

Indian Mineral Industry at a Glance 2022-23



Issued by
**Controller General
Indian Bureau of Mines
Nagpur**

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Indian Bureau of Mines

Nagpur

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PREFACE

"Indian Mineral Industry at a Glance 2022-23" is the 42nd edition in its series. Erstwhile published series 'Statistical Profile of Minerals' has been merged with IMIG 2022-23.

The 38th issue of the series 'Statistical Profile of Minerals 2021-22' being the separately published last issue, the information on mineral production for 'Statistical Profile of Minerals 2022-23' has been included in this issue as per the recommendations of **"Report of Study Group to recognize Indian Mineral Yearbook and other Publications of IBM"** (enclosed in annexure I) and data of Statistical Profile of Minerals incorporate in this publication.

The publication has now been divided into five sections viz., **General, Minerals, Metals and Alloys, Foreign Trade and Employment in Mines** for easy of reference. The salient features of the data presented in each section are highlighted at the beginning of the section. The Indian Mineral Industry at a Glance is handy and a ready reckoner with important features of the mining sector. It is stated that some of the figures of GDP/GVA, consumption, foreign trade, employment, mineral based product etc. pertaining to previous years are updated based on latest data.

The publication has been brought out by the Mining and Mineral Statistics Division of the Bureau. This Division, in addition to the extensive data available with it, has also utilised the data furnished by the Mineral Economics Division on Mineral Resources and Mining Leases for Section-1.

The foreign trade data on minerals, metals and selected mineral-based products is received from the Director General of Commercial Intelligence & Statistics (DGCI&S), Kolkata. Country-wise break-up of some of the minerals and metals at 8-digit customs tariff / ITC (HS) code level is not available for few items. The entire data of such minerals and metals have been grouped under country-item 'unspecified', which has been clubbed with 'others'. The data for the remaining countries in respect of tables of such minerals have limitations to that extent.

The Bureau is thankful to the Director General of Commercial Intelligence and Statistics, Kolkata; The Department of Industrial Policy & Promotion, Office of the Economic Advisor, Ministry of Commerce & Industry and Central Statistical Office for providing the valuable information for this publication.

During the year 2014-15, 31 non-metallic minerals were notified as minor minerals by the Central Government w.e.f. 10.02.2015. The figures of such minerals for the year 2014-15 were available for the period from April 2014 to January 2015. Therefore, the figures of these minerals are of the period of 10 months (April 2014 to January 2015) and not comparable with those of previous years.

This publication is compiled as a reference material on mining and minerals related information to all those who are directly or indirectly associated with the mining and mineral sector.

Place : Nagpur
Dated: May, 2025

**Controller General
Indian Bureau of Mines**

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Note: (i) Figures for the previous year have been revised wherever necessary. Figures for the latest year are provisional and subject to revision.

(ii) In certain cases sum of individual items may not tally with the total of the table due to rounding off the figures

Symbols and Abbreviations

(e)	अनुमानित	Estimated
N.A.	अनुपलब्ध	Not Available
(R)	संशोधित	Revised
++	नगण्य	Negligible
-	निरंक	Nil
(P)	अनंतिम	Provisional
%	प्रतिशत	Percentage
kg	किलोग्राम	Kilogram
t	टन	Tonne
'000 t	हज़ार टन	Thousand Tonne
m.t.	मिलियन टन	Million Tonne
m.cu.m.	मिलियन घन	Million Cubic Metres
R.O.M.	खान निर्गत	Run-of-mine
Av.	औसत	Average
m.m.	मिलीमीटर	Millimetre
h.p.	अश्व उर्जा	Horsepower

Section-1**General**

Reserves/Resources	Mineral reserves and resources as on 01.04.2020	: 8-10
Mining Leases	Mineral wise Mining Leases as on 31.03.2023 State wise Mining Lease as on 31.03.2023	:11-13
Reporting Mines	Number of Reporting Mines (By Mineral Groups) Number of Reporting Mines (Mineral Wise) Number of Reporting Mines (State Wise)	:14 :15-16 :17
GDP and Indices	Gross Value Added (GVA) at Current Prices Index of Mineral Production (By Mineral Groups) Wholesale Price Index (By Groups)	:18 :19

Section-1

General

The value of mineral production in India, covering both metallic and non-metallic reached Rs. 120108 Crores in 2022-23. This marked a decline of approximately 13% compared to the previous year's mineral production value. The metallic minerals contributed about 90% of the total value, while non-metallic minerals accounted for the remaining 10% in the year 2022-23.

During 2022-23, the production of metallic mineral except gold has gone up during last decade similarly the production of non-metallic excluding kyanite has also shown an upward trend during last decade.

The production and value of fuel minerals have not been included in this publication for 2022–23, in accordance with the recommendations of the **“Report of the Study Group to Reorganize the Indian Mineral Yearbook and Other Publications of IBM.”**

The index of mineral production (base 2011-12=100) has increased from 113.3 in 2021-22 to 119.9 in 2022-23 showing with increase of 6 % as compared to the previous year (*Table -7*).

The total number of mines in 2022-23 (excluding atomic, fuel and minor minerals) was reported 1408 (Metallic-577 & Non-metallic-831 mines) (*Table -4*).

Metallic Minerals:

The production of all metallic minerals, except gold, registered a spectacular growth during the last 70 years. The production of iron ore increased from 4.1 million tonne in 1951 to 257 million tonne in 2022-23. The production of bauxite increased from 68 thousand tonne in 1951 to 23 million tonne in 2022-23, chromite from 17 thousand tonne to 3.5 million tonne, manganese ore from 1398 thousand tonne to 2827 thousand tonne, lead concentrates from 2 thousand tonne to 377 thousand tonne and zinc concentrates from 2 thousand tonne to 1670 thousand tonne, copper ore from 375 thousand tonnes to 3326 thousand tonnes. The production of silver, a by-product in the country, was at 713768 kg. in 2022- 23 as compared to 454 kg. in 1951. However, the production of primary gold decreased from 7041 kilogram in 1951 to 1433 kilogram in 2022-23 (*Table-12*).

Non-Metallic Minerals:

In the non-metallic minerals, the production of limestone at 406 million tonne in 2022-23 was more than about 78 times of its production 5.2 million tonnes in 1951. The production of phosphorite was touched 1978 thousand tonnes in 2022-23, magnesite from 119 thousand tonne to 108 thousand tonne in last 7 decade. The production of diamond also increased from 2 thousand carat in 1951 to 388 thousand carat. In 2022-23 while the production of kyanite was declined from 43 thousand tonne in the year 1951 to 2.8 thousand tonne in the year 2022-23 (*Table -12*).

Section 1 : General : Reserves/Resources
Table-1 : Mineral Reserves and Resources

Mineral	Unit	As on 01.04.2020		
		Reserves (A)	Remaining Resources (B)	Total (A+B)
Alexandrite	--	N.E.	N.E.	N.E.
Andalusite	'000 t	-	126050	126050
Antimony				
Ore	Tonne	7503	11180	18683
Metal	Tonne	75	180	255
Apatite	Tonne	29395	21080904	21110299
Asbestos	Tonne	-	22908067	22908067
Bauxite	'000 t	646493	4311754	4958248
Borax	Tonne	0	74204	74204
Chromite	'000 t	78535	253150	331685
Cobalt (Ore)	Million Tonnes	-	45	45
Copper				
Ore	'000 t	163891	1496979	1660870
Metal	'000 t	2162	10036	12197
Diamond	Carats	847559	30876432	31723991
Diatomite	'000 t	-	2885	2885
Emerald	Kilogram	-	55869	55869
Fluorite	Tonne	404241	20588239	20992480
Garnet	Tonne	8590472	47416654	56007126
Gold				
Ore(Primary)	Tonne	23728100	494506270	518234370
Metal(Primary)	Tonne	93	515	607
Ore (Placer)	Tonne	-	26121000	26121000
Metal (Placer)	Tonne	-	6	6
Graphite	Tonne	8563411	203060176	211623587
Iron Ore (Haematite)	'000 t	6209034	17848870	24057905
Iron Ore (Magnetite)	'000 t	202823	11024791	11227614
Kyanite	Tonne	846865	104835455	105682321
Lead-Zinc				
Ore	'000 t	103275	663222	766497
Lead Metal	'000 t	1900	10970	12870
Zinc Metal	'000 t	7438	25732	33170
Lead+Zinc Metal	'000 t	-	143	143
Limestone	'000 t	19028470	208560789	227589259
Magnesite	'000 t	66070	393047	459117
Manganese Ore	'000 t	75041	428583	503624
Marl	Tonne	68145000	31053477	99198477

Section 1 : General : Reserves/Resources
Table-1 : Mineral Reserves and Resources (contd...)

Mineral	Unit	As on 01.04.2020		
		Reserves (A)	Remaining Resources (B)	Total (A+B)
Molybdenum				
Ore	Tonne	-	27203398	27203398
Contained MoS2	Tonne	-	16891	16891
Nickel Ore	Million Tonnes	-	189	189
Perlite	'000 t	-	2406	2406
Platinum group of metals (PGM)	Tonnes of Metal Contained	-	21	21
Potash	Million Tonnes	-	23091	23091
Pyrite	'000 t	-	1674401	1674401
Rare Earth Elements (REE)	Tonne	-	459727	459727
Rock Phosphate	Tonne	30876093	280377392	311253485
Rock Salt	'000 t	3860	8920	12780
Ruby	Kilogram	-	5349	5349
Sapphire	Kilogram	-	450	450
Sillimanite	Tonne	8262300	64005091	72267391
Silver				
Ore	Tonne	170446020	398197732	568643752
Metal	Tonne	7707	22561	30268
Sulphur (Native)	'000 t	-	210	210
Tin				
Ore	Tonne	2101	83720794	83722895
Metal	Tonne	974	102783	103757
Titanium	Tonne	15998625	411108526	427107150
Tungsten				
Ore	Tonne	-	89432464	89432464
Metal	Tonne	-	144650	144650
Vanadium				
Ore	Tonne	-	24633855	24633855
Contained V2O5	Tonne	-	64594	64594
Vermiculite	Tonne	1590996	765227	2356223
Wollastonite	Tonne	2680978	22427488	25108466
Zircon	Tonne	669466	1674435	2343901

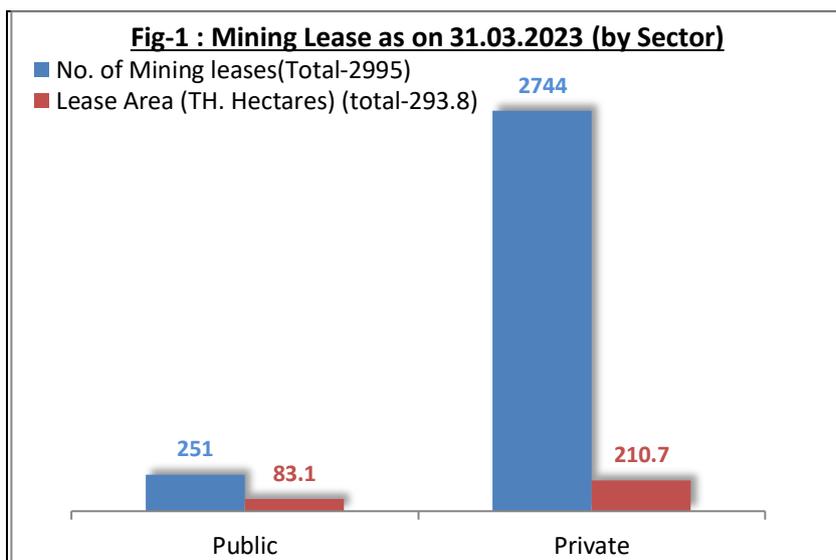
Source: National Mineral Inventory as on 01.04.2020

(P): provisional

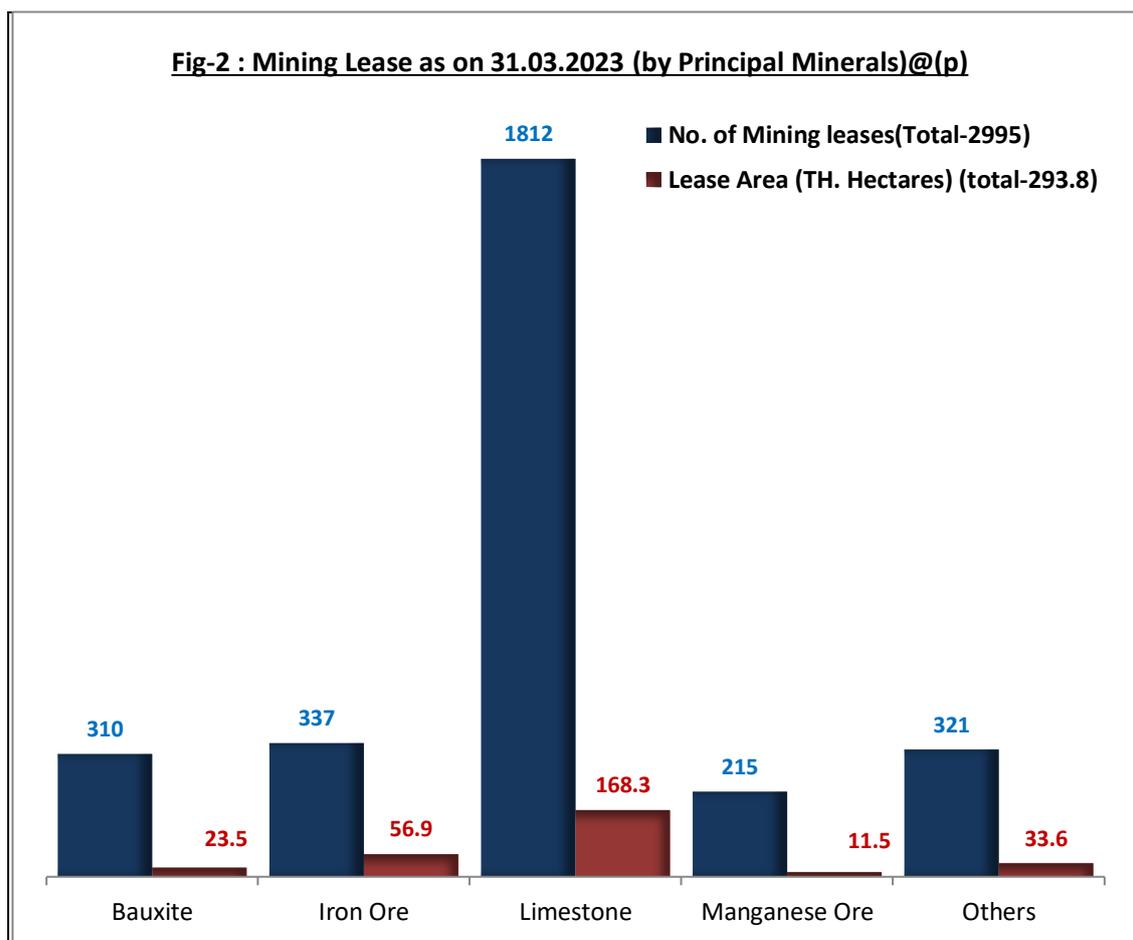
N.E : Not estimated

Note: Figures are rounded-off.

Section 1 : General : Mining Leases



Source: Data as received from respective State Government Departments (DGMs/DMGs etc).
 @ Excluding fuel, atomic & minor minerals
 (p): provisional



Source: Data as received from respective State Government Departments (DGMs/DMGs etc).
 @ Excluding fuel, atomic & minor minerals
 (p): provisional

Section 1 : General : Mining Leases

Table-2: Mineral wise Mining Leases (as on 31-3-2023)@(p)

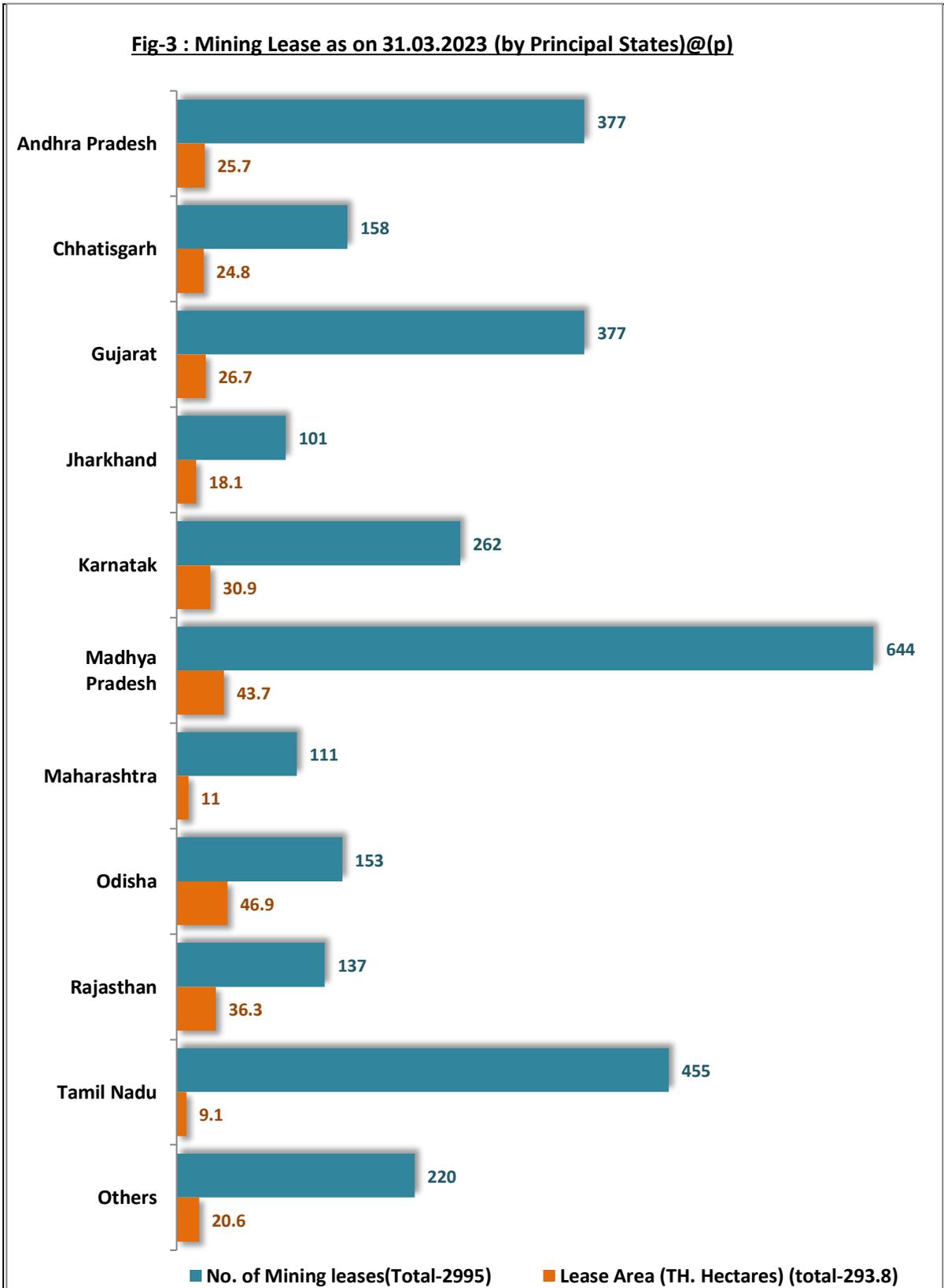
Mineral	No. of Mining Leases Granted/ Executed	Lease Area (in Hectares)	Mineral	No. of Mining Leases Granted/ Executed	Lease Area (in Hectares)
Grand Total	2995	293811.54	Non-Metallic Total	2063	178092.597
Metallic Total	932	115718.94	Amethyst	2	5.83
Aluminous Laterite	1	90.36	Apatite	1	13.47
Bauxite	310	23524.363	Beryl	2	9.8
Chromite	22	5620.859	Borax	1	159
Copper Ore	9	3916.851	Diamond	2	275.963
Gold	10	6934.26	Emerald	2	125.64
Iron Ore	337	56920.617	Epidote	1	4.0515
Lead and Zinc Ore	11	6890.4875	Fluorite	7	416.158
Manganese Ore	215	11482.96	Fluorspar	1	63.2
Tin	17	338.183	Garnet	20	118.7838
			Gemstone Cats Eye	3	82.357
			Graphite	27	1199.0369
			Iolite	2	16.417
			Kyanite	15	288.982
			Limeshell	18	873.958
			Limestone	1812	168264.605
			Magnesite	33	2301.721
			Moulding Sand	6	39.232
			Perlite	1	144.8831
			Rock Phosphate	7	1534.237
			Rock Salt	1	8.122
			Selenite	4	624.3466
			Semi Precious Stone	14	164.214
			Siliceous Earth	17	168.4086
			Sillamanite	1	4.64
			Stibnite/Antimony	1	40.468
			Vermiculite	50	890.9683
			Wollastonite	12	254.1042

Source: Data as received from respective State Government Departments (DGMs/DMGs etc).

@: Excluding fuel, atomic & minor minerals

(p): provisional

Section 1 : General : Mining Leases



Source: Data as received from respective State Government Departments (DGMs/DMGs etc).
 @ Excluding fuel, atomic & minor minerals
 (p): provisional

Section 1 : General : Mining Leases

Table-3 : State wise Mining Leases as on 31-3-2023@(p)

State/UT	No. of Mining Leases Granted/Executed	Lease Area (in Hectares)
All India	2995	293811.5373
Andhra Pradesh	377	25650.8434
Assam	6	858.5
Bihar	5	53.378
Chhattisgarh	158	24825.281
Goa	10	918.3144
Gujarat	377	26732.8153
Haryana	4	46.85
Himachal Pradesh	39	2430.489
Jammu & Kashmir	37	1330.231
Jharkhand	101	18099.9169
Karnataka	262	30945.005
Kerala	5	421.654
Ladakh (UT)	1	159
Madhya Pradesh	644	43658.856
Maharashtra	111	10990.034
Meghalaya	23	824.6102
Odisha	153	46921.1818
Rajasthan	137	36253.10025
Tamil Nadu	455	9096.255
Telangana	78	10429.733
Uttar Pradesh	4	2960.21
Uttarakhand	7	191.809
West Bengal	1	13.47

Source: Data as received from respective State Government Departments (DGMs/DMGs etc).

@: Excluding fuel, atomic & minor minerals

(p): provisional

Section 1 : General : Reporting Mines

Fig 4 : No. of Reporting Mines(by Mineral Group)

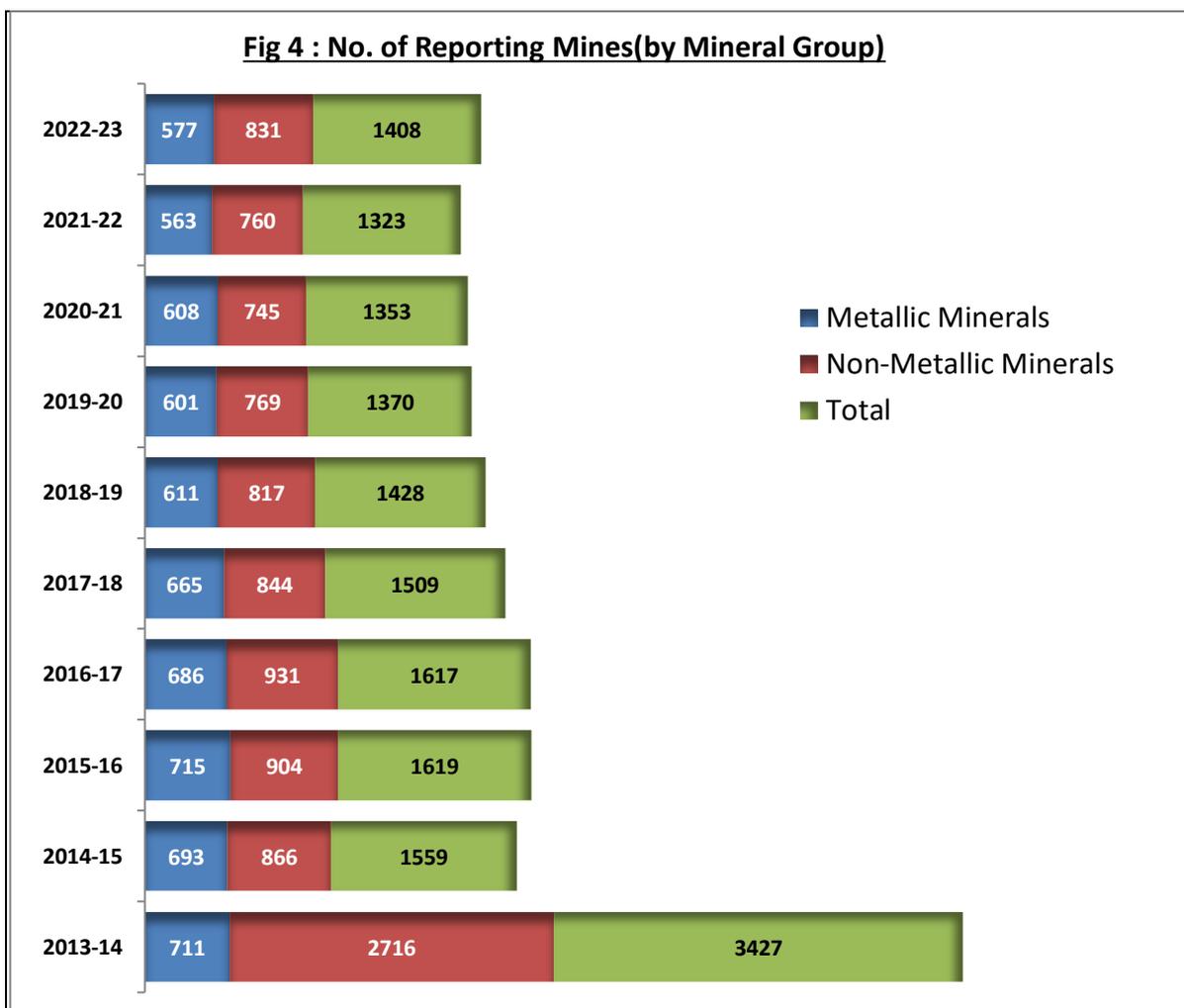
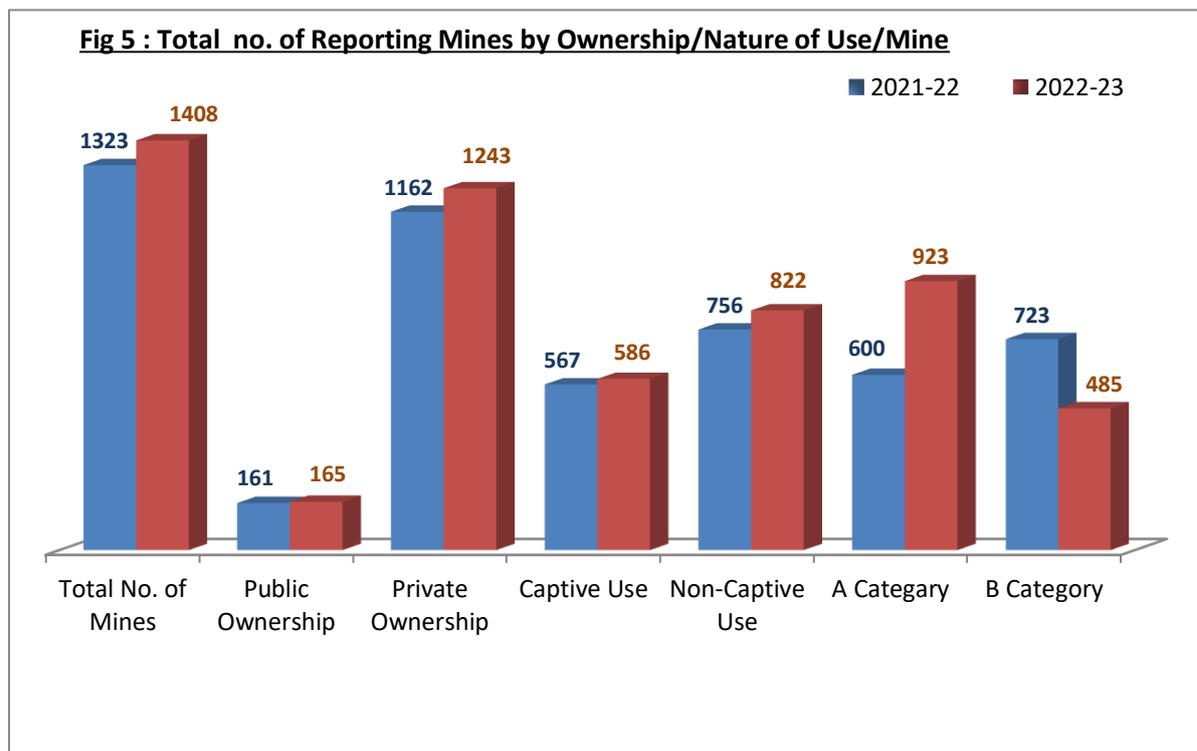


Fig 5 : Total no. of Reporting Mines by Ownership/Nature of Use/Mine



Note : Excluding Atomic, Fuel and Minor Minerals

Section 1 : General : Reporting Mines

Table 4 : Number of Reporting Mines (Mineral wise) (contd...)														
Mineral	2022-23 @							2021-22 @						
	Total No. of Mines	Type of Ownership		Nature of Use		Mine Category		Total No. of Mines	Type of Ownership		Nature of Use		Mine Category	
		Public	Private	Captive	Non-Captive	A	B		Public	Private	Captive	Non-Captive	A	B
All India	1408	165	1243	586	822	923	485	1323	161	1162	567	756	600	723
Metallic Total	577	110	467	141	436	274	303	563	116	447	137	426	272	291
Bauxite	160	19	141	55	105	43	117	127	19	108	47	80	36	91
Chromite	18	7	11	5	13	17	1	20	9	11	5	15	19	1
Copper Ore & Concentrates	5	5	0	5	0	5	0	5	5	0	5	0	5	0
Gold	6	4	2	6	0	6	0	6	4	2	6	0	6	0
Iron Ore & Concentrates	242	43	199	50	192	144	98	255	43	212	51	204	151	104
Lead & Zinc Concentrates	9	1	8	8	1	8	1	10	2	8	9	1	9	1
Manganese Ore	133	30	103	9	124	51	82	134	33	101	9	125	46	88
Silver	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tin Concentrates	4	1	3	3	1	0	4	6	1	5	5	1	0	6

@Excluding fuel, atomic & minor minerals

Section 1 : General : Reporting Mines

Table 4 : Number of Reporting Mines (Mineral wise) (contd...)														
Mineral	2022-23 @							2021-22 @						
	Total No. of Mines	Type of Ownership		Nature of Use		Mine Category		Total No. of Mines	Type of Ownership		Nature of Use		Mine Category	
		Public	Private	Captive	Non-Captive	A	B		Public	Private	Captive	Non-Captive	A	B
Total Non-Metallic	831	55	776	445	386	649	182	760	45	715	430	330	328	432
Apatite	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Asbestos	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Diamond	3	3	0	0	3	2	1	3	3	0	0	3	2	1
Emerald	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Flint Stone	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fluorite	4	3	1	2	2	2	2	1	1	0	0	1	0	1
Garnet	6	0	6	0	6	0	6	7	0	7	0	7	0	7
Graphite	11	1	10	2	9	3	8	14	1	13	2	12	3	11
Iolite	3	0	3	1	2	0	3	3	0	3	0	3	0	3
Kyanite	5	2	3	0	5	0	5	5	2	3	0	5	0	5
Lime Shell	2	0	2	0	2	0	2	1	0	1	0	1	0	1
Limestone	747	31	716	432	315	620	127	676	22	654	420	256	303	373
Magnesite	10	5	5	4	6	7	3	10	5	5	4	6	7	3
Marl	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Moulding Sand	3	0	3	0	3	0	3	4	0	4	0	4	0	4
Phosphorite	8	6	2	0	8	5	3	7	6	1	0	7	4	3
Salt (Rock)	1	1	0	0	1	0	1	1	1	0	0	1	0	1
Selenite	3	2	1	1	2	1	2	4	3	1	1	3	1	3
Siliceous Earth	14	0	14	0	14	7	7	13	0	13	0	13	6	7
Sillimanite	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vermiculite	6	1	5	2	4	1	5	6	1	5	2	4	1	5
Wollastonite	5	0	5	1	4	1	4	5	0	5	1	4	1	4

@Excluding fuel, atomic & minor minerals

Section 1 : General : Reporting Mines

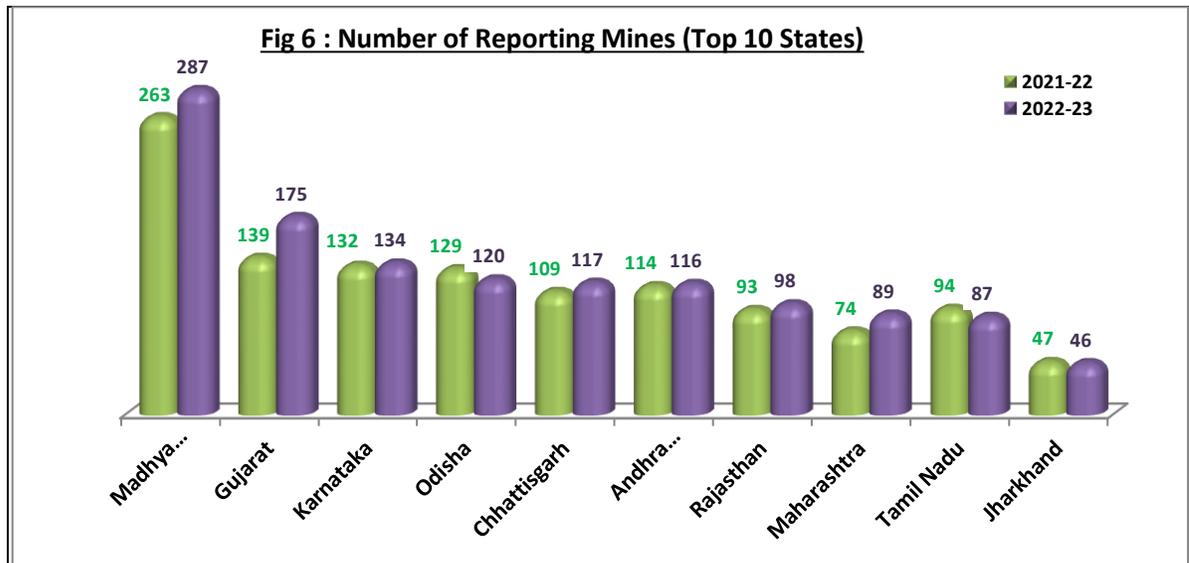


Table 5 : Number of Reporting Mines (State wise)

State	2022-23@	2021-22@
All India	1323	1408
Andhra Pradesh	114	116
Arunachal Pradesh	0	0
Assam	2	3
Bihar	1	1
Chhattisgarh	109	117
Goa	35	30
Gujarat	139	175
Haryana	0	0
Himachal Pradesh	23	24
Jammu and Kashmir	10	19
Jharkhand	47	46
Karnataka	132	134
Kerala	1	1
Madhya Pradesh	263	287
Maharashtra	74	89
Meghalaya	16	18
Odisha	129	120
Rajasthan	93	98
Tamil Nadu	94	87
Telangana	38	39
Tripura	0	0
Uttar Pradesh	2	3
Uttarakhand	1	1
West Bengal	0	0

@Excluding fuel, atomic & minor minerals.

Section 1 : General : GDP and Indices

Table 6 : Gross Value Added (GVA) at Current Prices (Rs. Crores)			
Financial Year	Total GVA	Mining & Quarrying	Percentage
2013-14(NS)	10380813	295978	2.9
2014-15(NS)	11481794	314177	2.7
2015-16(NS)	12566646	301230	2.4
2016-17(NS)	13935917	321872	2.3
2017-18(2 nd RE)	15513122	357788	2.3
2018-19(2 nd RE)	17161213	377171	2.2
2019-20(2 nd RE)	18355109	358517	2.0
2020-21(2 nd RE)	18188780	316268	1.7
2021-22 (2 nd RE)	21635584	439339	2.0
2022-23 (FRE)	24659041	494602	2.0

(NS): New Series

(RE): Revised Estimates

Table 7 : Index of Mineral Production, 2013-14 to 2022-23				
(By Mineral Groups)				
Year	Fuels	Metallic Minerals	Non-Metallic Minerals	All Minerals
(Base 2004-05)	W=857.18	W=80.765	W=42.327	W=1000
2013-14	125.5	106.7	162.1	124.7
2014-15	129.1	92.1	175.4	126.5
(Base 2011-12)	W=751.172	W=230.004	W=18.824	W=1000
2015-16	98.1	94	106.5	97.3
2016-17	98.7	114.6	107.8	102.5
2017-18	100.3	119	117.4	104.9
2018-19	102.6	123.5	128.1	107.9
2019-20	99.6	141.3	120.9	109.6
2020-21	95.5	117.7	117.4	101
2021-22	102.6	146.8	130.1	113.3
2022-23	110.6	148.6	137.7	119.9

Note: Minor Minerals are excluded from Item Basket for Base Year 2011-12

Section 1 : General : GDP and Indices

Table 8 : Wholesale Price Index, 2013-14 to 2022-23					
(By Groups)					
Year	All Commodities	Minerals	Metallic Minerals	Other Minerals	Mineral Oils
(Base 2011-12=100)					
2013-14	112.5	114.4	105.2	146.8	121.6
2014-15	113.9	118.6	112.2	140.7	108.7
2015-16	109.7	105.6	91.7	154.1	73.9
2016-17	111.6	113.1	98.4	164.4	73.3
2017-18	114.9	122.5	109.1	169.3	82.5
2018-19	119.8	136.5	123.0	183.5	96.7
2019-20	121.8	154.5	147.4	179.0	92.3
2020-21	123.4	164.9	159.8	183.1	79.2
2021-22	139.4	197.2	193.3	211.0	126.2
2022-23	152.5	203.5	191.7	245.2	172.9

Source: Office of Economic Adviser, DPIIT

Section 2
Minerals

	Value of Mineral Production (By Mineral Group), 2013-14 to 2022-23	:22
Mineral Production	Value of Mineral Production (By States), 2018-19 to 2022-23	:23
	Number of Mines (By Type of Ownership / By Nature of Use / By Mine Category), 2013-14 to 2022-23	:24
	Mineral Production (By Type of Ownership / By Nature of Use / By Mine Category), 2013-14 to 2022-23	:25
Mineral Overview	Mineral wise Overview (by Number of Mines / Mineral Production / Closing Stock / Labour Employed), 2013-14 to 2022-23	:26-34

Mineral Production

Metallic Minerals:

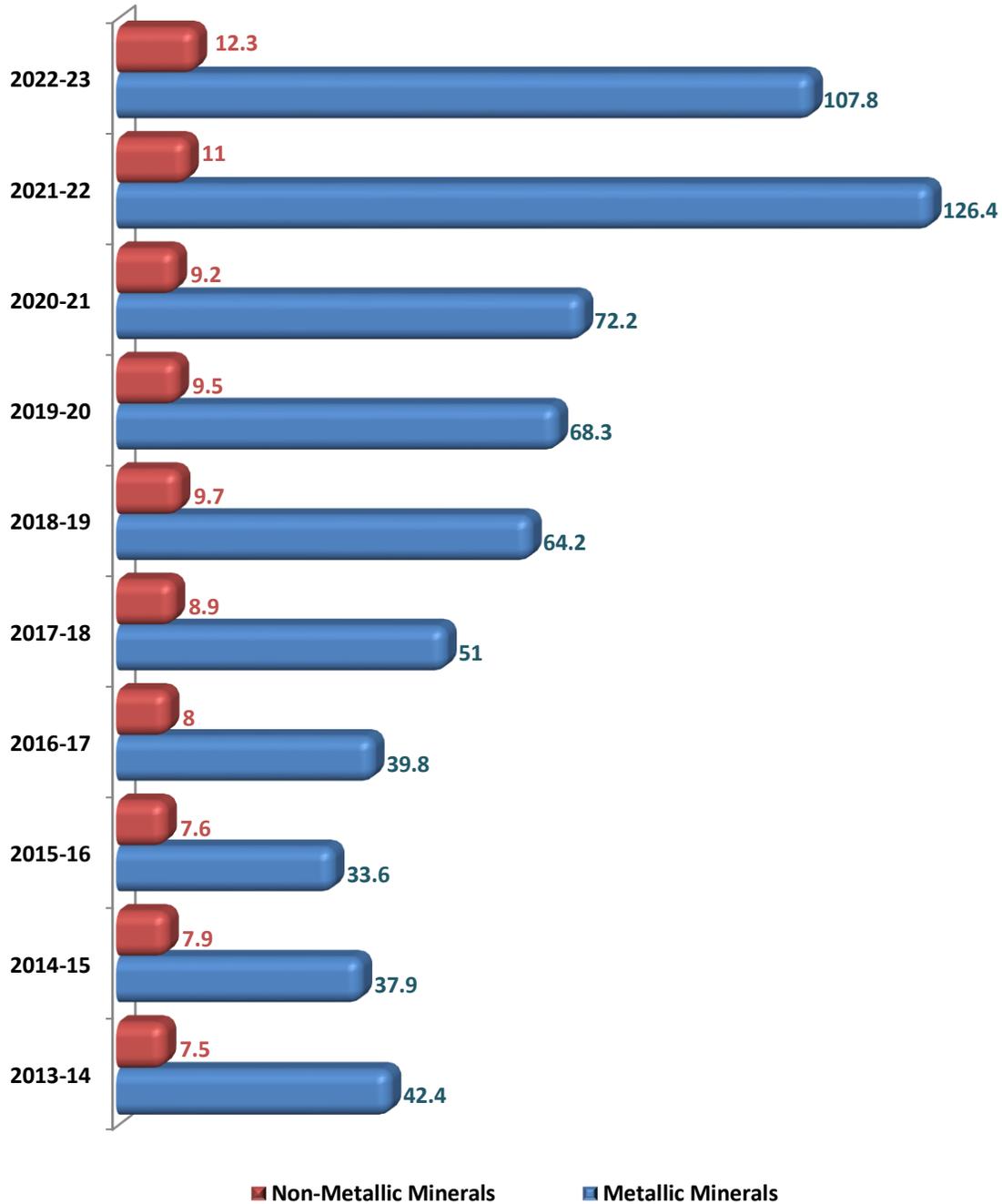
The production of bauxite was at 22 million tonne in 2021-2022 and 23 million tonne in the year 2022-2023, its production during the decade was shown in a fluctuating trend. The production of chromite was highest at 4.3 million tonne in the 2010-11 in the decade and its production was recorded 3.5 million tonnes in 2022-2023 with decrease about 5 % as compared to previous year. The output of copper ore had a fluctuating trend during the decade and their respective production was at 3570 thousand tone for the year 2021-2022 and at 3326 thousand tonne the year 2022-2023 respectively. it has been showing with a decrease 7% over the preceding year. The production of iron ore touched highest level 254 million tonnes in 2021-2022 during the decade but its production was shown in fluctuation trend during the decade and recorded at 257 million tonnes in 2022-23 with 1 % increase over the preceding year. The production of manganese ore showed fluctuating trend during the decade and touched at 2827 thousand tonnes in 2022-23 with increase 5% as compared to previous year. The production of lead and zinc ores at 16744 thousand tonne, lead concentrates at 377 thousand tonne and that of zinc concentrates at 1670 thousand tonne in 2022-23, showing an overall increase in lead & zinc ore, lead & zinc concentrates as compared to the previous year and touched highest level during the decade. However the production of primary gold was 1433 kilogram during the decade of ending year 2022-23 (Tables -12).

Non-Metallic Minerals:

The production of apatite & phosphorite was recorded at 1978 thousand tonnes in 2022-2023 with increase 42% as compared to previous year and its production was shown in fluctuation trend during decade. The production of diamond, with a mixed production trend, was touched 388 carat in 2022-23 during decade except the year 2010-11 and also increased by about 46 % over the preceding year. The production of limestone has shown a fluctuating trend during the decade ending 2022-2023. Its production was at 406 million tonne in 2022-23 which was 4% higher over the preceding year 2021-22. The production of magnesite showed mixed trend during the decade. Its production was recorded 108 thousand tonne during the decade in 2022-23 which was 5% lower over the preceding year 2021-22. However, the production of sillimanite was also touched lowest level at 1437 tonne during the decade ending 2022-23 with decrease 58% as compared to previous year (Tables -12).

Section 2 : Minerals : Mineral Production

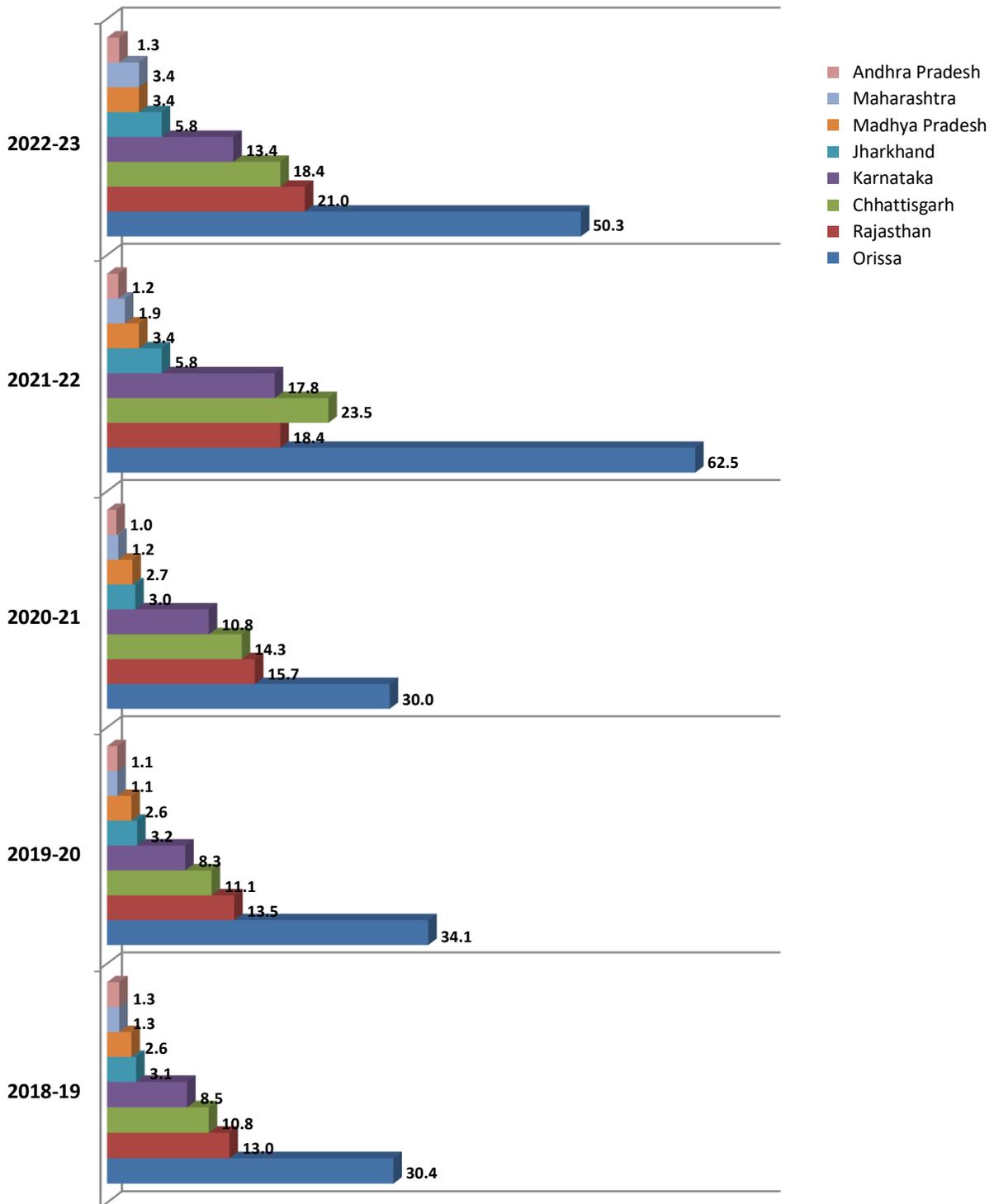
**Fig 7 : Value of Mineral Production (By Mineral Group)@
(Rs. Th. Crores)**



@Excluding atomic minerals, fuel minerals and minor minerals

Section 2 : Minerals : Mineral Production

Fig 8 : Value of Mineral Production by Principal States (Rs. Thousand Crores)



Section 2 : Minerals : Mineral Production

Table 9 : Value of Mineral Production[@] (By States)					
	(Rs. Crore)				
State	2018-19	2019-20	2020-21[§]	2021-22[§]	2022-23[§]
All India	73955	77802	81435	137422	120108
Andhra Pradesh	1303	1094	979	1222	1326
Assam	53	50	47	54	49
Bihar	14	26	30	35	33
Chhattisgarh	10828	11098	14311	23514	18400
Goa	0	0	90	0	0
Gujarat	740	696	652	704	820
Haryana	0	0	0	0	0
Himachal Pradesh	252	275	263	298	270
Jammu & Kashmir	36	28	30	29	30
Jharkhand	3119	3188	3044	5769	5815
Karnataka	8480	8268	10832	17816	13423
Kerala	33	36	33	37	32
Madhya Pradesh	2609	2603	2657	3358	3361
Maharashtra	1311	1137	1205	1937	3357
Meghalaya	295	299	269	297	411
Orissa	30445	34126	30044	62542	50291
Punjab	0	0	0	0	0
Rajasthan	13000	13500	15731	18399	21037
Tamil Nadu	723	747	625	721	804
Telangana*	614	530	497	599	572
Uttar Pradesh	85	93	90	85	68
Uttaranchal	15	8	5	5	7
West Bengal	0	0	0	0	0

@: Excluding atomic minerals, §: Excludes the value of fuel minerals *State came into existence w.e.f. 2nd June 2014

Section 2 : Minerals : Mineral Production

Table 10 : Number of Mines 2013-14 to 2022-23 (By Ownership/Nature of Use/Mine Category)							
Year	Total Number of Mines	Type of Ownership		Nature of Use		Mine Category	
		Public	Private	Captive	Non Captive	A	B
2013-14	3427	218	3209	632	2795	498	2929
2014-15*	1559	145	1414	543	1016	480	1079
2015-16	1619	144	1475	550	1069	487	1132
2016-17	1617	153	1464	544	1073	510	1107
2017-18	1509	151	1358	548	961	541	968
2018-19	1428	157	1271	549	879	559	869
2019-20	1370	148	1222	539	831	563	807
2020-21	1353	160	1193	534	819	595	758
2021-22	1323	161	1162	567	756	600	723
2022-23	1408	165	1243	586	822	923	485

*Excludes the data of 31 minerals for February & March 2015 declared as minor minerals vide Gazette Notification dated 10th February 2015

Table 11 : Value of Mineral Production[@] 2013-14 to 2022-23 (Rs. Crores)							
(By Ownership/Nature of Use/Mine Category)							
Year	Total Value	Type of Ownership		Nature of Use		Mine Category	
		Public	Private	Captive	Non Captive	A	B
2013-14	49906	18305	31601	17035	32871	37788	12118
2014-15	45824	18543	27281	16396	29428	35553	10271
2015-16	41194	13357	27836	18085	23109	32665	8528
2016-17	47789	15120	32670	19758	28031	38160	9629
2017-18	59831	19562	40269	22645	37186	46560	13271
2018-19	73955	22516	51439	26542	47413	57851	16104
2019-20	77802	20668	57134	27200	50602	59938	17864
2020-21	81435	27659	53775	28981	52454	64727	16708
2021-22	137422	55388	82034	44996	92426	112785	24637
2022-23	120108	49234	70873	42981	77127	102709	17398

Section 2 : Minerals : Mineral Overview

Table 12 : Mineral Overview (contd...)						
Mineral	Year	No. of Mines	Quantity	Value (Rs. Crore)	Closing Stock	Labour Employed (Av. Daily)
Bauxite ('000 tonne)	2013-14	177	22319	1000	12084	6854
	2014-15	162	22494	1192	10768	6698
	2015-16	190	28124	1544	14093	8652
	2016-17	165	24745	1487	16301	6491
	2017-18	163	22786	1578	18072	6632
	2018-19	157	23690	1784	19927	6093
	2019-20	144	21825	1630	15289	6162
	2020-21	134	20381	1679	17116	5023
	2021-22	127	22494	2528	16101	5275
	2022-23(p)	160	23843	2788	17424	6537
Chromite ('000 tonne)	2013-14	26	2878	2376	2258	6277
	2014-15	26	2164	1880	2245	6772
	2015-16	25	2916	2121	2560	6645
	2016-17	26	3728	3194	2694	6959
	2017-18	25	3481	3204	2270	7234
	2018-19	26	3971	3685	2253	7245
	2019-20	22	3929	3213	2411	5845
	2020-21	24	2830	2186	2764	4249
	2021-22	20	3786	4797	2988	4480
	2022-23(p)	18	3560	4805	2940	6435
Iron Ore ('000 tonne)	2013-14	322	152183	31649	124378	39127
	2014-15	320	129321	27664	123705	39243
	2015-16	330	158108	22321	144498	42065
	2016-17	318	194584	25229	148716	45383
	2017-18	304	201426	34713	152953	45988
	2018-19	252	206494	45347	163121	43125
	2019-20	271	244083	49643	146718	45687
	2020-21	280	205041	52729	121170	42422
	2021-22	255	254099	100826	118595	48934
	2022-23(p)	242	257859	79928	97385	30310
Manganese Ore ('000 tonne)	2013-14	163	2626	1518	726	16659
	2014-15	161	2369	1366	1114	15504
	2015-16	146	2167	855	1317	12990
	2016-17	153	2395	1625	1218	12505
	2017-18	149	2600	1991	1951	12903
	2018-19	148	2832	2164	2884	13164
	2019-20	137	2910	1885	6134	11775
	2020-21	145	2703	1742	2727	10191
	2021-22	134	2692	2207	2826	10600
	2022-23(p)	133	2827	2291	3050	12542

Section 2 : Minerals : Mineral Overview

Table 12 : Mineral Overview (contd...)							
Mineral	Year	No. of Mines	Copper Ore	Copper Concentrates		Closing Stock (TH.Tonne)	Labour Employed (Av. Daily)
			Quantity (TH.Tonne)	Quantity (TH.Tonne)	Value (Rs. Crore)		
Copper Ore & Concentrates	2013-14	5	3778	139	668	9	3324
	2014-15	5	3505	108	529	12	3473
	2015-16	5	3908	152	655	42	3285
	2016-17	5	3846	135	651	38	2791
	2017-18	5	3678	142	771	40	2442
	2018-19	5	4135	144	885	38	3449
	2019-20	5	3952	125	845	64	3928
	2020-21	5	3273	109	853	23	2829
	2021-22	5	3570	115	1102	1	2794
2022-23(p)	5	3326	113	1144	3	3722	

Mineral	Year	No. of Mines	Gold Ore	Gold Primary		Closing Stock (TH.Tonne)	Labour Employed (Av. Daily)
			Quantity (TH.Tonne)	Quantity (Kg)	Value (Rs. Crore)		
Gold Ore & Gold Primary	2013-14	4	420	1564	423	192	3433
	2014-15	5	447	1441	360	122	3429
	2015-16	5	563	1323	321	106	3426
	2016-17	5	582	1595	436	110	3451
	2017-18	5	550	1650	477	68	3235
	2018-19	7	567	1672	527	89	3258
	2019-20	6	596	1742	650	151	3216
	2020-21	5	438	1127	548	101	3247
	2021-22	6	475	1407	676	15	3128
2022-23(p)	6	634	1433	765	0	4776	

Section 2 : Minerals : Mineral Overview

Table 12 : Mineral Overview (contd...)									
Mineral	Year	No. of Mines	Lead & Zinc Ore	Lead Concentrates		Zinc Concentrates		Closing Stock (TH.Tonne)	Labour Employed (Av. Daily)
			Quantity (TH.Tonne)	Quantity (TH.Tonne)	Value (Rs. Crore)	Quantity (TH.Tonne)	Value (Rs. Crore)		
Lead & Zinc Ore and Concentrates	2013-14	8	9282	194	437	1491	2739	89	7116
	2014-15	8	9363	198	564	1489	3157	116	7222
	2015-16	8	10453	262	789	1474	3494	42	7018
	2016-17	8	11881	268	967	1484	4339	1028	7337
	2017-18	8	12614	306	1143	1540	4980	237	8056
	2018-19	10	13752	358	1632	1457	5608	39	8223
	2019-20	10	14479	352	1826	1447	6044	83	10396
	2020-21	10	15455	377	1881	1514	6313	83	8535
	2021-22	10	16339	368	2203	1594	7873	97	14876
	2022-23(p)	9	16744	377	2476	1670	9231	76	13300

Mineral	Year	No. of Mines	Production		Closing Stock	Labour Employed (Av. Daily)
			Quantity	Value (Rs. Crore)		
Tin Concentrates (Kg)	2013-14	6	34862	22791	24718	30
	2014-15	6	24685	18528	8093	34
	2015-16	6	13541	9231	3683	32
	2016-17	6	12121	8736	6989	19
	2017-18	6	16758	11347	5136	16
	2018-19	6	21212	14627	9315	6
	2019-20	6	15530	10337	10809	9
	2020-21	3	16865	10413	8520	9
	2021-22	6	26292	31979	260	12
	2022-23	4	45429	51850	0	16

Mineral	Year	Production	
		Quantity (Kg)	Value (Rs. Crore)
Silver	2013-14	349774	1578
	2014-15	327647	1195
	2015-16	426443	1521
	2016-17	460811	1832
	2017-18	557691	2118
	2018-19	679386	2582
	2019-20	609340	2562
	2020-21	705796	4266
	2021-22	647156	4213
	2022-23(p)	713768	4381

Section 2 : Minerals : Mineral Overview

Table 12 : Mineral Overview (contd...)						
Mineral	Year	No. of Mines	Production		Closing Stock	Labour Employed (Av. Daily)
			Quantity	Value ('000 Rs.)		
Apatite (tonne)	2013-14	2	1300	2768	7409	126
	2014-15	2	930	2065	6581	118
	2015-16	2	110	387	6691	95
	2016-17	2	-	-	6641	58
	2017-18	2	-	-	6306	45
	2018-19	1	-	-	6306	1
	2019-20	-	-	-	6306	-
	2020-21	-	-	-	6306	-
	2021-22	-	-	-	6306	-
	2022-23(p)	-	-	-	6306	-
Asbestos (tonne)	2013-14	4	172	7271	11	50
	2014-15	-	-	-	11	-
	2015-16	-	-	-	-	-
	2016-17	-	-	-	-	-
	2017-18	-	-	-	-	-
	2018-19	-	-	-	-	-
	2019-20	-	-	-	-	-
	2020-21	-	-	-	-	-
	2021-22	-	-	-	-	-
	2022-23(p)	-	-	-	-	-
Diamond (carat)	2013-14	2	37517	614087	15076	157
	2014-15	2	36107	613504	15303	176
	2015-16	2	36044	621441	14084	156
	2016-17	2	36491	639562	24102	157
	2017-18	2	39699	374110	25637	135
	2018-19	2	38437	539062	39163	131
	2019-20	2	28816	352472	33938	161
	2020-21	2	13917	147696	25329	142
	2021-22	3	266	18051	73	699
	2022-23(p)	3	388	61473	255	871
Flint Stone (tonne)	2013-14	2	459	136	-	7
	2014-15	2	244	79	-	7
	2015-16	1	253	76	-	2
	2016-17	1	26	8	-	3
	2017-18	-	-	-	-	-
	2018-19	-	-	-	-	-
	2019-20	-	-	-	-	-
	2020-21	-	-	-	-	-
	2021-22	-	-	-	-	-
	2022-23(p)	-	-	-	-	-

Section 2 : Minerals : Mineral Overview

Table 12 : Mineral Overview (contd...)						
Mineral	Year	No. of Mines	Production		Closing Stock	Labour Employed (Av. Daily)
			Quantity	Value ('000 Rs.)		
Fluorite (tonne)	2013-14	2	2487	11402	91570	62
	2014-15	2	2946	13761	94296	53
	2015-16	2	2333	12965	96619	58
	2016-17	2	1175	6733	97794	46
	2017-18	1	1314	8646	97359	43
	2018-19	1	1079	8117	97597	44
	2019-20	1	1315	8844	97749	44
	2020-21	1	1052	8018	97818	46
	2021-22	1	1237	9430	97141	36
	2022-23(p)	4	1135	5831	98177	58
Garnet ('000 tonne)	2013-14	69	483559	1113231	89886	3300
	2014-15	6	91394	800998	63608	1864
	2015-16	7	82001	648124	62908	1890
	2016-17	7	85413	787302	67953	1894
	2017-18	7	158277	1618903	78008	863
	2018-19	10	123404	1746756	95784	1267
	2019-20	7	568	1775	45947	39
	2020-21	9	7114	26378	3832	66
	2021-22	7	8182	29880	3259	52
	2022-23(p)	6	10324	24660	3648	57
Graphite (tonne)	2013-14	12	146390	102471	125414	257
	2014-15	10	116712	83996	115526	231
	2015-16	11	135528	106487	139589	253
	2016-17	9	122438	94158	186603	162
	2017-18	9	33649	28229	177914	249
	2018-19	11	39030	36233	177944	237
	2019-20	12	34674	55908	179191	219
	2020-21	13	35386	87147	182564	167
	2021-22	14	62888	122147	179193	131
	2022-23(p)	11	89645	162481	191057	133
Iolite (Kg)	2013-14	2	-	-	2204	9
	2014-15	-	-	-	2241	-
	2015-16	-	-	-	2204	-
	2016-17	-	-	-	2204	-
	2017-18	-	-	-	2220	-
	2018-19	3	73	684	2321	33
	2019-20	2	90	579	2411	24
	2020-21	3	16	73	2427	8
	2021-22	3	27	191	2454	61
	2022-23(p)	3			2454	12

Section 2 : Minerals : Mineral Overview

Table 12 : Mineral Overview (contd...)						
Mineral	Year	No. of Mines	Production		Closing Stock	Labour Employed (Av. Daily)
			Quantity	Value ('000 Rs.)		
Kyanite (tonne)	2013-14	4	3679	8071	10032	64
	2014-15	3	6255	12185	14280	57
	2015-16	5	2901	14180	14519	98
	2016-17	5	3253	13458	12891	69
	2017-18	5	7818	23277	12340	80
	2018-19	4	4889	15757	12384	64
	2019-20	5	3498	12728	9622	69
	2020-21	4	4925	9251	11265	61
	2021-22	5	9320	17267	13745	95
	2022-23(p)	5	2765	5318	12214	99
Lime Shell (tonne)	2013-14	6	18750	35162	2341	549
	2014-15	7	16353	37137	2468	533
	2015-16	7	10353	28613	996	534
	2016-17	7	12344	34774	2719	483
	2017-18	6	14765	51445	18492	511
	2018-19	5	7534	27780	4408	290
	2019-20	2	4600	18730	6921	244
	2020-21	-	-	-	608	1
	2021-22	1	100	231	590	9
	2022-23(p)	2	250	658	711	23
Moulding Sand (tonne)	2013-14	5	29963	4877	2741	33
	2014-15	3	6383	1671	411	29
	2015-16	3	26042	6117	1148	34
	2016-17	4	27685	6623	6241	31
	2017-18	4	7100	1804	261	18
	2018-19	3	14805	4145	66	11
	2019-20	3	12905	3766	2293	11
	2020-21	4	14363	4150	5697	24
	2021-22	4	17583	5256	4598	23
	2022-23(p)	3	17260	5383	7172	12
Salt Rock (tonne)	2013-14	0	0	0	0	0
	2014-15	0	0	0	0	0
	2015-16	0	0	0	0	0
	2016-17	1	0	0	0	14
	2017-18	1	47	421	1	25
	2018-19	1	17	160	2	27
	2019-20	1	130	1447	3	24
	2020-21	1	486	14156	113	23
	2021-22	1	286	712	38	23
	2022-23(p)	1	1002	10725	560	45

Section 2 : Minerals : Mineral Overview

Table 12 : Mineral Overview (contd...)						
Mineral	Year	No. of Mines	Production		Closing Stock	Labour Employed (Av. Daily)
			Quantity	Value (Rs. Crore)		
Lime Stone ('000 tonne)	2013-14	779	280863	5133	12404	22978
	2014-15	785	293273	5800	13077	23801
	2015-16	807	307001	6867	12633	23987
	2016-17	832	314669	7388	14615	23892
	2017-18	758	340417	8100	18238	22019
	2018-19	725	379974	8958	22493	21633
	2019-20	691	359464	8889	24775	21335
	2020-21	665	349120	8648	24195	20470
	2021-22	676	392034	10202	27235	20343
2022-23(p)	747	406462	10879	28522	21640	
Magnesite ('000 tonne)	2013-14	14	197	45	63	818
	2014-15	19	285	75	71	935
	2015-16	20	328	83	66	1258
	2016-17	19	299	75	83	1331
	2017-18	10	195	59	78	937
	2018-19	11	147	41	80	811
	2019-20	12	103	35	62	711
	2020-21	12	75	31	67	642
	2021-22	10	113	55	54	656
2022-23(p)	10	108	47	51	692	
Marl ('000 tonne)	2013-14	-	3254	28	1263	-
	2014-15	-	2179	26	1022	-
	2015-16	-	2390	32	1227	-
	2016-17	-	2204	32	1321	-
	2017-18	-	1970	33	1226	-
	2018-19	-	1890	35	1042	-
	2019-20	-	2149	41	881	-
	2020-21	-	2216	42	600	-
	2021-22	-	1853	33	469	-
2022-23(p)	-	1452	31	478	-	
Phosphorite/ Rock Phosphate ('000 tonne)	2013-14	5	1454	475	1802	1079
	2014-15	5	1607	376	2356	1111
	2015-16	5	1572	376	2568	1129
	2016-17	6	1124	300	2491	1222
	2017-18	6	1516	367	2735	1277
	2018-19	7	1421	388	2347	1200
	2019-20	6	1400	473	2300	961
	2020-21	6	1456	469	2322	951
	2021-22	7	1395	665	2366	756
2022-23(p)	8	1978	1290	2501	737	

Section 2 : Minerals : Mineral Overview

Table 12 : Mineral Overview (contd...)						
Mineral	Year	No. of Mines	Production		Closing Stock	Labour Employed (Av. Daily)
			Quantity	Value ('000 Rs.)		
Selenite (tonne)	2013-14	1	531	706	-	9
	2014-15	2	207	456	-	12
	2015-16	3	3103	6206	-	20
	2016-17	3	4328	8656	-	24
	2017-18	4	469	939	-	21
	2018-19	3	2906	5812	-	16
	2019-20	2	2154	4206	825	14
	2020-21	3	402	602	763	15
	2021-22	4	716	902	494	18
2022-23(p)	3	328	443	94	9	
Silicious Earth (tonne)	2013-14	-	-	-	-	-
	2014-15	-	-	-	-	-
	2015-16	13	47386	20735	45029	89
	2016-17	16	77270	55340	72980	92
	2017-18	15	86662	53164	93014	106
	2018-19	16	80237	50205	86493	133
	2019-20	12	19367	11710	80622	85
	2020-21	12	23823	14686	81530	48
	2021-22	13	33898	22837	71321	47
2022-23(p)	14	32070	17535	38543	66	
Sillimanite (tonne)	2013-14	5	67265	408247	15103	2166
	2014-15	4	66273	456050	21239	1720
	2015-16	4	69942	509314	24430	1759
	2016-17	5	68131	535949	28555	1776
	2017-18	5	81638	671690	21635	1678
	2018-19	6	69919	564498	15804	2042
	2019-20	2	13221	37903	10113	36
	2020-21	1	11110	13987	1463	2
	2021-22	-	3432	8283	2906	-
2022-23	-	1437	4249	3898	-	

Section 2 : Minerals : Mineral Overview

Mineral	Year	No. of Mines	Production		Closing Stock	Labour Employed (Av. Daily)
			Quantity	Value ('000 Rs.)		
Vermiculite (tonne)	2013-14	8	11851	9470	13119	98
	2014-15	8	19336	12479	17899	107
	2015-16	7	23279	10556	29045	106
	2016-17	6	9042	8162	27570	78
	2017-18	5	6054	7075	26915	71
	2018-19	5	2992	3709	25693	63
	2019-20	5	2774	3347	16786	61
	2020-21	5	1260	2157	7806	43
	2021-22	6	3060	3765	16476	43
	2022-23(p)	6	2303	1484	8285	21
Wollastonite (tonne)	2013-14	4	192712	157090	10706	416
	2014-15	6	186524	162113	3417	333
	2015-16	5	175348	150313	13896	309
	2016-17	4	166186	158823	17782	306
	2017-18	4	153049	126025	25518	279
	2018-19	3	184063	172013	82594	265
	2019-20	4	124757	139695	103115	244
	2020-21	4	103902	122210	118407	219
	2021-22	5	108335	149156	137695	191
	2022-23(p)	5	110793	147258	157223	224

Mineral	Year	Production
		Quantity (Kg)
Sulphur (tonne)	2013-14	390325
	2014-15	464672
	2015-16	473322
	2016-17	560826
	2017-18	825173
	2018-19	890400
	2019-20	900942
	2020-21	737337
	2021-22	880858
	2022-23	925663

Section 3
Metals & Alloys

	Iron & Steel, 2013-14 to 2022-23	:38
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	Alumina and Aluminium and Copper 2013-14 to 2022-23	:40
	Gold , Silver and Lead & Zinc, 2013-14 to 2022-23	:41

Section 3 Metals & Alloys

Ferrous Metals:

The output of finished steel was at 114 million tonnes for the year 2021-2022 and at 123 million tonnes for the year 2022-2023 respectively. It was nearly 9% higher as compared to the level of previous year. The production of finished steel had a fluctuating trend during the decade. The production of semi-finished steel in the year 2021-2022 was at 120 million tonnes. While output of semi-finished steel in the year 2022-2023 was at 127 million tonnes which was achieved at highest level during the decade and it was 6% higher as compare to the previous year. It had also a fluctuating trend during the decade (Table -13).

Ferro-Alloys:

The production of ferro-chrome was at 1113 thousand tonnes in the year 2021-2022 and at 1126 thousand tonnes in the year 2022-2023 respectively which was achieved at highest level during the decade. It was 1% higher as compare to the previous year. During the decade it settled to maintain the level of 944 thousand tonnes in the latest 7 years from 2012-13 to 2018-19. The output of ferro-manganese and ferro-silicon was recorded not available during the year 2021-22 & 2022-23. But the production of ferro-manganese and ferro-silicon had settled to maintain the level of 518 thousand tonnes and level of 90 thousand tonnes respectively in the last 7 years (Table -14).

Non-ferrous Metals:

The non-ferrous metals, India have achieved self-sufficiency in aluminium and zinc. The production of alumina was steadily increased during the decade from 2009-2010. It reached the highest level of the decade at 5208 tonnes in 2021-2022 but it was at 4928 tonnes in the year 2022-2023 which was lower 5% compared to the previous year. The production of aluminium was increased steadily till the year 2018-19 during the decade. It was at 4017 thousand tonnes in the year 2021-2022 and at 4066 thousand tonnes in the year 2022-2023 respectively which was achieved at highest level during the decade (Table -15).

The production of copper (blister/anode) showed mixed trend in the decade and it was recorded not available during the year 2021-22 & 2022-23.

The production of copper (cathode) and copper (CCWR) was at 484 thousand tonne and 351 thousand tonnes respectively which were more by 33% and 3% compared to the preceding year. Whereas during the year of 2022-2023 the production of copper (blister/anode) was recorded zero thus it was

touched lowest level during the decade. The production of copper (cathode) and copper (CCWR) was at 554 thousand tonne and 423 thousand tonnes respectively in the year of 2022-2023 which were again more by 14% and 21% compared to the preceding year (Table -16).

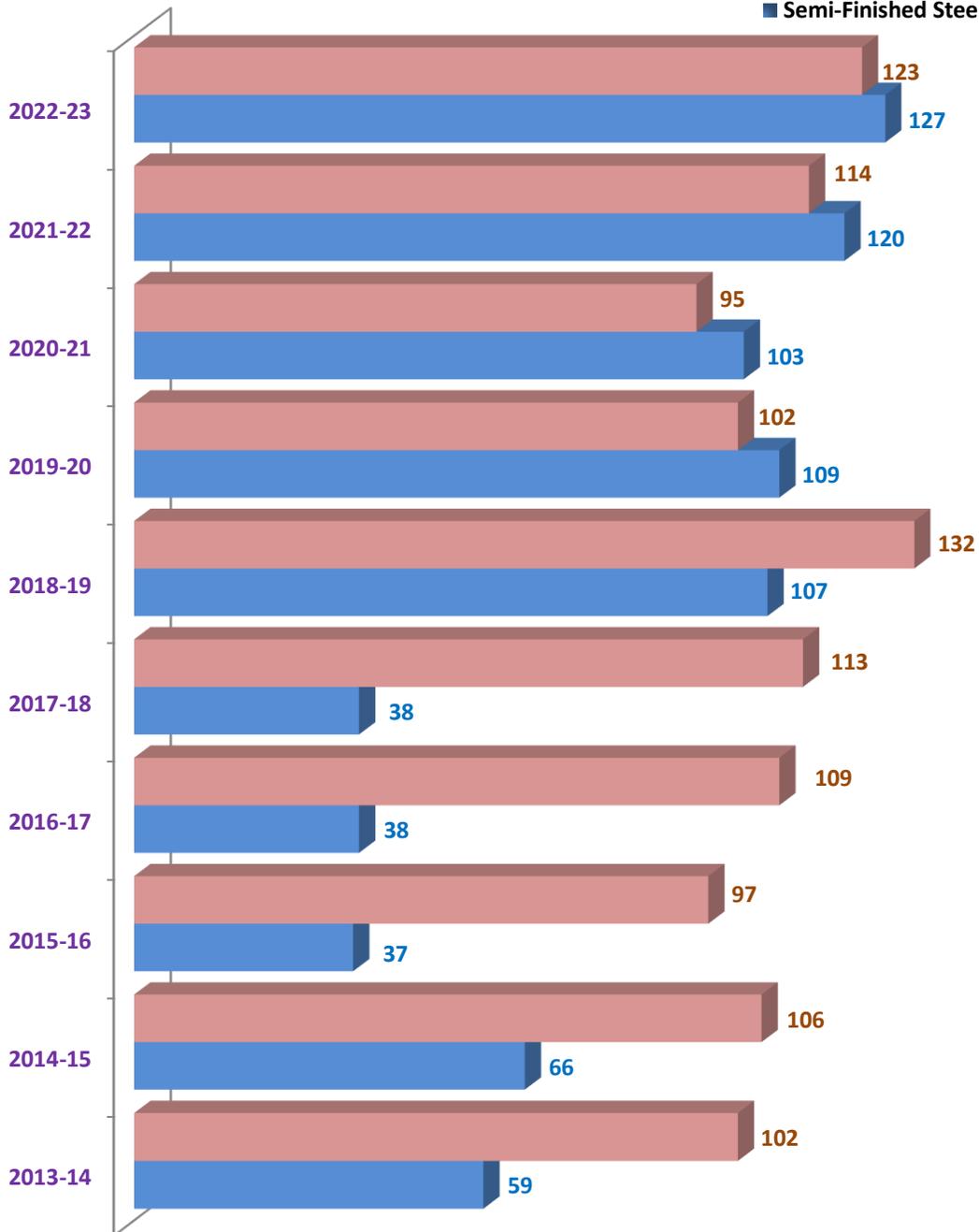
A fluctuating trend was observed in the production of gold (including by-product recovery from imported copper cathodes) during the decade and it was 13854 kg in 2022-23 which was increased with 37% compare to previous year and was achieved at highest level during the decade. But in case of production of silver, it was observed frequently increase during the decade except for the year of 2013-2014. The production of silver, a by-product, reached the peak level at 794 tonne in 2022-23 and was 23% higher as compared to the previous year (Table -17).

The output of lead (primary) showed increasing trend during the decade ending 2022-23. The production of lead (primary) was 211 thousand tonne which was 10% higher than the previous year. The output of zinc ingots had a fluctuating trend of production during the decade ending 2022-23. The production zinc ingots were at 821 thousand tonnes which was achieved at highest level during the decade and with increase 8% as compared to previous year (Table -18).

Fig 9 : Production of Iron & Steel

(in Million Tonnes)

■ Finished Steel
■ Semi-Finished Steel



Section 3 : Metal & Alloys

Table 13 : Production Iron & Steel, 2013-14 to 2022-23		
('000 tonne)		
Year	Semi-finished Steel	Finished Steel
2013-14	59379	102090
2014-15	65793	106052
2015-16	37445	97340
2016-17	38236	108950
2017-18	38357	112783
2018-19	106565	131573
2019-20	109216	102058
2020-21	103044	95122
2021-22	120007	113596
2022-23	127197	123197

Source: Joint Plant Committee, Kolkata

@Semi-finished steel includes Steel Ingots

*Finished Steel includes C.R. Sheets

Table 14 : Production Principal Ferro Alloys, 2013-14 to 2022-23			
('000 tonne)			
Year	Ferro-Chrome	Ferro-Manganese	Ferro-Silicon
2013-14	944	518	90
2014-15	944	518	90
2015-16	944	518	90
2016-17	944	518	90
2017-18	944	518	90
2018-19	944	518	90
2019-20	921	NA	NA
2020-21	868	NA	NA
2021-22	1113	NA	NA
2022-23	1126	NA	NA

Source: Joint Plant Committee, Kolkata

Section 3 : Metal & Alloys

Table 15 : Production of Alumina & Aluminium, 2013-14 to 2022-23 (‘000 tonne)		
Year	Alumina	Aluminium
2013-14	3779	1667
2014-15	4024	2027
2015-16	4172	2355
2016-17	4576	2897
2017-18	462	3401
2018-19	4893	3696
2019-20	4978	3635
2020-21	4878	3619
2021-22	5208	4017
2022-23	4928	4066

Table 16 : Production of Copper, 2013-14 to 2022-23 (‘000 tonne)			
Year	Blister / Anode	Cathode	CCWR
2013-14	17	644	283
2014-15	16	766	338
2015-16	17	790	390
2016-17	15	788	372
2017-18	15	831	380
2018-19	13	454	354
2019-20	4	408	349
2020-21	NA	364	342
2021-22	NA	484	351
2022-23	NA	554	423

CCWR: Continuous Cast Wire Rod

Section 3 : Metal & Alloys

Table 17 : Production of Gold & Silver, 2013-14 to 2022-23 (Kilograms)		
Year	Gold*	Silver*
2013-14	9209	349774
2014-15	9988	402467
2015-16	10412	426443
2016-17	10082	460811
2017-18	12500	557691
2018-19	12623	679386
2019-20	8382	609340
2020-21	7387	705796
2021-22	10087	647156
2022-23	13854	794434

*Includes production reported from HINDALCO Industries Ltd

Table 18 : Production of Lead & Zinc, 2013-14 to 2022-23 (‘000 tonne)		
Year	Lead (Primary)	Zinc Ingots
2013-14	123	767
2014-15	127	733
2015-16	145	759
2016-17	142	672
2017-18	168	791
2018-19	198	696
2019-20	181	688
2020-21	214	715
2021-22	191	776
2022-23	211	821

**Section 4
Foreign Trade**

	Value of Exports of Minerals, 2022-23	: 44
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Export

The value of mineral exports from India (excluding fuel minerals) showed a fluctuating trend during the decade ending in 2022–23. In 2022–23, the export value stood at ₹2,38,934 crore, representing a marginal decline of around 5.33% compared to the previous year (2021–22). Diamonds accounted for 76.89% of the total mineral export value in 2022–23, followed by iron ore (6.04%), granite (5.25%), alumina (2.69%) and Sulphur (1.39%) (Table-23 & Table 24).

The value of metals exports in 2022-23 stood at ₹2,90,376 crore, which is a decline of 16.67% compared to the previous year, i.e., 2021-22 (Table 23).

The top five countries for mineral exports from India in 2022–23 were the USA (28.89%), Hong Kong (19.10%), the UAE (8.88%), Belgium (8.74%), and China People’s Republic (8.44%) (Table 19).

The top five countries for metal exports from India in 2022–23 were the USA (15.16%), Italy (7.10%), the UAE (5.41%), Korea Republic (4.59%), and Netherlands (4.36%). Total export of Metal & Alloys was ₹290376 crore. (Table 20)

The value of export of Diamond (mostly cut) in 2022-23 was ₹183607 crore. USA (34.7%), Hong Kong (24.3%), Belgium (11.2%), UAE (9.8%), and Israel (5.3%) were the top importing countries of Diamond (mostly cut) from India (Table 26).

Import

The value of mineral imports from India (excluding fuel minerals) showed a fluctuating trend during the decade ending in 2022–23. In 2022–23, the import value stood at ₹3,26,709 crore, representing an increase of around 8.81% compared to the previous year (2021–22). Diamonds accounted for 63.59% of the total mineral import value in 2022–23, followed by Copper Ores and Conc (8.38%), Precious and semi precious stones (7.02%), Rock Phosphate (4.63%), alumina (2.73%), Manganese Ore (2.53%), and Limestone (1.92%). (Table-23 & Table 25).

The value of metals imports in 2022-23 stood at ₹6,69,640 crore, which is an increase of 6.74% compared to the previous year, i.e., 2021-22 (Table 23).

The top five countries for mineral imports to India in 2022–23 were the UAE (26.63%), USA (13.10%), Belgium (11.51%), Hong Kong (11.26%), and South Africa (3.46%) (Table 21).

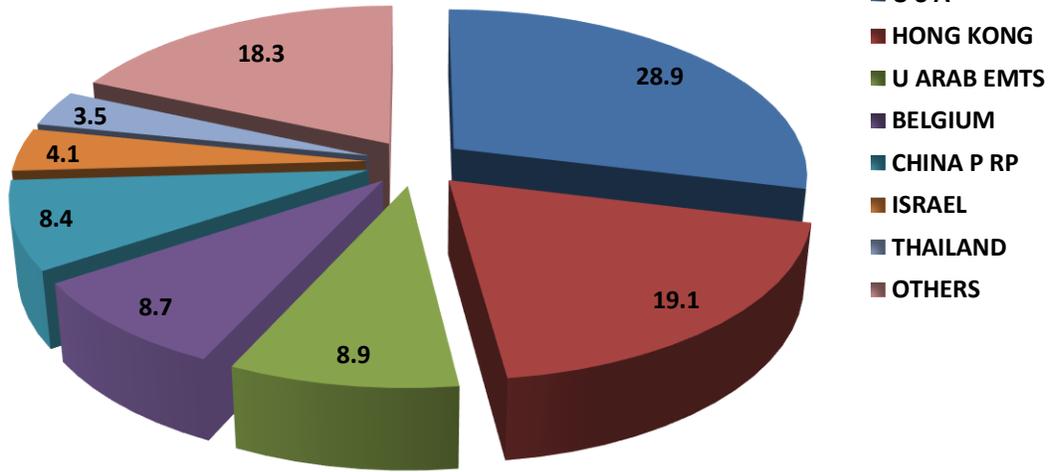
The top five countries for metal imports to India in 2022–23 were the Switzerland (15.51%), China Peoples Republic (8.37%), UAE (7.92%), USA (6.13%), and UK (5.48%). Total import of Metal & Alloys was ₹669640 crore (Table 22).

The value of import of Diamond (mostly cut) in 2022-23 was Rs 205786 crore. UAE (37.6%), USA (19.9%), Belgium (17.9%), Hong Kong (7.1%), and Russia (4.5%) were the top exporting countries of Diamond (mostly cut) to India (table 27).

Section 4 : Foreign Trade

Fig 10 : Percentage Contribution of Export of Minerals 2022-23

Total Exports : Rs. 238934 Crores



Countries	Value (Rs. Crores)	Percentage Contribution
All Countries	238934	100.00
U S A	69038	28.89
HONG KONG	45644	19.10
U ARAB EMTS	21220	8.88
BELGIUM	20883	8.74
CHINA P RP	20175	8.44
ISRAEL	9913	4.15
THAILAND	8373	3.50
SINGAPORE	5188	2.17
U K	3408	1.43
JAPAN	2998	1.25
VIETNAM SOC REP	2375	0.99
SWITZERLAND	2283	0.96
OMAN	2177	0.91

Source: DGCIS, Kolkata

Countries	Value (Rs. Crores)	Percentage Contribution
ITALY	1994	0.83
BANGLADESH PR	1729	0.72
FRANCE	1471	0.62
TURKEY	1470	0.62
AUSTRALIA	1406	0.59
GERMANY	1343	0.56
INDONESIA	1238	0.52
KOREA RP	1235	0.52
SAUDI ARAB	1098	0.46
RUSSIA	1019	0.43
OTHER COUNTRIES	11257	4.71

Section 4 : Foreign Trade

Fig 11 : Percentage Contribution of Export of Metals 2022-23

Total Exports : Rs. 290376 Crores

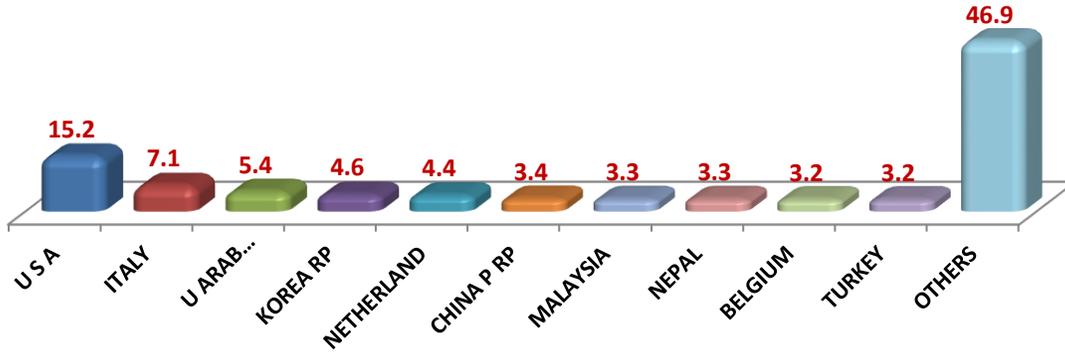


Table 20 : Value of Export of Metals, 2022-23

Country	Value (Rs. Crores)	Percentage Contribution
All Countries	290376	100.00
U S A	44017	15.16
ITALY	20625	7.10
U ARAB EMTS	15711	5.41
KOREA RP	13335	4.59
NETHERLAND	12669	4.36
CHINA P RP	9782	3.37
MALAYSIA	9594	3.30
NEPAL	9484	3.27
BELGIUM	9305	3.20
TURKEY	9161	3.15
SAUDI ARAB	8630	2.97
MEXICO	8515	2.93
VIETNAM SOC REP	7907	2.72
GERMANY	7447	2.56
U K	6400	2.20
BANGLADESH PR	6308	2.17
INDONESIA	5855	2.02
JAPAN	5640	1.94
SPAIN	5564	1.92
THAILAND	4923	1.70
CANADA	4903	1.69
TAIWAN	4199	1.45
SINGAPORE	4160	1.43
OMAN	3138	1.08
AUSTRALIA	2995	1.03
BRAZIL	2671	0.92
EGYPT A RP	2324	0.80

Table 20 : Value of Export of Metals, 2022-23

Country	Value (Rs. Crores)	Percentage Contribution
POLAND	2321	0.80
FRANCE	2133	0.73
KENYA	1998	0.69
QATAR	1844	0.63
GREECE	1817	0.63
RUSSIA	1740	0.60
SOUTH AFRICA	1401	0.48
COLOMBIA	1330	0.46
CROATIA	1252	0.43
TANZANIA REP	1234	0.42
SRI LANKA DSR	1188	0.41
BAHARAIN IS	1163	0.40
BHUTAN	1070	0.37
NIGERIA	1012	0.35
PORTUGAL	1010	0.35
KUWAIT	936	0.32
ISRAEL	931	0.32
DENMARK	880	0.30
ROMANIA	844	0.29
SWEDEN	794	0.27
PHILIPPINES	724	0.25
MALDIVES	716	0.25
GHANA	694	0.24
SWITZERLAND	680	0.23
CZECH REPUBLIC	588	0.20
ARGENTINA	587	0.20
Other Countries	14229	4.90

Source: DGCI, Kolkata

Section 4 : Foreign Trade

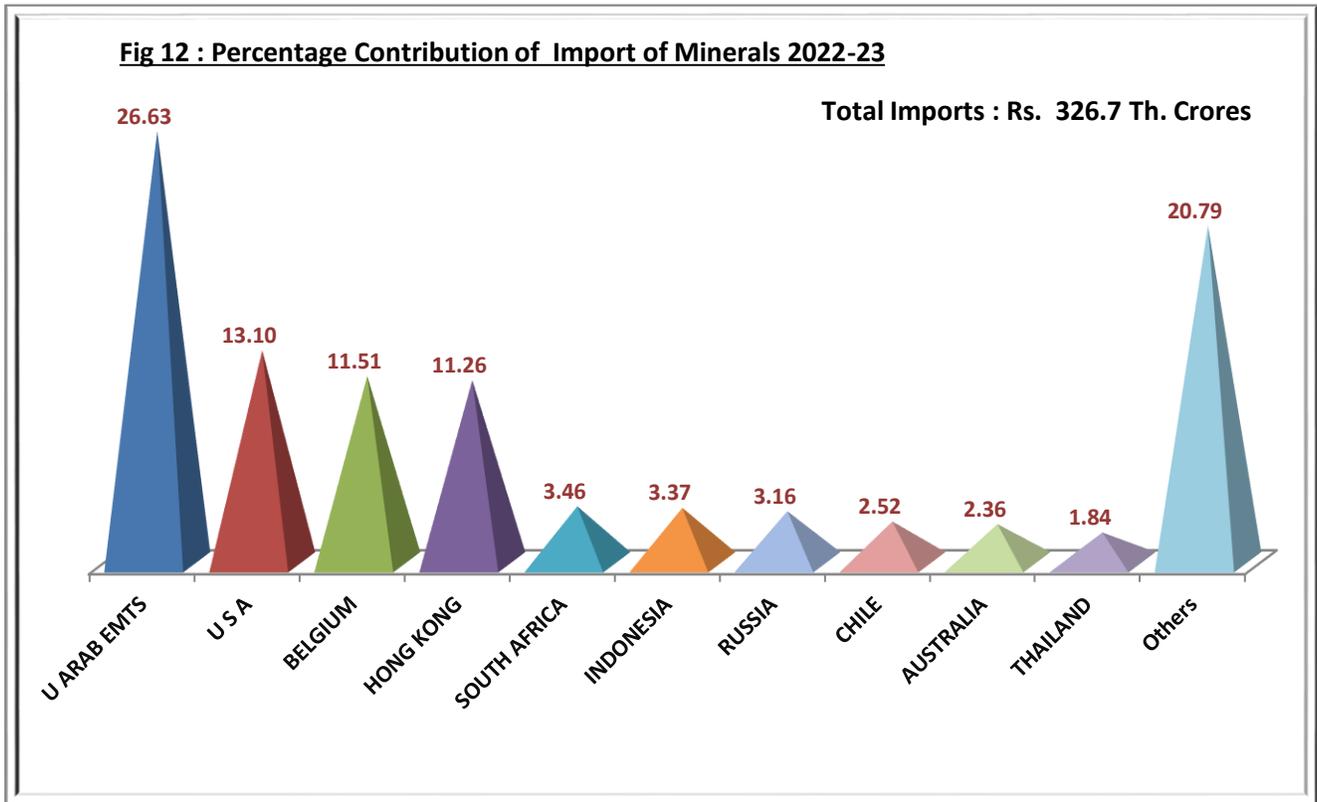


Table 21 : Value of Import of Minerals, 2022-23

Country	Value (Rs. Crores)	Percentage Contribution
All Countries	326709	100
U ARAB EMTS	87004	26.63
U S A	42807	13.10
BELGIUM	37598	11.51
HONG KONG	36802	11.26
SOUTH AFRICA	11309	3.46
INDONESIA	10997	3.37
RUSSIA	10322	3.16
CHILE	8240	2.52
AUSTRALIA	7704	2.36
THAILAND	6015	1.84
JORDAN	6004	1.84
ISRAEL	5949	1.82
SINGAPORE	4220	1.29
CHINA P RP	3749	1.15

Source: DGCI, Kolkata

Table 21 : Value of Import of Minerals, 2022-23

Country	Value (Rs. Crores)	Percentage Contribution
BOTSWANA	3664	1.12
PERU	3303	1.01
VIETNAM SOC REP	2974	0.91
MOROCCO	2964	0.91
TURKEY	2933	0.90
OMAN	2437	0.75
BRAZIL	2315	0.71
MALAYSIA	1911	0.59
TOGO	1860	0.57
GUINEA	1795	0.55
PANAMA REPUBLIC	1642	0.50
GABON	1597	0.49
EGYPT A RP	1592	0.49
CANADA	1546	0.47
OTHER COUNTRIES	15457	4.73

Section 4 : Foreign Trade

Fig 13 : Percentage Contribution of Import of Metals 2022-23

Total Imports : Rs. 669.6 Th. Crores

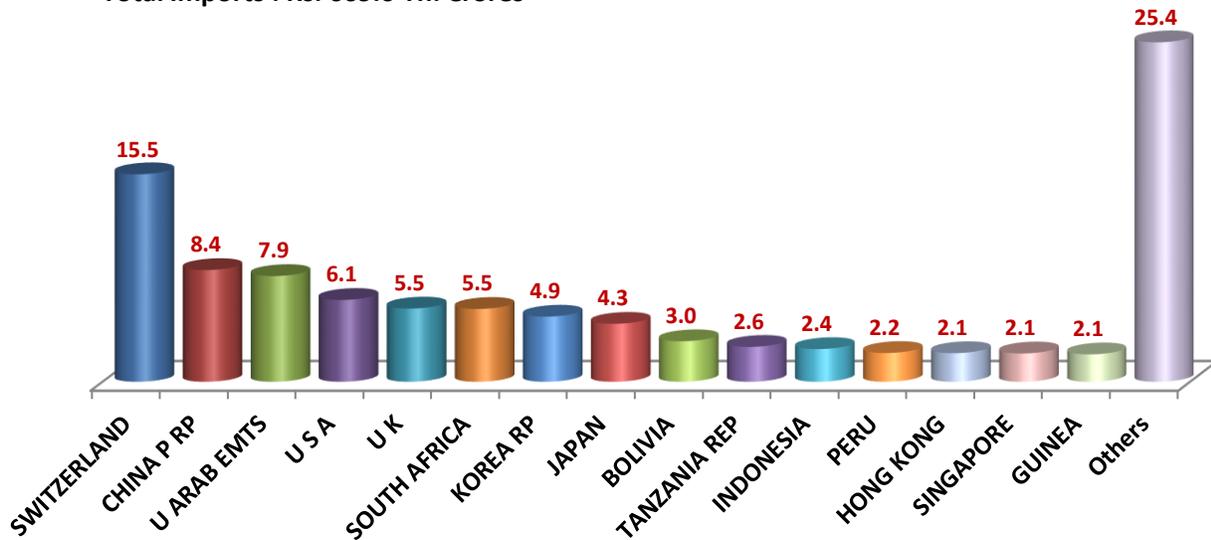


Table 22 : Value of Import of Metals, 2022-23

Country	Value (Rs. Crores)	Percentage Contribution
All Countries	669640	100
SWITZERLAND	103884	15.51
CHINA P RP	56022	8.37
U ARAB EMTS	53012	7.92
U S A	41040	6.13
U K	36722	5.48
SOUTH AFRICA	36535	5.46
KOREA RP	32666	4.88
JAPAN	29053	4.34
BOLIVIA	20327	3.04
TANZANIA REP	17498	2.61
INDONESIA	16392	2.45
PERU	14424	2.15
HONG KONG	14345	2.14
SINGAPORE	14201	2.12
GUINEA	13739	2.05
GHANA	11555	1.73
AUSTRALIA	10900	1.63
GERMANY	10266	1.53
MALAYSIA	10181	1.52
VIETNAM SOC REP	10156	1.52

Source: DGCIS, Kolkata

Table 22 : Value of Import of Metals, 2022-23

Country	Value (Rs. Crores)	Percentage Contribution
THAILAND	9429	1.41
SAUDI ARAB	8097	1.21
BRAZIL	7087	1.06
NETHERLAND	6084	0.91
COLOMBIA	5634	0.84
RUSSIA	5052	0.75
BELGIUM	4685	0.70
ITALY	4206	0.63
TURKEY	3789	0.57
UGANDA	3636	0.54
TAIWAN	3558	0.53
CANADA	3360	0.50
SWEDEN	3037	0.45
KUWAIT	2650	0.40
FRANCE	2546	0.38
MOZAMBIQUE	2534	0.38
DOMINIC REP	2494	0.37
POLAND	2181	0.33
QATAR	2104	0.31
ARGENTINA	2086	0.31
Other Countries	32474	4.85

Section 4 : Foreign Trade

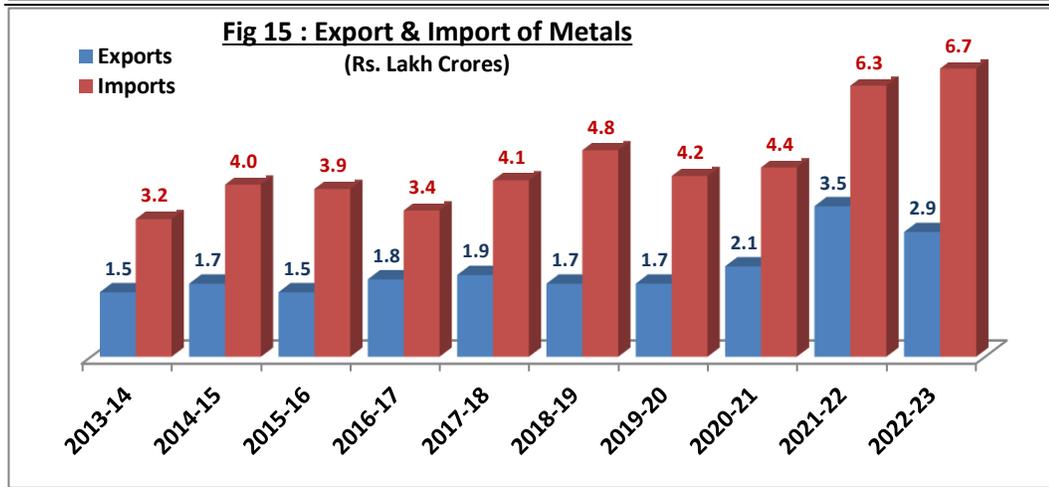
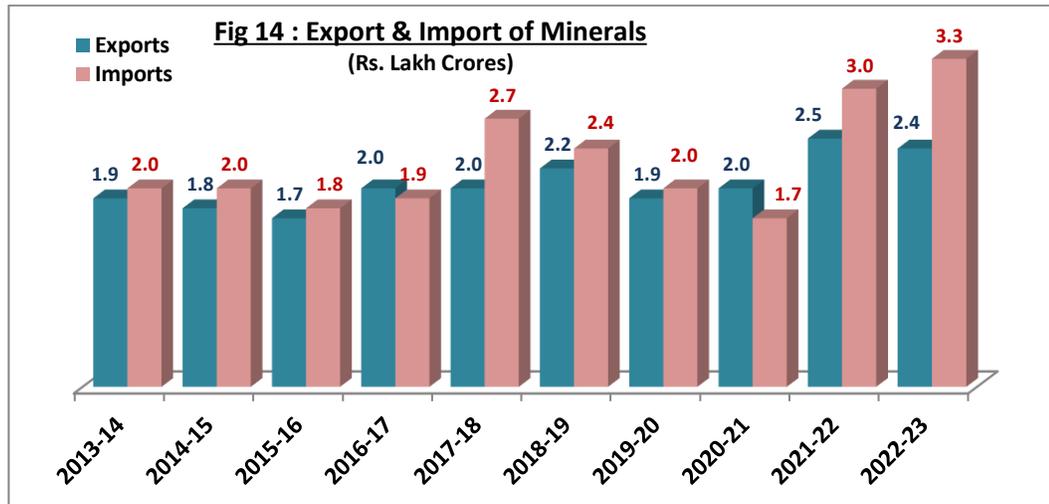


Table 23 : Exports, Imports and Net Trade in Minerals and Metals, 2013-14 to 2022-23 (Rs. Crore)

Year	Minerals@			Metals		
	Exports	Imports	Difference	Exports	Imports	Difference
2013-14	193485	195339	-1855	153482	321356	-167874
2014-15	176698	197107	-20409	167296	401259	-233964
2015-16	169558	176302	-6744	152958	390373	-237414
2016-17	198887	189225	9662	182186	337788	-155602
2017-18	197770	265426	-67655	190334	411826	-221491
2018-19	217592	244131	-26539	174287	477843	-303557
2019-20	188291	196306	-8015	166845	417435	-250590
2020-21	195253	173019	22234	207614	436338	-228723
2021-22	252395	300253	-47858	348475	627314	-278838
2022-23	238934	326709	-87775	290376	669640	-379264

@Excluding Fuel Minerals,
Source: DGCI, Kolkata

Section 4 : Foreign Trade

Table 24 : Share of Principal Minerals in the Value of Mineral Exports, 2013-14 to 2022-23						
Exports						
Year	Exports of Minerals@ (Rs. Crores)	Percentage Share of Principal Minerals				
		Diamond*	Iron Ore	Granite	Alumina	Sulphur#
2013-14	193485	81.73	4.88	5.10	1.31	0.20
2014-15	176698	83.82	1.78	5.56	1.87	0.21
2015-16	169558	84.18	0.75	5.47	1.53	0.30
2016-17	198887	81.81	5.18	4.69	1.51	0.17
2017-18	197770	81.92	4.80	4.68	1.67	0.22
2018-19	217592	80.80	4.26	4.69	2.16	0.20
2019-20	188291	74.37	9.88	5.43	1.64	0.21
2020-21	195253	64.44	18.57	5.80	1.45	0.22
2021-22	252395	75.03	9.57	5.01	1.88	0.83
2022-23	238934	76.89	6.04	5.25	2.69	1.39

Source: DGCI & S, Kolkata

@Excluding Fuel Minerals

*Includes mostly cut, industrial and powder

#(exc. Sublimed Precipitated And Colloidal)

Table 25 : Share of Principal Minerals in the Value of Mineral Imports, 2013-14 to 2022-23								
Imports								
Year	Imports of All Minerals@ (Rs. Crores)	Percentage Share of Principal Minerals						
		Diamond*	Copper Ores And Conc.	Precious And Semi-precious Stones (cut And Uncut)	Rock Phosphate	Alumina	Manganese Ore	Limestone
2013-14	195339	69.07	17.01	0.64	2.82	1.41	1.45	1.10
2014-15	197107	63.53	14.46	0.74	3.14	1.08	1.76	1.12
2015-16	176302	62.71	14.92	1.19	3.70	1.30	0.99	1.35
2016-17	189225	68.53	9.67	1.30	2.62	1.77	1.27	1.29
2017-18	265426	71.66	10.49	1.74	1.71	2.28	1.91	1.09
2018-19	244131	72.90	4.98	1.98	2.31	4.22	1.99	1.50
2019-20	196306	75.77	4.42	2.10	2.76	2.54	2.10	1.91
2020-21	173019	74.18	3.41	2.77	3.10	3.32	3.19	1.90
2021-22	300253	68.49	7.45	4.29	3.49	2.75	3.21	1.63
2022-23	326709	63.59	8.38	7.02	4.63	2.73	2.53	1.92

Source: DGCI & S, Kolkata

@Excluding Fuel Minerals , *Includes mostly cut, industrial and powder

Section 4 : Foreign Trade

Table 26 : Share of Principal Countries in the Value of Exports of Diamond, 2013-14 to 2022-23							
Exports of Diamond (Mostly Cut)							
Year	Value of Exports (Rs. Crores)	Percentage Share of Principal Importing Countries					
		U S A	Hong Kong	Belgium	U Arab Emts	Israel	Others
2013-14	158005	23.3	35.1	10.1	17.2	5.0	9.4
2014-15	148056	26.6	38.0	10.9	10.5	4.9	9.2
2015-16	142664	29.9	36.1	10.2	10.0	4.6	9.2
2016-17	162567	30.4	37.8	9.8	9.1	4.1	8.8
2017-18	161931	30.0	39.6	9.2	7.8	4.1	9.3
2018-19	175733	32.8	37.7	9.4	6.1	4.0	10.0
2019-20	139974	35.0	32.5	10.6	6.5	4.6	10.8
2020-21	125735	36.4	34.1	7.4	6.5	4.8	10.8
2021-22	189219	38.6	25.4	10.3	7.8	5.6	12.3
2022-23	183607	34.7	24.3	11.2	9.8	5.3	14.7

Source: DGCI & S, Kolkata

Table 27 : Share of Principal Countries in the Value of Imports of Diamond, 2013-14 to 2022-23							
Imports of Diamond (Mostly Cut)							
Year	Value of Imports (Rs. Crores)	Percentage Share of Principal Exporting Countries					
		U Arab Emts	U S A	Belgium	Hong Kong	Russia	Others
2013-14	134117	24.9	2.9	40.1	14.3	3.4	14.4
2014-15	125035	19.7	2.9	43.8	10.8	3.7	19.0
2015-16	110378	22.1	2.9	38.6	11.5	6.5	18.4
2016-17	129443	23.0	2.1	26.3	10.9	11.7	26.1
2017-18	189913	15.4	1.4	13.9	10.5	11.8	47.0
2018-19	177377	22.2	21.7	25.9	13.8	2.0	14.3
2019-20	147952	23.4	20.8	24.4	13.0	2.5	15.8
2020-21	127725	28.5	20.6	20.1	13.4	3.9	13.5
2021-22	204273	34.6	20.6	20.8	6.5	2.9	14.6
2022-23	205786	37.6	19.9	17.9	7.1	4.5	13.0

Source: DGCI & S, Kolkata

Section 4 : Foreign Trade

Table 28 : Production, Exports/Imports and Apparent Consumption as Percentage of Total Availability, 2022-23 (By Selected Minerals)					
Mineral	Total Availability* (‘000 tonne)	Percentage Share of			
		Gross Production	Imports	Exports	Apparent Consumption
Bauxite	23415	87	13	1	99
Chromite	2987	95	5	++	100
Iron Ore	205807	100	++	28	72
Kyanite	6	80	20	4	96
Limestone	371918	94	6	1	99
Magnesite	439	17	83	1	99
Manganese Ore	6762	40	60	1	99
Phosphorite	9237	16	84	++	100
Sulphur	2201	34	66	36	64

*Total Availability = Apparent Consumption + Exports = Production + Imports

++ Negligible

Section 5
Employment in Mines

Average Daily Employment	Average Daily Employment in Mines, (By Groups) 2013-14 to 2022-23	: 54
	Average Daily Employment in Mines, (By Ownership / Mine Category) 2018-19 to 2022-23	: 55-59

Section 5

Employment in Mines

During the year 2022-23, the average daily employment of labour in the MCDR Minerals group was approximately 1.02 lakh persons (102,337 employees). It represents a decline of about 10% compared to the previous year.(Table -29)

The average daily employment of labour in the metallic mineral sector during 2022–23 was 77,638 persons, while the non-metallic sector employed 24,699 persons. .(Table -29)

Within the metallic mineral group, Iron Ore accounted for the highest share of employment at 39%, followed by Lead & Zinc Concentrates with 17%, Manganese Ore with 16%, and both Chromite and Bauxite at 8% each. Employment in Gold mining accounted for 6%, Copper Ore & Concentrates for 5%, and Tin Concentrates for 1% of the total labour employed in the metallic minerals category. (Table -30)

Within the non-metallic mineral group, the majority of labour was employed in limestone mining, which accounted for 88% of the total employment in this category. This was followed by Diamond with 4%, Phosphorite and Magnesite with 3% each. The remaining 2% of the labour was engaged in the mining of other non-metallic minerals. (Table -30)

Section 5 : Employment in Mines

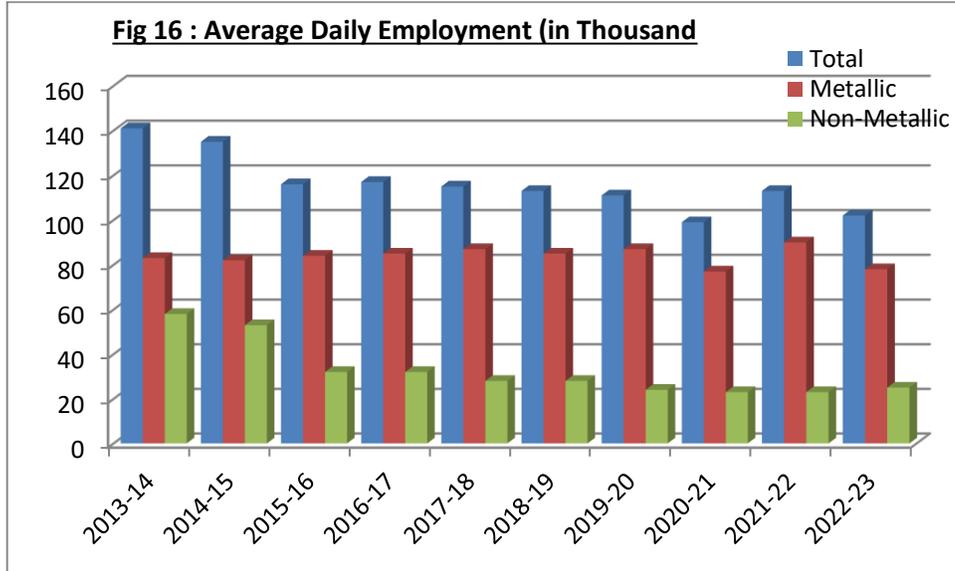


Table 29 : Average Daily Employment in Mines, 2013-14 to 2022-23 (By Groups)

Year	Total Minerals	Metallic Minerals	Non-metallic Minerals
2013-14	140857	82820	58037
2014-15	135115	82375	52740
2015-16	115890	84113	31777
2016-17	116574	84936	31638
2017-18	114863	86506	28357
2018-19	112831	84563	28268
2019-20	111345	87063	24282
2020-21	99491	76563	22928
2021-22	113281	90098	23183
2022-23	102337	77638	24699

Source: Returns received under MCDR, 1988

Section 5 : Employment in Mines

Table 30 : Average Daily Employment in Metallic Mineral Mines, 2018-19 to 2022-23 (contd...)						
Mineral	Year	Total	Type of Ownership		Mine Category	
			Public Sector	Private Sector	A	B
Bauxite	2018-19	6093	1663	4430	3793	2300
	2019-20	6162	2164	3998	4079	2083
	2020-21	5041	1687	3354	3736	1305
	2021-22	5275	1609	3666	4004	1271
	2022-23(p)	6537	2110	4427	4737	1800
Chromite	2018-19	7245	2029	5216	6873	372
	2019-20	5845	1337	4508	5501	344
	2020-21	4289	1116	3173	4228	61
	2021-22	4480	1193	3287	4434	46
	2022-23(p)	6435	1855	4580	6391	44
Copper Ore & Concentrates	2018-19	3449	3449	-	3449	-
	2019-20	3928	3928	-	3928	-
	2020-21	2829	2829	-	2829	-
	2021-22	2794	2794	-	2794	-
	2022-23(p)	3722	3722	-	3722	-
Gold	2018-19	3258	3223	35	3227	31
	2019-20	3261	3223	38	3261	-
	2020-21	3247	3113	134	3247	-
	2021-22	3128	3028	100	3128	-
	2022-23(p)	4776	4642	134	4776	-

Source : Returns received under MCDR, 1988

Category 'A' i) Mechanised Mines,

ii) > 150,

iii) > 75 labours in workings below ground labours in all

Category 'B' : Other than 'A'

Section 5 : Employment in Mines

Table 30 : Average Daily Employment in Metallic Mineral Mines, 2018-19 to 2022-23						
Mineral	Year	Total	Type of Ownership		Mine Category	
			Public Sector	Private Sector	A	B
Iron Ore & Concentrates	2018-19	43125	12974	30151	34204	8921
	2019-20	45687	13286	32401	36018	9669
	2020-21	42422	14150	28272	34506	7916
	2021-22	48934	17594	31340	40345	8589
	2022-23(p)	30310	10765	19545	23424	6886
Lead & Zinc Concentrates	2018-19	8223	17	8206	8222	1
	2019-20	10396	-	10396	10396	-
	2020-21	8535	11	8524	8534	1
	2021-22	14876	3	14873	14875	1
	2022-23(p)	13300	1	13299	13299	1
Manganese Ore	2018-19	13164	8381	4783	10264	2900
	2019-20	11775	7338	4437	9266	2509
	2020-21	10191	6219	3972	8076	2115
	2021-22	10600	6484	4116	8415	2185
	2022-23(p)	12542	8024	4518	10512	2030
Tin Concentrates	2018-19	6	-	6	-	6
	2019-20	9	-	9	-	9
	2020-21	9	-	9	-	9
	2021-22	11	-	11	-	11
	2022-23(p)	16	-	16	-	16

Source : Returns received under MCDR, 1988

Category 'A' i) Mechanised Mines,

ii) > 150,

iii) > 75 labours in workings below ground labours in all

Category 'B' : Other than 'A'

Section 5 : Employment in Mines

Table 31 : Average Daily Employment in Non-Metallic Mineral Mines, 2018-19 to 2022-23 (contd...)						
Mineral	Year	Total	Type of Ownership		Mine Category	
			Public Sector	Private Sector	A	B
Apatite	2018-19	1	1	-	1	-
	2019-20	-	-	-	-	-
	2020-21	-	-	-	-	-
	2021-22	-	-	-	-	-
	2022-23(p)	-	-	-	-	-
Diamond	2018-19	131	131	-	89	42
	2019-20	161	161	-	105	56
	2020-21	142	142	-	112	30
	2021-22	699	699	-	212	487
	2022-23(p)	871	871	-	196	675
Fluorite	2018-19	44	44	-	-	44
	2019-20	44	44	-	-	44
	2020-21	46	46	-	-	46
	2021-22	36	36	-	-	36
	2022-23(p)	58	52	6	10	48
Garnet	2018-19	1267	666	601	1210	57
	2019-20	39	-	39	-	39
	2020-21	66	-	66	-	66
	2021-22	52	-	52	-	52
	2022-23(p)	57	-	57	-	57
Graphite	2018-19	237	27	210	-	237
	2019-20	219	16	203	8	211
	2020-21	167	20	147	12	155
	2021-22	131	26	105	25	106
	2022-23(p)	133	29	104	13	120
Iolite	2018-19	33	-	33	-	33
	2019-20	24	-	24	-	24
	2020-21	8	-	8	-	8
	2021-22	61	-	61	-	61
	2022-23(p)	12	-	12	-	12

Source : Returns received under MCDR, 1988

Category 'A' i) Mechanised Mines,

ii) > 150,

iii) > 75 labours in workings below ground labours in all

Category 'B' : Other than 'A'

Section 5 : Employment in Mines

Table 31 : Average Daily Employment in Non-Metallic Mineral Mines, 2018-19 to 2022-23 (contd...)						
Mineral	Year	Total	Type of Ownership		Mine Category	
			Public Sector	Private Sector	A	B
Kyanite	2018-19	64	21	43	-	64
	2019-20	69	16	53	-	69
	2020-21	61	13	48	-	61
	2021-22	95	22	73	-	95
	2022-23(p)	99	19	80	-	99
Lime Shell	2018-19	290	-	290	200	90
	2019-20	244	-	244	200	44
	2020-21	1	-	1	-	1
	2021-22	9	-	9	-	9
	2022-23(p)	23	-	23	-	23
Limestone	2018-19	21633	1914	19719	13997	7636
	2019-20	21335	1864	19471	14179	7156
	2020-21	20470	1726	18744	14137	6333
	2021-22	20343	1747	18596	14208	6135
	2022-23(p)	21640	2607	19033	21028	612
Magnesite	2018-19	811	490	321	720	91
	2019-20	711	420	291	634	77
	2020-21	642	444	198	596	46
	2021-22	656	435	221	614	42
	2022-23(p)	692	457	235	647	45
Moulding Sand	2018-19	11	-	11	-	11
	2019-20	11	-	11	-	11
	2020-21	24	-	24	-	24
	2021-22	23	-	23	-	23
	2022-23(p)	12	-	12	-	12
Phosphorite/ Rock Phosphate	2018-19	1200	1163	37	1139	61
	2019-20	961	916	45	907	54
	2020-21	951	912	39	904	47
	2021-22	756	722	34	715	41
	2022-23(p)	737	701	36	691	46

Source : Returns received under MCDR, 1988

Category 'A' i) Mechanised Mines,

ii) > 150 ,

iii) > 75 labours in workings below ground labours in all

Category 'B' : Other than 'A'

Section 5 : Employment in Mines

Table 31 : Average Daily Employment in Non-Metallic Mineral Mines, 2018-19 to 2022-23						
Mineral	Year	Total	Type of Ownership		Mine Category	
			Public Sector	Private Sector	A	B
Salt (Rock)	2018-19	27	27	-	-	27
	2019-20	24	24	-	-	24
	2020-21	23	23	-	-	23
	2021-22	23	23	-	-	23
	2022-23(p)	45	45	-	-	45
Selenite	2018-19	16	16	-	-	16
	2019-20	14	14	-	-	14
	2020-21	15	15	-	-	15
	2021-22	18	12	6	6	12
	2022-23(p)	9	7	2	2	7
Siliceous Earth	2018-19	133	0	133	62	71
	2019-20	85	0	85	42	43
	2020-21	48	-	48	20	28
	2021-22	47	0	47	25	22
	2022-23(p)	66	-	66	38	28
Sillimanite	2018-19	2042	2002	40	1669	373
	2019-20	36	36	-	25	11
	2020-21	2	2	-	-	2
	2021-22	-	-	-	-	-
	2022-23(p)	-	-	-	-	-
Vermiculite	2018-19	63	37	26	-	63
	2019-20	61	35	26	-	61
	2020-21	43	24	19	8	35
	2021-22	43	20	23	6	37
	2022-23(p)	21	2	19	6	15
Wollastonite	2018-19	265	-	265	254	11
	2019-20	244	-	244	237	7
	2020-21	219	-	219	210	9
	2021-22	191	-	191	186	5
	2022-23(p)	224	-	224	200	24

Source : Returns received under MCDR, 1988

Category 'A' i) Mechanised Mines,

ii) > 150 ,

iii) > 75 labours in workings below ground labours in all

Category 'B' : Other than 'A'



Report of Study Group to reorganize Indian Mineral Yearbook and other Publications of IBM

July, 2024

Report of Study Group to reorganize Indian Mineral Yearbook and other Publications of IBM

1. Background

The objective of IBM is to promote systematic and scientific development and optimum utilization of mineral resources of the country. In order to achieve this objective one of the charter of functions of Indian Bureau of Mines is “to collect, collate and organize into a database, all information on exploration, prospecting, mines and minerals in the country in the shape of a National Mineral Information Repository and take steps to publish and disseminate the same” through publications. The various publications of IBM are as follows:

- a) Indian Mineral Yearbook (IMYB) is a flagship publication of Indian Bureau of Mines and its preparation & publication is the outcome of collective & coordinated efforts of the Mineral Economics Division and Mining & Mineral Statistics Division. The IMYB published in three volumes titled General Reviews (Vol. I), Reviews on Metals & Alloys (Vol. II) and Mineral Reviews (Vol. III).
- b) Monthly Statistics of Mineral Production, (MSMP) – a monthly publication of mineral statistics.
- c) Indian Mineral Industry at a Glance (IMIG) – a yearly publication of mineral statistics for ten years.
- d) National Mineral Industry (NMI) – a quinquennial publication for information on mineral resources in India.
- e) Statistical Profile of Mineral (SPM) – a yearly publication of mineral statistics for five years.
- f) Bulletin of Mineral Information (BMI) – a half yearly publication for recent amendments/notifications, Summary of court cases and Highlights related to mineral sector.
- g) Bulletin of Mining Leases and Prospecting License – a publication of statistics on mining leases in India.

2. Objective of the committee

The Secretary (Mines) envisioned formulating a Study Group by drawing eminent persons from the academia, industry and R&D Organization for reorganization of Indian Mineral Yearbook and other publications/ reports of IBM, in order to increase its readability with efforts to bring in the latest information. In continuation of same a Study Group has been constituted vide letter dated 07.05.2024 under the chairmanship of Sh. B. L. Gurjar, COM, IBM (the copy of Office Memorandum is attached as **Annexure**) with an objective as below:

- To review the publications of IBM such as IMYB, IMIG, SPM, MSMP, NMI, BMI, etc. with a view to increase its readability.
- To review the comprehensive foundation of the publication, current state of knowledge & content.
- To identify gaps in the existing publications for potential future era of digitization.
- To identify the shortcomings in data presentation & information clarity, also to suggest the methodologies & techniques for improvement.
- To identify the specific areas in a publication to be more in detail and concise to include relevant points only, for better understanding of the reader.
- To analyse possibility for including visual and graphical content, this helps a reader to accumulate information faster and easier.

3. Methodology for deliberation

The committee has made deliberations on the content of the present publications and discussed in length the utility of data, its limitation, availability, frequency of updating and significance in the present scenario. The committee has also focused to make publications more of data centric and less of theoretical/academic. The suggestions/modifications in the publications have been suggested to keep in mind the Reader's perception of more of information/data analytics with less of speculations. Publication-wise deliberations/modification/suggestions of the committee have been divided into two parts as below:

- (a) **Generic** modifications/ deletions/ suggestions, which are applicable to complete list of reviews in a volume and its part thereof.
- (b) **Specific** modifications/ deletions/ suggestions, which are applicable to specific part/ review/ chapter of the publications.

4. The Recommendations for Modifications/ Suggestions in Publications of IBM

4.1 Indian Mineral Yearbook

The Indian Minerals Yearbook (IMYB) comprises three Volumes titled ‘General Reviews’ i.e. first Volume, ‘Metals & Alloys’ is the second Volume and ‘Mineral Reviews’ is the third Volume. It encompasses country-wide & macro-level information related to minerals sector. An attempt has been made to comprehensively depict the Indian Mineral Industry and National Economy, along with concise portrayal of Policy & Legislation, Research & Development and Exploration & Development, Production, Prices, Foreign Trade, Mineral-Based Industries, reviews on mineral/metal, etc. for the corresponding year of publication. Volume wise suggestions/modifications/deletions needed to enhance the readability are described below:

4.1.1 Volume-I: General Review

I. Generic:

- a) The information in the Reviews should not be of repetitive in nature such as policy (steel policy, NMP, etc), amendments in Acts and Rules, etc. The recent (for corresponding year only) amendments in Acts, Rules and Policy should be included and it should be concise & summarized (not elaborative in nature).
- b) The information already covered in other specific review may be provided as a summary.
- c) Information, where no correction is suggested, may be updated as per practice and try to make it brief or more readable.
- d) Try to avoid carried forward information until unless it is confirmed during the review year.

II. Specific: Review wise suggestions/ modifications/ deletions are given below-

1. Indian Mineral Industry & National Economy:

- a) National Mineral Policy should not be repeated every year and only brief on legislative framework or steps to boost Indian economy may be given.
- b) In Star Rating, legislative framework and MSS, etc., only summary or brief may be given, as it is already covered in the review of “Mineral Policy & Legislation”.
- c) Exploration & Development should be limited to short note on only results or summary.
- d) Research & Development should be deleted, as included in corresponding reviews.
- e) Only summary or brief of Foreign Trade is to be included.

2. Mineral Policy And Legislation:

- a) Brief about legislative framework covering NMP, MMDR Act 1957 and Rules made thereunder may be given as a introduction of review.
- b) Only recent amendments/notifications (year under review), preferably summary, may be included.

3. Status of Reconnaissance Permits, Prospecting Licences and Mining Leases in India:

- a) It may be renamed as Status of **Mineral Concession in India** and the existing information may be retained/ updated as per availability.
- b) Information in respect of mineral wise and state wise successfully Auctioned block (ML, CL, EL) during the review year may be included.

4. Exploration & Development:

- a) National Mineral Policy should not be deleted from this review.

- b) Information pertaining to coal and Petroleum & Natural Gas may be deleted, as not under the purview of IBM and information is mostly from publication of other Ministry/Departments.
- c) Exploration & Development activities by DMGs, GSI, MECL, PSUs and other exploration agencies may be given in tabulated form (preferably agencies, state, district, location/block, geological mapping, drilling sampling, results, etc. as per available data) only.
- d) Results obtained/Remarks column in tables should be limited to 7-10 lines covering type of exploration, sampling and chemical analysis, outcome in terms of assay of mineral found (analytical results) and reserves/resources established, as most the information taken from GSI report which is available in public domain.

5. Research & Development: No Change.

6. Port facilities:

- a) This review may be deleted.
- b) The information under Table 1, 3, 4 & 7, inland waterways, recent initiatives, summary of Major/minor port (excluding port wise review), future outlook (if any) may be accommodated in Infrastructure in review on Indian Mineral Industry & National Economy.

7. Mineral based Industry:

- a) The information may be limited to summary and the historical or repetitive information may be avoided as far as possible.
- b) As far as possible data on industry may be given in tabular form to enhance the readability.
- c) The detail of company may be avoided to make more readable.

8. Production: Graphical representation instead of table may be included wherever it is possible, otherwise no change.

9. Prices: No change.

10. Foreign Trade: Graphical representation instead of table may be included wherever it is possible, otherwise no change.

11. State Review:

- a) **Mineral Resources:** In table (State wise and grade wise Reserves/Resources), UNFC code wise information may be replaced with Reserves, Remaining Resources and Total Resources.
- b) Details of Exploration Activities in corresponding state may be deleted, as it is already covered in review on Exploration & Development and this is also not available in the mineral reviews.

4.1.2 Volume-II: Metal Reviews

I. Generic

- 1. As far as possible Graphical representation of data may be included to enhance the readability of publication.
- 2. Review on Ferro-alloys may be deleted, as very limited information is available for updation and most of the information is carried forward (repetitive in nature and validation of information is also very difficult.
- 3. Information about slag may be deleted from the review of “Iron Steel & Scrape and Slag”, as most of the information is not received regularly and is mostly carried forward (repetitive in nature). The NSP policy may also be deleted from the said review, as already covered in Vol-I.
- 4. Try to avoid carried forward information until unless it is confirmed during the review year.

II. Specific

The following modification/deletion/suggestion may be applicable to respective topic/heading in individual review on metals.

- 1. **Image of ore/metal:** Collage of ore/metal images may be given at first page (not more than half page) and salient features, like, reserves/resources with metal content, R/R ratio, production of ore & conc., metal content, reporting

mines, installed capacity of metal, metal production, export/import, world ranking, etc. (as applicable for that metal/ore) may be given in box embedded in Collage.

2. **Introduction:** It may be summarized and limited to about half of 1st page in single column.
3. **Reserves/Resources:** Almost half page note in single column on reserves/resources may be limited (collected from the latest NMI).
 - In table (State wise and grade wise Reserves/Resources), UNFC code wise information may be replaced with Reserves, Remaining Resources and Total Resources.
 - Graphical representation (Pie Chart depicting % share) for Ores (Reserves, Remaining Resources, and Total Resources) with metal content may be included.
 - Bar chart for State wise and Grade wise distribution of Reserves, Remaining Resources, Total Resources with metal content may be included for graphical representation (wherever possible). If resources are located in 5 or more states then it may be prepared by using distribution of top 5 states and others.
4. **Exploration & Development:** It may be deleted, as information has already covered in review on Exploration & Development in Vol. I.
5. **Production:** It may be renamed as **Mining Leases & Production** by including total number of mining lease of respective metal/ore/mineral with area as on _____. A short note on mineral production covering sector, owner (captive & non captive mines), reporting mines (private & public sector), major producer, etc. may be provided. State wise and Grade wise Analysis of ore production may also be included. Under topic of average employment, existing short note is sufficient
 - Pie Chart or Bar chart or Table for State wise distribution of no. of mining leases with area as on _____ may be provided.

- Table for detail of producer mines in current year may be limited to top 5 – 10 covering name of mine/company, State, district, location. The corporate address of the producers should be deleted.
 - Bar chart for State wise production in Last 3 yrs (All states other than major states may be considered as “other states”) may be included for graphical representation.
 - Table for State/Sector/Grade wise production (Qty & Value) in Last 3 yrs (whenever 3 yrs is not possible to adjust then 2 years)
 - Table for State wise ore produced, Ore treated and Concentrate produced along with metal content in Last 3 yrs (whenever 3 yrs is not possible to adjust then 2 years)
 - Pie chart or Table (whatever possible) for State/Industry/Plant/Sector wise installed capacity (smelting and refining) and production of metal and/or mineral based product in Last 3 yrs (whenever 3 yrs is not possible to adjust then 2 years).
 - Bar chart for Sector wise distribution of mineral production in last 3 yrs may be included for graphical presentation, if possible.
- 6. Mining & Milling:** This information may be summarized, as mostly repetitive (every year) in nature. Plant wise or mine wise updated information is only kept and try to avoid the redundant information.
- 7. Smelting:** It may be may be summarized and limited to process technology, plant location and installed capacity (history or product/plant specific detail may be avoided) to keep it more readable.
- 8.** The industry details should be concise (brief/summary) and tabular with information limited to end product only. It should be compiled in half column only. Capacities and details of semis, downstream product may be deleted. Information related to downstream products should be deleted, as these details are depends upon market conditions and demand of the downstream product.

9. **Recycling:** A short note covering latest facts instead of history may be given, as history or lengthy information and lack of data reduces the readability. This is mostly repetitive in nature, hence, it may be concise and summarized.
10. **Development & Expansion:** Separate chapter on Development & expansion may be deleted and information in this context, mostly limited to set up of Greenfield project and capacity expansion in brownfield project, may be included in brief under industry details.
11. **Research & development:** Detail of Research & development may be deleted, as already covered in R & D Review and information in respect of most of minerals & metal is not complete.
12. **Uses & Specification:** In this topic, detail of Specification may be deleted as mostly carry forwarded (or not updated) and it may be renamed as Uses & Consumption by combining information of consumption with it. Uses may be summarised and provided in tabular form, if possible. The apparent consumption (in place of consumption) may be given in table by considering opening & closing stock, production, export and import.
13. **World Review:** A summary note on world reserves and world production of metal/ore/mineral including India's ranking in world may be provided. **Country-wise text/details may be deleted**, as the information is taken from different source and lags behind the year of information of World production and world reserves. Also the dependency of world review on USGS Mineral yearbook reviews make IMYB delayed.
 - a) The information in Table for World reserves and world production may be as per existing practice. The information may be limited to top 10 countries and others (collective information of countries other than top 10 countries). If information for India is included in others in the table than the same may be provided as a footnote of table.
 - b) Graphical representation for world reserves and world production may be included, if possible.

14. Foreign Trade: A summary note on export/import of Metal & Alloys alongwith table containing country wise export/import of Metal & Alloys including waste & scrap (qty & value) for last 3 years (maximum Top 10 country and others) may be retained.

- a) Country-wise tables may be given only for primary metal or any other important product, if any (not for all commodities/products).
- b) Table containing country-wise export of import of product/commodities other than primary metal (or any other important product) may be deleted. As in the absence of HS codes/ commodity details in the table, information is not complete in nature. Country wise information of various product/articles/alloys of metal makes the review lengthy and the same may not be useful on most of the times.
- c) The information of export & import of rest of the products/alloys/articles of respective metal may be given in a separate single table containing product-wise detail (single table for all other products/alloys/articles).

15. Health and safety: It is not a domain of IBM and information is mostly repetitive since long, hence the Health and safety should be deleted.

16. Technical Possibilities: This topic may be deleted as most of the information is not updated regularly.

17. Future Outlook: Brief of future information related to production, demand, expansion, etc. in respect of metal may be included and the historical information may be updated.

4.1.3 Volume-III: Mineral Reviews

I. Generic:

1. As far as possible Graphical representation of data may be included to enhance the readability of publication
2. The Review on **coal & lignite** may be deleted, as not under the purview of IBM and its most of the information is from Ministry of Coal Reports and

publications, which is already in public domain. The validation of information is also very difficult.

3. The Review on **Petroleum and Natural Gas** may be deleted, as not under the purview of IBM and its most of the information is from other Ministries Reports and publications, which is already in public domain. The validation of information is also very difficult.
4. The Review on **Cement** may be deleted, as it is not a ore/mineral or metal and very limited information is available for updating, hence validation of information is also very difficult. **The important statistics may be included in the review on Mineral based Industry.**
5. The Review of “**Minor Mineral**” may be deleted, as not under the purview of IBM and very limited information is available for updating, hence validation of information is also very difficult.
6. Separate information on Development & expansion may be deleted. The information, mostly limited to set up of Greenfield project and capacity expansion in brownfield project, may be included in brief under industry details.
7. Try to avoid carried forward information until unless it is confirmed during the review year.

II. Specific

The following modification/deletion may be applicable to individual review on minerals.

1. **Image of ore/metal:** Collage of ore/mineral images may be given at first page (not more than half page) and salient features, like, reserves/resources with, R/R ratio, production of ore, reporting mines, export/import, world ranking, etc. (as applicable for that ore/mineral) may be given in box embedded in Collage.
2. **Introduction:** It may be summarized and limited to about half of 1st page in single column.
3. **Reserves/Resources:** Almost half page note in single column on reserves/resources may be limited (collected from the latest NMI).

- In table (State wise and grade wise Reserves/Resources), UNFC code wise information may be replaced with Reserves, Remaining Resources and Total Resources.
- Graphical representation (Pie Chart depicting % share) for Ores (Reserves, Remaining Resources, and Total Resources) with metal content may be included.
- Bar chart for State wise and Grade wise distribution of Reserves, Remaining Resources, Total Resources with metal content may be included for graphical representation (wherever possible). if resources are located in 5 or more states then it may be prepared by using distribution of top 5 states and others.

4. Exploration & Development: It may be deleted, as information has already covered in review on Exploration & Development in Vol. I.

5. Production & Stocks: It may be renamed as **Mining Leases & Production** by including total number of mining lease of respective metal/ore/mineral with area as on _____. A short note on mineral production covering sector, owner (captive & non captive mines), reporting mines (private & public sector), major producer, etc. may be provided. State wise and Grade wise Analysis of ore production may also be included.

- A Pie Chart or Bar chart or Table for State wise distribution of no. of mining leases with area as on_____ may be provided.
- Table for detail of producer mines in current year may be limited to top 5 – 10 covering name of mine/company, State, district, location. The corporate address of the producers should be deleted.
- Bar chart for State wise production in Last 3 yrs (All states other than major states may be considered as “other states”) may be included for graphical representation.
- Table for State/Sector/Grade wise production (Qty & Value) in Last 3 yrs (whenever 3 yrs is not possible to adjust then 2 years)

- Bar chart for Sector wise distribution of mineral production in last 3 yrs may be included for graphical presentation, if possible.
 - Under topic of closing stock at mine head, a Table for State/Sector/Grade wise closing stock at mines head in last 2 yrs.
 - Existing short note on average employment may be retained.
6. **Mining, Marketing and transport:** It may be deleted as mostly carry forwarded or not updated (mostly repetitive every year). If updated information of mining is available, then a short note on mining may be included in half of column of page.
 7. **Mining & Processing:** It may be deleted as mostly carry forwarded or not updated (mostly repetitive every year). If updated information on mining & processing is available, then a short note on it may be included in half of column of page.
 8. **Grading & Marketing:** It may be deleted as mostly carry forwarded or not updated (mostly repetitive every year).
 9. **Classification:** It may be deleted as mostly carry forwarded or not updated (mostly repetitive every year).
 10. **Environment Factors:** It may be deleted as mostly carry forwarded or not updated (mostly repetitive in nature) and not under the purview of IBM. The validation is also difficult.
 11. **Pollution Control & Environmental Management Efforts:** It may be deleted as mostly carry forwarded or not updated (mostly repetitive in nature) and not under the purview of IBM. The validation is also difficult.
 12. **Beneficiation:** It may be may be summarized and limited to process technology, plant location and installed capacity (history or product/plant specific detail may be avoided) to keep it more readable.
 13. The industry details should be concise (brief/summary) and tabular with information limited to end product only. It should be compiled in half column only. Capacities and details of semis, downstream product may be deleted.

Information related to downstream products should be deleted, as these details are depends upon market conditions and demand of the downstream product.

- 14. Research & development:** Detail of Research & development may be deleted, as already covered in R & D Review and information in respect of most of minerals is not complete.
- 15. Uses & Specification:** The detail of Specification may be deleted as mostly carry forwarded (or not updated) and BIS specifications are on chargeable basis, which are not available in open sources. This chapter may be renamed as Uses & Consumption by combining information of consumption with it. Uses may summarise and provided in tabular form, if possible, for ease of understanding. The apparent consumption (in place of consumption) may give in table by considering opening & closing stock, production, export and import, as the consumption has not been updated since long.
- 16. Technical Possibilities:** This topic may be deleted as most of the information is not updated regularly.
- 17. Substitutes:** A short note on possible substitute, if available, may be included.
- 18. Trade Policy:** The policy condition and tariff, if available, for the respective ore/mineral may be included as a short note or table.
- 19. Health and safety:** It is not a domain of IBM and information is mostly repetitive since long, hence the Health and safety should be deleted.
- 20. World Review:** A summary note on world reserves and world production of metal/ore/mineral including India's ranking in world may be provided. Country-wise text/details may be deleted, as the information is taken from different source and lags behind the year of information of World production and world reserves. Also the dependency of world review on USGS Mineral yearbook causes delay in IMYB schedule.
 - a) The information in Table for World reserves and world production may be as per existing practice. The information may be limited to top 10 countries and others (collective information of countries other than top 10 countries). If

information for India is included in others in the table than the same may be provided as a footnote of table.

- b) Graphical representation for world reserves and world production may be included, if possible.

21. Foreign Trade: A summary note on export/import of ore & minerals alongwith table containing country wise export/import of ore & minerals for last 3 years (maximum Top 10 country and others) may be retained.

- a) Country-wise tables may be given only for primary ore & minerals or any other important product, if any (not for all commodities/products).
- b) Table containing country-wise export of import of product/commodities other than ore & minerals (or any other important product) may be deleted. As in the absence of HS codes/ commodity details in the table, information is not complete in nature. Country wise information of various products makes the review lengthy and the same may not be useful on most of the times.
- c) The information of export & import of rest of the products may be given in a separate single table containing product-wise detail (single table for all other products).

22. Future Outlook: Brief of future information related to production, demand, expansion, etc. in respect of mineral may be included and the historical information may be limited to reference only (mostly latest information may be provided).

4.2 Bulletin on ML, CL, EL and Auction

1. The Bulletin of ML & PL and Bulletin of Mineral Information should be merged as the set of information in both the publications is output of same set of information in different forms.
2. The name of the combined publication should be changed to “**Bulletin of ML, CL, EL and Auction**”.
3. The structure and information to be given in the following manner as below:

Existing Format		Suggestion/Modification
Heading	Sub Heading	
	1. Introduction	Introduction
	2. Land Use Scenario	Half page brief on mining lease distribution and land use in country Pie chart of land use (table may be deleted)
Section I: Distribution of Mining Leases	3. Mining Leases	State/Mineral wise Analysis:
	3.1 State wise Analysis	Retain Table 1, 2 & 4 (Blank space may be compressed) and delete Table 3 Insert pie chart for mining lease distribution in mineral rich state & others
	3.2 District wise Analysis	District wise Analysis: Retain Table 5, 6 & 7
	3.3 Mineral wise Analysis	Mineral wise Analysis: Delete Table 8 & 9
	3.4 Frequency Distribution	Frequency Distribution: Delete Table 10 and retain Table 11 (category classification as footnote of table)
	3.5 Sector wise Distribution	Sector wise Distribution: Pie chart instead of text Merge Table 12 & 13 (by inserting CPSU & SPSU under Public sector of Table 12) and retain Table 14
Section II: Trend in Mining Leases during year	2.1 Trend in Mining	Mining Lease Granted/Executed:
	A. Mining Leases Granted	Table having following detail Mineral, State/District/Village, Area, Date of grant, Date of Execution, Period, Name & Address of lessee
	B. Mining Leases Executed	
	C. Mining Leases Lapsed	Mining Lease Lapsed/Terminated/Determined/Cancelled: Table having following detail Mineral, State/District/Village, Area, Whether mining lease Lapsed/Terminated/Determined/Cancelled, Date of Lapsed/ Terminated/Determined/Cancelled, Name & Address of lessee
	D. Mining Leases Transferred	Mining Leases Transferred: Table having following detail Mineral, State/District/Village, Area, Name & Address of Transferor, Name & Address of Transferee, Valid Upto, Date of Transfer order or Transfer deed
	E. Mining Leases Extended	Mining Leases Extended: Table having following detail Mineral, State/District/Village, Area, Date of extension, Date up to

		Which lease period extended, Name & Address of lessee
	2.2 Trend in Prospecting A. Prospecting Licences Granted	May be deleted or included in next section
Section III: Prospecting Licences or Composite Licences	4. Prospecting Licences or Composite Licences 4.1 State wise Distribution of Prospecting Licences or Composite Licences	State wise Distribution of Prospecting Licences or Composite Licences or Exploration Licence: Compress table by deleting rows where all information in respect of state is nil
	4.2 Mineral wise Distribution of Prospecting Licences	Mineral wise Distribution of Prospecting Licences or Exploration Licence: Compress table by deleting rows where all information in respect of mineral is nil
Recommended for New insertion		
Section IV: Auction Regime	Successful Auction since inception (as on date_____):	Detail of State wise and Mineral wise summary of auction since inception State, Mineral, Type of Concession, No. of successfully auctioned blocks
	Auction Trend	Successful auction during the year: Table having following detail State, Mineral, Date of Auction, Type of Concession, Area, Status, Name of Bidder

4.3 National Mineral Inventory at a Glance: The National Mineral Inventory at a Glance is a publication designed to provide a quick and broad qualitative scenario of mineral resources of the country. The publication provides reserves/resources as per United Nations Framework Classification (UNFC) which has been adopted in the Indian Mineral Sector. The resource data has been provided in the form of tables. These tables give mineral wise distribution of resources in different states and vice versa along with codes and terminologies as per UNFC. *The data presentation, information clarity and current state of knowledge are at par with any other National & International publication and hence may be retained as it is.*

4.4 National Mineral Inventory an Overview: The National Mineral Inventory an overview is a publication, which is aimed to disseminate of updated data of mineral resources in the country. It covers information on mineral resources in category of ferrous, non-ferrous, precious & semi-precious minerals, strategic minerals, fertilizer minerals, refractory minerals,

ceramic & glass minerals, other industrial minerals and all India resource summaries. The publication also encompasses a comparative mineral-wise/ state-wise/ grade-wise data on reserves, remaining resources and total resources as on 1.4.2020 vis-a-vis 1.4.2015. It also provides details about the significant increase or decrease of mineral resources over the previous inventory, particularly in respect of their grades, lease status with break up into Private & Public sector. *The data presentation, information clarity and current state of knowledge are at par with any other National & International publication and hence may be retained as it is.*

4.5. Mineral Statistics of Mineral Production (MSMP): MSMP is a monthly publication that presents important statistics on mineral production in all the States and Union Territories of India. The publication also comprises statistics on Index of Mineral Production; value of mineral production by states; details of production by minerals, by state for each mineral, by mineral in each state; state-wise average sale price of minerals by grades; average sale price of metals and metal production. The publication is complete in all sense and may be retained as it is. *The data presentation, information clarity, graphical content and current state of knowledge is at par with any other National & International publication and hence may be retained as it is.*

4.6 Indian Mineral Industry at a Glance

1. The Statistical profile of Minerals and Indian Mineral Industry at a Glance should be merged as the set of information in both the publications is output of same set of information in different forms.
2. The structure of Indian Mineral Industry at a Glance and Statistical profile of minerals is given as below:

Part A: Mineral Industry at a Glance

Existing Format		Suggestion/Modification
Heading	Sub Heading	
Section – 1 General	Reserves and Resources as on 01.04.2020 Mineral Reserves/Resources	Table 1 may retain
	Mining Leases as on 31-3-2021 Mining Leases (By Principal Minerals) Mining Leases (By Principal States)	Table 2 to Table 7 including chart may be deleted Two Table for State wise

	Concentration of Mining Leases (By Potential) Distribution of Lease Area (By Sectors) Distribution of Leases (By Lease Groups) Distribution of Leases (By Area Groups)	and Mineral wise no. of mining leases with area may be provided
	Reporting Mines Number of Reporting Mines (By Mineral Groups) Number of Underground Mines (By Principal Minerals)	Table 8 to Table 9 may retain
	Value of Mineral Production Decennial Growth in the Value of Mineral Production 1958 to 2018-19, 1959 to 2019-20 & 1950 to 2020-21 Value of Mineral Production (By Mineral Group) Value of Mineral Production (By Minerals) Value of Mineral Production (By States) Value of Mineral Production (By Sectors) Value of Mineral Production & Number of Mines (By Sectors)	Table 10 to Table 16 may retain
	GDP and Indices Index of Mineral Production (By Mineral Groups) Wholesale Price Index (By Groups) Gross Domestic Product (GDP) at Current Prices	Table 17 to Table 19 including chart may retain
	Exports and Imports Exports: Total Merchandise: Minerals & Metals Imports: Total Merchandise: Minerals & Metals	Table 20 to Table 21 including chart may retain
	Explosives Consumption of Explosives, 2018-19, 2019-20 & 2020-21 (By Minerals)	Table 22 to Table 24 may be deleted
	Afforestation Afforestation in Metalliferous Mines During 2020-21 (By Principal Minerals)	Table 25 may be deleted
Section – 2 Mineral	Production, Value, Employment and Reporting Mines, 2009-10 to 2020-21,	Table 26 to Table 29 may be deleted (as it related to Coal,

Productions, 2009-10 to 2020-21	(Principal Minerals) (Coal, Lignite, Petroleum (Crude), Natural gas (Utilised), Bauxite, Chromite, Copper Ore & Concentrates, Gold Ore and Gold, Iron Ore, Lead & Zinc Ore and Concentrates, Manganese Ore Apatite & Phosphorite, Diamond, Kyanite, Limestone, Magnesite and Sillimanite are covered)	Lignite, Petroleum and Natural gas) and Table 30 to Table 42 including chart may retain (similar information for 5 years are also provided in Statistical profile)
Section – 3 Productions of Metals & Alloys, 2009-10 to 2020-21	Production of Metals and Alloys, 2009-10 to 2020-21 (Iron & Steel, Ferro-Alloys, Alumina and Aluminium, Copper, Gold and Silver and Lead & Zinc are covered)	Table 43 to Table 48 including chart may retain
Section – 4 Foreign Trades, 2009-10 to 2020-21	Exports of Principal Minerals, 2009-10 to 2020-21 (Chromite, Granite, Value of Exports of Granite (By Principal Countries), Iron Ore, Value of Exports of Iron ore (By Principal Countries), Manganese Ore, Marble, Mica are covered) Imports of Principal Minerals, 2009-10 to 2020-21 (Asbestos, Coal, Petroleum (Crude), Rock Phosphate, Sulphur are covered)	Table 49 to Table 61 may be deleted (very few minerals are covered)
	Direction of Trade Value of Exports of Minerals, 2018-19 to 2020-21 Value of Exports of Metals, 2018-19 to 2020-21 Value of Imports of Minerals, 2018-19 to 2020-21 Value of Imports of Metals, 2018-19 to 2020-21 Exports, Imports & Net Trade in Minerals & Metals Share of Principal Minerals in the Exports Value of Minerals, 2014-15 to 2020-21 Share of Principal Minerals in the Imports Value of Minerals, 2014-15 to 2020-21 Share of Principal Countries in the Value of	Table 62 to Table 74 including chart may retain

	Exports of Diamond, 2014-15 to 2020-21 Share of Principal Countries in the Value of Imports of Diamond, 2014-15 to 2020-21 Production, Exports/Imports & Apparent consumption as Percent of Total Availability 2018-19 to 2020-21	
Section – 5 Average Daily Employments in Mines, 2009-10 to 2020-21	Employment in Mines Average Daily Employment in Mines (By Groups), 2009-10 to 2020-21 Average Daily Employment in Metallic Minerals Mines 2018-19, 2019-20 & 2020-21 (By Sectors) Average Daily Employment in Non Metallic Minerals Mines 2018-19, 2019-20 & 2020-21 (By Sectors) Average Daily Employment in Mines (By Category/Sector) 2018-19, 2019-20 & 2020-21	Table 75 to Table 79 may retain
Section – 6	Consumption of Minerals, 2009-10 to 2020-21 (Only Iron & Steel Industry, Cement Industry and Refractory Industry are covered)	Section – 6 including Table 80 to Table 82 may be deleted (Coverage of industries are not encouraging)
Section – 7	Productions of Mineral-based Products, 2009-10 to 2020-21 (Only Cement and Asbestos-Cement Products, Ceramic Products, Fertilizers and Sulphuric Acid are covered)	Section – 7 including Table 83 to Table 86 may be deleted (Products are very limited)
Section – 8	Mining Machinery, 2009-10 to 2020-21	Section – 8 including Table 87 to Table 112 may be deleted
Appendix Appendix-I(a) Decennial Growth in Production, 1958 to 2018-19 Appendix-I(b) Decennial Growth in Production, 1959 to 2019-20 Appendix-I(c) Decennial Growth in Production, 1950 to 2020-21 Appendix-II Decennial Mineral Production, 2009-10 to 2020-21		Table 113 to Table 116 may retain

Part B: Statistical Profiles of Minerals

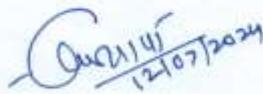
Mineral wise profile covering following information

Existing Format	Suggestion/Modification
A) Total Resources: Reserves, Remaining Resources and Total Resources	Retain
B) Mining Leases as on ____: No. of Leases and Lease Area	Retain
C) Mines Reporting Production: Sector wise, Owner wise, State wise and Grade wise no. of mines and production during last 2 years	As far as possible accommodate information for 5 years
D) Production Trend: Production (Qty & Value) during last 5 years	Retain
E) Closing Stock: Closing stock during last 5 years	Retain
F) Employment: Average Number of Persons Employed per Day during last 2 years	As far as possible accommodate information for 5 years
G) Domestic Consumption Trend: Consumption during last 5 years	Deleted or Apparent consumption may be provided (mostly not available)
H) Exports/Imports Trend: Exports/Imports (Qty & Value) during last 5 years	Retain
I) Exports/Imports by Country in ____: Exports/Imports (Qty & Value) by 5 major countries	Retain
J) Five Principal Mines in ____:	Retain
K) Contribution of above Mines in ____: Quantity and % share	Retain

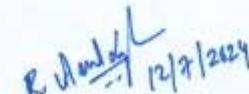
5 Other Recommendations:

The data dissemination is one of the prime objectives of Indian Bureau of Mines and to enhance the readability and accessibility of information to the public, the following data analytics may be provided on IBM's portal in respect of:

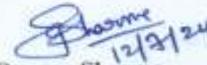
1. State-wise, mineral-wise, sector-wise, frequency-wise number of leases.
2. State-wise, sector-wise, grade-wise, mineral-wise statistics, leasehold/ freehold on National Mineral Inventory.
3. State-wise, mineral-wise, grade-wise production of Minerals.
4. Survey of viewership of IBM's publication.
5. The location of Mines address can have Google map link so that directly reader can see the location on Google map.
6. Glossary should be added hyperlinked.



Deepak Thapa
AME (S), IBM



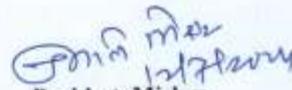
Anil Singh Rajput
Sr. Manager, MOIL



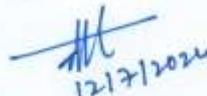
Gaurav Sharma
Mineral Economist (I), IBM



Dr. Sandeep Panchal
Asstt. Professor, VNIT



Prabhat. Mishra
Sg. Mineral Economist (I), IBM



B. L. Gurjar
Controller of Mines,
IBM

***** End of Report *****

207-IR022/1/2024-TS-IBM_HQ

I/32016/2024

By E-mail

	<p>भारत सरकार Government of India खान मंत्रालय Ministry of Mines भारतीय खान ब्यूरो Indian Bureau of Mines मुख्य खान नियंत्रक कार्यालय (एमईएस) Office of CCOM (MES) No.: 207-IR022/1/2024-TS-IBM_HQ</p>	 <p>एक ही धरती - एक ही परिवार - एक ही भविष्य ONE EARTH - ONE FAMILY - ONE FUTURE Block 'D', Second Floor, Indira Bhawan, Civil Lines, Nagpur 440 001 Phone/ Fax No.: 0712 2565136 E mail: ccom- mes@ibm.gov.in Date :07.05.2024</p>
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Office Memorandum

Subject: Constitution of the Study Group to reorganize Indian Mineral Yearbook and other Publications of IBM, to increase its readability with efforts to bring in the latest information

The IBM's objective is to promote systematic and scientific development and optimum utilisation of mineral resources of the country. In order to achieve this objective one of the charter of functions of Indian Bureau of Mines is "to collect, collate and organise into a database, all information on exploration, prospecting, mines and minerals in the country in the shape of a National Mineral Information Repository and take steps to publish and disseminate the same".

Indian Mineral Yearbook (IMYB) is a flagship title of Indian Bureau of Mines and its publication & release is the outcome of collective & coordinated efforts of the Bureau's Mineral Economics Division and Mining & Mineral Statistics Division. The IMYB published in three volumes titled General Reviews (Vol. I), Reviews on Metals & Alloys (Vol. II) and Mineral Reviews (Vol. III).

The other important publications of IBM are Monthly Statistics of Mineral Production, (MSMP) - a collection of monthly mineral statistics, Indian Mineral Industry at a Glance (IMIG) - a collection of mineral statistics for ten years, National Mineral Industry (NMI) - a collection of information on mineral resources in India, Statistical Profile of Mineral (SPM) - a collection of mineral statistics for five years, Bulletin of Mineral Information (BMI) - a collection of amendments/ notifications and summary of court cases in mineral sector and Bulletin of Mining Leases and Prospecting License - a collection of statistics on mining leases in India.

In continuation of the same the Secretary (Mines) directed to formulate of a Study Group by drawing eminent persons from the academia, industry and R&D Organization for reorganization of Indian Mineral Yearbook and other publications/ reports to increase its readability with efforts to bring in the latest information. In this context, a Study Group has been constituted in order to reorganize Indian

1/32016/2024

Mineral Yearbook and other Publications of IBM, of following members:

S. No.	Name of Member	Designation
1	Shri B. L. Gurjar, Controller of Mines, IBM	Chairman
2	Shri P. Mishra, Sg. Mineral Economist (I), IBM	Member
3	Prof. Sandeep Panchal, Asst. Professor, VNIT	Member
4	Shri. Anil Singh Rajput, Sr. Manager, MOIL	Member
5	Shri. Deepak Thapa, AME (S)	Member
6	Shri Gaurav Sharma, ME (I), IBM	Member Secretary

-

Terms of Reference:-

1. To review the publications of IBM such as IMYB, IMIG, SPM, MSMP, NMI, BMI, etc. with a view to increase its readability.
2. To review the comprehensive foundation of the publication, current state of knowledge & content.
3. To identify gaps in the existing publications for potential future era of digitization.
4. To identify the shortcomings in data presentation & information clarity, also to suggest the methodologies & techniques for improvement.
5. To identify the specific areas in a publication to be more in detail and concise to include relevant points only, for better understanding of the reader.
6. To analyse possibility for including visual and graphical content, this helps a reader to accumulate information faster and easier.
7. The committee should submit its report latest by **30.06.2024**.

(Pankaj Kulshreshta)
Chief Controller of
Mines (MES)
Indian Bureau

of Mines

Copy to:-

S. No.	Name of Member	Contact Details
1	Shri B. L. Gurjar, Controller of Mines, IBM	bigurjar@ibm.gov.in, com.tc@ibm.gov.in
2	Shri P. Mishra, Sg. Mineral Economist (I), IBM	pmishra@ibm.gov.in
3	Prof. Sandeep Panchal, Asst. Professor, VNIT	
4	Shri. Anil Singh Rajput, Sr. Manager, MOIL	anilsinghrajput@moil.nic.in
5	Shri. Deepak Thapa, AME (S)	mms@ibm.gov.in
6	Shri Gaurav Sharma, ME (I), IBM	gsharma@ibm.gov.in