8 Production

MINERALS

The total value of mineral production (excluding atomic minerals) at Rs. 187717 crore during 2009-10 increased by about 8% as compared to the previous year due to rise in the production of coal, lignite, natural gas (utilised), petroleum (crude), lead concentrate, zinc concentrate, silver, barytes, diamond, garnet (abrasive), kaolin, limestone, magnesite, marl,ochre, quartz, etc.

In the total value of mineral production, the fuel minerals contributed the major share of about Rs.131532 crore or 70%. The rest was accrued from metallic minerals Rs. 32274 crore or 17%, non-metallic minerals Rs. 4287 crore or 2% and minor minerals Rs. 19624 crore or about11% (Table-1).

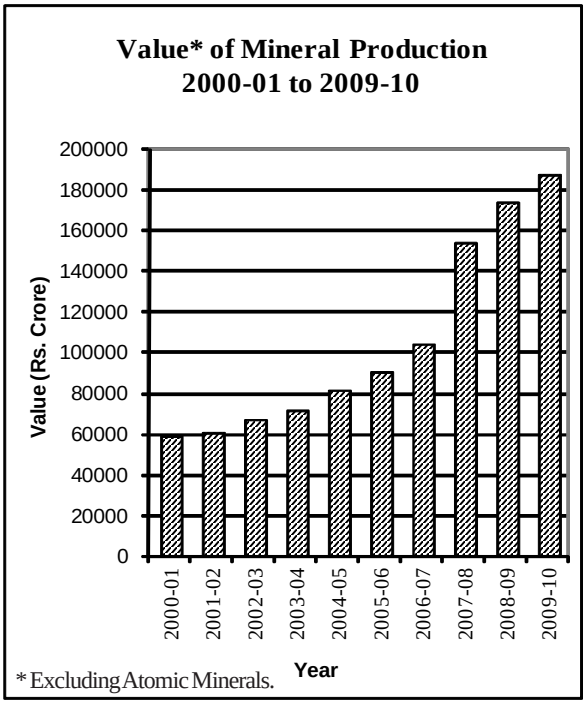
Fuel Minerals

The value of fuel minerals in 2009-10 at Rs. 131532 crore increased by about 15% as compared to the preceding year. The production of **coal** at 532 million tonnes during 2009-10 increased by 8% over the previous year. Chhattisgarh, Odisha, Jharkhand, Madhya Pradesh, Andhra Pradesh, Maharashtra, West Bengal and Uttar Pradesh continued to be the principal producing states accounting for 99% of the total production of coal in the country during 2009-10. Meghalaya, Assam, Arunachal Pradesh and Jammu & Kashmir reported remaining 1% of the total production. The production of **lignite** at 34 million tonnes registered an increase of 5% over the previous year. Major quantity of 22 million tonnes or 66% was reported from Tamil Nadu and the rest 12 million tonnes or 34% was from Gujarat and Rajasthan.

The production of **petroleum (crude)** at about 34 million tonnes increased marginally during 2009-10 as compared to the previous year. Offshore region contributed 65% of total production followed by Gujarat 18% and Assam 14%. The remaining 3% was jointly shared by Rajasthan, Andhra Pradesh, Tamil Nadu, and Arunachal Pradesh. During 2009-10, production of **natural gas (utilised)** at 47510 million cu m recorded an increase of 46% as compared to the level of previous year. Offshore, which is the largest source for natural gas accounted for 82% of the total production followed by Assam 6%, Gujarat 5% and the remaining 7% was contributed by Andhra Pradesh, Tamil Nadu, Tripura, Rajasthan, Arunachal Pradesh and West Bengal.

Metallic Minerals

The value of metallic minerals in 2009-10 at Rs. 32274 crore decreased by 8% over the previous year due to lower production reported in bauxite, chromite, copper concentrates, gold and manganese ore. Among the principal metallic minerals, iron ore contributed Rs. 26865 crore or 83%, lead (concentrate) & zinc (concentrate) together Rs. 1465 crore or about 5%, manganese ore Rs. 1270 crore or 4%, chromite Rs. 1183 crore or 4%, bauxite Rs. 456 crore, copper (concentrate) Rs. 363 crore, gold Rs. 331 crore and silver Rs. 339 crore or about 1% each while a negligible share was from tin concentrates.



The production of **iron ore** at about 218.6 million tonnes in 2009-10 increased 3% over the previous year. About 27% of the total production was shared by Public Sector Companies like SAIL (including formerly IISCO), NMDC, OMC, etc. The share of Private Sector was 73%. Almost entire production of iron ore (97%) accrued from Odisha, Karnataka, Goa, Chhattisgarh and Jharkhand. The remaining 3% production was reported from Andhra Pradesh, Madhya Pradesh, Maharashtra and Rajasthan.

The production of **copper concentrate** at 124 thousand tonnes in 2009-10 decreased about 9% as compared to the previous year. Average metal content in copper concentrate was 22.9% Cu. The production of **chromite** at 3.41 million tonnes in 2009-10 also decreased 16% as compared to the previous year. Odisha reported almost entire output of chromite (99.8%) in the country. A nominal production was reported from Karnataka and Maharashtra. Mining of chromite was mostly dominated by private sector producers, viz, Tata Steel (formerly TISCO), IMFAL, Balasore Alloys Ltd, FACOR and Misrilal Mines (P) Ltd jointly accounted for 77% production during 2009-10. Three public sector companies, viz, OMC, MML and Industrial Development Corp. of Orissa Ltd (IDCOL) together reported 18% of the total production in 2009-10. The production of **manganese ore** at 2.4 million tonnes in 2009-10 decreased by about 13% as compared to that in the previous year. MOIL continued to be the largest producer of manganese ore with a share of 42% production in 2009-10 followed by Tata Steel and SMIOR (10% each) and OMM (7%). Of the total production of manganese ore in 2009-10, Madhya Pradesh and Odisha contributed 25% each, Maharashtra 24%, Karnataka 13% and Andhra Pradesh 10%. The remaining 3% was jointly shared by Gujarat, Rajasthan and Jharkhand with a nominal share from Goa.

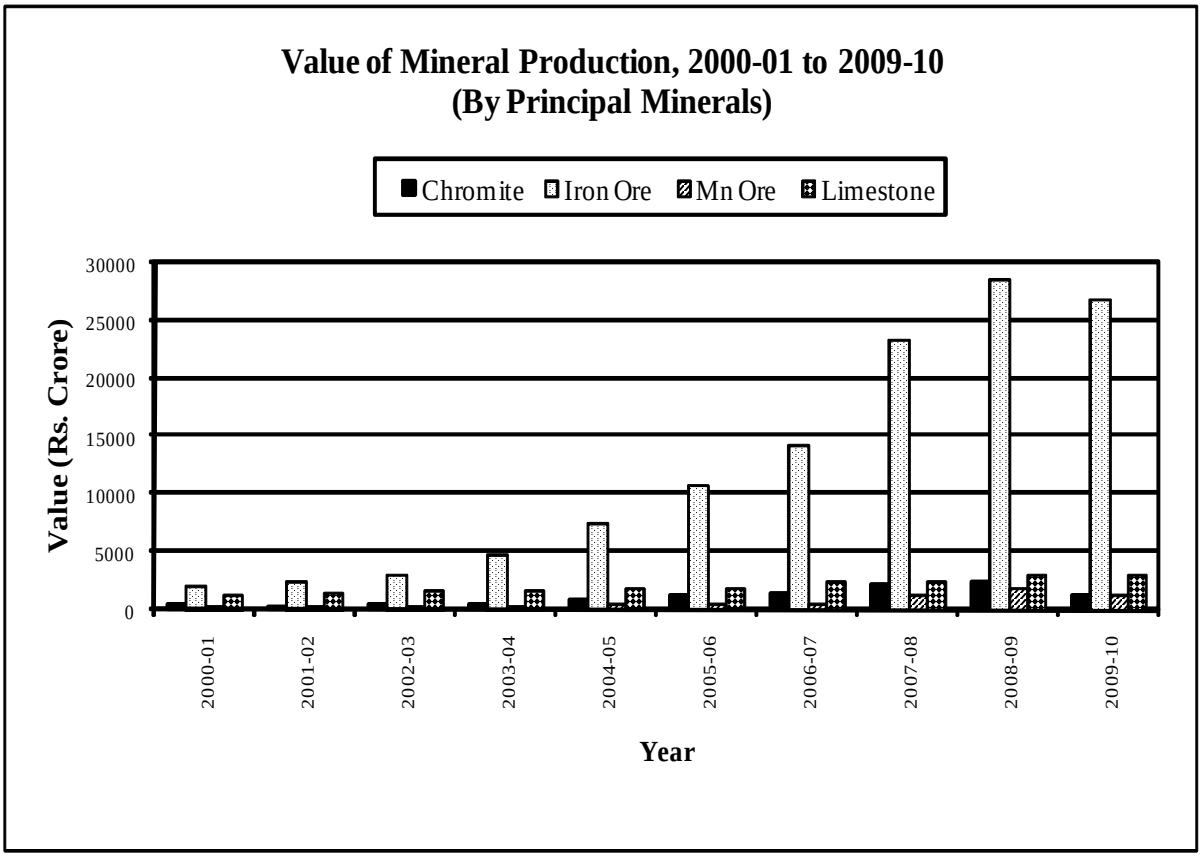
The production of **gold** at 2106 kg (excluding by-product gold recovery from imported concentrates) in 2009-10 reported decrease of about 14% as compared to the previous year. Karnataka was the leading producer of gold accounting for 99% of the total production. The remaining production was reported from Jharkhand. The production of **bauxite** at 14 million tonnes in 2009-10 decreased 10% as compared to the previous year. The five major companies namely NALCO, Hindalco, BALCO, M.P.State Mining Corp. Ltd. and Bombay Minerals Ltd engaged in bauxite mining jointly contributed 66% production of bauxite in 2009-10. Odisha accounted for 35% output of bauxite during 2009-10 followed by Gujarat 19%, Maharashtra 14%, Chhattisgarh and Jharkhand 12% each.

During 2009-10, the production of **lead concentrate** at 136 thousand tonnes increased 2% and that of zinc concentrate at 1277 thousand tonnes increased 4% over the previous year. Average metal content in lead concentrate was 61.82% Pb and that in zinc concentrate was 52.85% Zn. Rajasthan accounted for the entire production of lead and zinc concentrates during 2009-10.

Non-metallic Minerals

The value of production of non-metallic minerals at Rs. 4287 crore during 2009-10 increased by 5% as compared to the previous year. Limestone retained its leading position by contributing 70% of the total value of non-metallic minerals in 2009-10. The other non-metallic minerals in the order of production value were phosphorite/rock phosphate (7%), barytes (5%), dolomite 3%, gypsum, garnet (abrasive) and kaolin (2% each), magnesite, marl, silica sand, sillimanite and talc/soapstone/steatite (about 1% each). The remaining 4% accrual was from other non-metallic minerals.

The production of **limestone** at 229 million tonnes in 2009-10 registered an increase of 3% over the previous year. Limestone is widely produced in 17 states of the country. As much as 87% of the total output in 2009-10 was contributed by seven principal states viz. Andhra Pradesh (22%), Rajasthan (20%), Madhya Pradesh (12%), Gujarat and Tamil Nadu (9% each), Karnataka (8%), Chhattisgarh (7%) and others 13%. About 38% of the production was reported by principal private sector producers, namely, Grasim Industries Ltd (9%), The ACC Ltd (7%), Ultra Tech Cement Ltd (6%), The India Cement Ltd and Shree Cement Ltd (5% each) and Madras Cement Ltd and Vasavdatta Cement Ltd (3% each).


Value of Mineral Production, 2000-01 to 2009-10
(By Principal Minerals)
Chromite
Iron Ore
Mn Ore
Limestone
Value (Rs. Crore)
30000
25000
20000
15000
10000
5000
0
2000-01
2001-02
2002-03
2003-04
2004-05
2005-06
2006-07
2007-08
2008-09
2009-10
Year

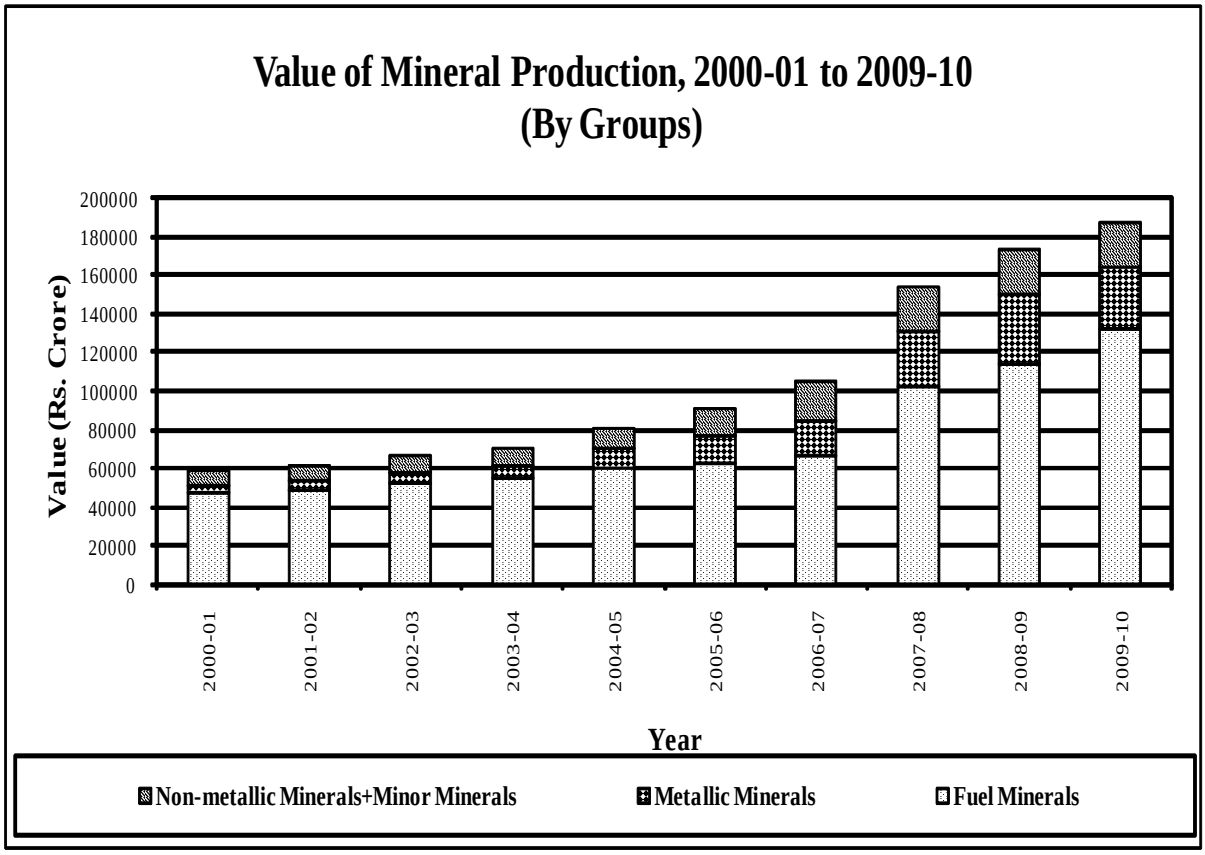

Value of Mineral Production, 2000-01 to 2009-10
(By Groups)
Value (Rs. Crore)
200000
180000
160000
140000
120000
100000
80000
60000
40000
20000
0
2000-01
2001-02
2002-03
2003-04
2004-05
2005-06
2006-07
2007-08
2008-09
2009-10
Year
Non-metallic Minerals+Minor Minerals
Metallic Minerals
Fuel Minerals

Table – 1 : Mineral* Production in India, 2007-08 to 2009-10 (By Mineral Groups & Minerals)

(Value Rs.'000)

Mineral	Unit	2007-08		2008-09		2009-10 (P)	
		Quantity	Value	Quantity	Value	Quantity	Value
All Minerals	–	–	**1540319209**	–	**1734823175**	–	**1877168618**
Fuel Minerals	–	–	**1021188001**	–	**1147156300**	–	**1315317175**
Coal	'000t	457082	384645565	492757	455370200	532062	490815205
Lignite	'000t	33980	29608836	32421	36877900	34080	38785770
Natural Gas (utilised)	m.c.m.	32417	109995500	32849	121088500	47510	177803600
Petroleum(crude)	'000t	34118	496938100	33506	533819700	33691	607912600
Metallic Minerals	–	–	**291820949**	–	**350759869**	–	**322742945**
Bauxite	t	22624960	5683866	15460202	4703221	13952002	4563581
Chromite	t	4872684	21421691	4073479	22633627	3412867	11834079
Copper ore	t	3242371	–	3452406	–	3227667	–
Copper conc.	t	150187	3471268	137514	4091113	124471	3625381
Gold ore	t	681243	–	587215	–	517599	–
Gold[1/]	kg	2969	3017382	2438	3152620	2106	3313896
Gold (by-product)[1/]	kg	–	–	–	–	–	–
Iron ore	'000 t	213250	233792271	212960	285444020	218639	268648395
Lead & zinc ore	t	5783099	–	6680698	–	7101972	–
Lead conc.	t	125755	1443876	133768	1362744	136095	1743405
Zinc conc.	t	1035828	9394204	1224077	9466647	1277080	12908514
Manganese ore	t	2696980	12060370	2789025	17737032	2439899	12695427
Silver	kg	80697	1521443	105284	2147578	138768	3388389
Tin conc.	kg	63218	14578	59778	21267	59015	21878
Non-metallic Minerals	–	–	**33713147**	–	**40667918**	–	**42869410**
Agate	t	25	14	–	–	11	6
Apatite	t	6691	22115	6415	13025	5398	10417
Phosphorite/rock phosphate	t	1849188	2125681	1803954	3087617	1546742	3120117
Asbestos	t	269	10598	315	14521	233	11395
Ball clay	t	796134	140368	997676	200778	898125	188775
Barytes	t	1076290	570064	1686148	966445	2138456	2349747
Calcite	t	86364	34844	67284	22729	49542	16731
Chalk	t	194934	64323	203085	77251	183693	69176
Clay (others)	t	818993	73904	1220783	80499	1005923	71735
Corundum	kg	89920	322	21000	63	6600	20
Diamond	crt	586	5701	536	4537	16810	115949
Diaspore	t	21236	17868	24642	23384	26469	24892
Dolomite	t	5852296	1461207	5504093	1554124	5182284	1447900
Dunite	t	57989	15127	50935	23482	57182	15055
Felspar	t	488458	99521	531689	97300	455549	91510

(Contd.)

Table - 1 (Concld.)

Mineral	Unit	2007-08		2008-09		2009-10 (p)	
		Quantity	Value	Quantity	Value	Quantity	Value
Fireclay	t	544973	86854	495781	83416	410401	66240
Felsite	t	550	999	1238	1367	1320	1632
Fluorite (graded)	t	3970	19629	3176	15626	4996	21770
Fluorite (conc.)	t	3794	45554	6814	88715	8786	126412
Garnet (abrasive)	t	1275919	523688	1151241	565937	1565579	740870
Graphite (r.o.m.)	t	170813	75865	117767	46618	108606	44192
Gypsum	t	3400050	719738	3876671	993465	3421804	958580
Selenite	t	3864	3205	15224	12940	13344	11342
Jasper	t	–	–	99	51	–	–
Kaolin	t	1466442	573568	2083731	641747	2578237	698874
Kyanite	t	5102	5393	4620	5184	5553	6417
Sillimanite	t	40537	176725	33702	236871	30690	254990
Laterite	t	1478590	217425	1237393	162442	1221410	173232
Limestone	'000t	193089	23997880	221563	29219751	228934	29862279
Limekankar	t	336385	54294	434332	76167	335065	58715
Limeshell	t	128250	84405	97856	73256	61726	48581
Magnesite	t	252849	334310	252880	363514	286383	422567
Marl	t	4155925	173453	4167452	193919	4627212	257081
Mica (crude)	t	4578	160645	1462	42728	1213	40831
Mica (waste & scrap)[2/]	t	3505	–	5685	–	7999	–
Ochre	t	1233221	203900	766382	70694	1023183	95441
Pyrophyllite	t	203707	43381	255699	55831	242397	54046
Pyroxenite	t	289321	90746	281785	139143	279002	153873
Quartz	t	315281	53721	430734	75564	506740	91796
Quartzite	t	95850	37665	97458	31459	108079	31155
Silica sand	t	4303513	507257	2832322	365719	2282712	298207
Sand (others)	t	1804306	78991	1808185	106971	2159407	101976
Salt (rock)	t	1216	2518	2011	3630	1837	4926
Shale	t	2894922	90073	3047063	90260	2792897	60246
Slate	t	7827	2556	8931	5552	–	–
Talc/steatite/soapstone	t	922505	593311	888470	598246	835119	527387
Sulphur[3]	t	227311	–	269572	–	263124	–
Vermiculite	t	8910	7340	12647	9423	12847	10398
Wollastonite	t	118666	106401	111581	125957	132385	111929
Minor Minerals@	–	–	**193597112**	–	**196239088**	–	**196239088**

* *Excluding the minerals declared as prescribed substances under the Atomic Energy Act,1962.*

1/ Excludes by-product gold recovery from imported concentrates.

2/ Includes mine waste and waste obtained while dressing of crude mica at the mine site.

3/ Obtained as by-product from fertilizer plants and oil refineries.

@ Figures for earlier years have been repeated as estimates, wherever necessary, because of non-receipt of data.

The production of **phosphorite/rock phosphate** at 1,547 thousand tonnes decreased by 14% in 2009-10 as compared to the previous year. The entire production was from Public Sector. Jhamarkotra mine of Rajasthan State Mines & Minerals Ltd in Rajasthan reported 88% production of phosphorite/rock phosphate during 2009-10. Production of **dolomite** at 5,182 thousand tonnes in 2009-10 also decreased by 6% over the preceding year. Seven major companies, viz, SAIL (23%), Rashtriya Ispat Nigam Ltd (12%), South West Ltd and Tata Steel (9% each), Bisra Stone Lime Co. (7%), Dolomite Mining Corp. and Manish Singh (2% each) together accounted for 64% of the dolomite produced in 2009-10. Andhra Pradesh, Chhattisgarh and Odisha were the principal producing states of dolomite accounting for 30%, 23% and 18% production respectively, and the remaining 29% was contributed by Gujarat, Jharkhand, Karnataka, Madhya Pradesh, Maharashtra, Rajasthan and Uttarakhand during the year.

The production of **kaolin** in 2009-10 at 2,578 thousand tonnes increased 24% over the previous year. Nearly 49% of total output of kaolin in 2009-10 was reported from Gujarat followed by Kerala (28%) and Rajasthan (13%). Production of **gypsum** at 3.4 million tonnes in 2009-10 reported decrease of 12% as compared to the previous year. Almost the entire production of gypsum was reported from Rajasthan (99.9%) while a nominal output was also reported from Jammu & Kashmir and Gujarat. Two public sector companies, namely, RSMML and Fertilizer Corporation of India Ltd accounted for almost entire production. The production of **magnesite** at 286 thousand tonnes during 2009-10 increased by 13% as compared to the previous year.

The production of **talc/soapstone/steatite** in 2009-10 at 835 thousand tonnes decreased about 6% over the previous year. Rajasthan was the principal producing state and accounted for 75% production in 2009-10. Five principal producers in Rajasthan, namely Associated Soapstone Distributing Co. (P) Ltd (29%), Udaipur Mineral Development Syndicate (P) Ltd (17%), Jai Polymers Pvt. Ltd (7%), Nalwaya Mineral Industries Pvt. Ltd (5%), Katiyar Mining and Industrial Corp. (4%) together accounted for 62% production of talc/soapstone/steatite in 2009-10.

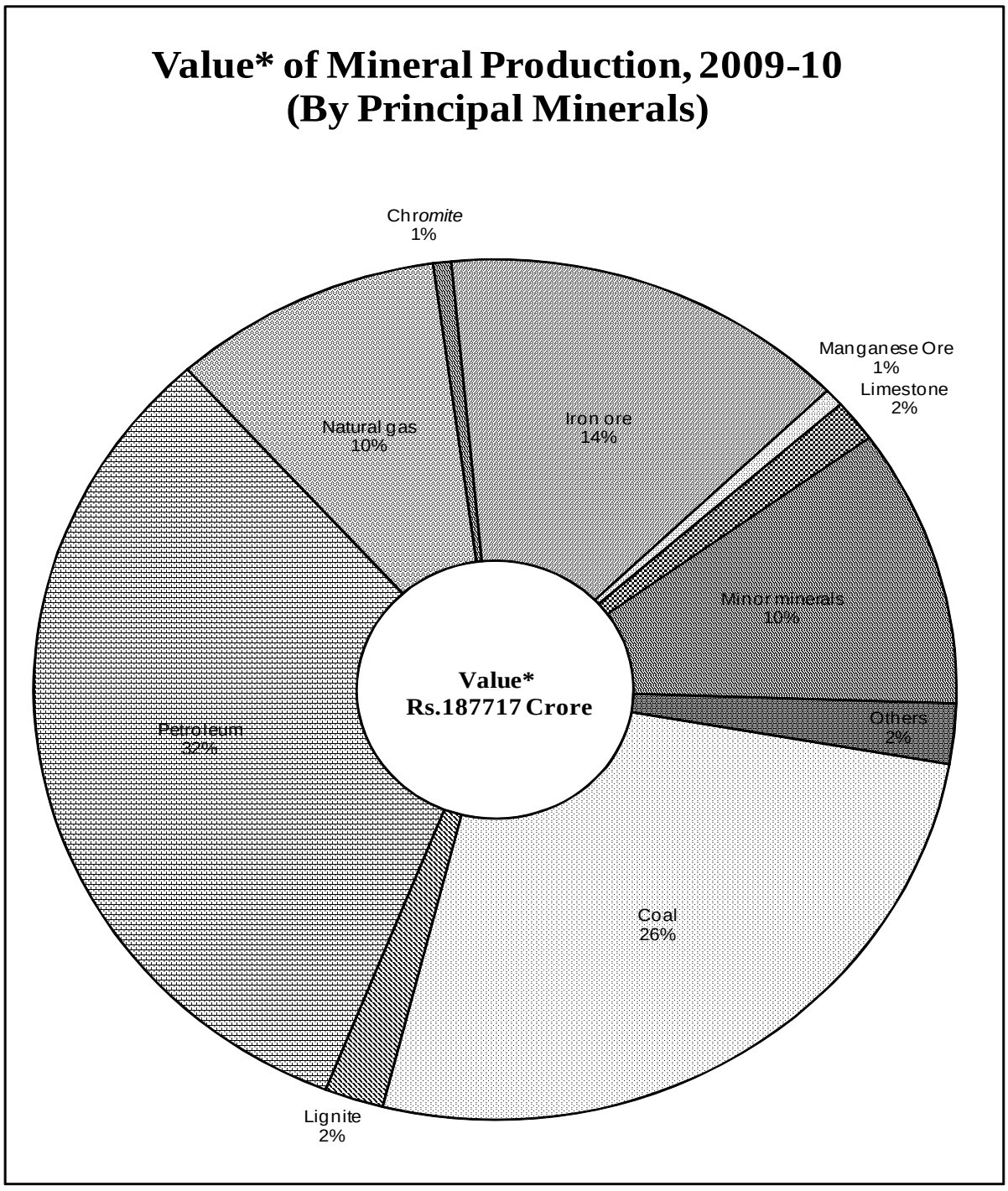
Reporting Mines

Reporting mine is defined as "a mine reporting production or reporting 'nil' production during a year but engaged in developmental work such as, overburden removal, underground driving, winzing, sinking work, exploration by pitting, trenching or drilling as evident from the MCDR returns".

There were 2,999 working mines (excluding atomic & minor minerals and petroleum (crude) & natural gas) in India located in 21 states reporting production during 2009-10. Among them, 574 mines belonged to coal & lignite, 700 to metallic minerals and 1,725 to non-metallic minerals. There were 770 mines in public sector and the rest of 2,229 mines in private sector. The reporting mines concentrated in eleven major states, namely, Andhra Pradesh, Chhattisgarh, Gujarat, Jharkhand, Karnataka, Madhya Pradesh, Maharashtra, Odisha, Rajasthan, Tamil Nadu and West Bengal accounted for 93% of the total reporting mines.

Employment

The estimated average daily employment of labour strength engaged in mining sector was 521425 in 2009-10. Of this, 419,925 or 81% were in public sector and 101,500 or 19% in private sector. Fuel minerals accounted for 75%, metallic minerals 16% and non-metallic minerals 9% of the total labour force during the year.



* Excluding Atomic Minerals.

Role of Public Sector

The value of mineral production (excluding atomic minerals and minor minerals) in public sector was at Rs.120444 crore or 64% in the overall value of mineral production in 2009-10. The share of public sector in the total value of fuel minerals was 83%, in metallic minerals 31% and 28% in non-metallic minerals during the year.

The entire production of copper ore & conc. among metallic minerals and diamond, dunite, fluorite (conc.), fluorite (graded), phosphorite/rock phosphate, salt (rock), sand (others), selenite and sulphur in respect of non-metallic minerals was reported from the public sector. By and large, almost the entire production of lignite, gold, barytes and gypsum accrued from public sector during 2009-10. Public Sector also had sizeable contribution in production of coal (91%), petroleum (crude) (84%), kyanite (84%), sillimanite (74%) and magnesite (60%) (Table-2).

Table – 2 : Mineral Production (Quantity), 2008-09 and 2009-10 (By Sectors)

Mineral	Unit	All India		Public sector		Private sector		% share of public sector in total production		Overall increase (+) or decrease (-) in production in 2009-10 over
		2008-09	2009-10	2008-09	2009-10	2008-09	2009-10	2008-09	2009-10	2008-09
Fuel Minerals										
Coal	'000 t	492757	532062	450115	484053	42642	48009	91.35	90.98	7.98
Lignite	'000 t	32421	34080	32138	33764	283	316	99.13	99.07	5.12
Natural Gas (utilised)	m.c.m.	32849	47510	24759	25525	8090	21985	75.37	53.73	44.63
Petroleum (crude)	'000 t	33506	33691	28832	28428	4674	5263	86.05	84.38	0.55
Metallic Minerals										
Bauxite	tonne	15460202	13952002	5952885	6290586	9507317	7661416	38.50	45.09	-9.76
Chromite	tonne	4073479	3412867	1190664	604627	2882815	2808240	29.23	17.72	-16.22
Copper conc.	tonne	137514	124471	137514	124471	–	–	100.00	100.00	-9.48
Copper ore	tonne	3452406	3227667	3452406	3227667	–	–	100.00	100.00	-6.51
Gold*	kg	2438	2106	2420	2092	18	14	99.26	99.34	-13.62
Gold ore	tonne	587215	517599	582908	512533	4307	5066	99.27	99.02	-11.86
Iron ore (total)	'000 t	212960	218639	64746	59252	148214	159387	30.40	27.10	2.67
Lead & zinc ore	tonne	6680698	7101972	–	–	6680698	7101972	–	–	6.31
Lead conc.	tonne	133768	136095	–	–	133768	136095	–	–	1.74
Manganese ore	tonne	2789025	2439899	1156220	1126751	1632805	1313148	41.46	46.18	-12.52
Silver	kg	105284	138768	229	218	105055	138550	0.22	0.16	31.80
Tin conc.	kg	59778	59015	48309	34223	11469	24792	80.81	57.99	-1.28
Zinc conc.	tonne	1224077	1277080	–	–	1224077	1277080	–	–	4.33
Non-Metallic Minerals										
Agate	tonne	–	11	–	–	–	11	–	–	–
Apatite	tonne	6415	5398	2513	2110	3902	3288	39.17	39.09	-15.85
Phosphorite/ rock phosphate	tonne	1803954	1546742	1803954	1546742	–	–	100.00	100.00	-14.26
Asbestos	tonne	315	233	–	–	315	233	–	–	-26.03
Ball Clay	tonne	997676	898125	110882	99327	886794	798798	11.11	11.06	-9.98
Barytes	tonne	1686148	2138456	1640398	2112474	45750	25982	97.29	98.79	26.82
Calcite	tonne	67284	49542	–	–	67284	49542	–	–	-26.37
Chalk	tonne	203085	183693	–	–	203085	183693	–	–	-9.55
Clay (others)	tonne	1220783	1005923	–	–	1220783	1005923	–	–	-17.60
Corundum	kg	21000	6600	–	–	21000	6600	–	–	-68.57
Diamond	carat	536	16810	536	16810	–	–	100.00	100.00	3036.19
Diaspore	tonne	24642	26469	307	138	24335	26331	1.25	0.52	7.41
Dolomite	tonne	5504093	5182284	2668326	2249942	2835767	2932342	48.48	43.42	-5.85
Dunite	tonne	50935	57182	49505	57182	1430	–	97.19	100.00	12.26
Felsite	tonne	1238	1320	–	–	1238	1320	–	–	6.62
Felspar	tonne	531689	455549	1160	3100	530529	452449	0.22	0.68	-14.32
Fireclay	tonne	495781	410401	5343	5523	490438	404878	1.08	1.35	-17.22
Fluorite (conc.)	tonne	6814	8786	6814	8786	–	–	100.00	100.00	28.94
Flourite (graded)	tonne	3176	4996	3176	4996	–	–	100.00	100.00	57.30

(Contd.)

Table - 2 (Concld.)

Mineral	Unit	All India		Public sector		Private sector		% share of public sector in total production		Overall increase (+) or decrease (-) in production in 2009-10 over
		2008-09	2009-10	2008-09	2009-10	2008-09	2009-10	2008-09	2009-10	2008-10
Garnet (abrasive)	tonne	1151241	1565579	25982	24224	1125259	1541355	2.26	1.55	35.99
Graphite r.o.m.	tonne	117767	108606	59227	50764	58540	57842	50.29	46.74	-7.78
Gypsum	tonne	3876671	3421804	3855405	3344794	21266	77010	99.45	97.75	-11.73
Selenite	tonne	15224	13344	15224	13344	–	–	100.00	100.00	-12.35
Jasper	tonne	99	–	–	–	99	–	–	–	–
Kaolin (total)	tonne	2083731	2578237	100812	82956	1982919	2495281	4.84	3.22	23.73
Kyanite	tonne	4620	5553	3615	4692	1005	861	78.25	84.49	20.19
Sillimanite	tonne	33702	30690	25717	22784	7985	7906	76.31	74.24	-8.94
Laterite	tonne	1237393	1221410	58456	52765	1178937	1168645	4.72	4.32	-1.29
Limekankar	tonne	434332	335065	–	–	434332	335065	–	–	-22.86
Limeshell	tonne	97856	61726	34593	16885	63263	44841	35.35	27.35	-36.92
Limestone	'000 t	221563	228934	14009	17768	207554	211166	6.32	7.76	3.33
Magnesite	tonne	252880	286383	148971	170760	103909	115623	58.91	59.63	13.25
Marl	tonne	4167452	4627212	–	–	4167452	4627212	–	–	11.03
Mica (crude)	kg	1462	1213	–	–	1462	1213	–	–	-17.09
Mica (waste & scrap)	kg	5685	7999	–	–	5685	7999	–	–	40.71
Ochre	tonne	766382	1023183	–	–	766382	1023183	–	–	33.51
Pyrophyllite	tonne	255699	242397	18166	12916	237533	229481	7.10	5.33	-5.20
Pyroxenite	tonne	281785	279002	–	–	281785	279002	–	–	-0.99
Quartz	tonne	430734	506740	3837	5191	426897	501549	0.89	1.02	17.65
Quartzite	tonne	97458	108079	–	–	97458	108079	–	–	10.90
Salt (rock)	tonne	2011	1837	2011	1837	–	–	100.00	100.00	-8.65
Sand (others)	tonne	1808185	2159407	1808185	2159407	–	–	100.00	100.00	19.42
Shale	tonne	3047063	2792897	98800	62495	2948263	2730402	3.24	2.24	-8.34
Silica sand	tonne	2832322	2282712	32604	112433	2799718	2170279	1.15	4.93	-19.40
Slate	tonne	8931	–	–	–	8931	–	–	–	–
Sulphur	tonne	269572	263124	269572	263124	–	–	100.00	100.00	-2.39
Talc/steatite/ soapstone	tonne	888470	835119	–	–	888470	835119	–	–	-6.00
Vermiculite	tonne	12647	12847	1921	1602	10726	11245	15.19	12.47	1.58
Wollastonite	tonne	111581	132385	–	–	111581	132385	–	–	18.64

** Excluding by-product gold recovery from imported concentrates.*

Minor Minerals

The share of minor minerals in the value of mineral production was about 12.57% in 2007-08 & 11.31% in 2008-09 (Table -3).

The value of minor minerals at Rs 19624 crore in 2008-09 was higher by 1.36% as compared to that in the previous year. Andhra Pradesh with share of 38.5% in the value of minor minerals produced in the country continued to occupy the top position. Rajasthan at second place had a share of 23.4% in the value of minor minerals. Next in the order were Uttar Pradesh (14%), Madhya Pradesh (8.7%), Kerala (4.6%), Gujarat (3.7%), Maharashtra (1.6%) and Chhattisgarh (1.3%). The contribution of remaining states and Union Territories was less than one percent each (Table - 4).

Mineralwise analysis revealed that road metals had the largest share of 24.6% to the value of minor minerals followed by building stone 23.8%, brick-earth 12.4%, ordinary sand 11.2%, marble 5.9%**,** gravel 5.1% , quartzite & sandstone 4.2%, limestone 3.9%, murrum 2.8%, kankar 1.9% and ordinary earth 1.7%. The individual share of remaining minerals was less than one percent and together contributed 2.5% to the value of minor minerals (Table - 5).

Table – 3 : Share of Minor Minerals in Total Value of Mineral Production, 2006-07 to 2008-09

(Value in Rs. '000)

Year	All minerals	Minor minerals	% share of minor minerals
2006-07	1310234341	165036435	12.60
2007-08	1540319209	193597112	12.57
2008-09 (P)	1734823175	196239088	11.31

Table – 5 : Value of Minor Minerals 2006-07 to 2008-09 (By Minerals)

(In Rs '000)

Mineral	2006-07	2007-08	2008-09 (P)
All minerals	**165036435**	**193597112**	**196239088**
Building stones	34179560	38012856	46719429
Gravel	8509870	11435418	10050319
Ordinary clay	1420474	1186062	1482744
Ordinary sand (1)	10083732	16381775	21979158
Boulder	836385	1042902	1409437
Shingle	49772	29579	15550
Chalcedony or impure quartz pebbles (2)	193	3897	1990
Limeshell (3)	5680	9226	8678
Kankar (3)	3150073	4853358	3755452
Limestone (3)	3390764	7467549	7695154
Murrum	3189962	5288297	5482505
Brick earth	24912079	18866099	24341368
Fuller's earth	91773	96825	1797413
Bentonite	115592	128414	146768
Road metal	60807783	73325810	48245767
Reh matti	9871	10954	10954
Slate (4)	36755	37012	30166
Shale (4)	40	176	176
Marble	6368476	6741641	11506488
Stone (5)	289259	1074580	1528535
Quartzite/ Sandstone (6)	5212254	5890393	8224119
Saltpetre	2827	3341	3935
Ordinary earth (7)	2373261	1710948	3413917

Source : *State Governments.*

(1) Used for purposes other than (i) refractory and manufacture of ceramics, (ii) metallurgical, (iii) optical, (iv) stowing in coal mines, (v) manufacture of silvicrete cement, sodium silicate, pottery & glass.

(2) Used for ball mill purposes or filling for bore wells or for decorative purposes in buildings.

(3) Used in kilns for manufacture of lime used as building material.

(4) Used for building material.

(5) Used for making household utensils.

(6) Used for purposes of building or for making road metals and household utensils.

(7) Used for purposes of construction of embankments, roads, railways and buildings.

Table – 4 : Value of Minor Minerals 2006-07 to 2008-09 (By States)

(In Rs '000)

State	2006-07	2007-08	2008-09 (P)
India	**165036435**	**193597112**	**197850022**
Andhra Pradesh	81894496	100541779	75500935
Arunachal Pradesh	1523	1523	1523
Assam	342553	166578	270986
Bihar	10850274	1173623	1173623
Chhattisgarh	752041	2167553	2611866
Goa	57250	57250	57250
Gujarat	6063139	7256688	7256688
Haryana	1487198	1487198	1487198
Himachal Pradesh	257169	141903	251322
Jammu & Kashmir	231863	250339	250339
Jharkhand	401448	401448	401448
Karnataka	294003	304125	179970
Kerala (1)	3947510	5297388	8942838
Madhya Pradesh	4401876	11835512	18636809
Maharashtra	3173095	3173095	3173095
Manipur	2866	2866	2866
Meghalaya	72075	72075	72075
Mizoram	2368	1711	1711
Nagaland	1774	1774	1774
Odisha	856767	856767	856767
Punjab	190534	219935	607612
Rajasthan	24771804	31144940	45861749
Sikkim	9050	18787	18787
Tamil Nadu	590686	590686	590686
Tripura	5507	7641	10634
Uttar Pradesh	22209832	23269185	27495000
Uttarakhand	475155	1517507	499604
West Bengal (2)	1455113	1455113	1455113
Andaman & Nicobar Islands	230751	172786	172786
Chandigarh	953	3575	1206
Daman & Diu	587	587	587
Puducherry	5175	5175	5175

Source: *State Governments.*

(1) Excluding data in respect of quarrying permits for which royalty does not exceed Rs. 1000 /-

(2) Excluding data in respect of quarry permits issued by district authorities.

Note: *Earlier year's figures have been repeated as estimates, wherever necessary, due to non-receipt of data.*

Index of Mineral Production

During 2009-10, the index of mineral production in respect of mining and quarrying sector (excluding atomic minerals) (base 1993-94=100) at 194.38 displayed a growth of about 10% over the previous year. The positive growth in the index was owing to the upward movement in the index for fuel minerals by 12% and non-metallic group of minerals by 3 % (Table-6).

Table – 6 : Index of Mineral Production, 2007-08 to 2009-10
(Excluding Atomic Minerals)

(Base 1993-94=100)

Year	Index of mineral production (1000)	Coal & lignite (324.63)	Crude petroleum & natural gas (532.55)	Metallic minerals (80.76)	Non-metallic minerals (42.33)	Minor minerals (19.73)
2007-08	173.55	184.06	144.42	311.28	210.63	143.76
2008-09	177.29	197.19	143.39	298.81	234.98	143.76
2009-10 (P)	194.38	212.66	166.51	291.90	242.47	143.76

Note: *Figures in parentheses indicate the weights attached to respective groups.*

Gross Domestic Product from Mining & Quarrying Sector

The Gross Domestic Product (GDP) accrued from mining and quarrying sector at current price is estimated by deducting input cost incurred in mining operations from the ex-mine sale value of mineral production.

During 2009-10, the mining and quarrying sector accounted for about 2.52% of the total GDP. The contribution of mining and quarrying sector in GDP during 2009-10 was Rs. 154269 crore indicating an increase of 11.27% compared to the preceding year. This was mainly due to rise in the value of coal, natural gas (utilised), gold, lead & zinc conc., barytes, diamond, dolomite, garnet (abrasive) and magnesite & dunite during the year under report.

The contribution of minerals covered under MCDR in GDP of mining and quarrying sector during 2009-10 was about 20% of which metallic minerals contributes 18% and non-metallic minerals 2%.

As regards contribution of metallic minerals to the GDP from mining & quarrying sector, iron ore accounted for 15% and chromite, manganese ore, Lead & zinc conc. together shared around 1% each. Contribution of other metallic minerals to GDP from mining sector was negligible during the year. Among the non-metallic minerals, the share of limestone was 1% while a negligible share was contributed by the remaining non-metallic minerals (Table-7).

Statewise analysis reveals that Odisha occupies the top position contributing 34% in the GDP of minerals covered under MCDR during 2009-10 followed by Goa 18%, Karnataka 15%, Chhattisgarh 14%, Rajasthan 7%, Andhra Pradesh 5%, Madhya Pradesh 3%, Maharashtra 2% and Tamil Nadu and Gujarat 1% each. Share of other States to the GDP from mining sector was negligible during the year (Table - 8).

Table – 7 : Gross Domestic Product at Current Prices, 2007-08 to 2009-10 (By Principal MCDR Minerals)

(In Rs. thousand)

Mineral	2007-08(R)	2008-09(R)	2009-10 (P)	% change in 2009-10 over previous year	% share of the mineral in the GDP of Mining & Quarrying sector in 2009-10
GDP (All sectors) *	**45409870000**	**52820860000**	**61332300000**	**16.10**	**–**
Mining & Quarrying Sector *	**1257300000**	**1386490000**	**1542690000**	**11.27**	**100.00**
MCDR Minerals	**272788836**	**329834194**	**303078314**	**-8.11**	**19.65**
Metallic Minerals	**250619799**	**303242207**	**274649412**	**-9.43**	**17.80**
Bauxite	4850453	3663658	3485528	-4.86	0.23
Chromite	18970980	20902162	10997514	-47.39	0.71
Copper conc.	2515884	2626783	2346330	-10.68	0.15
Gold	2485391	2516124	2641148	4.97	0.17
Iron ore	201559217	248585767	232333535	-6.54	15.06
Lead & zinc conc.	7096934	5851896	7917482	35.30	0.51
Manganese ore	11611129	16935103	11520607	-31.97	0.75
Other metallic minerals	1529811	2160714	3407268	57.69	0.22
Non-metallic Minerals	**22169037**	**26591987**	**28428902**	**6.91**	**1.85**
Ballclay	123534	183848	170368	-7.33	0.01
Barytes	385513	720953	1753380	143.20	0.11
Dolomite	888578	899047	1138895	26.68	0.08
Garnet (abrasive)	336577	429263	591217	37.73	0.04
Gypsum	704457	999014	951481	-4.76	0.06
Kaolin	522707	507532	486336	-4.18	0.03
Laterite	218096	122518	135473	10.57	0.01
Limestone	15754460	18540659	18849815	1.67	1.22
Magnesite/Dunite	307964	210836	231378	9.74	0.02
Phosphorite/rock phosphate	969867	2180950	2189315	0.38	0.14
Silica sand	410823	266529	247620	-7.09	0.02
Sillimanite	160271	210775	211332	0.26	0.01
Talc/steatite/soapstone	387120	337628	260179	-22.94	0.02
Other non-metallic minerals	999070	982435	1212113	23.38	0.08

* ***Source*** *: CSO.*

Table – 8 : Gross Domestic Product from Mining & Quarrying Sector at Current Prices, 2007-08 to 2009-10 (By State/Union Territory)

(In Rs. thousand)

State/Union Territory	2007-08(R)	2008-09(R)	2009-10 (P)	% change in 2009-10 over previous year	% share of the State in the GDP of MCDR minerals in 2009-10
GDP from Mining & Quarrying Sector *	**1257300000**	**1386490000**	**1542690000**	**11.27**	**100.00**
MCDR Minerals	**272788836**	**329834194**	**303078314**	**-8.11**	**19.65**
Andhra Pradesh	13808976	17871146	14077030	-21.23	4.65
Assam	81922	74330	78869	6.11	0.03
Bihar	93308	100036	129262	29.22	0.04
Chhattisgarh	45676796	57895703	42979193	-25.76	14.18
Goa	28608360	44393548	53697959	20.96	17.72
Gujarat	4146259	3022854	2948533	-2.46	0.97
Himachal Pradesh	466921	518696	517260	-0.28	0.17
Jammu & Kashmir	57656	25079	40353	60.90	0.01
Jharkhand	7950021	1401766	1586439	13.17	0.53
Karnataka	53610095	52628355	45106402	-14.29	14.88
Kerala	482411	487846	460898	-5.52	0.15
Madhya Pradesh	8466754	10693275	8987504	-15.95	2.97
Maharashtra	6025409	8536484	5547179	-35.02	1.83
Meghalaya	199252	333773	368425	10.38	0.12
Odisha	85321285	112250070	103027583	-8.22	33.99
Rajasthan	14957177	16499279	19987616	21.14	6.60
Tamil Nadu	2568924	2854153	3256504	14.10	1.07
Uttar Pradesh	40155	47027	91437	94.44	0.03
Uttarakhand	175587	164290	150750	-8.24	0.05
West Bengal	51568	36484	39118	7.22	0.01

* ***Source*** *: CSO.*

METALS

Ferrous Metals

As per the provisional data received from the Office of the Joint Plant Committee, Kolkata, India produced 65.4 million tonnes of finished steel (including C.R. sheets), 23.6 million tonnes of semi-finished steel (including steel ingots), 5.7 million tonnes of pig iron, 20.7 million tonnes of sponge iron and 0.6 million tonnes of steel wires in 2009-10.

The production of finished steel (including C.R.sheets), semi finished steel (including steel ingots), pig iron and steel wire registered increase of 13.5%, 10.3 %, 12.8 % and 14.7%, respectively. However, the production of sponge iron was static at the previous year's level (Table - 9).

Table – 9 : Production of Ferrous Metals

2007-08 to 2009-10

(In '000 tonnes)

Ferrous Metals	2007-08	2008-09	2009-10 (P)
Finished steel (including C.R. sheets)	58263	57659	65428
Semi-finished steel (including steel ingots)	22685	21367	23561
Pig iron	5088	5083	5734
Sponge iron	18400	20700	20738
Steel wire	427	498	571

Source: *Office of Joint Plant Committee, Kolkata.*

Ferro-alloys

The production of ferro-alloys rose from 2.22 million tonnes in 2008-09 to 2.51 million tonnes in 2009-10. The production of bulk ferro-alloys and noble ferro-alloys was 2.48 million tonnes and 31,308 tonnes, respectively, in 2009-10. The data on production of ferro-alloys for 2007-08 to 2009-10 received from Indian Ferro-alloys Producers' Association (IFAPA), Mumbai, are given in Table-10.

Table – 10 : Production of Ferro-alloys

2007-08 to 2009-10

(In tonnes)

Ferro-alloy	2007-08	2008-09	2009-10
Total (A) + (B)	**2364614**	**2220304**	**2514628**
A) Bulk Ferro-alloys	**2334929**	**2192869**	**2483320**
HC Ferro-manganese	377958	370531	374225
MC Ferro-manganese	7517	8291	9222
LC Ferro-manganese	5735	5755	6018
Silico-manganese	858601	845432	1045226
MC Silico-manganese	35041	31521	39233
LC Silico-manganese	17760	14505	15379
Ferro-silicon	83716	99595	101917
HC Ferro-chrome/ charge-chrome	948366	814868	889093
LC Ferro-chrome	235	2371	3007
B) Noble Ferro-alloys	**29685**	**27435**	**31308**
Ferro-molybdenum	2899	2162	2822
Ferro-vanadium	1585	1501	1389
Ferro-tungsten	51	150	150
Ferro-silico-magnesium	13525	13400	17132
Ferro-aluminium	9377	8170	7017
Ferro-silicon-zirconium	109	87	120
Ferro-titanium	1937	1661	2379
Ferro-boron	80	83	90
Ferro-nickel-magnesium	122	221	209

Note: *HC: High carbon MC: Medium carbon LC: Low carbon*
Source: *Indian Ferro-alloys Producers' Association (IFAPA), Mumbai.*

Non-ferrous Metals

The production of aluminium at 1,481 thousand tonnes in 2009-10 registered an increase of 10% as compared to that in the previous year. Smelting and refining of copper is carried out by Hindustan Copper Ltd in their existing plants located at Khetri. Copper metal is also produced from imported copper concentrates at the plants of Sterlite Industries (India) Ltd and Hindalco Industries Ltd. The production of copper blister at 17,864 tonnes in 2009-10 decreased by 39% as compared to 29,472 tonnes in the previous year. The production of copper cathodes at 532,865 tonnes in 2009-10 increased by 4% as compared to the previous year. The production of copper electrolytic wire bars was not reported during the last three years. The production of copper continuous cast wire rods at 312,447 tonnes in 2009-10 decreased by 1% as compared to that in the previous year.

The production of lead (primary) at 64,319 tonnes in 2009-10 increased by about 7% as compared to that in the previous year. The production of zinc ingots in 2009-10 was 613,964 tonnes as against 579,091 tonnes in the previous year showing an increase of 6%.

Precious Metals

Gold (primary) is produced from gold ore by HGML in the state of Karnataka. Gold is also recovered as by-product from copper slime of Hindalco Industries Ltd in Gujarat and Hindustan Copper Ltd in Jharkhand. The total production of gold bullion during the year at 11,220 kg, increased by 54 % as compared to 7,309 kgs in the previous year.

Entire production of silver in India is reported as by-product from copper, lead and zinc concentrates and as a co-product of gold refining and from copper slime. The production of silver at 183,644 kg registered an increase of 29% as compared to that in the previous year.

Other Metals

Cadmium is a by-product of zinc smelting. Its production at 553 tonnes in 2009-10 was 9% higher as compared to that in the previous year. Production of selenium was not reported during 2009-10 (Table - 11).

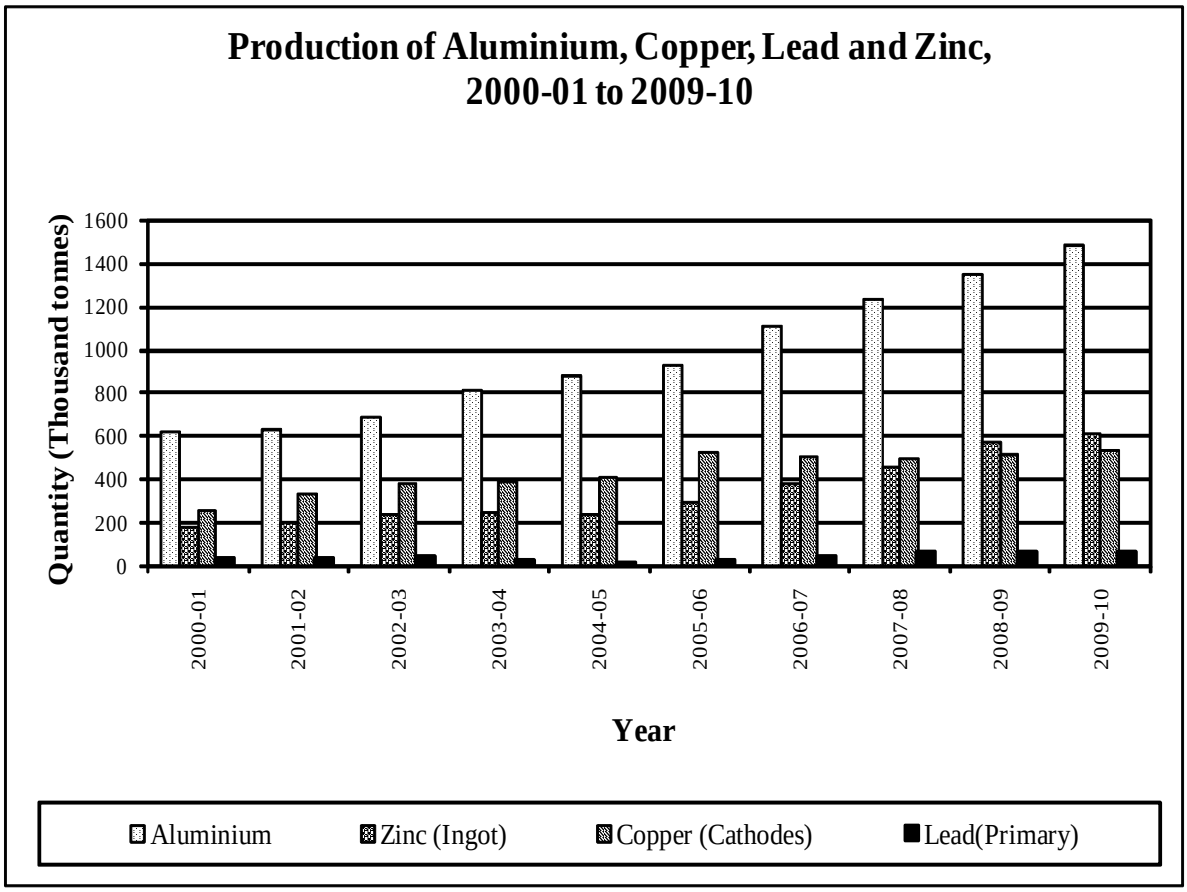


Table – 11 : Production and Value of Non-ferrous Metals, 2007-08 to 2009-10

(Value in Rs. '000)

Metal	Unit of quantity	2007-08		2008-09		2009-10 (P)	
		Quantity	Value	Quantity	Value	Quantity	Value
Aluminium	tonne	1239581	112101116	1347127	122673933	1480568	123771762
Cadmium	tonne	589	198345	507	127919	553	105211
Copper (blister)	tonne	45346	–	29472	–	17864	–
Copper (cathode)	tonne	501485	156929980	513640	129849338	532865	158204331
Copper (electrolytic wire bar)	tonne	–	–	–	–	–	–
Copper (continuous cast wire rod)	tonne	283570	90999023	314425	83388321	312447	100987199
Gold*	kg	12104	11617074	7309	9277886	11220	17798126
Lead (primary)	tonne	58246	7566718	60323	5418563	64319	7260867
Selenium	kg	–	–	–	–	–	–
Silver*	kg	133635	2512047	142590	2895138	183644	4490737
Tin	kg	27880	17079	26568	18952	27129	15491
Zinc ingot	tonne	457075	62236418	579091	47090795	613964	67484136

Source: *Individual producers/units.*

** Including by-product recovery from imported copper concentrates.*