such reservations to specified purposes such as to meet the requirement of SMEs for raw material. Besides, promotional work at public expense need not be undertaken if the private sector is willing to spend and invest on the same work. [1.76]
- Where detailed exploration/prospecting is undertaken by state or Central organisations such as GSI, MECL, or state-level Directorates as promotional work (i.e. at public expense) and mining based on such prospecting is to be undertaken by a third party, then such areas/blocks should be farmed out for mining on a tender/auction basis. This would not only ensure that transparency is maintained, but also the revenue generated from such auctions would help augment the resources of the states. This would also help small miners (SME sector) who do not have sufficient

resources to take up prospecting singly by themselves but can do so collectively or even outsource the work. [1.76]

PROCEDURES FOR GRANTING MINERAL CONCESSIONS

SINGLE WINDOW: CO-ORDINATION-CUM-EMPOWERED COMMITTEE APPROACH

- In order to streamline procedures and minimise delays, Coordination-cum-Empowered Committees should be set up at the levels of state and Central governments for taking decisions on applications for RP, LAPL, PL, and ML. [2.14]
- All applications for mineral concessions should be accepted at the state headquarters office of the DMG of the state government and not at its district office or at the District Collectorates. [2.14]
- The applications should be sent by the DMG simultaneously to designated officers at the district level of all the concerned departments, viz. mining, revenue, forests, Panchayati Raj (rural development), etc., for scrutiny of the proposals in relation to the records and applicable rules for the area for which the concession is being sought. Copies of the applications should be sent to the concerned secretariat departments for information and follow-up. The district-level officers should send their responses to the DMG within a time-bound framework under intimation to their respective secretariat departments. As against the present system in which the applicant applies for environmental and forest clearance after having received the clearance for LAPL/PL or ML, and for aerial reconnaissance after grant of RP, the applicant should have the possibility of making all these applications simultaneously, with copy to the DMG. [2.14]
- The state government should set up a Coordination-cum-Empowered Committee at the state level, headed by the Chief Secretary with state-level representatives from all the concerned departments (Mining, Forest, Environment, and Revenue, and where necessary, Industry and Panchayati Raj) as members. The Coordination-cum-Empowered Committee should be serviced by the DMG and meet at least once in two months. The main function of the Committee would be to provide oversight of clearance of the applications by various departments and act as a pressure point on the

departmental representative for securing timely clearance. The applicants could also be informed that their applications were being listed for review at a particular meeting, and if they so desire, they could be given the opportunity for furnishing clarifications, where necessary, to the Coordination-cum-Empowered Committee. [2.14]

- The state-level Coordination-cum-Empowered Committee should also be delegated powers to approve grant of mineral concessions in cases below a specified area or quantum of mineral deposit for non-Scheduled minerals when all departmental and statutory clearances have been received. In other cases, the recommendations made by the state-level Coordination-cum-Empowered Committee for grant of mineral concessions may be put up to the minister-in-charge of the state government or to the Cabinet, according to the Rules of Business. In the case of Scheduled minerals, where prior approval of the Central government is required, the recommendations of the Coordination-cum-Empowered Committee, duly approved at the appropriate level, should be forwarded to the Ministry of Mines. [2.14]
- At the Central government level, the Coordination-cum-Empowered Committee should be set up headed by the Secretary, Ministry of Mines, with representatives from GSI, IBM, the MOEF (separately for environment and forests), DGCA, Ministry of Defence, Intelligence Bureau and/or Home Ministry, Ministry of Finance (Department of Expenditure), and the state government concerned. The terms of reference of the committee would also be oversight of departmental clearances. The Committee should perform the important function of monitoring clearances by individual Departments/Ministries and ensuring timely completion of internal procedures and prompt decision by them. The Committee could also be empowered to accord approval on behalf of the Central government once the necessary departmental and ministerial clearances, including statutory clearances, have been received. It could also follow up on other clearances that need to be obtained even after the application for RP/LAPL/PL/ML have been granted, such as permission for aerial reconnaissance and forest and environmental clearances. For transparency, the applicants could also be informed that their applications were being listed for review in a particular meeting, and if they so desire, they could be given the opportunity for furnishing

clarifications, where necessary, to the Coordination-cum-Empowered Committee. [2.14]

- The Central Coordination-cum-Empowered Committee should grant prior approval in cases of Scheduled minerals for areas/quantum of mineral deposit up to a specified level. The recommendations of the Coordination-cum-Empowered Committee in respect of cases beyond the power delegated may be submitted to the minister-in-charge for grant of prior approval. [2.14]
- The DMG in each state should maintain a website in which the position of each application should be indicated. As and when clearances are received from each agency/Department, an entry to that effect should be made against the application. A similar website should be maintained by the Ministry of Mines for showing the position of each case from the time that the reference is received from the state government for according prior clearance. [2.14]

ADHERENCE TO TIME SCHEDULES FOR CONSIDERATION OF APPLICATIONS FOR RP, LAPL/PL, AND ML

- The MMDR Act should be amended to give jurisdiction to the Central government to entertain applications from aggrieved parties and take a final decision thereupon in the event of failure of the state government to take a decision within the time frame envisaged in Rule 63A of MCR 1960 The amended Section 30 would read as follows:

Section 30: Powers of the Central Government: The Central Government may of its own motion or on application made within the prescribed time by an aggrieved party:

- (i) revise any order made by a State Government or other authority in exercise of the powers conferred on it by or under this Act with respect of any mineral other than a minor mineral, or
- (ii) Where no such order has been made by the State Government or other authority (in exercise of the powers conferred on it by or under this Act with respect to any mineral other than a minor mineral) within the time prescribed

therefore (under Rule 63A), pass such order that it may think fit and appropriate in the circumstances:

Provided that in cases covered by clause (ii) above, the Central Government shall, before passing any order under this clause, give an opportunity to the concerned State Government (or other authority) as well as other concerned and/or aggrieved parties of being heard.

The third proviso of Rule 63 A of the MCR, 1960 should be deleted and a new Rule 54A should be added as indicated below:

54A: Where the State Government (or other authority) has not passed an order under Rule 63A:

- (a) for a non-exclusive RP within four months from date of receipt of an application of RP,
- (b) For a PL/LAPL within ten months from the date of receipt of an application for PL, and
- (c) For a ML within 13 months from the date of receipt of an application for ML,

the aggrieved party may apply to the Central Government to exercise its powers under Section 30 of the MMDR Act within 90 days of the expiry of the periods mentioned above. [2.19]

- The amendments proposed above would not take away or whittle down the powers of the state governments in respect of minerals owned by them. Instead they would only serve to secure adherence to the time limits already set and imposed under the existing law. The Committee also recommends that necessary changes should be made in the laws to provide that where the Centre does not grant prior approval in cases referred to it by the state government within the specified period, such prior approval should be deemed to have been granted. Further, in the applications received under Section 30 of the Act in situations in which no order has been made by the state government

there should be a time limit imposed on the Centre for disposal of the application within such time limit. A solution should also be found to ensure that the Centre adheres to the time limit. [2.20]

- During the deliberations of the Committee, doubts were raised on the constitutional validity of the proposal to amend Section 30 of the MMDR Act. In making its recommendation, the Committee relied on the legal opinion obtained by FIMI from the noted jurist Fali S. Nariman, a copy of which is appended as Annexure 2. The Committee's understanding was that this opinion would be reconfirmed by making a reference to the Attorney General before the GOI takes a decision on this recommendation. Some of the members representing the states also raised the point that in the interest of fair play, time limits should also be imposed on the Central government. This too was agreed to, as mentioned in paragraph 2.20. However, after the final meeting of the Committee had been held on 30 June 2006, four members representing the state governments of Chhattisgarh, Jharkhand, Karnataka, and Orissa sent a note of dissent on 3 July 2006, which is appended as Annexure 3. [2.21]

SIMPLIFICATION OF PROCEDURE FOR ASCERTAINING AVAILABILITY OF AREAS

- The present registry system should be modernised by creating a digitised on-line mineral atlas, which will show mineral titles on a spatial map and would be accessible to the public via the Internet. Investment of a large magnitude required by the mining sector in India cannot come in unless such a system is in place. The Committee suggests that this work on the modernisation of the registry system may be taken up in mission mode through, *inter alia*, the institutional upgradation of IBM and the regulatory divisions of the State Directorates, the latter being incentivised by the Centre and implemented by the states. [2.27]
- Block/grid based exploration area should be introduced for applications for the exploration titles of RPs, LAPs, and PLs so that areas are clearly demarcated and the need for hand-drawn maps is eliminated. [2.27]
- Facility for on-line application system for mineral concessions should be provided. [2.27]

- Section 12(1) of the MMDR Act should be amended to provide that in addition to the registers of applications for RP/PL/ML and registers of RP/PL/ML that are current, registers should also be maintained for relinquished areas in each case. Further, a new Section 12(3) should be introduced to require the concerned authorities to maintain the entire data of Section 12(1) digitally and to provide on-line access to the public. [2.27]
- Coordinates of areas granted, applied, as well as relinquished should be put on the websites of the state Mining and Geology Departments and IBM. [2.27]

PROCEDURE FOR DISPUTE RESOLUTION

- The MMDR Act and Rules should be amended to enable the powers of the Central government to be exercised by an independent tribunal so that appropriate arm's length is maintained between the Ministry of Mines as a regulator and that Ministry as an involved party. The tribunals should have experts in mining administration and mining laws as members. Independence of the tribunal should be ensured by appointing members on the basis of the recommendations of a Selection Committee, with a high-level Chairman and outside experts serving on such a committee. Members of the tribunal should be given security of tenure by being appointed for a fixed term. Such an independent and dedicated tribunal will also ensure timely disposal of revision cases and will find better acceptability among the investors. Furthermore, the tribunal should also have jurisdiction for revising the orders of the Central government. [2.29]

FOREST CONSERVATION AND ENVIRONMENT PROTECTION

ICMM AND SDF

- The Ministry of Mines and MOEF should jointly set up a working group to prepare a SDF specially tailored to the context of India's mining environment, taking fully into account the work done and being done in ICMM and the IUCN. The Indian SDF comprising of principles, reporting initiatives, and good practice guidelines unique to

the three sectors in Indian mining, i.e. SME, captive, and large stand alone, can then be made applicable to mining operations in India and a separate structure set up to ensure adherence to such framework, drawing from both IBM and the field formations of MOEF. [3.11]

- The aspect of social infrastructure in the form of schools, hospitals, drinking water arrangements, etc. needs to be addressed within a formalised framework on the lines of the ICMM model. The Samatha ruling,² requiring mining companies to spend a set percentage of their profits on model programmes for meeting local needs through a pre-determined commitment, is one option for the country as a whole. Another option could be to require the mining companies to spend a percentage, say three per cent, of their turnover on the social infrastructure in the villages around the mining area. The working group mentioned in paragraph 3.11 may take this into consideration when preparing the Indian SDF and determine the percentage that mining companies could be advised to set aside. [3.18]

FOREST AND ENVIRONMENT CLEARANCES

Forest (Conservation) Act, 1980

- The conditionality for environmental clearance for eventual grant of ML may be spelt out in advance and a prospector who meets the conditionality may be assured of FCA clearance eventually. [3.21]
- The Kanchan Chopra Committee appointed by the Hon'ble Court has recommended that compensatory afforestation charges should not be payable over and above the chargeable NPV and ground rent, and this recommendation is under consideration of the Hon'ble Supreme Court. While the final decision on the liability of mining lessees for use of forest land would be taken by the Hon'ble Supreme Court, the Committee would make the following two recommendations with a view to lightening the burden on the lessees:
 - the NPV should be payable in instalments in proportion to the land broken in accordance with the pre-submitted mining plan;

² Supreme Court Judgment dated 11 July 1997, in Civil Appeal (CA) nos. 4601–02 of 1997 arising out of Special Leave Petition (SLP) nos. 17080–81, Samatha vs. State of Andhra Pradesh and others.

- The lessee should not be asked to pay NPV each time a lease is renewed.

[3.22]

- Once the Hon'ble Supreme Court has passed a final order in the matter of T. N. Godavarman Thirumulpad vs. Union of India & Others, all 'forest' land must be notified in the official Gazette so that there is no scope for subjectivity in interpretation of FCA. [3.24]
- If investment in mining activity is to be encouraged on a large scale then the problem of procedural delays and time overruns will need to be addressed. It is more than two and a half decades since the FCA came into operation and discussions that have taken place in various fora to streamline the procedures for forest clearance have been largely in vain. In the Committee's view, immediate action is now required. Internationally, applications are cleared within a period of about six months and India cannot expect significant FDI in the minerals sector unless it falls in line with international norms. [3.28]
- The maximum delays take place at the level of the DFO in the process of evaluation of cost/benefit of the proposal, involving also enumeration of trees. The time overruns apply not only for fresh grants but also to renewals since as per the Supreme Court judgment, renewals are to be treated as fresh grants. The Committee feels that to minimise delays at the level of the DFO, the cost-benefit analysis of the proposal, including the enumeration of trees, should be outsourced by the DFO to competent private sector consultants. The Forest Department of the state government should maintain a panel of recognised consultants for this purpose. [3.29]
- Minerals are the property of the states, as are the forests too. Proposals for mining concessions for Schedule I minerals (MMDR Act) have to receive prior approval from the Central Government in the Ministry of Mines. However, in the case of forestry, all proposals require clearance from the MOEF (upto 40 hectares from the Regional Chief Conservators of Forest of MOEF stationed at Bangalore, Bhubaneswar, Bhopal, Shillong, Lucknow, Chandigarh, and Ranchi, and above 40 hectares directly from the

MOEF at New Delhi). It is, therefore, suggested that, in pursuance of the single window clearance recommended in Chapter 2, the Coordination-cum-Empowered Committee of the state governments in the case of non-Schedule I minerals and the Coordination-cum-Empowered Committee at the Centre in the case of Schedule I minerals should be the final authority to grant/recommend clearance under the FCA. The Committees should have a representative from the MOEF as its member who should be responsible for conveying the views of the department/MOEF to the Coordination-cum-Empowered Committee. These views will be binding on these Committees. Once the clearance for an area is communicated to the Coordination-cum-Empowered Committees by the representative of MOEF, the Coordination-cum-Empowered Committees can take a view on the application. In this way, the State Mines Department can grant leases or renewals in mineral bearing areas in forest lands, and such leases or renewals will include the clearance under FCA. This procedure will cut down delays drastically by incorporating the MOEF's FCA clearance within the single window system without in any way impinging on the right of MOEF to be the final arbiter. The MOEF may continue to get FCA clearances internally and only the final view may be brought to the Coordination-cum-Empowered Committee. The High Level Committee would recommend that the regional offices of MOEF convey the views of MOEF to the Coordination-cum-Empowered Committees in the states as proposed above so that the state Coordination-cum-Empowered Committees can take decisions expeditiously. An important difference between this and the current dispensation will be that unlike at present, the processing of an application for obtaining clearance under the FCA can start simultaneously with the processing of the lease application, and the application under FCA does not have to wait till the ML is granted. [3.30]

- Currently forest clearances are accorded in two stages. In the first stage, 'in principle' approval is accorded, which usually covers conditions relating to transfer, mutation, declaration as reserved/protected forest (RF/PF), and provision of equivalent non-forest land for compensatory afforestation. After the receipt of the compliance report from the state government in respect of these conditions, the second stage (formal) clearance is granted by MOEF. The Committee would suggest that once 'in principle' approval is obtained from the MOEF it should not be necessary to go to the MOEF

again and the State Mines Department should be authorised to grant or renew the ML to the individual lease holder subject to the fulfilment of the conditions stipulated in the ‘in principle’ approval, such as transfer and mutation of non-forest land in favour of the Forest Department, payment for compensatory afforestation and NPV, and such other stipulations as are normally put in by MOEF before conveying the formal (second stage) clearance. This would reduce the procedural steps in obtaining clearances. The state governments can report to the Central government on the compliance of the conditions mentioned in the ‘in principle’ approval by the user agency. In other words, the Committee would recommend that the second stage clearance may be delegated to the state governments. Further, in the case of renewals of existing leases, if the MOEF has already given its approval under FCA, there is no rationale for going through the whole process again when the lease becomes due for renewal. Unless there are serious adverse effects on the forest and wildlife or environment in an area or there is violation of the conditions mentioned in the initial letter of approval, the approval of applications for renewal should be no more than a formality. [3.31]

- When proposals for renewal of MLs are submitted for clearance under the FCA, 1980, the state governments often resort to arbitrary reductions in the lease area without assigning any reasons for the same. The industry has proposed that since factors such as depth of mine and consistency of ore body decide the area required for mining a viable deposit, the area applied for mining should not be arbitrarily reduced while according forest clearance or at the time of renewal of MLs. The Committee recommends that ad hoc reductions in the area applied for renewal under forest clearance be done away with. [3.32]
- Mining being a site-specific activity, diversion of forest land for mining should be considered for a longer period of, say, 50–100 years or till the exhaustion of the ore body. The Committee recommends that existing leases should be automatically renewed till the ore in the deposit lasts provided that periodic monitoring reports of the Regional Officers of the MOEF during the lease period indicate compliance with the conditions stipulated during grant of the diversion permission. If approval of

MOEF is required in the case of renewals, the same should be granted without having to go through the whole process of submitting a fresh proposal. [3.33]

- Compensatory afforestation charges are prescribed by the state governments. These charges vary widely across the states, and the criteria for fixing such charges are arbitrary. In order to have uniformity of approach, it has been suggested that compensatory afforestation charges be fixed by the Central government based on the forest area and topography of each state. Further, the compensatory afforestation charges should be staggered over the entire lease period and collected on yearly basis. It is suggested that there should be no differentiation in the stipulation of compensatory afforestation charges in the leases of low-value and high-value minerals. [3.34]
- The State Forest Departments of some of the states have issued instruction that for movement of minerals in the forest area, mining companies have to obtain a Transport Permit from the forest authorities by paying an additional royalty for specified major and minor minerals. The mining industry is already burdened with various forest levies, from NPV to compensatory afforestation charges. Any additional levies for transportation in the forest area can have an adverse effect on the viability of mining operations. [3.35]
- At present, the processing takes place at multiple levels, which has made the forest clearance process extremely time consuming. In order to avoid unnecessary delays in the processing of applications for diversion of forest land for mining, it is also suggested that the levels at the state government be reduced to three, i.e. District Forest Officer, Nodal Officer, and Secretary, State Forest Department. [3.36]

Environment (Protection) Act (EPA), 1986

- The time frame proposed in the draft notification of the MOEF of May 2006 works out to 232 days, even after excluding the time required for preparation of EMP and the final report. This proposed time frame is too long and is well beyond the international norm of up to 6 months (180 days) for granting environment clearances. There is scope for reducing this time frame. [3.44]

- As in the past, no environmental clearance is required for grant of RP. For prospecting there are ambiguities in the latest notification. The Committee feels that the level of waste-generation is very minimal at the prospecting stage as well and that there is no basis for requiring environmental clearance. It, therefore, recommends that prospecting should be exempted from such clearance. [3.44]

- The following suggestions in respect of public hearings need to be considered by the MOEF before finalising the draft notification.
 - Public hearings were earlier not required for mining operations below 25 hectares. Now even a 5-hectare ML may require a public hearing, which is a retrogressive step since small miners do not have such large impacts on the environment as to warrant public hearings. Public consultations should be dispensed with for areas less than 50 hectares and also for renewal of leases. [3.46]
 - Public hearing should be strictly limited to issues arising out of the EIA report. The proposed notification should specifically spell this out, as unrelated issues tend to delay the processing of applications. Furthermore, public hearing should be limited only to the people living in the area or to the legislators representing the area or NGOs registered in that area, and outsiders should not be allowed to participate. Contributions and suggestions of outsiders should be restricted to written comments from ‘other concerned persons’, which are already contemplated in the procedures as a part of ‘public consultations’. [3.46]

- An EMP has to be prepared under the MCDR and got approved by IBM. However, this EMP is not acceptable to the MOEF. The miner has to prepare two EMPs separately—one for IBM and another for MOEF. The Committee suggests that IBM and MOEF should prepare guidelines for a composite EMP so that IBM can approve the same in consultation with MOEF’s field offices. This will eliminate anomalous situations where increase of even a few tonnes in production requires project authorities to get a fresh EMP approved from the MOEF although the IBM allows a

grace of ± 10 per cent, keeping in view the fluctuations in the market situation and process complexities. If a single EMP is accepted in principle such anomalies can be resolved in advance. The Committee feels the MOEF should also have a cushion of ± 10 per cent in production while giving EIA clearance. [3.47]

- The country has gained considerable experience in matters relating to protecting the environment and there is much awareness of the need to work towards a clean and pollution-free environment. It is, therefore, necessary that the environmental standards are codified by the government after taking into account the ground realities and if some deviation becomes essential in view of the topography of the area and nature and behaviour of the deposits, there should be an appropriate mechanism to assist the mine owner to take corrective steps. In this regard, the ICMM's SDF, the GRI system, and the Supplement should be the basis on which such codification can be undertaken. Preparing such a code may be one of the main TORs of the joint working group proposed in paragraph 3.11. [3.48]

INFRASTRUCTURE NEEDS AND FINANCING

TRANSPORT INFRASTRUCTURE: ROADS, RAILWAYS, AND PORTS

- A number of NHs and one SH were identified in the presentations before the Committee as being of critical importance to the mining sector. Most of the identified roads are already under improvement under various NH projects. The identified roads not yet taken up are NH-33 and a small segment of NH-6 falling in Jharkhand as well as NH-75E. The Committee recommends that these sections of the route from Jaintgarh via Chaibasa and Jamshedpur to Haldia that have not yet been taken up for improvement should be taken up under the NHDP Phase-III project. [4.15, 4.19]
- The projects related to roads, railways, and ports proposed in paragraphs 4.15–4.24 should be implemented most expeditiously as they would address the immediate problems of exporters and lead to reduction of freight costs and make Indian iron ore more competitive *vis-à-vis* Australian and Brazilian iron ore. The infrastructure projects identified in future should be taken in PPP mode wherever possible. The deficiencies at the ports, the long linkage from the mining area to the port through

road and rail, and lack of long-term planning by exporters are some of the factors responsible for the current situation where the per tonne landed cost at a Chinese port of India's high grade ore is US\$ 65 compared to US\$ 62.90 for Brazilian ore and US\$ 50.99 for ore from Australia. Although India is much closer to China than Australia or Brazil the freight cost from Australia is US\$ 10 per tonne while from India it is US\$ 13 per tonne. [4.25]

- The Rural Water Supply Scheme of the Central government could be extended to the mining areas to meet the water supply requirement of the small- and medium-sized mines. With reforms in the electricity sector, supply of electricity to the remote areas will improve. The government should make a conscious decision to make electricity available to the mine sites also, especially for small- and medium-sized mines. [4.26]

INFRASTRUCTURE FINANCING

- Each state government with major mining activity should set up a MDF by earmarking 15 per cent of the annual royalty collections for the Fund. The GOI should also make matching contribution to the MDF of each state of an equal amount from the Plan funds, every year for the duration of the Eleventh Plan. [4.28]

INSTITUTIONAL FRAMEWORK

- The mandate of the existing mineral corporations of the state governments should be enlarged so as to include development financing and promotion of mining infrastructure projects and they should be renamed as Mineral Infrastructure Development and Finance Corporations (MIDFICs). The Committee recommends that these institutions should become joint sector organisations with participation from mining companies, financial institutions, commercial banks, and NBFCs. MIDFICs should promote implementing agencies in the form of JVs and SPVs. They will access the Viability Gap Funding Scheme of the GOI and the MDF of the state government concerned. The longer term debt for financially viable projects would also be available for the purpose from IIFCL. [4.30, 4.31]

- The Committee also recommends that consideration should be given to an alternative arrangement whereby allocations would be made to the Ministry of Mines to enable it to allocate funds directly to the MIDFICs for undertaking mining infrastructure projects. In order to facilitate such an arrangement, the Ministry of Mines would have to set up a small specialised body in the form of a corporate entity for appraising projects, routing funds, and providing the requisite expertise. [4.31]

VALUE ADDITION

- The guiding principle in respect of value addition should be that where among multiple applicants for LAPL/PL or ML there are applicants proposing to set up an industry based on the mineral, preference may be given to such applicants, but where none of the applicants is willing to set up an industry their applications should be considered under Section 11(3) within the time limits laid down in Rule 63A of the MCR, and not kept pending or rejected in the hope that value-adders would make an application in future. Equally, applications of sole applicants should not be kept pending on the ground that the application does not envisage the setting up of an industry based on the mineral. [5.12]
- The Committee recommends that Section 11 of the MMDR Act be modified so as to provide as follows in cases in which no notification has been made:
 - (i) Applications for non-exclusive RP should be freely granted, with somewhat light scrutiny of the applicant on the basis of the parameters (a) to (c) in existing Section 11(3);
 - (ii) Once non-exclusive RP has been granted, the progression to LAPL by the RP holder should be seamless (on the basis of first-in-time principle as mentioned in paragraph 1.41), provided the non-exclusive RP holder gives the data of reconnaissance operations establishing mineral resources in the area; at this stage, the scrutiny of the LAPL applicant against the parameters laid down in existing parameters (a) to (c) should be more rigorous;
 - (iii) For single applicants for direct PL or direct LAPL, only the parameters (a) to (c) in existing Section 11(3) should be applied. In deciding among multiple applicants for direct PL or direct LAPL, preference may be given by the state

government to the applicants who are qualified under the criteria (a) to (c) in existing Section 11(3) and, in addition, propose to make investment not only in mining operations but also in industry based on the mineral within the state when they eventually move to the next stage of ML. In such cases, transfer of the preferential right to grant of ML would be allowed to holders of PL or LAPL without any hindrance but in such transfers, the right to grant of ML would be passed on together with the obligation regarding value addition.
[5.13]

- In the case of applications received pursuant to notifications, the amended Section 11 should provide as follows:
 - (a) For single applications for LAPL only, the criteria in (a) to (c) in existing Section 11(3) should be applied;
 - (b) In the case of multiple applicants for LAPL/PL, where applicants are found to be qualified under criteria (a) to (c) in existing Section 11(3), preference should be given for the proposed investment in mine and industry based on the mineral within the state in the event of the applicant moving eventually to the next stage of ML;
 - (c) In cases in which ore bodies fully prospected by public agencies are to be auctioned as envisaged in Chapter 1, the States would have the right to waive the tender/auction procedures in cases in which the applicant proposes to set up the industry based on the mineral within the state. In such cases, the full cost of exploration by the public agency should be recovered from the lessee.
[5.14]

- In the case of multiple applicants referred to in paragraphs 5.13(ii), 5.14(ii), or 5.14(iii), if there are more than one applicant proposing to set up an industry in the state based on the mineral and also satisfying the criteria mentioned in Section 11(3) (a) to (c), the state government may grant the LAPL/PL or ML to the applicant it adjudges to be the most deserving in terms of criteria (d) of Section 11(3) of the Act.
[5.15]

- In addition to the above, the Committee recommends the following changes:
 - (i) Section 11(3)(d) should be amended to provide not only for the applicant to propose investment in industry but also for the applicant to have a tie-up with an associate company with necessary experience to make such investment;
 - (ii) Rule 35 should be deleted as it is redundant;
 - (iii) As proposed in Chapter 1, Rule 27(3) should be deleted. In its place, a rule should provide that where an application had been accepted on the strength of the proposal for investment in industry based on the mineral, a condition could be imposed to ensure that the concessionaire abides by the commitment. [5.16]

AUGMENTING STATE REVENUES

GUIDELINES FOR ROYALTY RATES

- Section 9(3) of the MMDR Act provides that royalty and dead rent should be fixed not more than once in every three years. The last revision in the rates of royalty and dead rent was notified by the Central government on 14 October 2004, and the next revision is due in October 2007. The Ministry of Mines should set up a study group to work out detailed rates of royalty, dead rent, and other levies on the basis of recommendations made by this Committee. [6.8]
- The method of fixation of rates of royalty should move forward decisively on the basis of *ad valorem* rates. For retaining specific rates for any mineral a very strong rationale should be required. The first step for the change should be conversion of the specific rates recommended by the Study Group set up in May 2002 into *ad valorem* rates on the basis of the price data for the period taken into consideration by the Study Group, i.e. 2001–02 and 2002–03. In considering raising the *ad valorem* rates further, the rates prevailing in Western Australia would be taken into consideration as a point of reference as the Committee feels that the rates prevailing in Western Australia are a good benchmark for determining the competitiveness of royalty rates. If the Western Australian rates are higher than the rates applicable in India there should be no hesitation in raising the rates to that level, unless special factors are brought forward such as the cost of mining operations. If the *ad valorem* rates work out to higher rates than those obtaining in Western Australia the existing rates should continue for the

next three-year period as well. In such cases, a lowering of rates could be considered only in those cases in which there is evidence to show that the royalty rates are inhibiting mining operations and mineral production is registering a downward trend. The rates that are already on *ad valorem* basis should be also revised on the basis of the same yardsticks—i.e. as a norm, consider raising the rates to the level in Western Australia unless there are factors justifying a lower rate in India, and leave the rates unchanged if the rates are higher than those in Western Australia unless there are indications that the existing rates are inhibiting mining operations. Another point to be borne in mind by the Study Group is that the royalties on base metals, noble metals, and precious stones need to be at low levels as an incentive for exploration in these minerals in which the country is grossly deficient. [6.18]

- The valuation of the mineral for the purposes of royalty should be based on the transaction value and should include the profit element over and above the unit cost of production. For export consignments the system is quite appropriate as the FOB price is taken as the basis and the transport cost from the pithead to the port as well as the loading and unloading charges and the port charges are deducted therefrom. For domestic sales also, the sale price rather than the pit mouth value should be taken into consideration. Thus the profit element must be added to the cost of production. The ideal would be to use the sale price to the end-user as opposed to the middleman as the basis for determining the valuation. From the sale price the element of transport and loading and unloading costs must be deducted as in the case of FOB price for export consignments. In the absence of the sale price, the present system of 20 per cent mark-up on the pit mouth value could continue on an ad hoc basis. For captive mines, the reported price is suspect and should not be used as the basis for calculating the average monthly value. It should be ensured that the IBM takes into account only arm's-length transactions in recording the monthly state-wise and mineral-wise prices. [6.19]

ILLEGAL MINING

- Effective deterrent action should be taken to stop illegal mining. The deterrents in law at present have not worked mainly because of the lack of teeth. The penalties should be increased several fold and so should the punishments. Illegal mining amounts to

stealing of public property and should be a non-bailable, cognisable criminal offence, for which, in the mineral-rich states, there should be special courts. [6.22]

FISCAL REGIME AND ITS STABILITY

- The constitutionality of the issue of whether the states can impose a cess on any mineral for which a royalty has been prescribed is currently under judicial scrutiny. The Committee would nevertheless observe that in considering the imposition of such a cess in future, state governments should bear in mind the adverse impact on the investment environment in the state. [6.23]
- To encourage exploration, which is a pre-mining activity, the Committee would recommend that the current restriction of four years for allowing deduction of expenditure on exploration and development from the income tax should be eliminated. All expenditure on exploration and development in the preceding 10 years before the commencement of commercial production should be allowed for deduction in mining operations. Further, the mining companies should be given the option to claim deduction either in the first 10 years of commercial production or during the useful life of the mine. Clarity also needs to be brought in Section 35E of the Income Tax Act, 1961 for set-off of unsuccessful exploration cost. [6.25]

OTHER SOURCES OF REVENUE

- A conscious decision needs to be taken to encourage physical value addition which improves ore quality and usage at pit mouth such as concentration, beneficiation, calibration, blending, etc. Wherever the miner adds value through these processes the royalty may be charged on the ore at pit mouth on the cost of extraction before processing. Alternatively, the *ad valorem* rate for beneficiated or concentrated ore should be proportionately lower, as in the case of beneficiated iron ore in Western Australia. [6.26]
- The penalty for non-payment of royalty is cancellation of the concession. A moratorium or a suitable structure for deferment of royalty payment to support investment in deserving cases, to be spelt out clearly in the MCR, could also be permitted in deserving cases. [6.26]

- Rates of dead rent should be rationalised so that they act as an effective deterrent against a mine owner who does not undertake mining as per the approved mining plan and prefers to keep large areas idle and keeps the mineral resources undeveloped. In other words, an escalating scale of dead rent should be worked out. This should be stringently applied to captive miners and PSUs as well. [6.26]
- The state governments would get revenues from the disposal of the ore bodies that have been explored earlier at public expense by an open tender/auction system as explained in Chapter 1. [6.26]
- Transfer fees should be levied on PLs and MLs sought to be transferred. As mentioned in Chapter 1, the unbundling of prospecting from mining is likely to bring in investment in the form of FDI into prospecting along with advanced technology. When the PL or ML of a prospected area is transferred for a premium by a prospecting firm in favour of a mining firm or if the firm itself is taken over or acquired by a mining firm for a consideration, a transfer fee as a percentage of the premium or consideration may be levied. Such a step would be in line with international practice. The rates of transfer fee should be suggested by the next study group set up for making recommendations on royalty rates. [6.26]

OTHER ISSUES

RAISING FUNDS FOR PROSPECTING

- The Ministry of Finance (Department of Economic Affairs) in consultation with SEBI and the major stock exchanges should examine the possibility of providing a special dispensation for mining sector companies on the lines of ASX and AIM and TSX's TVE so that investment in prospecting companies is encouraged. ASX-type assistance by way of improving investor communications, equity research, and appropriate index support to the mining sector would help attract private equity funds to this sector. The sectoral focus of private equity, including venture capital, and the financial markets generally is at present on identified emerging growth sectors, viz. IT, ITeS, media, telecom, lately commercial real estate, etc. With excellent growth potential appearing on the horizon on account of the new mining dispensation it is imperative that the

fund-raising environment for prospectors and miners moves in step to bring about the growth of mining. [7.14]

ALLOCATION OF CAPTIVE MINES TO STEEL MAKERS

- On the basis of current assumptions of demand and supply of iron ore in the country and of the growth in both, India would have enough resources to last until the end of the twenty-first century and there is no basis for basing policy changes on the exhaustion of these resources in the near future. However, the position would need to be kept under review and adjustments made in it in light of the emerging situation from time to time. The first review should take place after a period of 10 years, i.e. in 2016–17. [7.34]
- Stand alone mining and captive mining should continue to co-exist in the country. The position should be reviewed in 2016–17 in light of the emerging situation of establishment of steel capacity in the country, on the one hand, and accretions to the level of iron ore resources in the country, on the other. A view can be taken at that time on whether the balance of advantage in the grant of LAPL/PL/ML should be changed in favour of steel mills. [7.47]
- Through appropriate changes in Section 11(3)(d) it should be clarified that in a situation of multiple applications for grant of iron ore LAPL/PL/ML, the existing investment in steel plants that have exhausted their current captive mines should be a consideration. However, the applicant must independently qualify under other criteria, including Section 11(3)(a) relating to prior experience. This is necessary to ensure efficient mining. [7.47]
- Existing captive mines should be renewed if they have complied with the conditions of the lease and the life of the steel plant so warrants taking into account existing and planned capacities. In the case of new capacities, the recommendations of Chapter 5 will apply. [7.47]
- Steel making capacities already in existence on 1 July 2006 that do not have captive mines may also be given preferential allocation of adequate iron ore reserves within the state without the need to go through the process of tender/auction, as a one-time

measure to provide a level playing field. These existing steel companies would have to enter into tie-ups with experienced mining companies so that they become eligible in terms of Section 11(3)(a) of the MMDR Act. Due regard should be given to the size of the steel making capacity when considering allocation of a specific ore body. [7.47]

- Scientific and vigorous prospecting in the country should be encouraged. LAPLs and PLs for magnetite may be freely given to both stand alone and captive miners, whether Indian or foreign. LAPLs for haematite may be given only after strictly ensuring that GSI or another state agency has not already done the requisite exploration. [7.47]
- Captive iron ore mines allotted to steel makers should use the ore from these mines for their own steel and should not sell the same either in India or abroad. [7.47]

RESTRICTIONS ON THE EXPORT OF IRON ORE

- The Committee finds it anomalous that exports are regulated through a dual mechanism of canalisation as well as export licensing. [7.61]
- The export regime for iron ore of higher grade does not make any distinction between fines and lumps although, as noted earlier, fines are particularly in surplus in the country. The rationale for the 64 per cent cut-off of Fe content is also not clear, as the cut-off in IBM classification is 65 per cent. [7.62]
- In light of the assessment regarding availability of iron ore resources in relation to current domestic production, and the appraisal of the impact of export controls on the health of the mining industry and its attractiveness for investment, the Committee has concluded that there is no need to impose any quantitative restrictions on exports but that the position should be revisited after 10 years. However, by way of abundant precaution, the Committee recommends that an export duty may be levied on exports of iron ore in lump form with Fe content above 65 per cent. The system of licensing and canalisation currently in operation should be discontinued. Also captive miners should not be allowed to export either fines or lumps. They should sinter the former and use the latter in their own blast furnaces. [7.63]

POLICY ON BEACH SAND MINERALS

- As DAE has delisted ilmenite, rutile, and leucoxene as Prescribed Substances these minerals would have to be deleted from Part B of the First Schedule. However, in view of the potential of titanium becoming a metal of the future, these minerals should be treated to be minerals of national importance and put in Part C of the First Schedule. [7.76]
- Ilmenite, rutile, and leucoxene should be subject to the general mining regime whereby preference may be given to value adders in the grant of PL/ML, where applicants are willing to set up industry based on ilmenite, but in the absence of such applicants such licences, such licences should be freely granted on the basis of the provisions of the MMDR Act, particularly Section 11 thereof. [7.81]
- Like other minerals, mining of ilmenite should be guided by the framework that this Committee has proposed, which envisages that while preference may be given to value adders among multiple applicants for PL/ML, such licences must not be denied on the ground that there are no applicants proposing to set up an industry based on the mineral. India's reserves of ilmenite are very large and the country should not be deprived of the gains to be made in terms of employment and foreign exchange earnings while waiting for an entrepreneur to turn up who may be willing to set up an industry in the country based on the mineral. [7.81]
- If ilmenite mining is to be permitted without imposing a condition for value addition a corollary is that exports would have to be freely permitted. However, in view of the fact that some deposits of Indian ilmenite are unique in being of much higher grade than what is available in the rest of the world the Committee would propose the levy of export duty on high grade ilmenite (with titanium dioxide content of 56 per cent and above). A part of the collections from the levy could be used for promoting R&D activities on titanium and minerals bearing the metal. [7.84]
- AMD certification of export consignments of ilmenite may not be insisted upon as it is not justified on economic considerations. It could be continued as a charged service to be availed of on a voluntary basis. [7.85]

- In respect of three titanium bearing BSMs, the states should give concessions subject to the applicant obtaining the requisite clearances under the Atomic Energy (Radiation Protection) Rules, 2004 and the Atomic Energy (Safe Disposal of Radioactive Wastes) Rules, 1987 from AERB. [7.90]
- AERB and AMD should guide IBM in respect of mine plans and mine closure plans of BSMs. The states should ensure that in the disposal of wastes the AERB/AMD guidelines are strictly followed. [7.90]

PART - B

Appendix A

**No-I&M-25(3)/2005
Government of India
Planning Commission**

New Delhi
Dated: 14-09-2005

ORDER

It has been decided to set up a High Level Committee to review the National Mineral Policy and recommend possible amendments to the Mines and Minerals Development and Regulation (MMDR) Act, 1957 to give a fillip to private investment in the sector with the following composition.

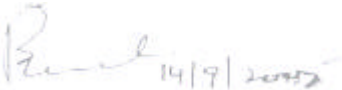
1. Shri Anwarul Hoda, Member, Planning Commission	Chairman
2. Secretary, Ministry of Mines	Member
3. Secretary, Ministry of Steel	Member
4. Secretary, Ministry of Environment and Forest	Member
5. Secretary, Department of Shipping	Member
6. Secretary, Department of Road, Transport and Highways	Member
7. Secretary (Revenue), Ministry of Finance	Member
8. Smt. Adarsh Misra, Pr. Adviser, (HUD/TRP/E&F) Planning Commission	Member
9. Shri Arvind Varma, Ex Secretary (Mines)	Member
10. Director General, Forest	Member
11. Chairman, Railway Board	Member
12. Additional Secretary, Ministry of Mines	Member
13. Director General, Geological Survey of India	Member
14. Controller General, Indian Bureau of Mines	Member
15. CEO, Infrastructure Leasing & Financing Service	Member
16. Secretary (Mines and Geology), Govt. of Rajasthan	Member
17. Secretary (Mines and Geology), Govt. of Orissa	Member
18. Secretary (Mines and Geology) Govt. of Karnataka	Member
19. Secretary (Mines and Geology), Govt. of Chhattisgarh	Member
20. Secretary (Mines and Geology), Govt. of Jharkhand	Member
21. President, Confederation of Indian Industries (CII)	Member
22. Secretary General, Federation of Indian Mineral Industries (FIMI)	Member
23. Shri L. P. Sonkar, Adviser (Minerals), Planning Commission	Member
24. Joint Secretary (Policy Division), Ministry of Mines	Member Secretary

The Chairman may co-opt any other Member in the Committee during the course of its deliberations. The Chairman may also call special invitees for providing specific inputs in the Committee's deliberations.

2. The terms of reference of the Committee will be as follows:

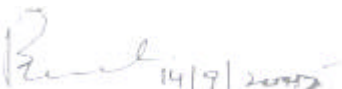
i) To review the National Mineral Policy 1993 and the Mines and Minerals Development and Regulation (MMDR) Act, 1957 and suggest the changes needed for encouraging investment in public and private sector in exploration and exploitation of minerals;

- ii) To review the existing procedures for granting RP/PL/ML and suggest ways for their streamlining and simplification;
 - iii) To review the procedures for according clearance to mineral exploration and mining projects under Forest (Conservation) Act 1980 and Environment (Protection) Act 1986, and suggest ways for speeding them up;
 - iv) To prioritize the critical infrastructure needs of the Indian mining sector and make recommendations on ways to facilitate investment to meet these needs;
 - v) To examine the implications of the policy of mineral rich States to make value addition within the State a condition for grant of mineral concession and make appropriate recommendations in this regard;
 - vi) To examine ways of augmenting State revenues from the mineral sector; and
 - vii) To examine any other issue relevant for stimulating investment flows and inducting state-of-the-art technology into the sector.
3. The Committee will finalize the report by the end of December, 2005.
 4. The Committee will be serviced by the Mineral Unit of the Planning Commission.
 5. Non-officials shall be entitled to TA/DA as permissible to Grade I officers of Government of India and the expenditure will be borne by the Planning Commission. The TA/DA of Government and Public Sector officials will be borne by their respective organizations.


(Rajeeva Ratna Shah)
Member Secretary

To: The Chairman and Members of the Committee
Copy to:

1. Special Secretary, Prime Minister's Office
2. Finance Secretary, Ministry of Finance,
3. Member-Secretary, Planning Commission
4. OSD to Deputy Chairman, Planning Commission
5. PS to Minister of State for Planning & Programme Implementation


(Rajeeva Ratna Shah)
Member Secretary

**No-I&M-25(3)/2005
Planning Commission
(Minerals &TRP Unit)**

Sub: Minutes of the Twelfth Meeting of the High Level Committee to review the National Mineral policy, held under the Chairmanship of Shri Anwarul Hoda, Member, Planning Commission on 30-06-2006

1. List of participants is annexed.
2. While welcoming the participants the Chairman observed that based on the conclusions in the draft chapters, the proposed recommendations had been embodied in chapter 8 of the report as per the Terms of the Reference of the High Level Committee. He emphasised that in view of a Parliament assurance there was a time constraint and it would be necessary to finalise the recommendations during the meeting. Although due care had been taken to reflect the views of stakeholders as well as members of the Committee in the body of the report, if any of the members felt that their views or any point had not been properly reflected or there were some factual errors, they could send their suggestions within 3 days. The Members were then invited to comment on draft recommendations of the Committee and present their views/suggestions.
3. Additional Chief Secretary, Government of Chhattisgarh, mentioned that on previous occasions the state governments had made various submissions which had not been reflected in the report. State governments should be given an opportunity to present their views in writing to the Committee which might form part of the report. Secretary (Industry) Government of Jharkhand stated that some of the points made by the states had not been reflected and it would be better to go point by point so as to ensure that the points made by the states were incorporated in the report. Secretary (C&I), Government of Karnataka also expressed similar views. The Chairman remarked that the intention was to discuss all the points and reach an agreement and

only if such an agreement was not reached would the differences need to be recorded in the Minutes of the meeting.

4. Additional Chief Secretary, Government of Chhattisgarh, drew attention of the Members to paragraph 1.3 on policy issues in Chapter I and stated that there was no need for substituting 'export of minerals in value added form' with the words 'export of minerals in value added form to the fullest extent possible' and the proposed recommendation could be deleted. After a brief discussion it was agreed to delete the same.
5. Additional Chief Secretary, Government of Chhattisgarh, stated that too much emphasis was laid on employment in the paragraph titled 'Linkages' and further that it would not be correct to say that mining contributed to the generation of wealth and creation of employment independently. In response to this, Secretary (Mines) stated that the intention was to indicate that mining activities created employment in the mineral bearing areas and were important for the socio-economic uplift of the people of the mineral bearing areas. Secretary (Mines) further emphasised that 'mining' should be declared as an independent activity and wherever required, linkages should be tied up. Secretary General (FIMI) also expressed similar views and mentioned that over 75 per cent of mining was non-captive and it was providing raw material to manufacturing and needed to be treated as industry in its own right and not merely as an ancillary activity of the manufacturing industry. In this regard. Chairman stated that growth in Mining and Quarrying needed to be accelerated from 3 per cent to a level of 10 per cent per annum so that there was significant contribution to GDP from the mining sector.
6. The representative of CII mentioned that mining of small deposits was not economical as compared with large deposits. Chairman remarked that while, on the one hand, mining of small deposits was considered inefficient as compared with large mining operations, on the other hand it was necessary to mine small deposits. Secretary-General (FIMI) argued that much depended on the size and nature of the deposit. If the size was small but the deposit was rich it would be economical to mine that deposit. After discussion on the issue of small deposit it was agreed to add the following text at the end of the paragraph 7.12 on policy issues.

‘Efforts would also be made to grant mineral concessions to consortia of small-scale miners and users who are otherwise qualified for a cluster of small deposits so that the benefits of economies of scale are reaped’.

7. Secretary (C&I), Government of Karnataka referred to the suggestion for an ‘open sky’ policy in respect of RPs and suggested that before granting concessions seamlessly at the next stage of PL there should be evaluation of the work carried out by the RP holder. In response, Secretary (Mines) stated that in every case the RP holder would have to submit data for acquiring LAPL/PL/ML. He also clarified that an ‘open sky’ policy would apply not only to areas that were greenfield areas, i.e. where no work had been done by GSI or any other public agency, but also to areas where GSI/RP holders had given up work. Secretary (Industry), Government of Jharkhand suggested that areas on which work had been given up by different organisations should also come within the purview of non-exclusive RPs. It was agreed that the open sky RP policy would apply not only to greenfield areas but also to areas where GSI/RP holders had given up work without identifying any workable prospects. It was also agreed to add ‘Non-exclusive RPs may be granted by the state without prior approval of the Centre even in respect of Scheduled minerals’ at the end of the paragraph.
8. Additional Chief Secretary, Government of Chhattisgarh, referred to the point ‘the Act be amended to exclude ore bodies explored and delineated by public agencies at public expense as mentioned in para 1.31 and 1.45 and suggested that in place of explored and delineated it should be fully prospected’. It was agreed to replace the words explored and delineated with fully prospected in chapter I as well as in chapter VIII.
9. Representative of CII suggested that under the mining lease, instead of writing value addition within the territorial limits of Scheduled Area it would be better if it were within the territorial limits of the state. Secretary (C&I), Government of Karnataka stated that there were no Scheduled Areas in Karnataka and instead of restricting to Scheduled Areas it could be within the state. This issue was deliberated at length and it was agreed to replace the words ‘territorial limits of the Scheduled Areas’ with territorial limit of the state and also to add ‘In case of more than one applicant

offering to set up such industry in the state, the state government may grant the ML for such an ore body to the applicant which it adjudges to be the most deserving in terms of the criteria (a) to (d) of Section 11 (3) of the Act. In such cases, the full cost of exploration by the public agencies should be recovered.’

10. Additional Chief Secretary, Government of Chhattisgarh raised the issue of the duration of concessions and suggested that the duration of the exclusive LAPLs should be less than eight years as LAPLs were granted only when some amount of work had already been done by the applicant and it would not be appropriate to block the area under LAPL for a long duration. This issue was discussed and it was agreed that ‘the duration of the exclusive LAPL would be six years extendable by another two years’.
11. Secretary (Industry), Government of Jharkhand, opined that the point made under Security of Tenure that ‘a RP (non-exclusive) holder should have an automatic right to a PL on first-come-first-served basis with no exceptions or exemptions’ was too strong and should be reformulated. Chairman remarked that the idea was to eliminate discretionary powers of the Centre /state. After further deliberation it was agreed to delete the words ‘with no exceptions or exemptions’.
12. Additional Chief Secretary, Government of Chhattisgarh, Secretary (Industry) Government of Jharkhand, and Secretary (Steel and Mines), Government of Orissa drew attention to the changes recommended in Section 4A(1) and suggested that the words ‘in the interest of national security’ could be replaced with ‘in the interest of national security and public works’ and Rule 27(1)(b) could be amended to give an automatic right to the miner to mine only the associated minerals discovered and not the additional minerals discovered. Further, the recommendations regarding deletion of Rule 27(1)(m) and Rule 27(3) of MCR that give the authority to the state government to pre-empt minerals and put restrictive conditions in concessions was discussed and it was agreed these Rules needed to be eliminated. The lease deed form should be exhaustive and should include all minerals and associated minerals for which the applicant may have applied and to which he may be entitled. The form should also contain the possibility of the state government imposing additional conditions on captive miners and value adders. The suggestions were accepted for

recommending amendments to the Act and Rules respectively. The representatives of the states also suggested that the reservation provisions in paragraph 1.72 for PSUs for exploration and mining should be retained after modifying them so as to limit their scope to specified purposes such as to meet the requirement of SMEs for raw materials.

13. Additional Chief Secretary, Government of Chhattisgarh and other representatives of the state governments invited attention to recommendations regarding 'Adherence to time schedule for consideration of applications for RP/LAPL/PL and ML and in the event of failure of the state government to take a decision within the time frame envisaged in Rule 63A'. It was argued that provision should also be made in the Act and the Rules to safeguard against situations in which the Centre did not take decision within the prescribed time frame. After a brief discussion it was agreed to recommend that 'necessary changes should be made in the laws to provide that where the Centre does not grant prior approval in cases referred to it by the state government within the specified period, such prior approval should be deemed to have been granted. Further, in the applications received under Section 30 of the Act in a situation in which no order has been made by the state government, there should be a time limit imposed on the Centre for disposal of the application within such time limit. A solution should also be found to ensure that the Centre adheres to the time limit.
14. Representative of CII suggested that under Value Addition, in deciding among multiple applicants for direct PL or direct LAPL it would be better to use the word 'preference' may be given by the state government in place of 'additional weight'. The suggestion was accepted.
15. Secretary (Steel and Mines), Government of Orissa and other representatives of states put forward the view that while the general rule could be that ore bodies fully prospected by public agencies would be auctioned as envisaged in chapter 1, the state governments should have the right to waive the auction procedures in cases in which the applicant proposed to set up the industry based on the mineral within the state. The suggestion was accepted.

16. The representative of CII observed that it was not enough to consider allocation of captive mines for existing steel plants. New steel plants should also be taken care of through allocation of captive mines. Secretary (Mines) mentioned that the main problem of allocation of captive mines was in respect of existing plants as the new capacities would be taken care of under new dispensation. Secretary General (FIMI) stated that steel plants without captive mines had been competing with the plants having captive mines. He suggested that both the groups should have similar opportunities. The issue of captive mines was deliberated at length and it was agreed that (i) renewal of mining lease should be approved only when all the conditions had been complied with; (ii) captive iron ore mines allotted to steel makers were only for their own use and they should not sell the ore either in India or abroad; (iii) stand alone mining and captive mining should continue to co-exist in the country, and (iv) the position should be revisited after 10 years.
17. The issue of current export regime for iron ore was also discussed at length by the Members of the Committee and it was decided that by way of ample precaution only an export duty needed to be levied on exports of iron ore in lump form with Fe content 65 per cent and above and the current licensing and canalisation system should be discontinued.
18. Secretary (Mines) briefly mentioned that as far as recommendations regarding infrastructure needs and their financing were concerned each state government should set up a Mineral Development Fund by earmarking 15 per cent of the annual royalty collections for the Fund. The Central government should also make matching contribution to the Mineral Development Fund of each state of an equal amount from the Plan funds, every year for the duration of the XI Plan. There was general agreement on these recommendations.
19. Additional Secretary (Department of Atomic Energy), drew attention to 'mining of beach sand minerals' and stated that Zircon occurred in close association with Monazite and both Zircon and Monazite had strategic importance. Zircon is required for nuclear reactors and Zirconium with hafnium content less than 1 part to 500 parts of Zirconium by weight, i.e. less than 2000 ppm in the form of metal, its alloys, compounds, manufactures thereof, waste or scrap of any of the foregoing had been

retained as a Prescribed Substance under OA303 of the revised list of Prescribed Substance notified under the Atomic Energy Act, 1962. It was due to this reason that it was necessary to retain Zircon as ‘Atomic Mineral’ under ‘part B’ of the MMDR Act. It was agreed to delete the words ‘As soon as Zircon is de-listed as a Prescribed Substance it should be removed from Part B of the First Schedule of the MMDR Act, which is the list of atomic minerals. The atomic minerals list is based on the prescribed substances list and once it has been taken out of the Prescribed Substances list there is no basis for it to be treated as an atomic mineral’. He also observed that AMD certification of export consignments of ilmenite could not be insisted upon as it was not justified on economic considerations. At best, it could be continued as a charged service to be availed of on a voluntary basis. He also invited attention to the recommendation ‘AERB and AMD should guide IBM in respect of mine plans and mine closure plans of BSMs. The states should ensure that in the disposal of waste the AERB/AMD guidelines are strictly followed. If this is found unworkable then AMD should be strengthened to take over this work in respect of abandoned sites’ and stated that it might not be possible for AMD to take up such activities and suggested to delete the line ‘If this is found unworkable then AMD should be strengthened to take over this work in respect of abandoned sites’, which was agreed to.

The meeting ended with a vote of thanks to the Chair.

Annexure

List of participants in the Twelfth Meeting of the High Level Committee to review the National Mineral Policy, held on 30.06.2006

Shri Anwarul Hoda	Member (Industry)—in chair
-------------------	----------------------------

Ministry of Mines

Shri A. K. D. Jadhav	Secretary
Shri Pradeep Kumar	Additional Secretary
Ms. Ajita Bajpai Pande	Joint Secretary

Ministry of Steel

Dr. Manoranjan	Secretary
----------------	-----------

Department of Shipping

Shri A. R. Rao Development Adviser (Ports)

Department of Road Transport & Highways

Shri R. D. Dohare Chief Engineer, S&R (Roads)

Department of Atomic Energy

Shri V. P. Raja Additional Secretary (I&M)

Shri S. Mendiratta Joint Secretary

Geological Survey of India

Shri P. M. Tejale Director General, Additional Charge

Shri S. Sengupta Deputy Director General

Dr B. Chattopadhyay Director

Indian Bureau of Mines

Shri C. P. Ambesh Controller General

Confederation of Indian Industries (CII)

Shri B. Muthuraman Representative, CII

Railway Board

Shri Ashok Kumar Executive Director (P)

State Government

Shri Arun K. Singh Secretary, Industry, Jharkhand

Shri Bhaskar Chatterjee Private Secretary, Government of Orissa, and
CMD, OMC Ltd.

Shri L. N. Gupta Secretary, Steel & Mines, Orissa

Shri Mahendra Jain Secretary, C&I, Government of Karnataka

Shri Shivraj Singh Additional Chief Secretary, Chhattisgarh

Shri B. R. K. Ranga Representative, Government of Rajasthan

Federation of Indian Mining Industries (FIMI)

Shri R. K. Sharma Secretary General

Planning Commission

Shri L. P. Sonkar, Adviser (Minerals & TRP)

Dr Ratnakar Gedam Joint Adviser (Minerals)

Dr R. Bhardwaj Deputy Adviser (Minerals)

Shri R. B. Tyagi Consultant (Minerals)

Shri Abhijit Intern, Planning Commission

Others

Shri Arvind Varma

Ex-Secretary (Mines), Government of India

List of Members of the High Level Committee who did not attend the Twelfth Meeting

Secretary, Ministry of Environment and Forest

Secretary (Revenue), Ministry of Finance

Smt. Adarsh Misra, Principal Adviser (HUD/TRP/E&F)

Director General, Forest

CEO, Infrastructure Leasing & Financing Service

Submissions for and Presentations made before the High Level Committee

List of Submissions for High Level Committee

1. Government of Rajasthan
2. Government of Bihar
3. Government of Himachal Pradesh
4. Government of Uttaranchal
5. Government of Madhya Pradesh
6. Government of Chhattisgarh
7. Government of Orissa
8. Government of Uttar Pradesh
9. Federation of Indian Mineral Industries

Others

1. Porbandar District Chamber of Commerce & Industries
2. Federation of Indian Chambers of Commerce and Industry (FICCI)
3. Tata Steel
4. Rashtriya Ispat Nigam Limited
5. Aravali Minerals and Chemicals
6. Jai Prakash Associates Ltd.
7. Ambuja Cement
8. Gujarat Mineral Industry Association
9. Society of Geo-scientists and Allied Technologists
10. Birla Corporation Ltd.
11. The India Cements Limited
12. Rajashree Cement
13. Grasim Cement
14. Cement Corporation of India Ltd.
15. Shree Digvijay Cement Co. Ltd.

16. Reserve Bank of India
17. M/s Jindal Stainless Steel
18. Development Commissioner, Visakhapatnam Special Economic Zone

List of Presentations Made Before the High Level Committee

1. Department of Atomic Energy
2. Rio Tinto
3. BHP Billiton
4. Indian Steel Alliance
5. Indian Diamonds—by Dr T. M. Babu
6. AXL Industries, Bhubaneswar
7. De Beers
8. Sesa Goa
9. Sterlite Industries
10. Essel Mining & Industries Limited
11. Goa Mineral Ore Exporters' Association
12. Mining Engineers' Association of India
13. Federation of Indian Mineral Industries
14. National Mineral Development Corporation Ltd.
15. ESSAR Steel Limited
16. Wolkem India Limited
17. Geomysore Services (India) Pvt. Limited
18. Transworld Garnet India Pvt. Limited
19. Steel Furnace Association of India
20. The Associated Cement Companies Limited
21. Ernst & Young India Limited

Appendix D

Summary of the Recommendations of the Committee Headed by Additional Secretary, Ministry of Mines to Review Policy and Procedural Aspects of Reconnaissance Permits¹

(i) Definition of reconnaissance and prospecting operations

The Committee has recommended that in order to bring out more clearly the scope of the activities to be covered under "Reconnaissance" and "Prospecting" the definitions of both reconnaissance and prospecting should be changed such that not only the reconnaissance operations should also include shallow pitting, trenching and surface drilling which are at present excluded from the definition but at the same time the definition of prospecting operations be widened so as to also cover operations permitted under reconnaissance operations. With these changes, exploration activities will become more flexible and transition from RP to PL will be smoother.

(ii) Period of Reconnaissance Permit

After deliberating upon the concern of the investors for extension of tenure of RP, the Committee was of the view that rather than providing extension in the period of RP beyond 3 years, provision may be made to facilitate an RP holder to move directly to a PL, even before the expiry of the RP and pending a decision thereon, reconnaissance operations could be continued in that area applied for PL while the remaining area would stand automatically surrendered. The Committee also recommended that the deemed extension of RP shall not exceed the total period for which a PL can be granted. Thus the Committee has recommended that with this the total period of combined RP and PL would not be more than 8 years but this would provide smoother transition from RP to PL.

(iii) Increase in the permissible area under PL

The Committee felt that the existing provisions of reducing the area from 10000 sq. km in RP to 25 sq. km in PL after 3 years is too drastic. This prevents genuine detailed prospecting by

¹ Source: Ministry of Mines.

the RP holders in areas beyond 25 sq. km. Initially the Committee had recommended maximum area under PL to be increased to 100 sq. km in a State but after further deliberations with the State Governments, FIMI and other investors, the Committee has recommended a maximum PL area of 500 sq. km for RP holders who undertake aerial survey with an escalating fee structure. The limit for direct PL applicant has been kept at 25 sq. kms in the recommendations.

(iv) Transfer of RP

Presently, though PL and ML are transferable, there is no provision for transfer of RPs. In view of the fact that in most legal regimes there was no restriction on transfer and transferability is one of the important elements of mining sector reforms, the Committee has recommended that RPs be made transferable with the prior approval of the Central Govt.

(v) Inclusion of other minerals in RP

On the issue of inclusion of other minerals in RP which is presently allowed only in case of PL and ML, the Committee was of the view that there should not be any restriction on inclusion of any other mineral which may be located during reconnaissance operations unless those minerals are included in any other mineral concession in that area or for which another mineral concession has already been applied for. Therefore, the Committee recommended that with certain conditions, minerals discovered during reconnaissance be allowed to be included in the RP.

(vi) Preference for grant of mineral concession

The Committee felt that since core competence of a mining company is to undertake scientific mining, it is not correct to evaluate the merits of an applicant for a mineral concession in terms of the proposed investment for setting up of future downstream units as is presently provided for. Instead merit of an applicant for mineral concession should be judged on the basis of proposed 'end use' of the mineral.

(vii) Reservation of area for State exploitation

Initially the Committee felt that in order to provide a level playing field to all parties interested in exploration activities and with a view to providing greater access to areas for exploration, the provision relating to reservation of areas for prospecting and mining by the Central or State Governments or by the companies owned and controlled by them needs to be removed. However, as the State Governments were not in agreement with the view, the Committee has recommended that the matter may be kept in abeyance till a detailed study of the areas reserved for PSUs/Government undertakings has been undertaken.

(viii) Single Window for clearances

A major concern in the mining sector has been the undue and protracted delays which take place not only before grant of mineral concession but also in post-grant clearances pertaining to various Ministries of the Central Govt. In view of the fact that the mineral concessions are granted by the concerned State Governments who are the owners of the minerals located within the boundary of the State, the Committee has recommended a single window system or committee approach at the State Govt. level. In cases where Central Govt. provides prior approval and expediting post-grant clearances required from various Central Ministries after grant of mineral concessions, the Committee has recommended Single Window/Committee approval at the Central level.

Recommendations of the Expert Group on National Guidelines for Mining Leases— Iron, Manganese, and Chrome Ores, Headed by Shri R. K. Dang²

Rationale for Preferences

1. In pursuit of the national goal of rapid industrialization, creation of wealth, enhancement of living standards and achieving economic strength in keeping with India's size and population, optimum utilization of the country's natural resources is of unquestionable importance. Steel is still the most important and critical requirement in the development of infrastructure, industry and manufacturing; even though progressive inroads are being made by substitutes like Aluminium, Plastic and Ceramics. Production of steel commensurate with our geographical size, population and developmental goals has to be given highest strategic priority. The present per capita consumption of 31 kgs has to increase to at least 80 kgs by 2020 and perhaps 300 kgs by 2050, as against present world average of 150 kgs and US consumption of 350 kgs.

2. For production of steel by conventional Blast Furnace process, the production of coking coal in India is much below requirements. India is also faced with the daunting prospect of inadequate petroleum reserves and escalating world prices. For various reasons, the cost of energy and capital in India are much higher than in some other steel producing countries. India is, however, endowed with rich resources of iron ore of high quality. This is one of our major strengths for globally competitive production of steel. Every care has to be taken in the national interest to preserve and leverage to the maximum this natural advantage by rapidly building up a strong world class steel industry as the bedrock for industrialization and manufacturing, paralleling the rapid expansion and success of the service sector in software and BPO outsourcing.

3. During 2004–05, 78 million tonnes of iron ore was exported (70% to China) earning \$ 4 billion or thereabouts. Export of its steel equivalent of 50 million tonnes would have earned \$ 20–25 billion. Total Indian exports in 2004–05 are estimated at \$ 79.2 billion and our net

² 'Report of the Expert Group on Preferential Grant of Mining Leases for Iron Ore, Chrome Ore and Manganese Ore', constituted by Government of India, Ministry of Steel, August 2005.

import of POL [petrol, oil, and lubricants] at around \$ 21 billion. During the last 3 decades, cumulative exports of iron ore were over 1 billion tonnes of mostly high grade ore for a total earning of perhaps \$ 30 billion.

4. The country's natural advantage of rich iron ore reserves must not be frittered away by continued positioning as a raw material supplier to the developed world and now, even to rapidly industrialising China. Nothing should be allowed to shift focus from or delay our attaining our rightful place as a major producer of steel and manufacturing in keeping with our size, population and resources. With growing industrialization and manufactures, production of steel and downstream products is clearly at a take-off point. Our iron ore reserves of all grades need to be channelised into steel production, with exports of iron ore a secondary activity, diminishing in inverse proportion to increasing steel production and consumption.

5. The entire exercise undertaken by the Expert Group as well as formulation of guidelines for the **SCHEME OF PREFERENCES** in the matter of grant of leases, and other observations and recommendations are customized to this strategy.

6. Any departure from the principles of natural justice and first-come-first-served, as enshrined, *inter alia*, in the MMDR Act, has to be based on larger public interest and in consonance with, though not limited, to the matters specified in Section 11(3)(a) to (d) of the Act, by making use of specific provisions contained in Section 11(3)(e) 'such other matters as may be prescribed'.

7. The **SCHEME OF PREFERENCES** recommended, hereinafter, is designed to make concrete elaboration in terms of Section 11(3)(e) specific to the rapid and orderly growth of the steel industry and limited to the three ferrous mineral, i.e. iron ore, manganese ore and chrome ore which are critical inputs.

Basis for Preferences

8. The proposed **SCHEME OF PREFERENCES** is designed to sub-serve the following main objectives:-

(1) Provide proximate and strategic security of these critical raw material for

1. Existing and under commissioning steel capacities and for
2. Rapid and orderly growth of a globally competitive Indian steel industry.

(2) Promote globally comparable best practices in (iron ore, chrome ore and manganese ore) mines for optimizing extraction of metallic values from) mined material, minimizing waste and rehabilitating post-mining environment, with a view to long term strategic conservation of metallic content for future needs for sustainable development.

(3) Encourage efficient, scientific, sustainable and globally competitive mining practices, with utmost care for preservation and enhancement of the environment and natural bio-diversity.

9. The Preferences are based on multiple levels of interaction by the Expert Group with representatives from a large cross-section of steel makers, mine operators and technologists in the mineral and metallic industries, and endeavour to incorporate relevant available technical knowledge and information at this point of time.

10. The very concept of enunciating a Preferential Schedule cannot be disassociated from the requirement of ensuring implementation of the conditionalities which **alone justify and are the very essence of according preference** to one party over another. The conditionalities are therefore incorporated as part and parcel of the preferences.

11. Special care has to be taken to ensure that such a scheme of preferences does not become an opportunity for anyone to lock up mineral reserves and obstruct the existing widely dispersed and well managed private sector iron ore mines.

12. The effective implementation and fulfillment of the conditionalities will require elaborate exercises in order to construct relevant legal protocols, structure appropriate reporting and monitoring mechanisms etc. This is not within the scope of the present limited exercise.

13. The proposed set of reference is based on the following broad considerations of national interest:-

- (i) **The existing public sector integrated steel plants represent massive investments of public money** already made. It is of highest priority to safeguard sufficient raw material reserves not only for the existing capacities of these plants, but also their in campus expansion and capacity optimization to the maximum extent feasible and approved by the Central Government.
- (ii) **Other major integrated steel plants of Indian public limited companies also represent large national investments of money**, not just by promoters but also by Indian public at large, whether directly or through financial institutions. Hence, these investments also need to be assured reasonable long term raw material security. To the extent that such plants are already operating or are under commissioning by March 2006, their long term requirements of iron ore must be provided for on priority.
- (iii) In furtherance of the objective of expanding Indian steel production, iron ore has to be earmarked for **new greenfield integrated plants and also for brownfield expansion of existing plants** by the private/public sector. However, there are large number of proposals from private sector for setting up new plants and expanding existing capacities. Not all of them can be depended upon to materialize in a time bound and efficient manner. It is, therefore, essential to build stringent safeguards into the terms and conditionalities under which such private promoters are afforded the privilege of preferential grant of lease. It is also to be ensured through watertight and legally tenable protocols, that **no applicant is able to lock up precious iron reserves by adopting delaying tactics, political maneuvering or legal tangles**. Stringent additional penalties should also be stipulated, apart from automatic lapsing of such leases without legal recourse.
- (iv) In view of the paramount need to take a **quantum leap in steel capacity** and per capita steel consumption and keeping in mind domestic financial and technology ground realities, there should be **no barrier for one or two large foreign entities with proven track record and access to global finance and cutting edge**

technology to enter the Indian steel scenario; through the platform of an Indian public limited company so that the Indian public at large can also share in their prosperity. Such entry would bring in its wake **multiplier benefits** of latest construction and operating technologies in raw material processing and steel making on the one hand and on the other, lead to **deeper integration of Indian steel with the world market place.**

- (v) Such entry should, however, be **limited to only a few large scale projects of, say, minimum 10 mtpa which can be considered of national importance**, in order to make a quantum jump in steel production in quantity and quality.
 - (vi) Special provision needs to be made for **affirmative action** to promote at least one **major integrated** steel plant with all its ancillary and multiplier benefits for location in or near schedule (**tribal**) areas in keeping with the purposes of Article 244(1) of the Fifth Schedule of the Constitution.
 - (vii) A large number of steel plants based on small blast furnace and/or direct reduction are coming up in dispersed or clustered locations spread across the country. Such **smaller distributed and variegated plants do serve a niche purpose in a large continental economy** like India by producing customized grades and special qualities, serving smaller markets, spreading employment and technology with multiplier effects in rural and more remote areas etc. Hence, the iron ore needs of such plants also deserve to be fully met. Since it is neither feasible nor technologically desirable to grant small leases to each and every such plant, they would continue to be catered to by the large number of small mines already operating in various iron ore areas. However, **to the extent that such smaller units can come together as groups or partnerships**, with complimentary and optimum utilization of different grades and types of iron ore from large scientifically operated mines and agglomeration plants **they deserve to be encouraged to do so** by preferential grant of leases.
- 14 (i) **After providing the 1st Preference to producers of steel**, by way of captive/semi-captive mines, it is essential to implement policy measures for encouraging a **globally competitive mining industry per se**, working to world benchmarks of scientific mining, optimum utilization of all mined material, beneficiation, systematic and time

bound prospecting and environmental and bio-diversity preservation. Such professional mining enterprises, whether in the public or private sector, **must in the first instance allocate a certain minimum proportion of production (say 70%) to cater to the needs of domestic users**, i.e. the large number of dispersed mini blast furnaces, direct reduction plants, or combination plants. As an incentive and also in order to maintain strategic interlocking with the world iron ore market on a sustained basis, such professional mining companies need to be permitted to **export the remaining 30% percent of production** in all permissible grades as per Government policy from time to time.

- (ii) While many countries in the world are using low grade iron ore through complex and sophisticated beneficiation technology; in India **iron ore beneficiation has remained largely a peripheral activity**—except Goa, where several mining enterprises are undertaking significant and systematic beneficiation by 2–4% of Fe. Elsewhere, the existing beneficiation plants for Haematite ore upgrade the iron content by only around 1.5–2% through simple washing techniques.

- (iii) In order to **promote a paradigm shift into higher levels of upgradation** of lean Haematite ores and for reclamation of the large dumps of mixed and unclassified lower grade iron ore/waste material at Gua and other old mines; by more sophisticated and complex ore-specific beneficiation techniques for strategic long term conservation and prolongation of the life of Indian iron ore reserves, **special preference is proposed to be given to attract any world class professional mining company with proven track record to develop major deposits of low grade Haematite ores, say below Fe 58% and reclaim dumps**, for supply to domestic/export market after high end beneficiation with latest world class technology. This will motivate and help indigenous mining companies also to improve and expand use of sophisticated beneficiation technologies.

Cross-country Comparison of Mining Laws

Country	Mining Law	Who grants	Mining legislation				
			Restrictions			Coverage of Mining Law	Security of tenure
			FDI	Commodities	Application area		
Argentina	Mining Code No. 25 1886, and the text ordained by decree No. 456, 1997: Law Nos. 24, 498 and 24, 585	NA	NA	NA	NA		Yes
Bolivia	Mining Code, Law No. 1777 (17 March 1997)	General Superintendent of Mines	None	None	Cities, cemeteries, historical places, monuments, military facilities, and other popular areas	Prospecting, exploration, mining, concentration, and smelting	Yes From exploration to mining
Botswana	Mines & Mineral Act 1999	Minister	None	Radioactive minerals	Burial ground and national monumental parks	Prospecting and mining	No
Brazil	Brazilian Mining Code, Decree-Law No. 227 (28 February 1967) as amended in accordance with law 9314 (14 November 1996)	Various agencies for various activities	None	None	Area covered by exploration authorisation, licence registration	Prospecting, exploration, mining, concentration and smelting	Yes Upon the approval of exploration report
Chile	Political Constitution of the Republic 1980 Constitutional Organic Law on Mining Concessions (1983) and Mining Code (14 December 1993)	Local Court of Justice	None	None	None	Prospecting, exploration, mining	Yes Exclusive rights from exploration to mining

Appendix F (cont.)

Country	Mining Law	Who grants	Mining legislation				
			Restrictions			Coverage of Mining Law	Security of tenure
			FDI	Commodities	Application area		
China	Mineral Resources Laws No. 36 (19 March 1986) and 74 (amended on 29 August 1996)	Department in charge of Geology and Mineral resources of provincial governments	Same as domestic investors	None	Specific minerals for which protective policy is there, harbours, airports, railways, highways, important rivers	Geological survey, exploration, mining and selling of minerals	Yes Exclusive rights from exploration to mining
India	Mines and Minerals (Regulation and Development) Act 1957, amended in 1994, and Mines and Minerals (Development and Regulation) Act	State governments	Yes Prospecting licences and mining lease are restricted to Indian nationals	Minerals in the First Schedule are with the permission of the Central government, Minor minerals with state governments	Reserved forest or forest land, reserved area by the Central government	Prospecting, mining	Yes Prospecting licensee shall have preference for ML
Indonesia	Basic Law of Mining, Legislative Decree No. 11, 2 December 1967	Director General of Mines	Yes Investor must establish a domestic company	None	Urban area, holy area, public area, transport area, other mining and defence area	Prospecting, exploration, mining and concentration, smelting and transport, and profiting	Yes

Appendix F (cont.)

Country	Mining Law	Who grants	Mining legislation				
			Restrictions			Coverage of Mining Law	Security of tenure
			FDI	Commodities	Application area		
Mexico	Federal Mining Law (26 June 1992)	Ministry of Commerce & Industry	None	Yes, but NA	Natural protected area, marine zone, mineral reserves zone, mining concessions in force	Exploration, exploitation, beneficiation, smelting	Yes
Namibia	Minerals (Prospecting and Mining Act, 1992 (16 December 1992)	Mining Commissioner	None	None	Private land with an agreement in writing, land reserved for public purpose	Reconnaissance prospecting, mining and sale	Yes
Peru	Supreme Decree No. 014-92 EM of the General Mining Law (2 June 1992	Mine Bureau	None	None	Urban area, defence zone, historically important areas, and public domain areas	Prospecting, exploration, mining, processing, and transportation	Yes
Western Australia	Mining Act 1978 (as amended) - This Act shall be read and construed subject to the Environmental Protection Act 1986	Shall be administered by the minister	None (since Australian companies are some of the leading companies in the world and the mining industry is developed already FDI flow is not a major factor there)	None	A national park, a nature reserve, a state forest or a timber reserve, water reserve	Reconnaissance prospecting, mining and sale	Yes

Appendix F (cont.)

Country	Mining Law	Who grants	Mining legislation				
			Restrictions		Application area	Coverage of Mining Law	Security of tenure
			FDI	Commodities			
Colombia	Mining Code Law 57/87 of 1987	Vice-Minister of Mines	None	None	Parks for natural reservation, indigenous reservation, black communities, areas of urban settlement and areas of defence	Prospecting, exploration, mining and concentration, smelting and transport and profiting	Yes
Ghana	Minerals & Mining Law 153 of 1986, Minerals and Mining Amendment Act 1994 (according to 18 November 2005 Mining Journal, a new Bill to repeal law 153 is being considered)	Minister of Mines & Energy	10–30 per cent: Government shall obtain obtain 10 per cent with no financial commitment and shall have the option to acquire a 20 per cent further option as agreed mutually	Radioactive minerals	None	Reconnaissance prospecting, exploration, mining and export	Yes

Source: 1. World Bank (2001), *Review of Legal and Fiscal Frameworks for Exploration and Mining*.
 2. World Bank (2001), *Mining Sector Reforms and Investment*.

Appendix G

Cross-country Comparison of Mining Lease Aspects

Country	Mining legislation				Minimum expenditure exploration obligation	Mining rights transfer	Mortgage facility	EIA requirement
	Approval time for exploration lease	Terms for mining lease						
		Initial term	Renewal	Concession fee				
Argentina	NA	NA	NA	NA	None	Yes	Yes	Yes
Bolivia	8 days	No limitation	No limitation	1–5 years Bs 131 6 years and more Bs 262 per block	None	Yes	Yes	Yes (ML)
Botswana	NA	25 years	Every 25 years	P100/Km ²	None	Yes	None	Yes (ML)
Brazil	NA	No limitation	No limitation	None	None	Yes	Yes	Yes (ML)
Chile	4–5 months	No limitation	No limitation	Approx. \$ 5/HA annually	None	Yes	Yes	Yes (ML)
China	40 days	Large-scale: 30 years Medium-scale: 20 years Small-scale: 10 years	Possible	YU 1000/Km ² per year		Yes	Is permitted	Yes

Appendix G (cont.)

Country	Mining legislation				Minimum expenditure exploration obligation	Mining rights transfer	Mortgage facility	EIA requirement
	Approval time for exploration lease	Terms for mining lease						
		Initial term	Renewal	Concession fee				
Colombia	One year	Small-scale: 10 years Medium-scale: 30 years Large-scale: 30 years	Small-scale: 10 years Medium-scale: none Large-scale: none	NA	None	Yes	None	Yes
Ghana	In a recent change attempts are being made to reduce the time	Up to 30 years	Up to 30 years	For foreigners: US\$ 30,000 Local: C5million	None	Yes	None	Yes
India	Not available	30 years	20 years	As dead rent		Yes with state and Central government approval	Not specified	
Indonesia	Not specified	30 years	Yes: not specified	US\$ 0.1–0.35/HA	US\$ 1200 per sq. km	Yes with government approval	Yes with government approval	Not specified
Mexico	15 days	50 years	50 years	Mining duties exploitation: 1 st –2 nd year: MP19 3 rd –4 th year: MP 38 5 th year onwards: MP 66 all per HA		Yes	Not specified	Yes

Appendix G (cont.)

Country	Mining legislation				Minimum expenditure exploration obligation	Mining rights transfer	Mortgage facility	EIA requirement
	Approval time for exploration lease	Terms for mining lease						
		Initial term	Renewal	Concession fee				
Namibia	NA	25 years	15 years	N\$ 1000 for a mine with gross annual revenue below N\$ 10 million and N\$ 5000 for above N\$ 10 million revenue		Yes	Yes	Yes
Peru	Not specified	SML: 40 years ML: 20 years AML: 5 years	SML: 20 years ML: 10 years AML: 5 years	SML: US\$ 7.23/HA		Yes	Yes	Yes
Western Australia	Not specified	21 years	21 years and further terms of 21 years	Not specified	Is there but not specified	Yes	Yes	Yes

Source: 1. World Bank (2001), *Review of Legal and Fiscal Frameworks for Exploration and Mining*.

2. World Bank (2001), *Mining Sector Reforms and Investment*.

3. Western Australia Mining Act, 1978.

Appendix H

Cross-country Comparison of Environment Laws and Related Aspects

Country	Environment Regulations		Inspection and Monitoring Agency	International Law	Community Consultation	Pollution Taxes
	Environment Law	Administration				
Argentina	Environmental Protection Mining Code Law No.24, 585 (25 November 1995)	Mining Agency of the provisional Governments	Enforcement Authority established by the Provinces	Antarctic Environmental Protocol	None	
Bolivia	Environmental law No. 1333 (27 April 1992); and Regulation of the Environmental Law (8 December 1995)	Vice-Minister for Environment, Natural Resources, and Forestry Development	Vice-Minister for Environment and Forestry and the Mining Environmental Unit under the Vice Minister, Mining and Metallurgy Ministry	Bio-diversity Climate change	Yes	None
Botswana	Mines and Minerals Act 1999	Mines Department, Ministry of Minerals, Energy and Water Affairs	Air Pollution Control Division, Mines Department, Ministry of Minerals	Various Conventions	Yes	NA
Brazil	National System for the Environment, Law 9.605- 1996	Ministry of Environment	Ministry of Minerals and Energy	Antarctic Environmental Protocol	Yes	None
Chile	Decree 185 of Ministry of Mining, Law No. 19 300 Environment	National Commission for Environment	Ministry of Mining and Health	Antarctic Environmental Protocol	Yes in certain cases	None
China	Environmental Protection Law	Ministry of Environment Ministry of Land and Resources	Ministry of Land and Resources	Antarctic Environmental Protocol	Not specified	Are there
Colombia	Law of Environment (Law 99/93)	Ministry of Environment	Ministry of Mines and Energy	Antarctic Environmental Protocol	Yes	Penalties for air pollution and incentives for equipment

Appendix H (Cont.)

Country	Environment Regulations		Inspection and Monitoring Agency	International Law	Community Consultation	Pollution Taxes
	Environment Law	Administration				
Ghana		Environment Protection Agency		Biodiversity Climate change	Yes	None
India	Environment (Protection) Act 1986 and Amendment in 1991	Ministry of Environment and Forests	Ministry of Environment and Forests	Antarctic Environmental Protocol	Yes	None
Indonesia	Law No. 93 of 1997 concerning environmental management	Director General of Mines	Director General of Mines	UN Convention on Law	Yes	None
Namibia	Minerals Act, Draft Environmental Protection Bill	Ministries of Mines and Energy	Ministries of Mines and Energy	Biodiversity Climate change	Yes	Not yet
Peru	Environment and Natural Resources Code-Decree No 613 (7 September 1990), Regulations for Environmental Protection in Mining and Metallurgical Activities -1993 Environmental regulation for mining exploration activities – 1998	General Directorate of Environmental Affairs of the Ministry of Mines and Energy	General Directorate of Environmental Affairs of the Ministry of Mines and Energy through independent auditors	Antarctic Environmental Protocol	Yes	None
Western Australia						Not available

Source: 1. World Bank (2001), *Review of Legal and Fiscal Frameworks for Exploration and Mining*.
 2. World Bank (2001), *Mining Sector Reforms and Investment*.
 3. Western Australia Mining Act, 1978.

Cross-country Comparison of Various Aspects of Mining Reforms

Country	Score								
	Security of tenure: (a) Guaranteed: 9 (b) Priority: 1	Transferability of exploration and mining leases: (a) without prior approval: 9 (b) with prior approval: 4	Time required to obtain a exploration licence: (a) less than 3 months: 6 (b) 3–6 months: 2 (c) Over 6 months: 0	Duration of exploration: (a) 7 years or more: 6 (b) 4–7 years: 4 (c) less than 4 years: 0	Duration of ML: (a) 50 years and above: 6 (b) 25–49 years: 4 (c) less than 25 years: 0	Office responsible for Environment: (a) within Mines Ministry: 6 (b) Unit within Mines Ministry advising Environment Ministry: 6 (c) Only Environment Ministry: 1	Approval process to obtain ML: (a) No or limited government approval (b) Subject only to EIA: 4 (c) Subject to feasibility study and EIA: 0	Application for licence: (a) First come first served: 9 (b) Based on set criteria like technological, financial, and in the Indian case, the value addition: 2 (c) at the discretion of government: 0	Total score (Sum of cols. 2–9)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Argentina	9	9	0	6	6	6	4	9	49
Bolivia	9	9	6	9	6	6	4	9	58
Botswana	0	4	Not specified	4	6	6	4	2	26
Brazil	9	4	0	4	6	6	4	2	35
Chile	9	9	2	4	6	6	4	9	49
Peru	9	9	6	6	6	6	4	9	55
Mexico	9	9	6	4	6	1	4	9	48
China	9	9	6	6	6	6	4	9	55
India	1	4	0	4	6	1	4	2	22
Ghana	9	9	2	6	6	1	4	9	46
Western	9	4	6	6	6	NA	4	9	44

Australia									
Indonesia	9	4	Not specified	6 (Contract of work)	6 (Contract of work)	6	4	9	44
Namibia	9	9	Not specified	0	4	6	4	9	41
Tanzania	9	9	6	6	6 (renewed after every 5 years)	6	4	9	56

Note: 1. In the case of 'Not specified' the score is taken as 0.

2. Both for exploration and mining, the total period that was considered includes the renewal also.

3. The score is on the basis of Koh Naito, Felix Remy, John P. Williams (2001), *Mining Sector Reform and Investment: Results of a Global Survey*, World Bank.

In order to compute each Reform Index, the authors assigned a score and a weight to each answer to a question. The score assigned to an answer ranges from 0 to 9 based on its importance as a component of generally accepted best practice in mining sector administration, as shown in the table below.

Score	Importance to mining sector reform
9	Extremely important
6	Very important
4	Partially important
2	Somewhat important
1	Restrictive
0	Very restrictive

For example, the second answer ('A2') to the first question on the Questionnaire (relating to 'Security of Tenure') states that the country provides a 'guaranteed right to obtain a mining licence subject to transparent criteria'. This answer is assigned a score of 9 because of its importance as a key element of international best practice in the administration of mining rights. By contrast, the third answer ('A3') states that the country provides a 'priority right to apply for a mining licence but approval is discretionary'. The score for that answer is only 1 because it represents something significantly less than 'best practice' on an issue of critical importance.

Source: 1. World Bank (2001), *Review of Legal and Fiscal Frameworks for Exploration and Mining*.

2. Koh Naito, Felix Remy, and John P. Williams (2001), *Mining Sector Reform and Investment: Results of a Global Survey*, World Bank.

3. Western Australia Mining Act, 1978.

Geological Survey of India: Mineral Exploration Status and Future Scenario

- Total land area: 3.28 million sq. km
- Total hard rock area: 2.42 million sq. km, of which 0.60 million sq. km is in Deccan Trap
- 20–25 per cent of hard rock area is potential for Schedule minerals
- Geological environment for Schedule minerals: 571,000 sq. km area.

Exploration Scenario of Schedule Minerals

Geological environment (sq. km)	Area covered by geological mapping (Scale : 1:63,360/50,000)	Area covered by multisensor aero-geophysical survey	Potential area for prospecting (sq. km)	Area covered by prospecting (P-I & P-II stage)	Area covered by exploration (E-I & E-II stage)
Gold: 112,000	100 per cent area where Schedule minerals are expected	180,085 sq. km (GSI-TOASS) Operation Hard Rock (1967–68): 90,395 sq. km BRGM: CGG (1971–72): 76,460 sq. km Total : 347,040 sq. km	40,000	20–25 per cent of potential area	4 per cent of the area covered under P-I and P-II stages
Base metal: 182,000			50,000	30 per cent of potential area	3 per cent of the area covered under P-I and P-II stages
Diamond and gemstone: 300,000			300,000	25–30 per cent of potential area	0.1–0.15 per cent of the area covered under P-I and P-II stages
Ferrous group:					
Iron ore: 4000			4000	Geological mapping and delineation of 90 per cent of potential area for haematitic ore completed.	Resource assessment of potentially rich areas was carried out till early 1980s. Currently most of the areas are under lease. Many areas are covered under forest. Available freehold and non-forest areas are being taken up.

Annexure 1 (cont.)

Geological environment (sq. km)	Area covered by geological mapping (Scale: 1:63,360/50.000)	Area covered by multisensor aero-geophysical survey	Potential area for prospecting (sq. km)	Area covered by prospecting (P-I & P-II stage)	Area covered by exploration (E-I & E-II stage)
Manganese ore: 4600			4600	Geological mapping and delineation of 80 per cent of potential areas completed.	2 per cent of the area covered under P-I and P-II stages. For exploration, freehold and non-forest areas are available
Chromite ore: 2500			2500	Geological mapping and delineation of 40 per cent of potential areas completed.	2 per cent of the area covered under P-I and P-II stages
Platinum group of elements: 8000				1–2 per cent area has been covered.	3 per cent of the area covered under P-I and P-II stages
Coal: 48,500			17,000		70 per cent of the potential area explored upto a depth of 900m
Lignite: 9300			9300		40 per cent of the total area explored between the depth 300m and 500m.

Source: Geological Survey of India.

Federation of Indian Mineral Industries

.....Querist

OPINION

1. I have read the Case for Opinion and have had the benefit of the Conference with Querist's Advocate at which a senior Representative of the Querist was also present.
2. The Federation of Indian Mineral Industries (FIMI) is an all-India body representing the mining industry as well as the industries related thereto. FIMI has more than 400 direct members and 35 regional associations (who represent the regional and local interests in various parts of the country). FIMI has a its member public sector companies (both State and Central), private sector companies, foreign multinationals, JVs, etc. The basic object of FIMI is to advance and promote, by legitimate and constitutional means, the commercial and economic interest of the mining industry as well as industries related thereto or based thereon.
3. The entire regime for the development and regulation of mines and minerals is governed by the legislative powers vested in the Central and States under the Constitution of India. Entry 54 of List-I of the Seventh Schedule empowers the Parliament to pass laws with respect to:-

“Regulation of mines and mineral development to the extent to which such regulation and development under the control of the Union is declared by Parliament by law to be expedient in the public interest.”

Entry 23 in the State list (List-II) empowers State Legislatures to pass laws with respect to:-

“Regulation of mines and mineral development subject to the provisions of List I with respect to regulation and development under the control of the Union.”
4. Parliament has enacted the Mines and Minerals (Development and Regulation) Act, 1957 (MMDR Act) [(formerly the Mines and Minerals (Regulation and Development) Act] to provide for the development and regulation of mines and minerals under the control of the Union. Two sets of Rules viz. Mineral Concession Rules, 1960 (hereinafter referred as MCR) and Mineral Conservation and Development Rules, 1988 (hereinafter referred as MCDR) have been framed under the Central Act. The Act and the Rules provide the legal framework for the grant of mineral concessions and development in respect of major minerals.
5. Before undertaking mining operations, an entrepreneur has to undertake reconnaissance operations to locate the mineral occurrence. Reconnaissance

operations are undertaken over a fairly large area (as per our Act upto 10,000 square kilometers per state); after having done reconnaissance, an entrepreneur has to do detailed prospecting on the ground (area limit 25 square kilometers per state). The prospecting area helps him to know the correct nature of the deposit, the grade and the size of the deposit. After detailed prospecting, he applies for the mining lease (area limit 10 sq. km per State)

6. Sections 5, 6, 7 and 8 of MMDR Act govern the grant of RP/PL/ML and provide for maximum area and periods respectively for RP/PL/ML. Section 11 deals with preferential rights in certain cases. Rule 63(A) of MCR is the omnibus provision dealing with time-limits for the disposal of RP/PL/ML. It reads as follows:

“Rule 63(A): The State Government shall dispose of the application for the grant of reconnaissance permit, prospecting licence or mining lease in the following period:

a) Reconnaissance Permit - within six months from the date of receipt of the application for reconnaissance permit under rule 4A.

b) Prospecting Licence - within nine months from the date of receipt of the application for prospecting licence under rule 10.

c) Mining lease - within twelve months from the date of receipt of application for mining lease under rule 22:

Provided that the aforesaid periods shall be applicable only if the application for reconnaissance permit, prospecting licence or mining lease, as the case may be, is complete in all respects;

Provided further that the disposal by the State Government in case of minerals listed in the First Schedule to the Act shall mean either recommendation to the Central Government for grant of the mineral concession, or refusal to grant the mineral concession by the State Government under rule 5 for reconnaissance permit, rule 12 for prospecting licence and rule 26 for mining lease, and in all other cases, disposal shall mean either intimation regarding grant of precise area, or refusal to grant the mineral concession under rule 5 for reconnaissance permit, rule 12 for prospecting licence and rule 26 for mining lease;

Provided also that in case the State Government is not able to dispose of the application for grant of reconnaissance permit, prospecting licence or mining lease within the period as specified above, the reasons for the delay shall be given in writing.”

7. An entrepreneur has to apply for the grant of Reconnaissance Permit (RP), Prospecting Licence (PL) and Mining Lease (ML) to the State Government as per procedure laid down in Mineral Concession Rules, 1960. However, if a mineral is specified in Schedule-1 of the Act and/or if the area is in excess of the area mentioned in para 4 above, the concerned State Government has to take prior approval of the

Central Government. The minerals mentioned in Schedule-1 are: Asbestos, Bauxite, Chrome ore, Copper ore, Gold, Iron ore, Lead, Manganese ore, Precious stones, Zinc.

8. As an all India organisation, FIMI is very eager to promote investment in the mining sector. Although the Act was last revised in December, 1999 (to attract investment in mining sector) at the ground level there has been hardly any investment flow. The basic reason is the delay and cumbersome procedures which lead to time overruns - and the delay is at State levels. The Federation therefore wishes to approach the Central Government to further amend the MMDR Act and simplify the procedures and accordingly amend the MCR so that an entrepreneur does not have to wait for interminable periods of time (left to be determined by the concerned State Government) for grant of reconnaissance permit (RP), prospecting licence (PL) and mining lease (ML). The time-frames prescribed for the disposal of RP/PL/ML are presently observed more in breach than in compliance, and the third proviso to Rule 63A gives a virtual carte blanche to State Governments to dispose of applications long after the prescribed periods, and only at the time of disposal of such applications to give written reasons for the delay: the ground reality is that most applications remain undisposed off for years, thus obviating the necessity for giving written reasons for the delay : the occasion for giving such written reasons is thus pushed further and further away by simply not considering the applications.
9. In the circumstances, the Federation proposes to move the Central Government for some form of seamless conversion of RP/LAPL to PL and then to ML so that the delays involved in each stage are minimised, and kept strictly within statutory limits - It seeks my opinion as to how this should be done.
10. I am of the opinion that the remedy lies in an amendment to the revising powers conferred by Section 30 of the MMDR Act—by recasting the same. Section 30 should be altered to read as follows and there needs to be added Rule 54A (after Rule 54) of the Mineral Concession Rules 1960.

Suggested Amendments:

- A. **Section 30: Powers of the Central Government.** The Central Government may, of its own motion or on application made within the prescribed time by an aggrieved party:
 - (i) revise any order made by a State Government or other authority in exercise of the powers conferred on it by or under this Act with respect to any mineral other than a minor mineral, or
 - (ii) where no such order has been made by the State Government or other authority (in exercise of the powers conferred on it by or under this Act with respect to any mineral other than a minor mineral) within the time prescribed therefore (under Rule 63A), pass such order that it may think fit and appropriate in the circumstances: Provided that in cases covered by clause (ii) above the Central Government shall, before passing any order under this clause, give an opportunity to the concerned State Government (or other authority) of being heard.

B. After Rule 54 of the Mineral Concession Rules 1960 and Rule 54A:

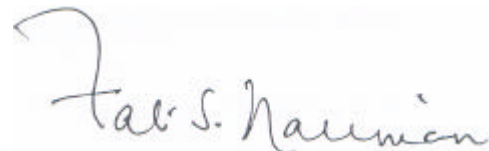
54-A - Where the State Government (or other authority) has not passed an order under Rule 63A:

- (a) for a RP within four months from date of receipt of an application for RP,
- (b) for a PL within ten months from the date of receipt of an application for PL;
and
- (c) for ML within thirteen months from the date of receipt of an application for ML, the aggrieved party may apply to the Central Government to exercise its powers under Section 30 of the MMDR Act within 90 days of the expiry of the periods mentioned above.

C. Delete the third proviso of Rule 63A - as this would be unnecessary in view of the time limits provided for in Rule 54A as suggested above.

11. I am of the opinion that introducing “deemed approval” concepts may encounter resistance from State Governments: justifiably so. The amendments proposed in para 10 above are only in further implementation of the letter and spirit of the statute and the Rules: they do not attempt to take away or whittle down the power of State Governments in respect of minerals owned by them, they only help keep the State Governments to adhere to the time-limits already set and imposed under existing law, and only in default of their exercising powers within such time limits can the Central Government intervene.

Date: 16th May, 2006
Place: New Delhi



(FALI S. NARIMAN)
Senior Advocate

To,

The Chairman,
High Level Committee
(National Mineral Policy)
Planning Commission,
Yojna Bhawan,
New Delhi.

Sub.-:Recommendations of the High Level Committee - Disagreements of the States' Representatives.

Dear Sir,

The Draft Report on National Mineral Policy was discussed in the meeting of the High Level Committee held on 30th June 2006 under your chairmanship. In the said meeting, draft recommendations were discussed and based on the deliberations, certain recommendations were modified.

2. At the beginning of the above mentioned meeting, is was informed that despite the efforts of the Committee to arrive at a consensus, if there are still certain issued on which an agreement cannot be reached, then such disagreements may be communicated in writing to the Chairman within three days.

3. Sir, States' representatives have attended various meetings and have actively participated in the deliberations of the Committee. We had expressed our views on various issues in the meetings and had given the same in writing also from time to time to the officers of the Planning Commissions and the Ministry of Mines. One issue on which there was no agreement right from the beginning is the issue relating to the solution to be suggested for ensuring adherence to / compliance with the prescribed time schedules for disposal of applications for mineral concessions by the authorities dealing with such applications, discussed in Chapter - II of the Report.

4. It is seen from the write up and the recommendations made in "Chapter-II Procedures for Granting Mineral Concessions" that the views expressed by the States' representatives during the deliberations of the Committee have neither been discussed in the text of the said Chapter, nor our suggestions been taken into account in the recommendations contained in para 2.19 and para 2.20 of the Report (extracts of recommendations enclosed). It is seen from Chapter - II of the Draft Report that by amending section 30 of the MMDR Act 1957 and adding a new rule 54 A in the MCR 1960, it is proposed to give jurisdiction to

the Central Government to entertain applications from the aggrieved parties and take a **final decision** thereon in the event of failure of the State Governments to take decision on mineral concession applications within the prescribed time frames.

5. We, most respectfully disagree with the above mentioned recommendations. Our consistent view in this regard right from the beginning of the deliberations of the Committee has been that transfer of **original jurisdiction of the states** to recommend / decide the mineral concession applications **to the Central Government** is not, and cannot be accepted as a solution to the problem of alleged delays in decision making. Our views, expressed during the deliberations of the formal and informal meetings in this regard are summarised below: -

5.1 The states being the owners of minerals, original jurisdiction in respect of making recommendations / taking decisions on mineral concession applications has been and must continue to vest in the States. Transfer of original jurisdiction of the States in the cases in which some delays occur in decision making to the Central Government is totally unacceptable.

5.2 It is further seen from Chapter - II of the Draft Report that whereas the time limits for deciding applications by the State Governments are proposed to be either compressed or kept around the present level, there is no recommendation even for prescribing the time limits within which the Central Government should decide the revision applications. Further, no statutory solution(s) have been recommended for ensuring adherence to the time limits for deciding revision applications by the Central Government. The net result of the recommendation, thus, would be that the States will be deprived of their original jurisdiction after the periods specified in the proposed new Rule 54 A. This is unacceptable.

5.3 The position obtaining in the States presently is that the time limits prescribed for disposal of applications at times are/cannot be adhered to due to variety of reasons beyond the control of the State Governments, such as non-submission of requisite information / documents by the applicants, non-availability of the data / field reports about the mineral bearing areas applied for, which are necessary for decision making. Delays take place not for the reason that State Governments do so deliberately, but for the reason that the time limits prescribed are not adequate, particularly for processing the multiple application cases. However, discussion in Chapter - II gives only one sided view as if the State Governments keep the applications pending deliberately and the situation is so alarming that to remedy the situation a drastic / extra-ordinary statutory solution namely, depriving the States of their powers, is required. We do not agree with this.

5.4 It would have been better if a work study to know the status of pendency of the mineral concession applications and analyze the reasons for delays were conducted and then based on the outcome of such work study, remedial solutions / mechanisms for avoidance of delays were suggested. It is further seen that neither the Ministry of Mines nor any other official agency provided to the Committee the actual statistics in support of the apprehensions about the acuteness of the problem. The Committee has straight way sought to make recommendations to transfer the jurisdiction from the State Government to the Central Government without deliberating / finding a statutory solution to the problem of delays that would take place at the level of the Central Government. The prime facie view of the most Committee members during the deliberations was that it would not be possible to put in place any statutory mechanism to ensure disposal of revision applications by the Central Government within the specified time period.

5.5 It has been presumed in the Draft Report that by transferring the jurisdiction from the State Governments to the Central Government, the problem of alleged delays in the disposal of mineral concession applications would get solved. However, such presumption is not valid and the suggested solution would not work. Presently, the tribunal exercising the powers of the Central Government under section 30 of the MMDR Act 1957 takes inordinately long period of time in deciding the revision applications, which finds no mention in the Report. Solution suggested in the Draft Report for ensuring timely disposal of mineral concession applications is not likely to deliver unless some foolproof mechanism is also put in place to decide the revision cases in a time bound manner. In our view, no such foolproof statutory solution is possible. Therefore, the net result of the impugned recommendations would be that only the original jurisdiction would get transferred to the Central Government without any effective statutory mechanism to ensure that the transferred cases shall get decided within the specified time limits. The proposed recommendations are, therefore, not a solution to the problem and will only deprive the State of their powers.

5.6 It is seen that whereas the impugned recommendations contain the minutest details as to what new clause in section 30 and what new rule as Rule 54 A should be enacted / framed for transferring the jurisdiction from the States to the Centre, nothing of the sort has been done / reflected about the exercise of the powers in a time bound manner by the Central Governments inspite of flagging of this issue at the initial stages of deliberations on the report of the Committee.

5.7 Members of the Committee were informed that the secretariat of the Committee had obtained legal opinion on the issue whether the Central Government, to ensure time bound disposal of the mineral concession

applications, could exercise the jurisdiction of the State Governments in case of failure of the State Government in deciding such applications within the prescribed time limit. However, no legal opinion appears to have been taken on the issue whether and how it can be ensured by statutory changes in the MMDR Act 1957 that the Central Government decides revision applications within the specified time period. It was imperative that opinions on both the issues were taken together for the reason that if reply to the latter is negative, the intended objective would not be met and the whole exercise to address the problem becomes infructuous. If the reply to the latter issue is negative, the result would be that the applications that allegedly remain pending with the states will continue to remain pending with the Central Government. The recommendation would, thus, only result into transfer of jurisdiction from the States to the Centre, which is not acceptable.

5.8 In our assessment, as a result of the impugned recommendations, the State Governments, to abide by the inadequate time schedules, particularly in the case of multiple applications, running in hundreds in some cases, would be compelled to take decisions without complete information / data / documents and the quality of disposal would suffer. This would lead to long drawn litigations, with more and more revisions and writs being filed, blocking the mineral bearing areas in litigations. The impugned recommendations, thus, being un-implement able in spirit, would be counter productive.

5.9 In deciding the revision cases by the Central Government in multiple application cases that would be filed under the proposed new clause (ii) of section 30, inordinate delays are sure to take place for the reason that in such cases, a large number of applicants would need to be heard by the Central Government before taking a decision. When large number of such cases converge at the Central Government level, the pendency of cases in the Ministry of Mines might become unmanageable. The officers of the State Government would also get over-burdened as they would be required to present the case of the State Government before the Central Government rather than devoting their time for disposal of original applications. Further, the State Governments themselves would need to become parties to the litigation and appear before the Central Government, an unhappy / undesirable situation for the States.

5.10 The experience in the field has been that without the active support and concurrence of the State Governments, it is not possible to develop onshore minerals and mineral oil resources even if mineral concessions are granted. It is more so necessary in the case of development of mines because the number of areas in which help and assistance of the State Governments is required by miners are many. The suggested statutory changes as a solution to the problem of delays may not be conducive to the harmonious relations and for the help

and support that the mining companies require from the State Governments. For this reason also the recommended statutory change is not desirable.

5.11 To the best of our knowledge, there is no other enactment of Parliament which provides for such drastic provisions as suggested in the subject recommendations, namely if an statutory function is not discharged by a State Government, the jurisdiction shall get transferred to the Central Government. We, therefore, do not support the proposed amendment in section 30 and Rule 54 A.

5.12 The time periods of 10 months and 13 months prescribed for LAPLs/PLs and MLs are wholly inadequate for deciding multiple application for direct LAPL / PL and ML cases, which should at least be 18 months and 24 months, respectively.


6. The recommendation involves the question of exercise of powers by the States and the Central Government and is, therefore, sensitive from the view point of the Centre-State relations too. A recommendation touching the sensitive area of jurisdiction of the States and the Centre needs to be perhaps deliberated for a consensus at an appropriate political forum where both the Centre and the States are represented, particularly in view of the fact that the states are the owners of minerals and the actual work is to be done under the supervision of States.

Recommended solution to the problem of delays: -


7.1 In view of the aforesaid, and in the absence of a foolproof legal remedy, we hold the view that a solution to the problem of delays in disposal of mineral concession applications would be to put in place appropriate administrative coordination mechanisms including setting up of joint committees at the level of the States, comprising the representatives of the Central and the State Governments to monitor the disposal position on a regular basis and provide guidance for improvement. For this purpose, a Central Monitoring Committee chaired by the Union Mines Secretary could also be set up to review periodically the status of the disposal of such applications for directions. Setting up of a National Council presided over by the Union Mines Minister could also be considered. Such administrative mechanisms can certainly take care of the issues relating to delays.


7.2 Further, the suggestions contained in paras 2.19 and 2.20 of the report need to be further deliberated by a Joint Group of the Centre and the States for arriving at a consensus solution to the problem.

We most humbly request that the above may kindly be appropriately reflected in Chapter-II of the Report or as an Annexure thereto / Report.


(Shivraj Singh)
Addl. Chief Secretary
Mineral Resources Deptt.
Govt. of Chhattisgarh
03-07-2006


(A.K. Singh)
Secretary Industries,
Govt. of Jharkhand
(Special Invitee)
03-07-2006


(S.K. Satpathi)
Secretary Mines
& Geology
Govt. of Jharkhand
03-07-2006


(L.N. Gupta)
Secretary Steel
& Mines
Govt. of Orissa
03-07-2006


(Mahendra Jain)
Secretary Commerce &
Industries (Mines)
Govt. of Karnataka
03-07-2006

CC Shri L.P. Sonkar, Convener, High Level Committee, Planning Commission, New Delhi for information.

Recommendation Para No.	Recommendation
2.19	<p>Adherence to time-schedules for consideration of applications for RP,LAPL/PL and ML</p> <p>The following amendment to be made in the Act to give jurisdiction to the Central Government to entertain applications from aggrieved parties and take a final decision thereupon in the event of failure of the State Government to take a decision within the time frame envisaged in Rule 63A:</p> <p><u>A. Section 30: Powers of the Central Government.</u> The Central Government may of its own motion or on application made within the prescribed time by an aggrieved party :</p> <ul style="list-style-type: none"> (i) revise any order made by a State Government or other authority in exercise of the powers conferred on it by or under this Act with respect of any material other than a minor minerals, or (ii) where no such order has been made by the State Government or other authority (in exercise of the powers conferred on it by or under this Act with respect to any mineral other than a minor mineral) within the time prescribed therefore (under Rule 63A), pass such order that it may think fit and appropriate in the circumstances : <p style="padding-left: 40px;">Provided that in cases covered by clause (ii) above the Central Government shall, before passing any order under this clause, give an opportunity to the concerned State Government (or other authority) as well as other concerned and / or aggrieved parties of being heard.</p> <p><u>B. After Rule 54 of the Mineral Concession Rules 1960 add Rule 54A :</u></p> <p>54-A- Where the State Government (or other authority) has not passed an order under Rule 63 A:</p> <ul style="list-style-type: none"> ? for a non-exclusive RP within four months from date of receipt of an application of RP, ? for a PL/LAP within ten months from the date of receipt of an application for PC, and ? for a ML within thirteen months from the date of receipt of an application for ML, <p style="padding-left: 40px;">the aggrieved party may apply to the Central Government to exercise its powers under Section 30 of the MMDR Act within 90 days of the expiry of the periods mentioned above.</p> <p><u>C. Delete the third proviso of Rule 63 A as this would be unnecessary in view of the time limits provided for in Rule 54 A as suggested above.</u></p>
2.20	<p>The committee is of the view that the amendments proposed in the previous Para are only in further implementation of the letter and spirit of the statute and the Rules : they do not attempt to take away or whittle down the power of State Governments in respect of minerals owned by them, they only help keep the State Governments to adhere to the time-limits already set and imposed under existing law, and only in default of their exercising powers within such time limits can the Central Government intervene.</p>

The 2002 Sustainability Reporting Guidelines of Global Reporting Initiative

A. COMMON FRAMEWORK

Accountability, governance, and sustainability—three powerful ideas that are playing a pivotal role in shaping how business and other organisations operate in the 21st century. Together, they reflect the emergence of a new level of societal expectations that view business as a prime mover in determining economic, environmental and social well-being. These three ideas also point to the reality that business responsibility extends well beyond the shareholders to people and places both near and distant from a company’s physical facilities. Defining, measuring, and rigorously reporting on these economic, environmental, and social issues lie at the core of the mission of the Global Reporting Initiative (GRI).

GRI is a new independent, international institution¹ whose mission is to develop, promote, and disseminate globally applicable *Sustainability Reporting Guidelines* (“*Guidelines*”). Sustainability reporting is an organisation’s² public account of its economic, environmental, and social performance in relation to its operations, products, and services. The GRI was established to create a common framework for sustainability reporting worldwide. It seeks to elevate sustainability reporting to the same level of rigour, comparability, credibility, and verifiability expected of financial reporting, while serving the information needs of a broad array of stakeholders from civil society, government, labour, and the private business community itself. GRI is built on the pillars of inclusiveness, transparency, and technical excellence.

The *Guidelines* complement and strengthen traditional financial reporting by providing critical non-financial information that helps users assess the current and future performance of the reporting organisation. Whereas financial reporting primarily targets one key stakeholder—the shareholder—sustainability reports have a wider audience, reflecting the diverse groups and individuals with a stake in high quality information. Financial analysts, employees, customers, advocacy groups, trade unions, communities and others are all part of GRI’s audience.

The 20th century saw worldwide progress in harmonising financial reporting. The 21st century will require even more rapid progress in the development of globally accepted sustainability reporting methods. By drawing thousands of partners and hundreds of organisations into a multi-stakeholder process, GRI continues to work toward harmonisation of disclosure, thereby maximising the value of reporting for both reporting organisations and users alike.

¹ GRI is affiliated with the United Nations through its status as a Collaborating Centre of the United Nations Environment Programme.

² This includes corporate, governmental and non-governmental organisations. In its initial phase, GRI has emphasised use of the *Guidelines* by corporations. Use by governmental and non-governmental organisations is encouraged. Adaptations of the *Guidelines* for these sectors will appear in the near future.

Why Report?

During the past decade, organisations worldwide have produced approximately 3,000 sustainability, environmental, social and citizenship reports, virtually all on a voluntary basis. What motivates these organisations? The answers are as diverse as the reporters themselves. For some, it is a response to pressure from advocates and communities related to specific events or business practices. For others, sustainability reports are an effort to strengthen reputation and market competitiveness, as well as maintain a “license to operate” in vulnerable areas. And still others seek to demonstrate a serious commitment to a code of conduct to which they subscribe.

Whatever the initial motive, numerous benefits typically emerge. Those frequently cited include enhanced management, governance, communications, and stakeholder relations. Specifically, sustainability reporting helps to:

- Maintain and strengthen trust with community and advocacy groups, investors, consumers, and other stakeholders.
- Link disparate functions such as finance, marketing, R&D, and operations into a more integrated strategic vision and operation, opening new conversations that pave the way for discovery and innovation.
- Identify trouble spots, and unanticipated opportunities, in supply chains, among customers, communities or regulators, or in the areas of reputation and brand management.
- Assess and measure the value of sustainability practices in the organisation in relation to the organisation’s overall business strategy and competitiveness.
- Reduce share price volatility and uncertainty occasioned by surprise, untimely or incomplete disclosure.

Harmonisation with Other Initiatives

Sustainability reporting is part of a broad landscape of initiatives directly or indirectly linked to higher standards of accountability. These include charters, principles, codes of conduct, management systems, and performance standards. GRI is unique as the only comprehensive sustainability reporting framework based on a global, multi-stakeholder process. The *Guidelines* complement other initiatives by providing an integrated disclosure framework that enables organisations and their stakeholders to assess performance along economic, environmental, and social lines. At the same time, the *Guidelines* themselves are not a code of conduct nor a performance standard. Instead the *Guidelines* are a reporting standard, an instrument for measuring and reporting an organisation’s contributions over time in a comparable, comprehensive fashion.

While unique in its coverage and process as a reporting standard, strong links exist between GRI and initiatives such as the United Nations *Global Compact*, the OECD *Guidelines for Multinational Enterprises*, ISO 14001 and many others. GRI establishes various mechanisms for collaborating with such initiatives to achieve maximum alignment and mutual benefits. Components of many initiatives appear in the *Guidelines* themselves, at the same time the *Guidelines* provide an instrument for tracking progress in a rigorous and transparent fashion.

Assurance standards can help strengthen GRI-based reporting by providing added credibility to those organisations that choose to pursue external, independent verification of their reports. Such assurance, which GRI encourages, is one among numerous approaches to achieving credibility in the eyes of report users.



GRI seeks to harmonise with existing initiatives.

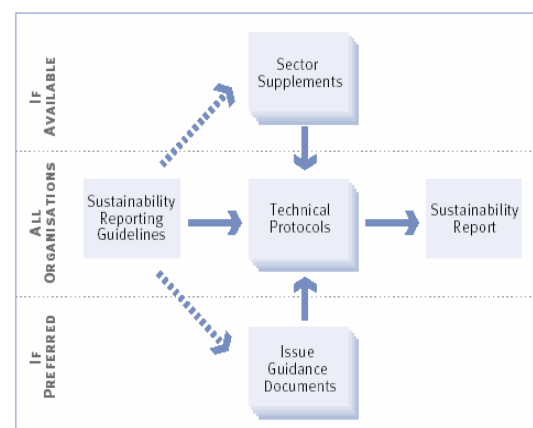
The GRI Family of Documents

The GRI family of documents includes the *Guidelines* themselves as well as sector supplements, technical protocols, and issue guidance documents.

Sector supplements recognise the limits of a one-size-fits-all approach by providing guidance that captures sustainability issues faced by specific industry sectors. Sector supplements (e.g., for financial services, telecommunications, auto manufacturing, mining) are used in conjunction with GRI’s core *Guidelines*.

Technical protocols provide detailed measurement methods and procedures for reporting on indicators contained in the core *Guidelines* and sector supplements. For example, there is a protocol for the energy indicators providing definitions (e.g., direct vs. indirect energy) and measurement methodologies (e.g., conversions, units). Technical protocols are comparable to the “Generally Accepted Accounting Principles” that guide financial reporting.

Issue guidance documents on topics such as “diversity” and “productivity” will provide organisations with innovative, thematic models for organising and reporting the information in the *Guidelines* and sector supplements.



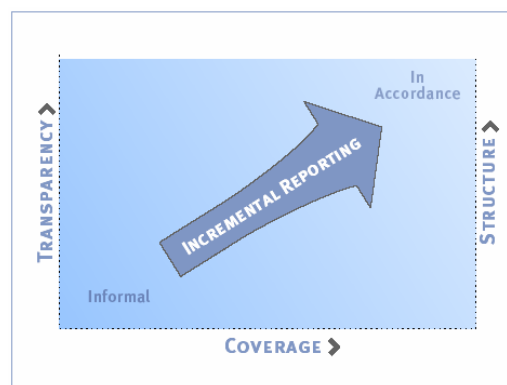
GRI family of documents

As these documents emerge in the coming years, they will provide an integrated package that will help move report quality to the level of comparability and rigour to which GRI aspires.

B. USING THE GRI GUIDELINES

The GRI *Guidelines* identify the information for inclusion in a GRI-based report. Providing such information may occur in the format and order that appears in the *Guidelines*, or alternatively, in a format designed by the reporting organisation.

The *Guidelines* are designed to be flexible, with a range of options suitable for reporting organisations at any level of experience and sophistication. The GRI recognises the need for many organisations to build their reporting capacity in an incremental fashion, moving gradually toward greater coverage, transparency, and structure in terms of continuity and consistency from year to year. Organisations that choose this incremental approach may informally use the *Guidelines*, and select certain principles, elements, and indicators to begin their reporting programmes. Getting started is the critical first step.



Options for reporting.

Other organisations, aspiring to leadership roles in the sustainability arena, may wish to identify their reports as prepared “in accordance” with the 2002 GRI *Guidelines*. To use this term, reporters must meet certain minimum requirements specified in the *Guidelines*.

“In Accordance” Requirements*

1. Report on the organisational profile, governance and management systems.
2. Include a GRI Content Index, linking GRI components to information actually contained in the report.
3. Respond to each core indicator by either (a) reporting on it, or (b) explaining its omission.
4. Ensure that the report is consistent with GRI’s reporting principles.
5. Include a statement signed by the board or CEO indicating that the report was prepared in accordance with the 2002 GRI *Guidelines* and represents a balanced and reasonable presentation of the organisation’s sustainability performance.

* See Part A of the Guidelines for details.

Reporting Principles

Following an introduction, the *Guidelines* present a series of reporting principles. These principles help ensure that GRI-based reports:

- provide a balanced and reasonable representation of an organisation’s sustainability performance

- facilitate comparability
- address issues of concern to stakeholders

The GRI reporting principles are the underpinnings of report content. They are the foundation of credible reporting, equal in importance to the content itself. The reporting principles are:

- *Transparency:* Full disclosure of the processes, procedures and assumptions in report preparation are essential to its credibility.
- *Inclusiveness:* The reporting organisation should engage its stakeholders in preparing and enhancing the quality of reports.
- *Auditability:* Reported information should be recorded, compiled, analysed and disclosed in a way that enables internal auditors or external assurance providers to attest to its reliability.
- *Completeness:* All material information should appear in the report.
- *Relevance:* Reporting organisations should use the degree of importance that report users assign to particular information in determining report content.
- *Sustainability Context:* Reporting organisations should seek to place their performance in the broader context of ecological, social or other issues where such context adds significant meaning to the reported information.
- *Accuracy:* Reports should achieve a degree of exactness and low margin of error to enable users to make decisions with a high degree of confidence.
- *Neutrality:* Reports should avoid bias in selection and presentation of information and provide a balanced account of performance.
- *Comparability:* Reports should be framed so as to facilitate comparison to earlier reports as well as to reports of comparable organisations.
- *Clarity:* Information should be presented in a manner that is understandable by a maximum number of users while still maintaining a suitable level of detail.
- *Timeliness:* Reports should provide information on a regular schedule that meets user needs and comports with the nature of the information itself.

Report Content

Part C of the *Guidelines* recommends that five sections appear in a sustainability report:

1. *Vision and Strategy:* A statement from the CEO and discussion of the reporting organisation's sustainability strategy.

2. *Profile*: An overview of the reporter's organisation, operations, stakeholders, and the scope of the report.
3. *Governance Structure and Management Systems*: A description of the reporter's organisational structure, policies, management systems, and stakeholder engagement efforts.
4. *GRI Content Index*: A cross-referenced table that identifies the location of specified information to allow users to clearly understand the degree to which the reporting organisation has covered the content in the *GRI Guidelines*.
5. *Performance Indicators*: Measures of performance of the reporting organisation divided into economic, environmental, and social performance indicators.

Organisations may adopt this format or modify it to enhance usefulness of the report to its stakeholders.

Performance Indicators

Performance indicators, both qualitative and quantitative, are the core of a sustainability report. The performance indicators are grouped under three sections covering the economic, environmental, and social dimensions of sustainability. In each area, GRI identifies core indicators (required for reporting in accordance with the *Guidelines*) and additional indicators (used at the discretion of the reporter to enrich a report).

Economic indicators concern an organisation's impacts, both direct and indirect, on the economic resources of its stakeholders and on economic systems at the local, national, and global levels. Included within economic indicators are the reporting organisation's wages, pensions and other benefits paid to employees; monies received from customers and paid to suppliers; and taxes paid and subsidies received. In a few instances, economic performance information overlaps with that in conventional financial statements. In general, however, the two are complementary.

Environmental indicators concern an organisation's impacts on living and non-living natural systems, including eco-systems, land, air and water. Included within environmental indicators are the environmental impacts of products and services; energy, material and water use; greenhouse gas and other emissions; effluents and waste generation; impacts on biodiversity; use of hazardous materials; recycling, pollution, waste reduction and other environmental programmes; environmental expenditures; and fines and penalties for non-compliance.

Social indicators concern an organisation's impacts on the social systems within which it operates. GRI social indicators are grouped into three clusters: labour practices (e.g., diversity, employee health and safety), human rights (e.g., child labour, compliance issues), and broader social issues affecting consumers, communities, and other stakeholders (e.g., bribery and corruption, community relations). Because many social issues are not easily quantifiable, GRI requests qualitative information where appropriate.

Assurance

Just as investors look to independent audits to certify the accuracy and completeness of financial reporting, stakeholders increasingly seek such assurance for sustainability reports. GRI encourages the independent assurance of sustainability reports, while recognising that no generally accepted assurance framework, protocols or practices currently exist.

Annex 4 in the *Guidelines* provides an overview of assurance processes as guidance for organisations considering the use of independent assurance to enhance the credibility of their sustainability reports. GRI continues to explore its role in creating a credible assurance infrastructure for the future.

C. LOOKING AHEAD

The development of a generally accepted sustainability reporting framework represents a major step forward in enhancing accountability, sustainability, and governance of organisations worldwide. Disclosure is integral to achieving all three goals. GRI is working to ensure that standards of disclosure are commensurate with the formidable challenges associated with economic, environmental, and social progress in the 21st century.

In 2002, the GRI released the *2002 Sustainability Reporting Guidelines*, appointed its first Board of Directors, established its unique governance structure, and sited its permanent Secretariat headquarters in Amsterdam. Looking ahead, the GRI will continue to expand, test and revise its reporting framework through a global, multi-stakeholder process.

GRI's vitality and leadership depends on the engagement and expansion of its global network of supporters. It requires both a concrete product incorporating the world's best thinking and a legitimate, dynamic process through which continuous learning can occur. GRI invites all parties to join this "work in progress"—through *Guidelines* testing, working groups, dialogues, feedback sessions, and through participation in GRI's governance—to ensure that both its process and products achieve the level of excellence and legitimacy to which it is firmly committed.

Using the GRI Guidelines and the Mining and Metals Sector Supplement

Introduction

The Global Reporting Initiative (GRI) is a long-term, multi-stakeholder, international process whose mission is to develop and disseminate globally applicable *Sustainability Reporting Guidelines* (the “*Guidelines*”). These *Guidelines* are for voluntary use by organisations¹ for reporting on the economic, environmental, and social dimensions of their activities, products, and services.² The aim of the *Guidelines* is to assist reporting organisations and their stakeholders in articulating and understanding contributions of the reporting organisations to sustainable development.

What Are the GRI *Guidelines*?

The GRI *Guidelines* are a framework for reporting on an organisation’s economic, environmental, and social performance. The *Guidelines*:

- Present reporting principles and specific content to guide the preparation of organisation-level sustainability reports;
- Assist organisations in presenting a balanced and reasonable picture of their economic, environmental, and social performance;
- Promote comparability of sustainability reports, while taking into account the practical considerations related to disclosing information across a diverse range of organisations, many with extensive and geographically dispersed operations;
- Support benchmarking and assessment of sustainability performance with respect to codes, performance standards, and voluntary initiatives; and
- Serve as an instrument to facilitate stakeholder engagement.

The *Guidelines* are **not**:

- A code or set of principles of conduct;
- A performance standard (e.g., emissions target for a specific pollutant); or
- A management system.

The *Guidelines* do **not**:

- Provide instruction for designing an organisation’s internal data management and reporting systems; or
- Offer methodologies for preparing reports, or for performing monitoring and verification of such reports.

¹ This includes corporate, governmental, and non-governmental organisations. All are included within GRI’s mission. In its first phase, GRI has emphasised use of the *Guidelines* by corporations with the expectation that governmental and non-governmental organisations will follow in due course.

² GRI uses the term “sustainability reporting” synonymously with citizenship reporting, social reporting, triple-bottom line reporting and other terms that encompass the economic, environmental, and social aspects of an organisation’s performance.

The *Guidelines* are structured in five parts:

Introduction

Trends driving sustainability reporting and the benefits of reporting.

Part A: Using the GRI *Guidelines*

General guidance on use of the *Guidelines*.

Part B: Reporting Principles

Principles and practices that promote rigorous reporting and underlie the application of the *Guidelines*.

Part C: Report Content

Content and compilation of a report.

Part D: Glossary and Annexes

Additional guidance and resources for using the *Guidelines*.

What Is a GRI “Sustainability Report”?

The GRI *Guidelines* organise “sustainability reporting” in terms of economic, environmental, and social performance (also known as the “triple bottom line”). This structure has been chosen because it reflects what is currently the most widely accepted approach to defining sustainability. GRI recognises that, like any simplification of a complex challenge, this definition has its limitations. Achieving sustainability requires balancing the complex relationships between current economic, environmental, and social needs in a manner that does not compromise future needs. Defining sustainability in terms of three separate elements (economic, environmental, and social) can sometimes lead to thinking about each element in isolation rather than in an integrated manner. Nonetheless, the triple bottom line is a starting point that is comprehensible and accessible to many, and has achieved a degree of consensus as a reasonable entry point into a complex issue. Looking ahead, GRI is committed to continually improving the structure and content of the *Guidelines* in line with the evolving consensus on how to best measure performance against the goal of sustainable development.

Who Should Use the *Guidelines*?

The use of the GRI *Guidelines* is voluntary. They are intended to be applicable to organisations of all sizes and types operating in any location. The *Guidelines* are designed to be used in a flexible manner by organisations with any level of experience in reporting. An organisation may choose to report on the full set of information in the *Guidelines* or may choose to apply a portion of the *Guidelines* and work towards fuller reporting over time. Alternatively, reporting may occur over a set of cycles which are appropriate to the agency and its work.

The *Guidelines* are intended to complement other initiatives to manage economic, environmental, and social performance and related information disclosure. The *Guidelines* and GRI-based reports are not a substitute for legally-mandated reporting or disclosure requirements, nor do they override any local or national legislation. Reporting organisations should note in their reports the instances where government regulations, conventions or treaties restrict disclosure of information asked for in the guidelines.

Reporting Using the GRI Framework

The GRI reporting framework comprises of three sets of documents. Together, this family of documents represents a comprehensive framework for measuring and reporting on economic,

environmental, and social sustainability at an organizational level. The GRI Reporting Framework includes:

- The *GRI Sustainability Reporting Guidelines*: The *Guidelines* represent the foundation upon which all other GRI reporting documents are based, and outline the core content that is broadly relevant to all organisations regardless of size, sector, or location. All organisations seeking to report using the GRI framework should use the *Guidelines* as the basis for their report, supported by the other GRI documents as applicable.
- Sector Supplements: GRI Supplements capture the relevant issues essential to sustainability reporting in a specific sector, but which may not appear in the *Guidelines* since they are relevant primarily for a specific range of reporting organisations or sectors.
- Technical Protocols: GRI is drafting a collection of Technical Protocols that offer specific guidance on various technical aspects of reporting within the GRI framework, including expectations related to measurement of specific indicators.

This Supplement incorporates an abridged version of the 2002 *Guidelines* in order to facilitate ease of use for practitioners. Much of the text, guidance and resources contained in the 2002 *Guidelines* have been removed for the sake of practicality, but this does not imply that such material is not relevant to report preparers and report readers endeavouring to use the Supplement. This Supplement is cross-referenced to both the print and HTML versions of the 2002 *Guidelines* so that the full text can easily be obtained.

Guidance Contained in Part A of the *Guidelines*

Part A of the *Guidelines* contains useful guidance on aspects related to applying the *Guidelines* and building a sustainability report, including:

- Relationship of the *Guidelines* to other sustainability management tools;
- Reporting expectations and design, including flexibility, incremental and in accordance reporting; and
- Frequency and medium of reporting, credibility of reports.

This guidance has been removed in this document, but readers looking for further information are invited to consult the *Guidelines*.

Context for Sustainability Reporting in the Mining and Metals Sector

This Supplement identifies aspects of mining and metals companies' operations that are significant to a discussion of sustainable development by companies in the sector, but which are not captured by the reporting elements and indicators in the 2002 *Guidelines*. This section briefly outlines the context for reporting in the sector and the broad overarching issues. The mining and metals sector includes exploration, feasibility, construction, mining and metal processing (including metal fabrication and recycling), and closure. Mining and metals form an integral part of modern society and industrial chains, and their activities and products interact with a wide range of groups.

There are many aspects relevant for reporting in the sector, but not all are easily amenable to performance indicators and sometimes must be dealt with qualitatively. However, there is work in progress in a number of areas to help advance approaches to measurement on many important issues such as transfer payments (e.g., the Extractive Industries Transparency Initiative) as well as understanding economic dimensions such as value added.

Companies produce a range of information in different formats for various audiences covering activities at both site and corporate level. The GRI framework aims to identify organisational level indicators to enable reporting that offers a view of the organisation as a whole, whether it has a few or many sites. Sustainability reporting can complement and provide a framework and context for other types of disclosure and communication, many of which are already used by companies, including project-level studies and related documentation. Sustainability reports will include some project/site-related information. However, the GRI *Guidelines* were not designed with the intention of specifying all of the project/site level information that may be of interest to stakeholder groups.

A framework for organisational level reporting must provide indicators that balance the need for describing an organisation as a whole, with the need for detail that makes such information meaningful. It has not been possible in certain areas to develop generic descriptions or indicators that provide meaningful information about organisations working across a diverse range of countries and cultures. Similarly, some information is of greater relevance when tied to a specific context or location. Case studies are sometimes a useful way of illustrating a company's approach to sustainable development. Reporting on performance indicators should be supplemented by case studies about challenges, processes, and outcomes. When used, the case studies should be representative of the reporting organisation, i.e. cover the range of geographical regions where the reporting organisation operates, include both corporate and local issues, and contain examples of where performance has been good or bad.

Decisions on which case studies to include, or whether facts or incidents are "significant" and should be disclosed, should be guided by the principles in Part B of the *Guidelines*, including completeness and relevance. In particular, information should be given if it would likely affect a decision of the report user. Reporting organisations should describe the processes and standards used in determining what is "significant", either on a case-by-case basis with respect to each indicator for which the determination is made, or in a summary statement, as appropriate.

Some areas of stakeholder interest are covered in disclosures required by existing regulations or laws, such as financial reports or reports to the South African government on compliance with legislation on Historically Disadvantaged South Africans. It is important that companies consider the principles outlined in Part B of the *Guidelines* and how they should be applied in the context of each company's own business operations to guide disclosures.

In preparing sustainability reports, it is important for organisations to provide information on the overall approaches to key issues such as social and economic capacity building at the community level or other broad topics. This information complements the more specific performance indicators that appear in a report and helps to provide a broad context.

Partnerships are important in solving challenges to sustainable development in the sector. Companies should therefore include a narrative discussion about the partnerships they have

developed for addressing challenges in different areas, such as biodiversity and community development.

Companies should define their policy on language. For example, if the document is in English but a number of their projects are operating where the official language is not English, is any material available in that language (e.g., on the website of the individual project)?

Finally, the supplement process does not aim to supplant or duplicate ongoing efforts and seeks to be informed by other initiatives such as those under the auspices of the United Nations. Similarly, this Supplement is a living document and future revisions will seek to benefit and incorporate developments from other initiatives.

Aspects to be Reported through Narrative Descriptions

There are also a few topics of particular importance that are best addressed through the narrative disclosures in a report:

Stakeholder Engagement: The importance of internal and external stakeholder engagement applies throughout the project cycle of mining and metals, but the approaches to engagement will vary depending on:

1. The stage of the project cycle (exploration, feasibility, construction, mining and metal processing (including metal fabrication and recycling), and closure),
2. The nature of the operation (underground, open pit, heap leach, metals refining, etc.),
3. The roles, levels of interest (e.g., directly affected or interested parties, etc.) and engagement objectives of the major stakeholders identified for the operational context.

A company's Sustainable Development Report should respond to disclosure elements in describing engagement practices relative to these three variables e.g., consultation and information sharing, participatory decision-making, or practices of dispute resolution). The narrative should also describe any overarching policies guiding these engagement practices through the project cycle of the operation, and how inputs from stakeholders are used by the reporting organisation.

Community Engagement and Support: The issue of broad and ongoing community support, or lack of it, is recognised as particularly important for the mining and metals sector. Some stakeholders refer to this as 'free prior informed consent'. It is generally agreed that broad community support is critical for project approval and implementation. However, there is an ongoing debate about what community support means, and how and when it is achieved. In the absence of consensus around these issues, companies should report on their process of community engagement, including the following:

1. Overall policy related to community engagement, including an explanation of the goal of the engagement process (e.g., community consent, community support, social license to operate, etc.).
2. Basis for identification of community-level decision-makers and representative institutions in proposed and existing operations sites.
3. Approach to community engagement processes, including:

- Issues in which community participation and support are sought such as access to land, social and environmental impact assessments, project design and implementation, community development planning, closure, etc.;
 - Procedures for provision of information to communities;
 - Dispute resolution mechanisms used;
 - Community involvement in monitoring and oversight mechanisms;
 - Identification of and engagement with marginalised groups (e.g., indigenous peoples, women, youth and ethnic minorities); and
 - Extent to which community engagement processes and desired outcomes are formalised in negotiated agreements.
4. Mechanisms used for equitable and transparent administration of funds and benefits for local communities.
 5. Mechanisms used to protect local cultural and intellectual property rights and sacred sites.
 6. Company policies and practices for situations in which community support is lacking.
 7. Outcomes of significant engagement processes during the year.

Impact Assessment: The approach to environmental and social impact assessment of projects is a concern for many stakeholders and cuts across a wide range of issues. Assessments provide a baseline against which changes over time can be measured. The detailed results of impact assessments or similar studies are typically disclosed through formats other than sustainability reports. However, an explanation of impact assessment approaches and related stakeholder engagement, including case studies where relevant, along with how they address common challenges, is an important part of reporting. Approaches to operational phase monitoring to assess whether actual impacts are consistent with those identified in the assessment may also be included.

ICMM Principles¹

1

Implement and maintain ethical business practices and sound systems of corporate governance.

2

Integrate sustainable development considerations within the corporate decision-making process.

3

Uphold fundamental human rights and respect cultures, customs and values in dealings with employees and others who are affected by our activities.

4

Implement risk management strategies based on valid data and sound science.

5

Seek continual improvement of our health and safety performance.

6

Seek continual improvement of our environmental performance.

7

Contribute to conservation of biodiversity and integrated approaches to land use planning.

8

Facilitate and encourage responsible product design, use, re-use, recycling and disposal of our products.

9

Contribute to the social, economic and institutional development of the communities in which we operate.

10

Implement effective and transparent engagement, communication and independently verified reporting arrangements with our stakeholders.

¹ Source: International Council of Mining and Metals.

Annexure 7

Royalty Accruals on Minerals in States with Significant Mining Activities

(Rs crore)

State	Total royalty collection		
	2002-03	2003-04	2004-05
Chhattisgarh	552.36	637.17	694.61
Jharkhand	797.65	900.16	916.2
Karnataka	83.89	143.62	210.94
Madhya Pradesh	590.69	646.71	733.72
Orissa	440.57	547.2	663.61
Rajasthan	399.68	457.96	589.79
Maharashtra	400.69	475.92	568.24
Gujarat	172.63	217.90	238.95
Kerala	1.63	10.45	12.61
Goa	14.81	17.87	17.44
Tamil Nadu	297.34	324.5	324.82
Andhra Pradesh	769.93	766.56	864.53
Uttaranchal	22.55	30.65	35.6
Uttar Pradesh	262.42	254.18	291.94
Haryana	118.08	76.77	92.50
Assam	9.36	12.64	13.36

Source: Department of Mining and Geology, various state governments.

Annexure 8

Mineral-wise Collection of Royalty in Selected States

(Rs crore)

Sl. No.	Mineral	2002-03					
		Madhya Pradesh	Jharkhand	Orissa	Chhattisgarh	Rajasthan	Karnataka
1	Iron ore	-	20.77	42.26	35.93	0.012	5.38
2	Bauxite	1.25	6.59	27.74	3.98		0.15
3	Copper	7.69	0.22	-	-	2.14	
4	Lime stone	113.96	3.18	8.11	58.60	93.62	44.49
5	Dolomite	1.07	1.05	6.29	3.68	0.69	0.16
6	Manganese	2.61	-	1.52	-	0.01	0.087
7	Chromite	-	-	18.18	-		0.078
8	Diamond	3.05	-	-	-		
9	Gold					0.13	0.0066
10	Rock phosphate					21.15	
11	Lead & Zinc					85.04	
12	Major minerals (sum of sl. nos. 1-11)	129.63	31.81	104.1	102.19	202.79	50.3516
13	Coal/lignite	450.26	732.07	310.73	434.08	2.39	
14	Sub-total (sl. nos. 12 +13)	579.89	763.88	414.83	536.27	205.18	50.35
15	Other minerals	3.87	1.77	2.52	0.55	20.318	0.7184
16	Major minerals Grand total (sl. nos. 14 + 15)	583.76	765.65	417.35	536.82	225.50	51.07
17	Minor minerals	6.93	32.00	23.22	15.54	174.18	32.82
18	Total royalty	590.69	797.65	440.57	552.36	399.68	83.89

Annexure 8 (cont.)

Sl. No.	Mineral	2003-04					
		Madhya Pradesh	Jharkhand	Orissa	Chhattisgarh	Rajasthan	Karnataka
1	Iron ore	-	18.22	59.32	42.92	0.0219	46.29
2	Bauxite	1.19	7.06	25.42	5.28		0.1
3	Copper	6.27	-	-	-	2.31	
4	Lime stone	101.7	2.94	8.37	57.69	95.19	51.05
5	Dolomite	0.88	1.04	5.94	4.12	0.59	1.05
6	Manganese	2.38	-	3.10	-		0.42
7	Chromite	-	-	27.25	-		0.35
8	Diamond	3.77	-	-	-		
9	Gold						2.91
10	Rock phosphate	0.29				27.08	
11	Lead & Zinc					103.2	
12	Major minerals (sum of sl. nos. 1-11)	116.5	29.26	129.40	110.01	228.3919	102.17
13	Coal/lignite	514.1	836.37	386	512.43	3.42	
14	Sub-total (sl. nos. 12 +13)	630.6	865.63	515.4	622.44	231.8119	102.17
15	Other minerals	2.91	1.93	4.15	0.71	25.1681	1.40
16	Major minerals Grand total (sl. nos 14 + 15)	633.5	867.56	519.6	623.15	256.98	103.57
17	Minor minerals	13.24	32.60	27.64	14.02	200.98	40.05
18	Total royalty	646.7	900.16	547.2	637.17	457.96	143.62

Annexure 8 (cont.)

Sl. No.	Mineral	2004-05					
		Madhya Pradesh	Jharkhand	Orissa	Chhattisgarh	Rajasthan	Karnataka
1	Iron ore	-	23.52	72.85	42.33	0.15	79.75
2	Bauxite	1.26	10.54	29.05	8.18		0.22
3	Copper	9.2	0.14	-	-	3.77	
4	Lime stone	119.95	3.08	10.35	62.06	116.56	54.24
5	Dolomite	1.03	1.05	5.030	5.54	0.49	0.4
6	Manganese	4.17	-	11.18	-	0.0094	1.19
7	Chromite	-	-	44.03	-		0.25
8	Diamond	4.18	-	-	-		
9	Gold						8.32
10	Rock phosphate					30.84	
11	Lead & Zinc					151.23	
12	Major minerals (sum of sl. nos. 1-11)	139.79	38.33	172.5	118.11	303.05	144.37
13	Coal/lignite	533.95	835.74	441.9	555.5	2.87	
14	Sub-total (sl. nos. 12 +13)	673.74	874.07	614.4	673.61	305.92	144.37
15	Other minerals	8.78	1.95	4.66	0.95	34.83	2.3
16	Major minerals Grand total (sl. nos 14 + 15)	682.52	876.02	619.1	674.56	340.75	146.67
17	Minor minerals	51.2	40.14	44.54	20.05	249.04	64.27
18	Total royalty	733.72	916.16	663.6	694.61	589.79	210.94

*In the case of Rajasthan, minor minerals in 2004-05 include royalty on marble (Rs 96.48 crore), masonry stones (Rs 24.66 crore), and sandstone (Rs 38.96 crore).

Source: Department of Mining and Geology, various state governments.

¹THE SECOND SCHEDULE¹

(See section 9)

RATES OF ROYALTY**RATES OF ROYALTY IN RESPECT OF MINERALS AT ITEM 1 TO 10, 12 TO 38 AND 40 TO 51 APPLICABLE IN ALL STATES AND UNION TERRITORIES EXCEPT THE STATE OF WEST BENGAL.**

1. Agate	Ten per cent of sale price on ad valorem basis
2. Apatite and Rock Phosphate	
(i) Apatite	Five per cent of sale price on ad valorem basis.
(ii) Rock Phosphate:	
(a) Above 25 per cent P ₂ O ₅	Eleven per cent of sale price on ad valorem basis.
(b) Up to 25 per cent P ₂ O ₅	Five per cent of sale price on ad valorem basis.
3. Asbestos:	
(a) Chrysotile	Eight Hundred rupees per tonne.
(b) Amphibole	Forty five rupees per tonne.
4. Barytes	Five and half per cent of sale price on ad valorem basis.
5. Bauxite and Laterite	(a) Zero point four zero per cent of London Metal Exchange Aluminium metal price chargeable on the contained aluminium metal in ore produced for those dispatched for use in alumina and aluminium metal extraction. (b) Twenty percent of sale price on ad valorem basis for those dispatched for use other than alumina and aluminium metal extraction and for export.

¹ Substituted by G.S.R. 677 (E), dated 14.10.2004.

6. Brown Ilmenite	Two per cent of sale price on ad valorem basis.
-------------------	---

¹Source: Government of India, Ministry of Mines, 2004, 'Mines and Minerals (Development and Regulation Act, 1957 (No. 67 of 1957) (As amended up to 14th October, 2004)', issued by Controller General, Indian Bureau of Mines, Nagpur.

(Leucoxene), Ilmenite, Rutile and Zircon	
7. Cadmium	Ten per cent of sale price on ad valorem basis.
8. Calcite	Fifteen per cent of sale price on ad valorem basis.
9. China clay/Kaolin (including ball clay, white shale and white clay)	
(a) Crude	Twenty three rupees per tonne.
(b) Processed (including washed)	Eighty five rupees per tonne.
10. Chromite	Seven and half per cent of sale price on ad valorem basis.

11. *[COAL:

A. Coal produced in all States and Union Territories except the State of West Bengal.

(i) Group I Coals:

(a) Coking Coal	}	
Steel Grade-I	}	
Steel Grade-II	}	
Washery Grade - ¹ (I)	}	Two hundred and fifty rupees only
(b) Hand picked coal produced in the	}	per tonne.
States of Arunachal Pradesh,	}	
Assam, Meghalaya and Nagland.	}	

(ii) Group II Coals:

(a) Coking Coal Washery Grade-II	}	
Coking Coal Washery Grade-III	}	
(b) Semi-Coking Coal Grade-I	}	
Semi-Coking Coal Grade-II	}	
Non-Coking Coal Grade-A	}	
Non-Coking Coal Grade-B	}	One hundred and sixty five rupees
(d) Upgraded Run of Mine coal	}	only per tonne.
produced in the States of	}	
Arunachal Pradesh, Assam,	}	
Assam, Meghalaya and	}	
Nagaland.	}	

*Substituted by G.S.R. 572 (E), dated 16.8.2002

!Substituted by G.S.R. 652 (E), dated 17.9.2002

(iii) Group III Coals:

(a) Coking Coal Washery Grade-IV	}	One hundred and fifteen rupees only
(b) Non-Coking coal Grade-C	}	per tonne.

(iv) Group IV Coals:

(a) Non-Coking coal Grade D	}	Eighty five rupees only per tonne.
(b) Non-Coking Coal Grade E	}	

- (v) **Group V Coals:**
 (a) Non-Coking Coal Grade F } Sixty five rupees only per tonne.
 (b) Non-Coking Coal Grade G }

Lignite Fifty rupees only per tonne.

- (vi) **Group VI Coals:**
 Coal produced in the State of Andhra Pradesh. Ninety rupees only per tonne.

**B. Coal produced in the State of West Bengal
 Coal Group**

- (i) **Group I Coals:**
 (a) Coking Coal }
 Steel Grade-I } Seven rupees only per tonne.
 Steel Grade-II }
 Washery Grade-I }

- (ii) **Group II Coals:**
 (a) Coking Coal Washery Grade-II }
 Coking Coal Washery Grade-III }
 (b) Semi-Coking Coal Grade-I } Six rupees and fifty paise only per
 Semi-Coking Coal Grade-II } tonne.
 (c) Non-Coking Coal Grade-A }
 Non-Coking Coal Grade-B }

- (iii) **Group III coals:**
 (a) Coking Coal Washery Grade-IV } Five rupees and fifty paise only per
 (b) Non-Coking Coal Grade-C } tonne.

- (iv) **Group IV Coals:**
 (a) Non-Coking Coal Grade-D } Four rupees and thirty paise only per
 (b) Non-Coking Coal Grade-E } tonne.

- (v) **Group V Coals:**
 (a) Non-Coking Coal Grade-F } Two rupees and fifty paise only per
 (b) Non-Coking Coal Grade-G } tonne.]

12. Copper Three point two per cent of London Metal Exchange copper metal price charge-able on the contained copper metal in ore produced.

13. Corundum Ten per cent of sale price on ad valorem basis.

- | | |
|--|---|
| 14. Diamond | Ten per cent of sale price on ad valorem basis. |
| 15. Dolomite | Forty five rupees per tonne. |
| 16. Felspar | Ten per cent of sale price on ad valorem basis. |
| 17. Fireclay
(including plastic, pipe, lithomargic and Natural pozzolanic clay) | Twelve per cent of sale price on ad valorem basis. |
| 18. Fluorspar
(also called fluorite) | Five per cent of sale price on ad valorem basis. |
| 19. Garnet: | |
| (a) Abrasive | Three per cent of sale price on ad valorem basis. |
| (b) Gem | Ten per cent of sale price on ad valorem basis. |
| 20. Gold: | |
| (a) Primary | One and half per cent of London Billion Market Association Price (commonly referred to as "London Price") chargeable on the contained gold metal in ore produced. |
| (b) By-product gold | Two and half per cent of London Billion Market Association Price (commonly referred to as "London Price") chargeable on by-product gold metal actually produced. |
| 21. Graphite: | |
| (a) with 80 per cent or more Fixed carbon | Two hundred and twenty five rupees per tonne. |
| (b) with 40 per cent or more fixed carbon but less than 80 per cent fixed carbon | One hundred and thirty rupees per tonne. |
| (c) with less than 40 per cent fixed carbon | Fifty rupees per tonne. |
| 22. Gypsum | Twenty per cent of sale price on ad valorem basis. |

23. Iron Ore:	
(i) Lumps:	
(a) with 65 per cent Fe content or more	Twenty seven rupees per tonne.
(b) with 62 per cent Fe content or more but less than 65 per cent Fe content.	Sixteen rupees per tonne.
(c) with less than 62 per cent Fe content	Eleven rupees per tonne.
(ii) Fines:	
(a) with 65 per cent Fe content or more	Nineteen rupees per tonne.
(b) with 62 per cent Fe content or more but less than 65 per cent Fe content.	Eleven rupees per tonne.
(c) with less than 62 per cent Fe content	Eight rupees per tonne.
(iii) Concentrates prepared by beneficiation and/or concentration of low grade ore containing 40 per cent Fe or less.	Four rupees per tonne.
24. Kyanite	Ten per cent of sale price on ad valorem basis.
25. Lead	Five per cent of London Metal Exchange lead metal price chargeable on the contained lead metal in ore produced.
26. Limestone:	
(a) L.D. grade (less than one and Half per cent silica content)	Fifty five rupees per tonne.
(b) Others	Forty five rupees per tonne
27. Lime kankar	Forty five rupees per tonne.
28. Limeshell	Forty five rupees per tonne.
29. Magnesite	Three per cent of sale price on ad valorem basis.

30. Manganese Ore:	
(a) Ore of all grades	Three per cent of sale price on ad valorem basis.
(b) Concentrates	One per cent of sale price on ad valorem basis.
31. Crude Mica, Waste Mica and Scrap Mica	Four per cent of sale price on ad valorem basis.
32. Monazite	One hundred and twenty Five rupees per tonne.
33. Nickel	Zero point one two per cent of London Metal Exchange nickel metal price chargeable on contained nickel metal in ore produced.
34. Ochre	Fifteen rupees per tonne.
35. Pyrites	Two per cent of sale price on ad valorem basis.
36. Pyrophyllite	Fifteen per cent of sale on ad valorem basis.
37. Quartz, Silica sand, Moulding sand and Quartzite	Twenty rupees per tonne
38. Ruby	Ten per cent of sale price on ad valorem basis.
39. Sand for Stowing	**
40. Selenite	Ten per cent of sale price on ad valorem basis.
41. Sillimanite	Two and half per cent of sale Price on ad valorem basis.
42. Silver	
(a) By-product	Five per cent of London Metal Exchange price chargeable on by-product silver metal actually produced.
(b) Primary silver	Five per cent of London Metal Exchange silver metal price chargeable on the contained silver metal in ore produced.
43. Slate	Forty five rupees per tonne.
44. Talc, Steatite and Soapstone	Fifteen per cent of sale price on ad valorem basis.

45.	Tin	Five per cent of London Metal Exchange tin metal price chargeable on the contained tin metal in ore produced.
46.	Tungsten	Twenty rupees per unit per cent of contained WO_3 per tonne of ore and on pro rata basis.
47.	Uranium	Five rupees (for dry ore with U_3O_8 content of zero point zero five per cent with pro rata increase/decrease at the rate of one rupee and fifty paise per metric tonne of ore for zero point zero one per cent increase/decrease).
48.	Vermiculite	Three per cent of sale price on ad valorem basis.
49.	Wollastonite	Ten per cent of sale price on ad valorem basis.
50.	Zinc	Six point six per cent of London metal Exchange zinc metal price on ad valorem basis chargeable on contained zinc metal in ore produced.
51.	All other minerals not Here-in-before specified [Clay (others), Chalk, Diaspore, Dunite, Felsite, Fuschite-Quartzite, Jasper, Perlite, Rock Salt, Shale, Pyroxenite etc.]	Ten per cent of sale price on ad valorem basis.

* Explanation:

1. For the purpose of this item the specification of the coal shall be as prescribed under clause 3 of the Colliery Control Order, 2000.

2. Rates of royalty in respect of item No.11 relating to Coal including Lignite as revised vide notification number G.S.R. 572 (E), dated the 16th August, 2002 of the Government of India in the Department of Coal shall remain in force until revised through a separate notification by the Department of Coal.

** Rates of Royalty in respect of item 39 relating to Sand for Stowing as revised vide notification number G.S.R.214 (E) dated the 11th April, 1997 will remain in force until revised through a separate notification by the Department of Coal.

Note: The rates of royalty for the State of West Bengal in respect of minerals except the mineral specified against item number 11 shall remain the same as specified in the notification of the Government of India in the Ministry of Steel and Mines (Department of Mines) number G.S.R.458 (E), dated the 5th May, 1987.

Annexure 10

International Comparison of Royalty Rates

	Australia	China	Brazil	Indonesia	Uzbekistan	India
Asbestos	5 % of realised value	2–4 % of sale value	NA	NA	3 % of sale price	Tonnage basis
China Clay	5% of realised value	NA	NA.	NA	7.9 % of sale value	Tonnage basis
Copper	5 % of realised value	2 % of sale value	2 % of net invoice value	4 % of sale value	7.9 % of sale price	3.2 % of LME metal price
Chromite	5 % of sale price	NA	NA	3.5 % of sale value	NA	7.5 % of sale value
Bauxite	7.5 % of realised value	2–4 % of sale value	NA	3.25 % of sale value	NA	0.35 % linked to LME price
Diamond	7.5 % of realised value	Industrial: 2 % of sale value; Gem: 4 % of sale value	NA	6.5 % of sale value	2–4 % of sale price	10 % of sale value
Gold	1.25 % of realised value	4 % of sale value	1 % on net invoice value	3.75 % on sale price	2.8 % of sale price	1.5 % of London Bullion Market Association price
Graphite	5 % of realised value	NA	NA	NA	6 % of sale price	Tonnage basis
Iron ore	5–7.5 % of realised value depending on grade	2 % of sale value	NA	3 % of sale price	3 % of gross value	Tonnage basis depending on grade
Magnesite	5 % of realised value	2–4 % of sale value	NA	NA	NA	3 % of sale price

Note: LME: London Metal Exchange.

Source: GOI (2004), 'Report of the Study Group on Royalty for Major Minerals (other than coal, lignite and sand for storing)', Ministry of Mines.

Annexure 11

Eleven Large Non-captive Iron Ore Mines in 2004–05

Sl. No.	Names of mine owners	
Eastern Sector (Orissa–Jharkhand):		
1.	Essel Mining and Industries Ltd.	
2.	Rungta Mines Ltd.	
3.	Sunderlal Mohanlal Sharda (operated by Jindal Steel & Power Ltd.)	
4.	Orissa Mining Corporation	
Bellary–Hospet Sector:		
5.	MSPL Ltd. (Group)	
6.	V.S. Lad & Sons	
7.	Mysore Minerals Ltd.	
8.	Kariganur Mineral Mining Industry	
Goa Sector:		
9.	Sesa Goa Ltd. (Group) operating in Chitradurga–Shimoga and Bellary-Hospet in Karnataka and Orissa (5.5 million tonnes in Goa)	
10.	V.S. Dempo & Co. (P) Ltd.	
11.	V.M. Salgaocar & Bro. (P) Ltd.	

Note: Excluding NMDC.

Annexure 12

Production, Consumption, Exports, and Iron Ore Surplus in India

(million tonnes)

	Production	Domestic consumption	Exports	Surplus
2002–03	99.07	40.94	48.02	10.11
2003–04	122.84	44.97	62.57	15.30
2004–05 (p)	142.71	48.15	78.14	16.42

Note: p: provisional figures.

Source: 1. Indian Bureau of Mines, Nagpur;
2. Joint Plant Committee, Kolkata;
3. Minerals and Metals Trading Corporation (MMTC), New Delhi;
4. GMOEA, Panjim, and other private exporters.

Annexure 13

Iron Ore Production by Sectors: Captive vs. Non-Captive

(million tonnes)

Sector	2002-03			2003-04			2004-05 (p)		
	Captive	Non-captive	Total	Captive	Non-captive	Total	Captive	Non-captive	Total
Public Sector	20.45 (41.16)	29.24 (58.84)	49.69 (100)	23.43 (40.72)	34.11 (59.28)	57.54 (100)	22.30 (39.01)	34.87 (60.99)	57.17 (100)
Private Sector	9.53 (19.30)	39.85 (80.70)	49.38 (100)	10.06 (15.41)	55.24 (84.59)	65.30 (100)	12.74 (14.89)	72.80 (85.11)	85.54 (100)
Total	29.98 (30.26)	69.09 (69.74)	99.07 (100)	33.49 (27.26)	89.35 (72.74)	122.84 (100)	35.04 (24.55)	107.67 (75.45)	142.71 (100)

Note: p: provisional figures;

Figures in parentheses indicate the percentage contribution of captive and non-captive in the total production by public and private sectors respectively.

Source: Indian Bureau of Mines, Nagpur.