Table 1. Concentration of global production of select mined minerals and the share of production by the top three producing countries.[1,4]									
Commodity	**Three country**	**Three country**	**Growth rate**	**Growth rate**	**1st Country**	**1st Processed**	**2nd Country**	**2nd**	**3rd Country**
Antimony	0.95	0.95	2.48%	-2.19%	China	90.6%	Bolivia	2.2%	Russia
Barite	0.73	0.76	0.54%	-3.96%	China	56.5%	India	12.8%	Morocco
Bauxite	0.60	0.58	2.79%	1.95%	Australia	30.6%	China	14.7%	Brazil
Beryllium	0.15	0.12	-3.35%	0.80%	China	11.5%	Mozambique	0.7%	Madagascar
Bismuth	0.92	0.91	4.50%	8.98%	China	56.5%	Mexico	19.4%	Peru
Boron	0.72	0.79	1.29%	-5.35%	Turkey	50.7%	Argentina	16.0%	Chile
Chromium	0.74	0.73	1.92%	0.10%	S. Africa	42.1%	Kazakhstan	16.1%	India
Cobalt	0.61	0.58	2.72%	2.09%	Congo-K	35.5%	Canada	12.2%	Zambia
Copper W/O U.S. Prod	0.49	0.49	NA	NA	Chile	36.1%	Peru	6.6%	China
Copper W/U.S. Prod	0.50	0.50	2.87%	1.17%	Chile	36.1%	U.S.	7.6%	Peru
Feldspar	0.54	0.59	6.11%	3.13%	Turkey	30.5%	Italy	19.5%	China
Fluorspar	0.77	0.78	0.40%	0.70%	China	55.8%	Mexico	16.3%	Mongolia
Gold	0.33	0.33	-0.43%	-4.13%	China	11.7%	Australia	10.5%	S. Africa
Graphite	0.83	0.91	0.71%	1.14%	China	72.1%	India	11.7%	Brazil
Indium	0.82	0.82	7.96%	-2.10%	China	61.3%	S. Korea	11.3%	Japan
Iodine	0.95	0.96	2.93%	1.47%	Chile	58.8%	Japan	35.3%	China
Iron ore	0.60	0.61	3.67%	5.66%	Brazil	22.0%	China	21.8%	Australia
Lead	0.64	0.64	0.73%	2.36%	China	37.9%	Australia	17.2%	Peru
Lithium	0.76	0.81	6.54%	-1.81%	Chile	43.0%	Australia	26.8%	China
Manganese	0.54	0.59	0.87%	-0.40%	S. Africa	21.5%	Australia	21.0%	China
Mercury	0.91	0.92	-3.62%	5.22%	China	66.7%	Kyrgyzstan	20.8%	Russia
Mg compounds	0.75	0.79	2.79%	3.67%	China	69.0%	Russia	5.9%	Turkey
Mica	0.78	0.82	8.05%	23.23%	China	64.3%	Russia	8.9%	Finland
Molybdenum W/O U.S. Pro	0.60	0.60	NA	NA	China	31.5%	Chile	21.2%	Peru
Molybdenum W/U.S. Pro	0.80	0.79	2.81%	3.51%	China	31.5%	U.S.	26.9%	Chile
Nickel	0.45	0.46	1.83%	-0.84%	Russia	16.8%	Canada	15.3%	Indonesia
Niobium	1.00	1.00	7.32%	7.85%	Brazil	92.4%	Canada	7.0%	Nigeria
Platinum	0.94	0.94	1.79%	-2.70%	S. Africa	77.0%	Russia	12.9%	Canada
Palladium	0.87	0.87	1.83%	-2.13%	Russia	43.4%	S. Africa	37.5%	Canada
Other PGMs	0.98	0.98	4.90%	-1.84%	S. Africa	74.7%	Russia	18.2%	Canada
Phosphate W/O U.S. Pro	0.51	0.56			China	29.7%	Morocco	17.5%	Russia
Phosphate W/U.S. Prod	0.62	0.64	-0.05%	1.29%	China	29.7%	Morocco	17.5%	U.S.
Potash	0.62	0.65	-1.39%	-9.25%	Canada	31.1%	Russia	20.4%	Belarus
Rare earths:	1.00	0.99	4.01%	1.59%	China	96.8%	India	2.2%	Brazil
Monazite	1.00	1.00	-6.28%	1.60%	India	72.9%	Brazil	17.1%	Malaysia
Rhenium W/O U.S. Prod	0.71	0.73	NA	NA	Chile	48.2%	Kazakhstan	11.6%	Peru
Rhenium W/U.S. Prod	0.77	0.74	9.21%	-0.47%	Chile	48.2%	U.S.	15.0%	Kazakhstan
Selenium	0.74	0.75	1.07%	1.63%	Japan	36.6%	Germany	29.5%	Belgium
Silicon	0.76	0.77	4.53%	3.03%	China	59.4%	Norway	9.1%	Brazil
Silver	0.44	0.45	1.42%	1.13%	Peru	16.8%	Mexico	15.1%	China
Strontium	0.93	0.97	2.59%	-4.71%	China	36.7%	Spain	36.3%	Mexico
Sulfur W/O U.S. Prod	0.35	0.36	NA	NA	Canada	12.9%	China	12.4%	Russia
Sulfur W/U.S. Prod	0.38	0.39	0.78%	-0.21%	U.S.	13.3%	Canada	12.9%	China
Tantalum	0.78	0.85	2.66%	-13.46%	Australia	50.6%	Brazil	20.6%	Rwanda
Tellurium	0.90	0.89	3.31%	2.92%	Japan	33.1%	Peru	28.2%	Russia
Tin	0.82	0.83	0.82%	-2.56%	China	42.6%	Indonesia	26.5%	Peru
Tungsten	0.91	0.86	0.84%	0.60%	China	75.8%	Russia	6.1%	Canada
Vanadium	0.98	0.98	2.05%	-1.82%	S. Africa	40.5%	China	32.8%	Russia
Yttrium	0.99	1.00	16.92%	7.92%	China	98.9%	India	0.6%	Brazil
Zinc	0.53	0.55	2.27%	2.29%	China	27.6%	Australia	13.8%	Peru
Zirconium	0.85	0.81	1.64%	2.17%	Australia	42.6%	S. Africa	28.7%	China

3rd Processed (% of total)
1.9%
6.4%
12.5%
0.3%
15.3%
12.6%
14.5%
10.5%
6.0%
6.6%
9.3%
6.2%
10.5%
7.0%
9.7%
2.2%
17.4%
8.8%
11.7%
16.5%
4.2%
4.0%
6.4%
7.9%
21.2%
13.7%
0.3%
3.8%
6.3%
5.0%
8.3%
16.7%
13.9%
0.5%
9.9%
10.5%
11.6%
9.1%
8.3%
13.0%
24.1%
10.3%
12.4%
13.8%
27.4%
14.2%
4.3%
25.0%
0.2%
13.1%
9.9%

Table 2. Concentration of global production of select processed minerals and the share of production by the top three producing countries.

Commodity	Three country concentration ratio 2004-2009	Three country concentration ratio 2007	Growth rate % 20 Year	Growth rate % 5 Year	1st Country	1st Processed (% of total)	2nd Country	2nd Processed (% of total)	3rd Country
Antimony W/O U.S. Prod	0.96	0.96			China	92.9%	Bolivia	1.8%	Argentina
Antimony W/U.S. Prod	0.97	0.97	3.34%	3.55%	China	92.9%	U.S.	2.2%	Bolivia
Aluminum	0.48	0.45	3.27%	2.82%	China	30.7%	Russia	7.9%	Canada
Bismuth	0.90	0.88	6.58%	1.39%	China	75.6%	Mexico	7.5%	Belgium
Bromine	0.71	0.92	-0.16%	-9.74%	Israel	38.4%	China	33.0%	Jordan
Cadmium	0.47	0.47	0.15%	0.59%	Canada	21.7%	Kazakhstan	10.8%	China
Chromium	0.75	0.74	3.14%	0.32%	S. Africa	42.4%	Kazakhstan	15.6%	China
Cobalt	0.50	0.53	4.00%	2.02%	China	24.8%	Finland	17.2%	Canada
Copper	0.49	0.5	2.71%	2.08%	China	19.6%	Chile	16.4%	Japan
Gallium	0.71	0.67	3.87%	1.59%	China	2.0%	Germany	2.0%	Kazakhstan
Germanium	-	-			China	NA	Canada	NA	Finland/Russia
Indium	0.82	0.82	7.96%	-2.10%	China	61.3%	S. Korea	11.3%	Japan
Iron (Raw Steel) W/O U.S	0.50	0.51			China	36.2%	Japan	8.9%	Russia
Iron (Raw Steel) W/U.S. P	0.52	0.52	2.36%	1.53%	China	36.2%	Japan	8.9%	U.S.
Lead W/O U.S. Prod	0.45	0.42			China	33.6%	Germany	4.9%	Japan
Lead W/U.S. Prod	0.56	0.54	1.33%	1.62%	China	33.6%	U.S.	15.7%	Germany
Magnesium Metal	0.92	0.92	2.66%	-0.78%	China	83.2%	Russia	4.9%	Israel
Molybdenum	0.72	0.71	-	2.41%	China	46.6%	Chile/Belgium	21.1%	Peru
Nickel Chemical	1.30	0.62	8.44%	-2.17%	Russia	46.7%	China	15.5%	Australia
Nickel Ferronickel	0.51	0.41	3.08%	3.82%	Japan	17.3%	Colombia	12.5%	New Caledonia
Nickel Metal	0.63	0.62	2.36%	1.20%	Russia	33.2%	China	15.5%	Australia
Nickel Oxide	1	1.00	2.53%	-1.70%	Japan	60.2%	Cuba	39.9%	Russia
Nickel Unspecified	0.93	0.94	-1.26%	-2.79%	Canada	85.8%	Australia	7.9%	-
Potash	0.62	0.65	-1.39%	-9.25%	Canada	31.1%	Russia	20.4%	Belarus
Rare Earth's	1	1	-	-	China	100%			
Selenium	0.74	0.75	1.07%	1.63%	Japan	36.6%	Germany	29.5%	Belgium
Tellurium	0.91	0.89	3.31%	2.92%	Japan	33.1%	Peru	28.2%	Russia
Tin	0.68	0.72	1.66%	-2.56%	China	43.1%	Indonesia	18.5%	Peru
Titanium	0.76	0.77	10.50%	11.17%	China	29.5%	Japan	25.4%	Russia
Vanadium	0.93	0.92		-2.32%	S. Africa	56.5%	Russia	35.7%	Japan
Yttrium		1	-	-	China	100%			
Zinc	0.44	0.46	2.34%	2.05%	China	32.8%	Canada	7.0%	S. Korea

3rd Processed (% of total)
1.7%
1.8%
6.3%
5.0%
20.5%
10.8%
15.5%
10.5%
8.8%
N/A
NA
9.7%
5.4%
7.3%
3.3%
4.9%
3.9%
7.9%
13.4%
11.4%
13.4%
0.2%
-
13.9%
9.1%
27.4%
10.4%
22.4%
<0.01%
6.1%

Table 3. Global production of refined primary aluminum, the three leading producing countries, and the concentration ratio of the top three producing countries (th tons).

Year	World refined primary production	U.S. refined primary production	Concentration ratio	1st Refined primary production	1st Country	2nd Refined primary production	2nd Country	3rd Refined primary production
1990	19,300	4,050	0.33	3,523.00	USSR	1,567.00	Canada	1,234.00
1991	19,700	4,121	0.32	3,251.00	USSR	1,822.00	Canada	1,228.00
1992	19,500	4,042	0.30	2,700.00	Russia	1,972.00	Canada	1,236.00
1993	19,800	3,695	0.33	2,820.00	Russia	2,308.00	Canada	1,381.00
1994	19,200	3,299	0.33	2,670.00	Russia	2,255.00	Canada	1,450.00
1995	19,700	3,375	0.33	2,724.00	Russia	2,172.00	Canada	1,680.00
1996	20,800	3,577	0.33	2,874.00	Russia	2,283.00	Canada	1,770.00
1997	21,700	3,603	0.33	2,906.00	Russia	2,327.00	Canada	1,960.00
1998	22,600	3,713	0.34	3,005.00	Russia	2,374.00	Canada	2,340.00
1999	23,600	3,779	0.34	3,146.00	Russia	2,530.00	China	2,390.00
2000	24,300	3,668	0.35	3,245.00	Russia	2,800.00	China	2,373.00
2001	24,300	2,637	0.38	3,300.00	Russia	3,250.00	China	2,583.00
2002	26,100	2,707	0.40	4,510.00	China	3,347.41	Russia	2,708.91
2003	28,000	2,703	0.44	5,970.00	China	3,478.06	Russia	2,791.92
2004	29,900	2,516	0.44	6,900.00	China	3,591.75	Russia	2,592.16
2005	31,009	2,481	0.46	7,800.00	China	3,647.07	Russia	2,894.20
2006	33,900	2,284	0.48	9,360.00	China	3,717.91	Russia	3,051.13
2007	38,000	2,554	0.52	12,600.00	China	3,955.00	Russia	3,083.00
2008	39,600	2,658	0.52	13,200.00	China	4,190.00	Russia	3,120.00
2009	36,900	1,727	0.54	12,900.00	China	3,815.00	Russia	3,030.00
2010	40,800	1,726	0.57	16,200.00	China	3,947.00	Russia	2,963.00

housand metric
3rd Country
Australia
Australia
Australia
Australia
China
China
China
China
China
Canada
Canada
Canada
Canada
Canada
Canada
Canada
Canada
Canada
Canada
Canada
Canada

Table 4. Global production of refined secondary aluminum, the three leading producing countries, and the concentration ratio of the top three producing countries (thousand metric tons).

Year	World refined primary production	U.S. refined primary production	Concentration ratio	1st Refined primary production	1st Country	2nd Refined primary production	2nd Country	3rd Refined primary production	3rd Country
1990	5,300.88	0.37	1,090.00	Japan	540.00	Germany	350.00	Italy	
1991	5,223.90	0.38	1,090.00	Japan	540.00	Germany	343.00	Italy	
1992	5,901.20	0.34	1,096.00	Japan	541.60	Germany	353.10	Italy	
1993	5,918.55	0.33	1,074.00	Japan	535.60	Germany	346.10	Italy	
1994	6,386.16	0.27	1,006.00	Japan	408.10	Germany	318.90	Italy	
1995	6,899.29	0.29	1,175.00	Japan	397.90	Germany	412.30	Italy	
1996	6,921.62	0.30	1,181.00	Japan	531.00	Germany	376.60	Italy	
1997	7,513.38	0.28	1,191.00	Japan	442.90	Italy	432.50	Germany	
1998	7,477.76	0.30	1,277.00	Japan	502.60	Italy	453.30	Germany	
1999	8,426.97	0.25	1,155.00	Japan	501.80	Italy	482.70	Germany	
2000	8,783.22	0.27	1,158.00	Japan	657.50	Italy	572.30	Germany	
2001	8,149.02	0.30	1,214.00	Japan	620.30	Germany	574.90	Germany	
2002	9,203.10	0.33	1,171.00	Japan	1,200.00	China	666.10	Germany	
2003	9,413.33	0.36	1,450.00	China	1,261.00	Japan	680.40	Germany	
2004	9,774.46	0.35	1,660.00	China	1,015.00	Italy	703.76	Germany	
2005	9,795.23	0.39	1,940.00	China	1,120.85	Italy	718.29	Germany	
2006	11,775.75	0.38	2,350.00	China	1,277.80	Italy	795.67	Germany	
2007	11,997.80	0.41	2,750.00	China	1,318.88	Italy	857.62	Germany	
2008	11,123.87	0.42	2,700.00	China	1,282.92	Italy	720.90	Germany	
2009	10,001.43	0.45	3,100.00	China	826.98	Italy	560.76	Germany	
2010	11,386.11	0.51	4,000.00	China	1,246.24	Italy	611.14	Germany	

Table 5. Global production of mined anitmony, the three leading producing countries, and the concentration ratio of the top three producing countries (thousand metric tons).

Year	World refined primary	U.S. refined primary	Concentration ratio	1st Refined primary	1st Country	2nd Refined primary	2nd Country	3rd Refined primary
1990	94.40	0.72	54.80	China	8.45	Bolivia	4.82	South Africa
1991	92.40	0.88	58.30	China	16.00	USSR	7.29	Bolivia
1992	90.10	0.83	59.00	China	10.00	Russia	6.02	Bolivia
1993	87.00	0.84	60.00	China	7.12	Russia	5.56	Bolivia
1994	118.00	0.89	91.00	China	7.05	Bolivia	7.00	Russia
1995	151.00	0.91	125.00	China	6.43	Bolivia	6.00	Russia
1996	156.00	0.91	129.00	China	6.49	Bolivia	6.00	Russia
1997	154.00	0.93	131.00	China	6.00	Russia	6.00	Bolivia
1998	116.00	0.92	97.40	China	4.74	Bolivia	4.24	South Africa
1999	107.00	0.92	89.60	China	5.28	South Africa	4.00	Russia
2000	126.00	0.94	110.00	China	4.50	Russia	4.10	South Africa
2001	157.00	0.95	140.00	China	4.93	South Africa	4.50	Russia
2002	118.00	0.92	100.00	China	5.75	South Africa	3.00	Tajikistan
2003	116.00	0.93	100.00	China	5.29	South Africa	2.59	Bolivia
2004	142.00	0.94	125.00	China	4.97	South Africa	3.00	Russia
2005	172.00	0.95	152.00	China	5.98	South Africa	5.10	Bolivia
2006	173.00	0.94	153.00	China	5.46	Bolivia	4.36	South Africa
2007	180.00	0.95	163.00	China	3.88	Bolivia	3.50	Russia
2008	182.00	0.95	166.00	China	3.91	Bolivia	3.50	Russia
2009	154.00	0.95	140.00	China	3.50	Russia	2.99	Bolivia
2010	167.00	0.95	150.00	China	4.98	Bolivia	3.00	Russia

Table 6. Global production of refined anitmony, the three leading producing countries, and the concentration ratio of the top three producing countries (thousand metric tons).

Year	World refined primary production	U.S. refined primary production	Concentration ratio	1st Refined primary production	1st Country	2nd Refined primary production	2nd Country	3rd Refined primary production	Country
1990	92.27	20.40	0.75	60.00	China	6.52	France	2.83	Thailand
1991	89.04	19.30	0.74	61.40	China	3.55	Bolivia	1.28	Mexico
1992	102.29	12.70	0.83	68.10	China	11.00	Kyrgystan	5.67	Bolivia
1993	110.87	9.62	0.87	81.30	China	11.00	Kyrgystan	4.47	Bolivia
1994	133.39	12.20	0.87	101.20	China	9.59	Kyrgystan	5.88	Bolivia
1995	153.48	10.50	0.91	130.00	China	4.78	Kyrgystan	4.84	Bolivia
1996	149.55	7.78	0.93	128.00	China	6.00	Kyrgystan	4.91	Bolivia
1997	139.89	7.55	0.92	120.10	China	4.40	Kyrgystan	4.14	Bolivia
1998	97.52	7.71	0.88	82.00	China	3.84	Bolivia	0.36	Peru
1999	97.53	8.22	0.89	84.50	China	2.24	Bolivia	0.26	Peru
2000	117.67	7.70	0.92	106.00	China	1.51	Kyrgystan	1.29	Bolivia
2001	157.39	5.38	0.96	148.00	China	1.99	Bolivia	1.05	Kyrgystan
2002	132.24	5.35	0.95	124.00	China	1.50	Kyrgystan	0.50	France
2003	100.54	5.60	0.93	90.00	China	1.90	Argentina	1.31	Kyrgystan
2004	134.09	3.65	0.96	125.00	China	1.97	Argentina	1.50	Kyrgystan
2005	149.56	3.03	0.96	138.00	China	2.94	Bolivia	2.20	Argentina
2006	151.40	3.52	0.96	140.00	China	2.78	Bolivia	2.21	Argentina
2007	158.26	3.48	0.96	147.00	China	2.86	Bolivia	2.73	Argentina
2008	169.06	3.18	0.97	158.00	China	2.98	Bolivia	2.50	Argentina
2009	178.09	3.02	0.97	168.00	China	2.34	Bolivia	2.30	Argentina
2010	194.51	3.52	0.98	187.00	China	2.20	Argentina	0.50	France

Table 7. Global production of mined barite, the three leading producing countries, and the concentration ratio of the top three producing countries (thousand metric tons).

Year	World refined primary	U.S. refined primary	Concentration ratio	1st Refined primary	1st Country	2nd Refined primary	2nd Country	3rd Refined primary
1990	5,770	0.50	1,750	China	633	India	500	USSR
1991	5,170	0.50	1,500	China	615	India	450	USSR
1992	4,570	0.52	1,500	China	458	India	401	Morocco
1993	4,570	0.52	1,500	China	548	India	325	Morocco
1994	4,470	0.51	1,500	China	498	India	265	Morocco
1995	4,870	0.52	1,800	China	422	India	289	Morocco
1996	6,090	0.60	2,800	China	470	Mexico	370	India
1997	6,780	0.63	3,500	China	409	India	343	Morocco
1998	6,460	0.68	3,300	China	749	India	353	Morocco
1999	6,160	0.68	3,500	China	360	India	329	Morocco
2000	6,560	0.71	3,500	China	840	India	344	Morocco
2001	6,740	0.73	3,600	China	850	India	471	Morocco
2002	6,160	0.73	3,100	China	916	India	470	Morocco
2003	6,730	0.69	3,600	China	723	India	325	Morocco
2004	7,670	0.69	3,900	China	1,100	India	313	Morocco
2005	7,870	0.73	4,200	China	1,200	India	335	Morocco
2006	7,910	0.74	4,400	China	950	India	525	Morocco
2007	7,790	0.76	4,400	China	1,000	India	500	Morocco
2008	8,570	0.73	4,600	China	1,100	India	590	Morocco
2009	6,430	0.73	3,000	China	1,200	India	520	Morocco
2010	7,850	0.73	4,000	China	1,100	India	650	Morocco

Table 8. Global production of mined bauxite, the three leading producing countries, and the concentration ratio of the top three producing countries (thousand metric tons).

Year	World refined primary	U.S. refined primary	Concentration ratio	1st Refined primary	1st Country	2nd Refined primary	2nd Country	3rd Refined primary
1990	113,000.00	0.60	41,391.00	Australia	15,800.00	Guinea	10,900.00	Jamaica
1991	111,000.00	0.61	40,510.00	Australia	15,466.00	Guinea	11,552.00	Jamaica
1992	105,000.00	0.62	39,746.00	Australia	13,800.00	Guinea	11,302.00	Jamaica
1993	110,000.00	0.62	41,320.00	Australia	15,300.00	Guinea	11,307.00	Jamaica
1994	106,000.00	0.63	41,733.00	Australia	13,300.00	Guinea	11,564.00	Jamaica
1995	112,000.00	0.66	42,655.00	Australia	15,800.00	Guinea	15,857.00	Jamaica
1996	117,000.00	0.60	43,063.00	Australia	15,600.00	Guinea	11,863.00	Jamaica
1997	122,000.00	0.60	44,465.00	Australia	16,359.00	Guinea	11,987.00	Jamaica
1998	123,000.00	0.59	44,553.00	Australia	15,570.00	Guinea	12,646.00	Jamaica
1999	129,000.00	0.61	48,416.00	Australia	15,590.00	Guinea	14,372.00	Brazil
2000	136,000.00	0.61	53,802.30	Australia	15,700.00	Guinea	13,866.00	Brazil
2001	137,000.00	0.60	53,799.00	Australia	15,100.00	Guinea	13,032.00	Brazil
2002	144,000.00	0.56	54,135.00	Australia	13,260.00	Brazil	13,120.00	Jamaica
2003	153,000.00	0.56	55,602.00	Australia	17,363.00	Brazil	13,444.00	Jamaica
2004	164,000.00	0.58	56,593.00	Australia	20,950.00	Brazil	17,000.00	China
2005	178,000.00	0.58	59,959.00	Australia	22,034.00	Brazil	22,000.00	China
2006	193,000.00	0.58	61,780.00	Australia	27,000.00	China	22,836.00	Brazil
2007	204,000.00	0.58	62,398.00	Australia	30,000.00	China	25,460.70	Brazil
2008	211,000.00	0.59	61,389.00	Australia	35,000.00	China	28,097.50	Brazil
2009	196,000.00	0.68	65,231.00	Australia	40,000.00	China	28,060.00	Brazil
2010	209,000.00	0.68	68,414.00	Australia	44,000.00	China	29,000.00	Brazil

Table 9. Global production of mined beryllium, the three leading producing countries, and the concentration ratio of the top three producing countries (thousand metric tons).

Year	World refined primary	U.S. refined primary	Concentration ratio	1st Refined primary	1st Country	2nd Refined primary	2nd Country	3rd Refined primary	Country
1990	7.10	4.55	0.35	1.60	USSR	0.85	Brazil	0.03	Argentina
1991	6.57	4.34	0.33	1.30	USSR	0.85	Brazil	0.03	Argentina
1992	6.95	4.83	0.29	1.10	Russia	0.80	Brazil	0.10	Kazakhstan
1993	6.07	4.94	0.18	1.00	Russia	0.10	Kazakhstan	0.02	Namibia
1994	5.44	4.33	0.20	1.00	Russia	0.10	Kazakhstan	0.01	Brazil
1995	6.18	5.04	0.18	1.00	Russia	0.10	Kazakhstan	0.03	Madagascar
1996	6.38	5.26	0.17	1.00	Russia	0.10	Kazakhstan	0.01	Madagascar
1997	6.91	5.77	0.16	1.00	Russia	0.10	Kazakhstan	0.03	Madagascar
1998	7.22	6.08	0.16	1.00	Russia	0.10	Kazakhstan	0.03	Madagascar
1999	6.21	5.07	0.18	1.00	Russia	0.10	Kazakhstan	0.02	Madagascar
2000	5.66	4.51	0.20	1.00	Russia	0.10	Kazakhstan	0.02	Mozambique
2001	3.61	2.48	0.31	1.00	Russia	0.10	Kazakhstan	0.01	Brazil
2002	2.53	1.97	0.22	0.50	China	0.05	Mozambique	0.01	Portugal
2003	2.68	2.10	0.22	0.50	China	0.08	Mozambique	0.01	Portugal
2004	2.76	2.21	0.20	0.50	China	0.05	Mozambique	0.01	Portugal
2005	3.45	2.78	0.19	0.50	China	0.15	Mozambique	0.01	Madagascar
2006	4.36	3.83	0.12	0.50	China	0.02	Mozambique	0.01	Madagascar
2007	4.36	3.81	0.12	0.50	China	0.03	Mozambique	0.01	Madagascar
2008	4.94	4.41	0.11	0.50	China	0.01	Madagascar	0.01	Mozambique
2009	3.59	3.03	0.16	0.50	China	0.05	Mozambique	0.01	Madagascar

Year	World refined primary	U.S. refined primary	Concentration ratio	1st Refined primary	1st Country	2nd Refined primary	2nd Country	3rd Refined primary	
1990	3.44	1.06	China	0.73	Mexico	0.56	Peru	0.68	
1991	3.23	1.04	China	0.65	Mexico	0.61	Peru	0.71	
1992	2.87	0.82	China	0.81	Mexico	0.55	Peru	0.76	
1993	3.55	1.30	Peru	0.91	Mexico	0.74	China	0.83	
1994	3.41	1.21	Peru	1.05	Mexico	0.61	China	0.84	
1995	3.43	1.00	Mexico	0.90	Peru	0.74	China	0.77	
1996	3.60	1.07	Mexico	1.00	Peru	0.61	China	0.74	
1997	4.36	1.64	Mexico	1.00	Peru	0.68	Bolivia	0.76	
1998	3.93	1.20	Mexico	1.03	Bolivia	1.00	Peru	0.82	
1999	4.86	2.68	China	1.00	Peru	0.55	Mexico	0.87	
2000	3.80	1.12	China	1.11	Mexico	1.00	Peru	0.85	
2001	5.10	2.00	China	1.39	Mexico	1.00	Peru	0.86	
2002	4.60	2.00	China	1.13	Mexico	1.00	Peru	0.90	
2003	5.10	2.50	China	1.00	Mexico	1.00	Peru	0.88	
2004	5.60	3.00	China	1.06	Mexico	1.00	Peru	0.90	
2005	5.40	3.00	China	0.97	Mexico	0.95	Peru	0.91	
2006	5.80	3.00	China	1.19	Mexico	0.95	Peru	0.89	
2007	6.20	3.50	China	1.20	Mexico	0.95	Peru	0.91	
2008	7.60	5.00	China	1.17	Mexico	0.96	Peru	0.94	
2009	8.30	6.00	China	1.00	Peru	0.85	Mexico	0.95	
2010								0.95	

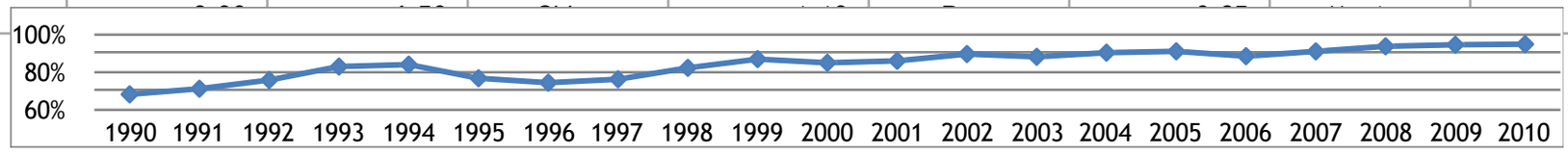

Table 10. Global production of mined bismuth, the three leading producing countries, and the concentration ratio of the top three producing countries (thousand metric tons).

Year	World refined primary production	U.S. refined primary production	Concentration ratio	1st Refined primary production	1st Country	2nd Refined primary production	2nd Country	3rd Refined primary production
1990	4.19	0.62	1.06	China	1.00	Belgium	0.55	Peru
1991	3.82	0.67	1.26	China	0.80	Belgium	0.50	Mexico
1992	3.71	0.65	1.06	China	0.80	Belgium	0.55	Mexico
1993	4.39	0.67	1.05	China	0.95	Belgium	0.94	Peru
1994	4.18	0.63	0.90	Belgium	0.88	Peru	0.85	China
1995	3.84	0.66	0.92	Mexico	0.80	China	0.80	Belgium
1996	4.18	0.64	0.96	Mexico	0.94	Peru	0.80	Belgium
1997	4.07	0.63	0.99	Mexico	0.80	Belgium	0.77	Peru
1998	4.33	0.62	1.03	Mexico	0.83	Peru	0.82	China
1999	3.57	0.65	0.86	China	0.75	Peru	0.70	Belgium
2000	4.20	0.61	1.08	Mexico	0.77	China	0.70	Belgium
2001	5.80	0.71	2.00	China	1.39	Mexico	0.70	Belgium
2002	6.70	0.77	3.00	China	1.13	Mexico	1.00	Belgium
2003	8.70	0.81	5.00	China	1.06	Mexico	1.00	Belgium
2004	15.00	0.90	11.70	China	1.06	Mexico	0.80	Belgium
2005	14.00	0.88	10.60	China	0.97	Mexico	0.80	Belgium
2006	15.00	0.92	11.80	China	1.19	Mexico	0.80	Belgium
2007	16.00	0.88	12.10	China	1.20	Mexico	0.80	Belgium
2008	17.00	0.89	13.10	China	1.17	Mexico	0.80	Belgium
2009	15.00	0.93	12.30	China	0.85	Mexico	0.80	Belgium
2010	16.00	0.92	13.00	China	0.85	Mexico	0.80	Belgium

Table 11. Global production of mined boron, the three leading producing countries, and the concentration ratio of the top three producing countries (thousand metric tons).

Year	World refined primary	U.S. refined primary	Concentration ratio	1st Refined primary	1st Country	2nd Refined primary	2nd Country	3rd Refined primary
1990	2,910.00	0.54	1,250.00	Turkey	180.00	USSR	144.00	Argentina
1991	2,960.00	0.50	1,210.00	Turkey	160.00	USSR	116.00	Argentina
1992	2,670.00	0.52	1,059.00	Turkey	203.00	Chile	125.00	Argentina
1993	2,640.00	0.52	1,079.00	Turkey	155.00	China	146.00	Argentina
1994	3,810.00	0.62	1,140.00	Turkey	1,000.00	Russia	215.00	Argentina
1995	4,170.00	0.58	1,144.00	Turkey	1,000.00	Russia	295.00	China
1996	4,330.00	0.64	1,447.00	Turkey	1,000.00	Russia	342.00	Argentina
1997	4,580.00	0.65	1,569.00	Turkey	1,000.00	Russia	423.00	Argentina
1998	4,570.00	0.64	1,650.00	Turkey	1,000.00	Russia	280.00	Chile
1999	4,470.00	0.63	1,500.00	Turkey	1,000.00	Russia	325.00	Chile
2000	4,550.00	0.64	1,402.00	Turkey	1,000.00	Russia	513.00	Argentina
2001	4,730.00	0.66	1,493.00	Turkey	1,000.00	Russia	634.00	Argentina
2002	4,560.00	0.63	1,342.00	Turkey	1,000.00	Russia	510.00	Argentina
2003	4,750.00	0.61	1,399.00	Turkey	1,000.00	Russia	512.00	Argentina
2004	4,960.00	0.61	1,588.00	Turkey	821.00	Argentina	594.00	Chile
2005	4,950.00	0.62	1,953.00	Turkey	633.00	Argentina	461.00	Chile
2006	3,620.00	0.78	1,819.00	Turkey	534.00	Argentina	460.00	Chile
2007	4,200.00	0.79	2,128.00	Turkey	670.00	Argentina	528.00	Chile
2008	4,480.00	0.78	2,139.00	Turkey	786.00	Argentina	583.00	Chile
2009	3,760.00	0.77	1,800.00	Turkey	608.00	Chile	500.00	Argentina
2010	4,080.00	0.76	2,000.00	Turkey	600.00	Argentina	504.00	Chile

Table 12. Global production of refined bromine, the three leading producing countries, and the concentration ratio of the top three producing countries (thousand metric tons).

Year	World refined primary	U.S. refined primary	Concentration ratio	1st Refined primary	1st Country	2nd Refined primary	2nd Country	3rd Refined primary
1990	390.00	0.47	130.00	Israel	28.00	UK	25.00	USSR
1991	391.90	0.48	135.00	Israel	29.30	UK	24.00	USSR
1992	397.00	0.46	135.00	Israel	29.90	UK	16.70	China
1993	392.00	0.48	135.00	Israel	27.40	UK	24.60	China
1994	421.00	0.48	135.00	Israel	33.80	UK	31.40	China
1995	432.00	0.44	130.00	Israel	32.70	UK	26.20	China
1996	483.00	0.48	160.00	Israel	41.40	China	30.60	UK
1997	542.00	0.49	180.00	Israel	50.10	China	35.60	UK
1998	521.00	0.50	185.20	Israel	40.00	China	35.90	UK
1999	547.00	0.51	181.00	Israel	55.00	UK	42.00	China
2000	542.00	0.52	210.00	Israel	42.00	China	32.00	UK
2001	523.00	0.54	206.00	Israel	40.00	China	35.00	UK
2002	540.00	0.52	206.00	Israel	42.00	China	35.00	UK
2003	494.00	0.55	176.00	Israel	75.00	China	20.00	Japan
2004	565.00	0.56	202.00	Israel	80.00	China	34.00	Jordan
2005	631.00	0.60	207.00	Israel	105.00	China	66.00	Jordan
2006	671.00	0.56	179.49	Israel	124.00	China	69.00	Jordan
2007	415.00	0.92	159.40	Israel	137.00	China	85.11	Jordan
2008	415.00	0.93	164.04	Israel	135.00	China	85.00	Jordan
2009	378.00	0.92	127.69	Israel	140.00	China	80.00	Jordan
2010	450.00	0.93	185.00	Israel	150.00	China	85.00	Jordan

Table 13. Global production of refined cadmium, the three leading producing countries, and the concentration ratio of the top three producing countries (thousand metric tons).

Year	World refined primary	U.S. refined primary	Concentration ratio	1st Refined primary	1st Country	2nd Refined primary	2nd Country	3rd Refined primary
1990	20.20	0.36	2.80	USSR	2.45	Japan	1.96	Belgium/Lux.
1991	20.90	0.35	2.89	Japan	2.50	USSR	1.83	Canada
1992	19.90	0.33	2.99	Japan	1.96	Canada	1.55	Belgium/Lux.
1993	18.40	0.34	2.83	Japan	1.94	Canada	1.57	Belgium/Lux.
1994	18.20	0.35	2.63	Japan	2.17	Canada	1.56	Belgium/Lux.
1995	20.10	0.33	2.65	Japan	2.35	Canada	1.71	Belgium/Lux.
1996	18.90	0.34	2.54	Japan	2.34	Canada	1.58	Belgium/Lux.
1997	20.30	0.33	2.47	Japan	2.26	Belgium/Lux.	2.06	Germany
1998	20.20	0.32	2.34	Japan	2.13	Canada	2.09	Belgium/Lux.
1999	20.20	0.33	2.57	Japan	2.15	Canada	1.91	Belgium/Lux.
2000	20.30	0.33	2.47	Japan	2.37	Canada	1.94	Belgium/Lux.
2001	19.00	0.36	2.51	Canada	2.46	Japan	1.88	Kazakhstan
2002	17.80	0.38	2.44	Japan	2.44	Canada	1.83	Kazakhstan
2003	18.40	0.40	2.71	Canada	2.50	Japan	2.18	Kazakhstan
2004	18.70	0.40	2.80	Canada	2.36	Kazakhstan	2.23	Japan
2005	20.20	0.39	3.00	Canada	2.58	Kazakhstan	2.30	Japan
2006	19.90	0.47	3.79	Canada	3.32	Kazakhstan	2.29	Japan
2007	19.40	0.47	4.21	Canada	2.85	Kazakhstan	2.10	China
2008	22.80	0.53	6.96	Canada	3.09	Kazakhstan	2.12	Japan
2009	20.80	0.54	7.00	Canada	2.50	Kazakhstan	1.82	Japan
2010	21.10	0.56	7.20	Canada	2.50	Kazakhstan	2.05	Japan

Table 14. Global production of mined chromite, the three leading producing countries, and the concentration ratio of the top three producing co metric tons).

Year	World mine production	Concentration ratio	1st Mine production	1st Country	2nd Mine production	2nd Country	3rd Mine production
1990	3,960.00	0.72	1,386.00	S. Africa	1,140.00	USSR	315.00
1991	3,990.00	0.74	1,530.00	S. Africa	1,140.00	USSR	282.00
1992	3,330.00	0.72	1,008.00	S. Africa	1,050.00	Kazakhstan	324.00
1993	2,790.00	0.72	852.00	S. Africa	870.00	Kazakhstan	300.00
1994	3,120.00	0.64	1,092.00	S. Africa	630.00	Kazakhstan	272.70
1995	4,200.00	0.65	1,527.00	S. Africa	726.00	Kazakhstan	462.00
1996	3,480.00	0.66	1,523.40	S. Africa	408.96	India	357.00
1997	4,110.00	0.68	1,848.60	S. Africa	539.49	Kazakhstan	408.91
1998	4,020.00	0.70	1,944.00	S. Africa	480.81	Kazakhstan	393.39
1999	4,260.00	0.75	2,045.12	S. Africa	721.68	Kazakhstan	441.83
2000	4,410.00	0.76	1,986.60	S. Africa	781.98	Kazakhstan	584.07
2001	3,660.00	0.76	1,650.60	S. Africa	613.71	Kazakhstan	503.38
2002	4,380.00	0.79	1,930.72	S. Africa	809.57	India	710.82
2003	4,650.00	0.81	2,221.62	S. Africa	878.34	Kazakhstan	663.00
2004	5,370.00	0.78	2,303.10	S. Africa	986.13	Kazakhstan	884.68
2005	5,760.00	0.75	2,265.60	S. Africa	1,074.37	Kazakhstan	976.55
2006	5,910.00	0.73	2,225.50	S. Africa	1,080.12	India	1,009.82
2007	6,870.00	0.73	2,894.09	S. Africa	1,106.16	Kazakhstan	996.00
2008	7,230.00	0.71	2,904.79	S. Africa	1,170.00	India	1,088.70
2009	5,790.00	0.72	2,059.66	S. Africa	1,128.00	India	999.96

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Table 15. Global production of refined ferrochromium, the three leading producing countries, and the concentration ratio of the top three producing countries (thousand metric tons).

Year	World refined production	Concentration ratio	1st Refined production	1st Country	2nd Refined production	2nd Country	3rd Refined production	3rd Country
1990	1,885.00	0.55	510.00	S. Africa	350.00	USSR	170.00	China
1991	1,940.00	0.57	575.00	S. Africa	350.00	USSR	190.00	China
1992	1,810.00	0.44	385.50	S. Africa	200.00	Kazakhstan	205.00	China
1993	1,635.00	0.47	417.00	S. Africa	164.00	Kazakhstan	186.00	China
1994	1,850.00	0.50	550.00	S. Africa	186.50	Kazakhstan	185.00	China
1995	2,355.00	0.54	760.00	S. Africa	256.00	Kazakhstan	250.00	China
1996	1,975.00	0.57	739.00	S. Africa	176.00	Kazakhstan	211.50	China
1997	2,415.00	0.63	969.75	S. Africa	300.00	Kazakhstan	240.00	China
1998	2,375.00	0.63	1,012.65	S. Africa	267.50	Kazakhstan	212.00	China
1999	2,500.00	0.66	1,077.60	S. Africa	365.78	Kazakhstan	200.00	China
2000	2,875.00	0.67	1,287.00	S. Africa	399.88	Kazakhstan	225.00	China
2001	2,340.00	0.69	1,070.50	S. Africa	380.95	Kazakhstan	155.00	China
2002	2,525.00	0.70	1,175.56	S. Africa	417.90	Kazakhstan	165.00	China
2003	3,035.00	0.71	1,406.50	S. Africa	496.50	Kazakhstan	250.00	China
2004	3,295.00	0.86	1,982.50	S. Africa	540.50	Kazakhstan	320.00	China
2005	3,445.00	0.70	1,406.00	S. Africa	578.08	Kazakhstan	425.00	China
2006	3,670.00	0.71	1,515.00	S. Africa	600.00	Kazakhstan	500.00	China
2007	4,185.00	0.74	1,776.00	S. Africa	653.77	Kazakhstan	650.00	China
2008	4,030.00	0.74	1,634.50	S. Africa	750.00	China	610.16	Kazakhstan
2009	3,500.00	0.78	1,400.00	S. Africa	775.00	China	550.00	Kazakhstan

Table 16. Global production of mined cobalt, the three leading producing countries, and the concentration ratio of the top three producing countries (thousand metric tons).

Year	World mine production	Concentration ratio	1st Mine production	1st Country	2nd Mine production	2nd Country	3rd Mine production	3rd Country
1990	42.30	0.74	19.00	Zaire	7.00	Zambia	5.50	USSR
1991	33.30	0.68	9.90	Zaire	6.99	Zambia	5.80	USSR
1992	28.00	0.63	6.91	Zambia	5.70	Zaire	5.10	Canada
1993	21.90	0.61	5.11	Canada	4.84	Zambia	3.50	Russia
1994	18.00	0.60	4.27	Canada	3.60	Zambia	3.00	Russia
1995	24.50	0.60	5.34	Canada	5.91	Zambia	3.50	Russia
1996	26.20	0.61	6.96	Zambia	5.71	Canada	3.30	Russia
1997	27.40	0.56	6.04	Zambia	5.71	Canada	3.50	Congo-K
1998	35.30	0.60	11.90	Zambia	5.86	Canada	3.30	Australia
1999	32.70	0.55	7.00	Congo-K	5.32	Canada	5.64	Zambia
2000	37.90	0.58	11.00	Congo-K	5.60	Australia	5.30	Canada
2001	44.80	0.44	8.00	Zambia	6.30	Australia	5.33	Canada
2002	52.20	0.60	14.60	Congo-K	10.00	Zambia	6.80	Australia
2003	52.90	0.61	14.80	Congo-K	11.30	Zambia	6.00	Australia
2004	60.30	0.59	20.20	Congo-K	10.00	Zambia	5.60	Australia
2005	65.20	0.60	24.50	Congo-K	9.30	Zambia	5.60	Australia
2006	68.90	0.60	27.10	Congo-K	8.00	Zambia	6.00	Australia
2007	71.50	0.58	25.40	Congo-K	8.69	Canada	7.50	Zambia
2008	76.30	0.63	32.30	Congo-K	8.95	Canada	6.90	Zambia
2009	72.30	0.66	35.50	Congo-K	6.10	Russia	6.00	China

Table 17. Global production of refined cobalt, the three leading producing countries, and the concentration ratio of the top three producing countries (thousand metric tons).

Year	World refined production[1]	Concentration ratio	1st Refined production	1st Country	2nd Refined production	2nd Country	3rd Refined production	3rd Country
1990	27.30	0.77	9.95	Zaire	6.30	USSR	4.67	Zambia
1991	25.20	0.73	8.11	Zaire	5.50	USSR	4.74	Zambia
1992	21.50	0.65	5.05	Zaire	4.80	Zambia	4.10	Russia
1993	16.60	0.61	3.71	Zambia	3.70	Russia	2.70	Canada
1994	20.00	0.52	4.34	Russia	3.00	Finland	2.97	Canada
1995	23.30	0.48	3.58	Zambia	3.26	Canada	4.45	Russia
1996	25.60	0.51	4.61	Zambia	4.20	Russia	4.16	Finland
1997	27.10	0.50	5.00	Finland	4.40	Zambia	4.10	Russia
1998	31.40	0.46	5.25	Finland	4.84	Zambia	4.42	Canada
1999	33.10	0.47	6.20	Finland	5.18	Congo-K	4.30	Russia
2000	36.00	0.46	7.70	Finland	4.40	Russia	4.36	Canada
2001	38.70	0.46	8.10	Finland	5.00	Russia	4.66	Zambia
2002	40.80	0.35	1.47	China	8.24	Finland	4.63	Canada
2003	43.20	0.45	7.99	Finland	6.62	Zambia	4.90	Russia
2004	48.50	0.36	4.58	China	7.89	Finland	5.14	Canada
2005	54.10	0.40	8.00	China	8.17	Finland	5.42	Zambia
2006	53.80	0.49	12.70	China	8.58	Finland	5.20	Canada
2007	53.30	0.53	13.20	China	9.17	Finland	5.62	Canada
2008	57.20	0.59	18.20	China	9.65	Finland	5.64	Canada
2009	59.80	0.62	23.10	China	8.96	Finland	4.92	Canada

Table 18. Global production of mined copper, the three leading producing countries, and the concentration ratio of the top three producing countries (thousand r

Year	World mine production	U.S. mine prod	Concentration ratio	1st Mine production	1st Country	2nd Mine production	2nd Country	3rd Mine production
1990	9,035.50	1,587.70	0.40	1,588.00	Chile	1,200.00	USSR	794.00
1991	9,090.00	1,630.00	0.41	1,814.00	Chile	1,100.00	USSR	810.00
1992	9,490.00	1,762.00	0.36	1,932.70	Chile	768.00	Canada	699.00
1993	9,420.00	1,813.00	0.36	2,055.00	Chile	731.00	Canada	584.00
1994	9,490.00	1,820.00	0.36	2,220.00	Chile	617.00	Canada	573.00
1995	10,100.00	1,850.00	0.37	2,489.00	Chile	726.00	Canada	525.00
1996	11,000.00	1,920.00	0.40	3,116.00	Chile	688.40	Canada	547.00
1997	11,400.00	1,940.00	0.40	3,392.00	Chile	656.80	Canada	558.00
1998	12,100.00	1,860.00	0.43	3,687.00	Chile	781.00	Indonesia	706.00
1999	12,800.00	1,600.00	0.46	4,391.00	Chile	766.00	Indonesia	739.00
2000	13,300.00	1,440.00	0.48	4,602.00	Chile	1,012.00	Indonesia	829.00
2001	13,700.00	1,340.00	0.49	4,739.00	Chile	1,081.00	Indonesia	871.00
2002	13,600.00	1,140.00	0.49	4,581.00	Chile	1,171.73	Indonesia	867.80
2003	13,800.00	1,120.00	0.49	4,904.20	Chile	1,005.83	Indonesia	862.58
2004	14,700.00	1,160.00	0.50	5,412.50	Chile	1,035.57	Peru	854.10
2005	15,000.00	1,140.00	0.49	5,320.50	Chile	1,065.00	Indonesia	1,009.90
2006	15,100.00	1,200.00	0.48	5,360.80	Chile	1,048.47	Peru	873.00
2007	15,400.00	1,170.00	0.49	5,557.00	Chile	1,018.16	Peru	928.00
2008	15,400.00	1,310.00	0.49	5,327.60	Chile	1,107.79	Peru	1,070.00
2009	15,900.00	1,180.00	0.47	5,394.00	Chile	1,113.45	Peru	1,040.00
2010	16,000.00	1,110.00	0.48	5,419.00	Chile	1,160.00	China	1,094.16

metric tons).

3rd Country									
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Canada									
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Table 19. Global production of refined primary copper, the three leading producing countries, and the concentration ratio of the top three producing countries (thousand metric tons).

Year	World refined production	U.S. refined produc	Concentration ratio	1st Refined production	1st Country	2nd Refined production	2nd Country	3rd Refined production	3rd Country
1990	8,587.40	1,180.00	0.43	1,350.00	USSR	1,190.00	Chile	1,180.00	Japan
1991	8,471.50	1,140.00	0.43	1,250.00	USSR	1,230.00	Chile	1,140.00	Japan
1992	8,796.40	1,210.00	0.31	1,242.00	Chile	967.70	Japan	525.00	Russia
1993	8,992.07	1,300.00	0.32	1,268.00	Chile	1,099.00	Japan	522.00	Russia
1994	8,682.40	1,350.00	0.30	1,076.40	Chile	1,026.00	Japan	502.20	Canada
1995	8,874.39	1,390.00	0.32	1,119.00	Chile	1,081.00	Japan	612.00	China
1996	10,700.00	1,430.00	0.28	1,140.50	Japan	1,112.50	Chile	692.00	China
1997	11,400.00	1,480.00	0.28	1,235.60	Chile	1,157.30	Japan	801.00	China
1998	12,150.00	1,530.00	0.27	1,226.90	Chile	1,149.27	Japan	870.00	China
1999	12,710.00	1,300.00	0.26	1,304.30	Chile	1,215.25	Japan	836.00	China
2000	12,930.00	1,030.00	0.28	1,295.70	Chile	1,292.35	Japan	1,023.80	China
2001	13,900.00	1,000.00	0.28	1,344.00	Chile	1,287.17	Japan	1,218.00	China
2002	11,200.00	841.00	0.34	1,300.00	China	1,248.10	Chile	1,211.11	Japan
2003	10,800.00	662.00	0.36	1,430.00	China	1,251.73	Japan	1,248.80	Chile
2004	11,100.00	671.00	0.36	1,590.00	China	1,200.40	Chile	1,188.49	Japan
2005	11,800.00	654.00	0.37	1,865.00	China	1,239.40	Chile	1,239.40	Japan
2006	11,900.00	675.00	0.38	2,000.00	China	1,409.09	Japan	1,119.50	Chile
2007	12,200.00	764.00	0.40	2,400.00	China	1,367.31	Japan	1,105.00	Chile
2008	12,400.00	713.00	0.42	2,700.00	China	1,366.31	Japan	1,087.00	Chile
2009	12,300.00	636.00	0.42	2,750.00	China	1,297.94	Japan	1,159.00	Chile
2010	12,300.00	--	0.45	2,950.00	China	1,382.66	Japan	1,155.00	Chile

Table 20. Global production of refined secondary copper, the three leading producing countries, and the concentration ratio of the top three producing countries (thousand metric tons).

Year	World refined secondary production	U.S. refined secondary production	Concentration ratio	1st Refined secondary production	1st Country	2nd Refined secondary production	2nd Country	3rd Refined secondary production	3rd Country
1990	1,740.00	441.00	0.32	272.00	W. Germany	160.00	China	130.00	USSR
1991	1,710.00	418.00	0.35	318.30	W. Germany	160.00	China	120.00	USSR
1992	1,830.00	433.00	0.38	345.40	Germany	229.00	China	114.70	Japan
1993	1,750.00	460.00	0.41	361.50	Germany	245.00	China	103.00	Belgium/Lux.
1994	1,670.00	392.00	0.45	339.00	Germany	254.00	China	160.00	Belgium/Lux.
1995	1,970.00	352.00	0.51	467.00	China	369.00	Germany	160.00	Belgium/Lux.
1996	1,980.00	345.00	0.48	428.00	China	355.00	Germany	163.00	Belgium/Lux.
1997	2,090.00	396.00	0.45	379.00	China	375.80	Germany	183.00	Belgium/Lux.
1998	1,990.00	349.00	0.47	421.00	Germany	341.00	China	183.00	Belgium/Lux.
1999	1,920.00	230.00	0.51	454.00	Germany	338.00	China	187.00	Belgium/Lux.
2000	1,960.00	208.00	0.53	464.40	Germany	347.00	China	220.00	Russia
2001	1,760.00	172.00	0.50	341.40	Germany	300.00	China	244.50	Russia
2002	1,730.00	69.90	0.54	368.79	Germany	350.00	China	216.00	Belgium/Lux.
2003	1,780.00	53.30	0.54	430.00	China	310.93	Germany	215.00	Belgium/Lux.
2004	2,080.00	50.80	0.59	620.00	China	368.96	Germany	237.00	Russia
2005	2,140.00	47.20	0.63	750.00	China	344.40	Germany	249.00	Russia
2006	2,560.00	44.80	0.65	1,000.00	China	350.00	Germany	312.00	Russia
2007	2,770.00	46.00	0.67	1,200.00	China	363.82	Germany	289.00	Russia
2008	2,780.00	53.80	0.66	1,200.00	China	389.30	Germany	250.00	Russia
2009	2,880.00	46.40	0.70	1,400.00	China	378.70	Germany	250.00	Russia
2010	2,900.00	--	0.80	1,700.00	China	378.70	Germany	250.00	Russia

Table 21. Global production of refined electrowon copper, the three leading producing countries, and the concentration ratio of the top three producing countries (thousand metric tons).

Year	World refined electrowon production	U.S. refined electrowon production	Concentration ratio	1st Refined electrowon production	1st Country	2nd Refined electrowon production	2nd Country	3rd Refined electrowon production	3rd Country
1990	472.60	393.00	0.17	52.70	Zambia	26.90	Mexico	--	NA
1991	518.50	441.00	0.15	45.40	Zambia	32.10	Mexico	--	NA
1992	573.60	502.00	0.12	43.70	Zambia	27.90	Mexico	--	NA
1993	586.93	491.00	0.16	48.85	Zambia	24.08	Mexico	20.30	Peru
1994	806.60	493.00	0.36	201.00	Chile	67.30	Zambia	25.80	Mexico
1995	1,048.61	539.00	0.45	372.50	Chile	62.00	Zambia	38.92	Mexico
1996	1,410.00	574.00	0.55	635.70	Chile	88.20	Peru	58.00	Zambia
1997	1,700.70	586.00	0.61	881.00	Chile	99.70	Peru	63.70	Zambia
1998	2,050.00	609.00	0.63	1,108.00	Chile	101.84	Peru	80.71	Zambia
1999	2,310.00	586.00	0.67	1,362.10	Chile	114.43	Peru	60.20	Zambia
2000	2,330.00	566.00	0.67	1,372.60	Chile	127.31	Peru	55.60	Mexico
2001	2,600.00	628.00	0.67	1,538.20	Chile	131.14	Peru	79.00	Zambia
2002	2,670.00	601.00	0.69	1,602.00	Chile	156.47	Peru	96.00	Australia
2003	2,720.00	591.00	0.71	1,653.10	Chile	171.20	Peru	109.00	Zambia
2004	2,710.00	584.00	0.71	1,636.30	Chile	167.00	Peru	124.00	Zambia
2005	2,690.00	554.00	0.71	1,584.60	Chile	155.00	Peru	165.53	Zambia
2006	2,830.00	530.00	0.72	1,692.00	Chile	178.00	Zambia	173.87	Peru
2007	2,980.00	504.00	0.74	1,832.00	Chile	200.00	Zambia	172.12	Peru
2008	3,080.00	507.00	0.75	1,971.00	Chile	175.00	Zambia	160.08	Peru
2009	3,250.00	476.00	0.75	2,118.00	Chile	145.00	Zambia	162.80	Peru
2010	3,300.00	500.00	0.73	2,089.00	Chile	160.00	Zambia	153.02	Peru

Table 22. Global production of mined feldspar, the three leading producing countries, and the concentration ratio of the top three producing countries (thousand metric tons).

Year	World mine production	Concentration ratio	1st Mine production	1st Country	2nd Mine production	2nd Country	3rd Mine production	3rd Country
1990	5,990.00	0.40	1,610.00	Italy	420.00	France	338.00	W. Germany
1991	5,670.00	0.40	1,300.00	Italy	703.00	Thailand	250.00	USSR
1992	5,990.00	0.40	1,387.97	Italy	559.81	Thailand	464.74	Turkey
1993	6,170.00	0.41	1,534.21	Italy	600.84	Thailand	366.00	Turkey
1994	6,490.00	0.44	1,806.94	Italy	554.23	Thailand	502.61	Turkey
1995	7,910.00	0.46	2,199.00	Italy	760.25	Turkey	670.18	Thailand
1996	8,290.00	0.47	2,310.00	Italy	910.81	Turkey	684.98	Thailand
1997	8,650.00	0.45	2,300.00	Italy	1,011.54	Turkey	611.79	Thailand
1998	9,330.00	0.49	2,748.00	Italy	1,089.48	Turkey	706.00	France
1999	9,980.00	0.47	2,700.00	Italy	1,369.66	Turkey	638.00	France
2000	9,540.00	0.45	2,500.00	Italy	1,147.72	Turkey	642.00	France
2001	11,800.00	0.38	2,600.00	Italy	1,200.00	Turkey	650.00	France
2002	14,100.00	0.46	3,159.00	Italy	1,766.39	Turkey	1,600.00	China
2003	13,600.00	0.43	2,343.72	Italy	1,862.31	Turkey	1,700.00	China
2004	15,100.00	0.47	3,251.26	Italy	1,983.34	Turkey	1,800.00	China
2005	16,800.00	0.49	3,995.23	Italy	2,331.97	Turkey	1,850.00	China
2006	20,600.00	0.57	4,019.50	Italy	5,771.89	Turkey	1,950.00	China
2007	21,500.00	0.59	4,200.00	Italy	6,548.80	Turkey	2,000.00	China
2008	22,700.00	0.59	4,727.00	Italy	6,767.50	Turkey	2,000.00	China
2009	19,600.00	0.56	4,700.00	Italy	4,212.55	Turkey	2,000.00	China
2010	20,600.00	0.57	4,700.00	Italy	5,000.00	Turkey	2,000.00	China

Table 23. Global production of mined fluorspar, the three leading producing countries, and the concentration ratio of the top three producing countries (thousand metric tons).

Year	World mine production	Concentration ratio	1st Mine production	1st Country	2nd Mine production	2nd Country	3rd Mine production	3rd Country
1990	5,120.00	0.58	1,700.00	China	634.00	Mexico	614.00	Mongolia
1991	4,300.00	0.59	1,700.00	China	475.00	Mongolia	370.00	Mexico
1992	4,120.00	0.62	1,900.00	China	384.00	Mongolia	287.00	Mexico
1993	4,180.00	0.66	2,100.00	China	356.00	Mongolia	283.00	Mexico
1994	3,750.00	0.64	2,000.00	China	235.00	Mexico	174.26	S. Africa
1995	4,040.00	0.69	2,000.00	China	522.00	Mexico	250.00	Russia
1996	4,180.00	0.70	2,150.00	China	523.97	Mexico	250.00	Russia
1997	4,180.00	0.74	2,300.00	China	552.84	Mexico	250.00	Russia
1998	4,430.00	0.72	2,350.00	China	598.04	Mexico	237.00	S. Africa
1999	4,300.00	0.74	2,400.00	China	557.11	Mexico	217.28	S. Africa
2000	4,450.00	0.74	2,450.00	China	635.23	Mexico	212.36	S. Africa
2001	4,590.00	0.73	2,450.00	China	619.47	Mexico	286.00	S. Africa
2002	4,450.00	0.74	2,450.00	China	622.48	Mexico	227.00	S. Africa
2003	4,850.00	0.96	3,650.00	China	756.26	Mexico	235.00	S. Africa
2004	5,220.00	0.75	2,700.00	China	842.70	Mexico	354.90	Mongolia
2005	5,360.00	0.75	2,800.00	China	875.45	Mexico	367.50	Mongolia
2006	5,660.00	0.77	3,100.00	China	936.00	Mexico	347.70	Mongolia
2007	5,730.00	0.78	3,200.00	China	933.00	Mexico	354.90	Mongolia
2008	6,000.00	0.77	3,250.00	China	1,057.65	Mexico	334.80	Mongolia
2009	5,550.00	0.79	2,900.00	China	1,050.00	Mexico	459.50	Mongolia
2010	6,010.00	0.80	3,300.00	China	1,070.00	Mexico	420.00	Mongolia

Table 24. Global production of refined primary gallium, the three leading producing countries, and the concentration ratio of the top three producing countries (thousand metric tons).

Year	World refined production	Concentration ratio	1st Refined production	1st Country	2nd Refined production	2nd Country	3rd Refined production	3rd Country
1990	0.037	0.78	0.015	Australia	0.008	Germany	0.006	Japan
1991	0.043	0.67	0.015	Australia	0.007	China	0.007	Germany
1992	0.041	0.68	0.013	Australia	0.010	Germany	0.006	Japan
1993	0.051	0.67	0.015	Australia	0.010	Russia	0.009	Germany
1994	0.053	0.75	0.018	Australia	0.012	Germany	0.010	Russia
1995	0.062	0.70	0.020	Australia	0.013	Russia	0.010	Germany
1996	0.054	0.78	0.025	Australia	0.009	Germany	0.008	Russia
1997	0.075	0.75	0.025	Germany	0.018	Kazakhstan	0.013	Russia
1998	0.093	0.79	0.030	Kazakhstan	0.029	Germany	0.015	Russia
1999	0.075	0.75	0.026	Germany	0.021	Kazakhstan	0.009	Russia
2000	0.093	0.73	0.035	Germany	0.019	Kazakhstan	0.014	Japan
2001	0.075	0.69	0.020	China	0.020	Germany	0.012	Kazakhstan
2002	0.067	0.67	0.020	China	0.015	Germany	0.010	Russia
2003	0.071	0.63	0.015	China	0.015	Germany	0.015	Kazakhstan
2004	0.063	0.83	0.023	China	0.019	Germany	0.010	Ukraine
2005	0.073	0.65	0.022	China	0.015	Germany	0.010	Ukraine
2006	0.079	0.64	0.026	China	0.015	Germany	0.010	Ukraine
2007	0.095	0.67	0.033	China	0.015	Germany	0.015	Kazakhstan
2008	0.111	0.75	0.040	China	0.025	Germany	0.019	Kazakhstan
2009	0.079	0.73	0.021	China	0.018	Germany	0.019	Kazakhstan
2010	0.182	0.79	0.093	China	0.032	Germany	0.019	Kazakhstan

Table 25. Global production of refined primary germanium, the three leading producing countries, and the concentration ratio of the top three producing countries (thousand metric tons).

Year	World refined production	1st Refined production	1st Country	2nd Refined production	2nd Country	3rd Refined production	3rd Country
2005	0.09	1	Canada	1	China		Finland/Russia
2006	0.09	1	Canada	1	China		Finland/Russia
2007	0.10	1	China	1	Canada		Finland/Russia
2008	0.14	1	China	1	Canada		Finland/Russia
2009	0.12	1	China	1	Canada		Finland/Russia
2010	0.12	1	China	1	Canada		Finland/Russia

Table 26. Global production of mined gold, the three leading producing countries, and the concentration ratio of the top three producing countries (thousand metric tons).

Year	World refined production	Concentration ratio	1st Refined production	1st Country	2nd Refined production	2nd Country	3rd Refined production	3rd Country
1990	2.18	0.53	0.61	S. Africa	0.30	USSR	0.24	Australia
1991	2.19	0.50	0.60	S. Africa	0.26	USSR	0.23	Australia
1992	2.29	0.44	0.61	S. Africa	0.24	Australia	0.15	Canada
1993	2.28	0.45	0.62	S. Africa	0.25	Australia	0.15	Russia
1994	2.27	0.43	0.58	S. Africa	0.26	Australia	0.15	Canada
1995	2.23	0.42	0.52	S. Africa	0.25	Australia	0.15	Canada
1996	2.29	0.42	0.50	S. Africa	0.29	Australia	0.17	Canada
1997	2.45	0.40	0.49	S. Africa	0.31	Australia	0.18	China
1998	2.50	0.38	0.47	S. Africa	0.31	Australia	0.18	China
1999	2.57	0.36	0.45	S. Africa	0.30	Australia	0.17	China
2000	2.57	0.35	0.43	S. Africa	0.30	Australia	0.18	China
2001	2.56	0.34	0.39	S. Africa	0.29	Australia	0.19	China
2002	2.53	0.34	0.40	S. Africa	0.27	Australia	0.19	China
2003	2.54	0.34	0.37	S. Africa	0.28	Australia	0.21	China
2004	2.42	0.34	0.34	S. Africa	0.26	Australia	0.22	China
2005	2.47	0.32	0.29	S. Africa	0.26	Australia	0.23	China
2006	2.37	0.32	0.27	S. Africa	0.25	Australia	0.25	China
2007	2.36	0.33	0.28	China	0.25	S. Africa	0.25	Australia
2008	2.29	0.31	0.29	China	0.22	Australia	0.21	S. Africa
2009	2.00	0.37	0.32	China	0.22	Australia	0.20	S. Africa
2010	2.56	0.31	0.35	China	0.26	Australia	0.19	S. Africa

Table 27. Global production of mined graphite, the three leading producing countries, and the concentration ratio of the top three producing countries (thousand metric tons).

Year	World refined production	Concentration ratio	1st Refined production	1st Country	2nd Refined production	2nd Country	3rd Refined production	3rd Country
1990	946.00	0.67	455.00	China	99.00	S. Korea	80.00	USSR
1991	771.00	0.57	289.00	China	75.20	S. Korea	75.00	USSR
1992	670.00	0.63	300.00	China	73.00	India	50.00	Ukraine
1993	648.00	0.67	310.00	China	82.40	India	40.00	Ukraine
1994	517.00	0.61	183.00	China	93.60	India	38.00	N. Korea
1995	584.00	0.64	204.00	China	129.37	India	40.00	N. Korea
1996	555.00	0.61	185.00	China	115.23	India	40.00	N. Korea
1997	685.00	0.66	310.00	China	102.14	India	40.00	N. Korea
1998	651.00	0.66	224.00	China	143.33	India	61.37	Brazil
1999	692.00	0.72	300.00	China	145.00	India	53.50	Brazil
2000	846.00	0.76	430.00	China	140.00	India	71.21	Brazil
2001	816.00	0.81	450.00	China	140.00	India	70.09	Brazil
2002	932.00	0.88	629.00	China	130.00	India	60.92	Brazil
2003	999.00	0.89	710.00	China	110.00	India	70.74	Brazil
2004	1,010.00	0.89	700.00	China	120.00	India	76.33	Brazil
2005	1,030.00	0.90	720.00	China	130.00	India	75.52	Brazil
2006	1,020.00	0.90	720.00	China	120.00	India	76.19	Brazil
2007	1,110.00	0.91	800.00	China	130.00	India	77.16	Brazil
2008	1,120.00	0.77	650.00	China	140.00	India	77.20	Brazil
2009	1,090.00	0.60	450.00	China	130.00	India	77.20	Brazil
2010	1,200.00	0.85	800.00	China	140.00	India	77.20	Brazil

Table 28. Global production of refined indium, the three leading producing countries, and the concentration ratio of the top three producing countries (thousand metric tons).

Year	World refined production	Concentration ratio	1st Refined production	1st Country	2nd Refined production	2nd Country	3rd Refined production	3rd Country
1990	0.118	--	--	--	--	--	--	--
1991	0.140	--	--	--	--	--	--	--
1992	0.140	--	--	--	--	--	--	--
1993	0.140	--	--	--	--	--	--	--
1994	0.145	--	--	--	--	--	--	--
1995	0.239	--	--	--	--	--	--	--
1996	0.200	--	--	--	--	--	--	--
1997	0.230	--	--	--	--	--	--	--
1998	0.230	--	--	--	--	--	--	--
1999	0.245	0.51	0.043	France	0.042	Canada	0.040	China
2000	0.450	0.71	0.200	China	0.065	France	0.055	Japan
2001	0.439	0.71	0.190	China	0.065	France	0.055	Japan
2002	0.406	0.65	0.160	China	0.060	Japan	0.045	Canada
2003	0.371	0.81	0.180	China	0.070	Japan	0.050	Canada
2004	0.392	0.82	0.200	China	0.070	Japan	0.050	Canada
2005	0.607	0.81	0.370	China	0.070	Japan	0.050	S. Korea
2006	0.636	0.81	0.400	China	0.060	S. Korea	0.055	Japan
2007	0.620	0.82	0.380	China	0.070	S. Korea	0.060	Japan
2008	0.601	0.80	0.340	China	0.075	S. Korea	0.065	Japan
2009	0.546	0.87	0.340	China	0.070	S. Korea	0.067	Japan
2010	0.609	0.77	0.330	China	0.070	S. Korea	0.069	Japan

Table 29. Global production of mined iodine, the three leading producing countries, and the concentration ratio of the top three producing countries (thousand metric tons).

Year	World mine production	Concentration ratio	1st Mine production	1st Country	2nd Mine production	2nd Country	3rd Mine production	3rd Country
1990	16.00	0.84	7.58	Japan	3.98	Chile	1.90	USSR
1991	17.30	0.85	7.49	Japan	5.45	Chile	1.80	USSR
1992	16.50	0.80	6.76	Japan	5.84	Chile	0.60	Azerbaijan, Turkmenistan
1993	16.10	0.80	6.49	Japan	5.96	Chile	0.50	China
1994	14.30	0.82	5.64	Chile	5.59	Japan	0.50	China
1995	13.40	0.85	5.49	Japan	5.44	Chile	0.50	China
1996	14.10	0.86	6.18	Japan	5.51	Chile	0.50	China
1997	15.70	0.87	7.15	Chile	6.04	Japan	0.50	China
1998	18.60	0.88	9.72	Chile	6.14	Japan	0.50	China
1999	18.40	0.87	9.32	Chile	6.15	Japan	0.50	China
2000	19.50	0.88	10.47	Chile	6.16	Japan	0.50	China
2001	20.70	0.89	11.36	Chile	6.64	Japan	0.50	China
2002	21.00	0.89	11.65	Chile	6.55	Japan	0.50	China
2003	24.60	0.92	15.58	Chile	6.52	Japan	0.50	China
2004	24.80	0.92	14.93	Chile	7.26	Japan	0.55	China
2005	26.50	0.91	15.35	Chile	8.10	Japan	0.55	China
2006	26.70	0.97	16.49	Chile	8.72	Japan	0.56	China
2007	26.30	0.96	15.47	Chile	9.28	Japan	0.57	China
2008	26.50	0.97	15.50	Chile	9.50	Japan	0.57	China
2009	28.50	0.97	17.40	Chile	9.60	Japan	0.58	China
2010	28.70	0.97	17.50	Chile	9.70	Japan	0.59	China

Table 30. Global production of mined iron ore, the three leading producing countries, and the concentration ratio of the top three producing countries (thousand metric tons).

Year	World mine production	Concentration ratio	1st Mine production	1st Country	2nd Mine production	2nd Country	3rd Mine production	3rd Country
1990	540,000.00	0.56	132,000.00	USSR	99,900.00	Brazil	69,800.00	Australia
1991	518,000.00	0.54	110,000.00	USSR	99,900.00	Brazil	69,700.00	Australia
1992	498,000.00	0.45	96,100.00	Brazil	69,800.00	Australia	59,300.00	China
1993	510,000.00	0.49	105,000.00	Brazil	74,800.00	Australia	70,400.00	China
1994	514,935.00	0.50	103,237.00	Brazil	80,900.00	Australia	72,050.00	China
1995	544,363.00	0.51	112,793.00	Brazil	88,653.00	Australia	75,000.00	China
1996	543,358.00	0.52	112,000.00	Brazil	93,000.00	Australia	75,000.00	China
1997	572,163.00	0.53	122,184.00	Brazil	97,901.00	Australia	80,400.00	China
1998	573,308.19	0.53	124,210.00	Brazil	99,418.89	Australia	81,200.00	China
1999	555,075.11	0.54	124,000.00	Brazil	95,223.00	Australia	78,200.00	China
2000	604,306.00	0.53	141,106.00	Brazil	104,226.00	Australia	73,500.00	China
2001	583,019.00	0.55	133,713.00	Brazil	112,592.00	Australia	72,600.00	China
2002	617,000.00	0.54	142,468.00	Brazil	116,341.00	Australia	76,200.00	China
2003	675,000.00	0.55	153,190.00	Brazil	132,257.00	Australia	86,000.00	China
2004	750,000.00	0.57	173,752.00	Brazil	145,282.00	Australia	105,000.00	China
2005	843,000.00	0.58	186,891.00	Brazil	163,000.00	Australia	138,000.00	China
2006	969,000.00	0.57	198,000.00	China	186,891.00	Brazil	171,000.00	Australia
2007	1,070,000.00	0.61	235,504.00	Brazil	233,000.00	China	186,000.00	Australia
2008	1,130,000.00	0.63	270,000.00	China	233,514.00	Brazil	208,000.00	Australia
2009	1,110,000.00	0.64	280,000.00	China	228,000.00	Australia	206,100.00	Brazil
2010	--	--	--	China	271,000.00	Australia	206,100.00	Brazil

Table 31. Global production of raw steel, the three leading producing countries, and the concentration ratio of the top three producing countries (thousand metric tons).

Year	World raw production	U.S. raw production	Concentration ratio	1st Raw production	1st Country	2nd Raw production	2nd Country	3rd Raw production	3rd Country
1990	771,000.00	89,726.00	0.43	154,414.00	USSR	110,339.00	Japan	66,100.00	China
1991	737,000.00	79,738.00	0.42	132,666.00	USSR	109,649.00	Japan	70,570.00	China
1992	724,000.00	84,322.00	0.34	98,131.00	Japan	80,000.00	China	67,000.00	Russia
1993	730,000.00	88,800.00	0.34	99,623.00	Japan	89,560.00	China	58,346.00	Russia
1994	730,000.00	91,200.00	0.33	98,295.00	Japan	92,610.00	China	48,812.00	Russia
1995	752,000.00	95,200.00	0.33	101,640.00	Japan	95,360.00	China	51,300.00	Russia
1996	751,000.00	95,500.00	0.33	101,241.00	China	98,801.00	Japan	49,193.00	Russia
1997	797,000.00	98,500.00	0.33	108,940.00	China	104,545.00	Japan	48,499.00	Russia
1998	770,000.00	98,600.00	0.33	115,590.00	China	93,548.00	Japan	44,046.00	Germany
1999	784,000.00	97,400.00	0.34	124,260.00	China	94,192.00	Japan	51,524.00	Russia
2000	850,000.00	102,000.00	0.35	128,500.00	China	106,444.00	Japan	59,098.00	Russia
2001	852,000.00	90,100.00	0.37	151,630.00	China	102,866.00	Japan	59,030.00	Russia
2002	907,000.00	91,600.00	0.39	182,370.00	China	107,745.00	Japan	59,776.60	Russia
2003	974,000.00	93,700.00	0.41	222,340.00	China	110,510.52	Japan	62,710.00	Russia
2004	1,060,000.00	99,700.00	0.43	272,450.00	China	112,717.66	Japan	65,645.60	Russia
2005	1,140,000.00	94,900.00	0.47	353,240.00	China	112,471.37	Japan	66,186.20	Russia
2006	1,250,000.00	98,200.00	0.48	419,150.00	China	116,266.00	Japan	70,816.00	Russia
2007	1,350,000.00	98,100.00	0.51	489,290.00	China	120,203.00	Japan	72,389.00	Russia
2008	1,330,000.00	91,900.00	0.52	500,490.00	China	118,739.00	Japan	68,700.00	Russia
2009	1,230,000.00	59,400.00	0.58	572,180.00	China	87,500.00	Japan	59,166.00	Russia
2010	1,410,000.00	80,500.00	0.53	637,230.00	China	109,599.00	Japan	--	Russia

Table 32. Global production of mined lead, the three leading producing countries, and the concentration ratio of the top three producing countries (thousand metric tor

Year	World mine production	U.S. mine production	Concentration ratio	1st Mine production	1st Country	2nd Mine production	2nd Country	3rd Mine production
1990	3,370.00	497.00	0.39	570.00	Australia	420.00	USSR	315.00
1991	3,260.00	477.00	0.40	579.00	Australia	380.00	USSR	352.00
1992	3,200.00	407.00	0.39	577.00	Australia	344.00	Canada	330.00
1993	2,900.00	362.00	0.37	519.00	Australia	338.00	China	217.00
1994	2,800.00	370.00	0.44	537.00	Australia	462.00	China	233.50
1995	2,710.00	394.00	0.45	520.00	China	455.00	Australia	237.60
1996	2,920.00	436.00	0.48	643.00	China	522.00	Australia	248.80
1997	3,100.00	459.00	0.48	712.00	China	531.00	Australia	258.20
1998	3,060.00	493.00	0.48	618.00	Australia	580.00	China	257.71
1999	3,080.00	520.00	0.49	681.00	Australia	549.00	China	271.78
2000	3,200.00	465.00	0.52	739.00	Australia	660.00	China	270.58
2001	3,120.00	466.00	0.54	714.00	Australia	676.00	China	289.55
2002	2,850.00	451.00	0.58	694.00	Australia	641.00	China	305.65
2003	3,200.00	460.00	0.61	955.00	China	688.00	Australia	308.87
2004	3,150.00	445.00	0.63	998.00	China	674.00	Australia	306.21
2005	3,470.00	437.00	0.64	1,140.00	China	767.00	Australia	319.35
2006	3,630.00	429.00	0.64	1,330.00	China	686.00	Australia	313.33
2007	3,720.00	444.00	0.64	1,410.00	China	641.00	Australia	329.15
2008	3,880.00	410.00	0.64	1,500.00	China	645.00	Australia	345.11
2009	3,900.00	406.00	0.63	1,600.00	China	566.00	Australia	302.46
2010	4,140.00	369.00	0.66	1,850.00	China	625.00	Australia	261.90

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Table 33. Global production of refined primary lead, the three leading producing countries, and the concentration ratio of the top three producing countries (thousand metric tons).

Year	World refined primary production	U.S. refined primary production	Concentration ratio	1st Refined primary production	1st Country	2nd Refined primary production	2nd Country	3rd Refined primary production	3rd Country
1990	3,090.00	404.00	0.29	420.00	USSR	266.00	China	212.00	Australia
1991	3,080.00	346.00	0.29	380.00	USSR	290.00	China	220.00	Australia
1992	2,950.00	305.00	0.26	325.00	China	219.00	Japan	215.00	Australia
1993	3,050.00	335.00	0.26	372.00	China	221.00	Australia	212.00	Japan
1994	3,012.00	351.00	0.27	408.00	China	212.00	Australia	181.70	Japan
1995	2,909.00	374.00	0.28	432.00	China	215.00	Australia	178.00	Canada
1996	2,870.00	326.00	0.33	562.00	China	204.00	Australia	194.00	Canada
1997	3,044.00	343.00	0.33	584.00	China	215.20	UK	204.00	Australia
1998	3,105.00	337.00	0.33	665.00	China	186.21	UK	176.80	Germany
1999	3,317.00	350.00	0.38	821.00	China	240.00	Australia	185.42	UK
2000	3,590.00	341.00	0.40	998.00	China	223.37	Australia	210.52	Germany
2001	3,403.00	290.00	0.43	984.00	China	270.00	Australia	203.00	UK
2002	3,428.00	262.00	0.46	1,100.00	China	268.00	Australia	207.72	UK
2003	3,387.00	245.00	0.52	1,290.00	China	270.00	Australia	195.00	UK
2004	3,327.00	148.00	0.57	1,500.00	China	232.00	Australia	173.61	S. Korea
2005	3,713.00	143.00	0.61	1,850.00	China	230.00	Australia	180.78	S. Korea
2006	3,896.00	153.00	0.64	2,130.00	China	206.00	Australia	163.70	UK
2007	3,882.00	123.00	0.65	2,140.00	China	202.00	Australia	195.02	S. Korea
2008	4,176.00	135.00	0.67	2,350.00	China	244.14	S. Korea	221.00	Australia
2009	4,024.00	103.00	0.72	2,480.00	China	222.46	S. Korea	204.00	Australia
2010	4,402.00	115.00	0.73	2,840.00	China	200.00	S. Korea	178.00	Australia

Table 34. Global production of refined secondary lead, the three leading producing countries, and the concentration ratio of the top three producing countries (thousand metric tons).

Year	World refined secondary production	U.S. refined secondary production	Concentration ratio	1st Refined secondary production	1st Country	2nd Refined secondary production	2nd Country	3rd Refined secondary production	3rd Country
1990	2,860.00	922.00	0.26	280.00	USSR	270.00	France	187.00	W. Germany
1991	2,690.00	885.00	0.26	250.00	France	250.00	USSR	202.00	Germany
1992	2,480.00	916.00	0.26	284.00	France	202.00	Germany	147.00	UK
1993	2,400.00	893.00	0.25	284.00	France	179.00	Germany	148.00	UK
1994	2,340.00	931.00	0.34	280.00	France	260.00	Germany	254.00	UK
1995	2,670.00	1,020.00	0.19	171.00	UK	168.00	France	164.40	Germany
1996	2,760.00	1,070.00	0.18	177.50	UK	162.00	France	149.40	Germany
1997	2,840.00	1,110.00	0.18	175.80	UK	170.80	France	164.40	Germany
1998	2,870.00	1,120.00	0.19	203.40	Germany	172.00	France	162.65	UK
1999	2,850.00	1,110.00	0.19	204.00	Germany	167.92	Japan	162.65	UK
2000	3,060.00	1,130.00	0.18	204.00	Germany	182.21	Japan	170.74	UK
2001	3,200.00	1,100.00	0.19	219.64	Germany	211.00	China	175.09	Japan
2002	3,370.00	1,100.00	0.19	238.70	Germany	230.00	China	178.02	Japan
2003	3,600.00	1,140.00	0.20	290.00	China	224.70	Germany	189.83	Japan
2004	3,740.00	1,130.00	0.23	430.00	China	243.30	Germany	188.60	Japan
2005	3,950.00	1,150.00	0.25	537.00	China	298.92	Germany	167.98	Japan
2006	4,200.00	1,160.00	0.24	590.00	China	265.19	Germany	171.74	Japan
2007	4,420.00	1,180.00	0.25	650.00	China	294.15	Germany	171.80	Japan
2008	4,600.00	1,140.00	0.29	850.00	China	301.90	Germany	172.45	Japan
2009	4,860.00	1,110.00	0.34	1,230.00	China	285.70	Germany	150.87	Japan
2010	5,090.00	1,140.00	0.35	1,360.00	China	280.00	Germany	160.00	Japan

Table 35. Global production of mined lithium, the three leading producing countries, and the concentration ratio of the top three producing countries (thousand metric tons).

Year	World mine production	Concentration ratio	1st Mine production	1st Country	2nd Mine production	2nd Country	3rd Mine production	3rd Country
1990	5.30	0.77	1.70	Chile	1.30	Australia	1.10	USSR
1991	5.40	0.80	1.70	Chile	1.60	Australia	1.00	USSR
1992	5.20	0.73	1.60	Chile	1.30	Australia	0.90	Russia
1993	5.60	0.73	2.00	Chile	1.30	Australia	0.80	Russia
1994	6.10	0.74	2.00	Chile	1.70	Australia	0.80	Russia
1995	6.30	0.71	2.00	Chile	1.70	Australia	0.80	Russia
1996	11.00	0.84	3.70	Australia	2.80	China	2.70	Chile
1997	14.00	0.70	4.10	Chile	2.90	China	2.80	Australia
1998	15.00	0.65	4.70	Chile	3.00	China	2.10	Australia
1999	14.00	0.70	5.30	Chile	2.30	China	2.20	Australia
2000	14.00	0.72	5.30	Chile	2.40	China	2.40	Australia
2001	15.10	0.74	6.80	Chile	2.40	China	2.00	Australia
2002	14.20	0.81	5.92	Chile	3.14	Australia	2.40	China
2003	15.10	0.83	6.58	Chile	3.45	Australia	2.50	China
2004	20.20	0.72	7.99	Chile	3.93	Australia	2.63	China
2005	20.60	0.72	8.27	Chile	3.77	Australia	2.82	China
2006	23.50	0.71	8.20	Chile	5.50	Australia	2.90	Argentina
2007	25.80	0.81	11.10	Chile	6.91	Australia	3.01	China
2008	25.40	0.79	10.60	Chile	6.28	Australia	3.29	China
2009	18.80	0.83	6.28	Australia	5.62	Chile	3.76	China
2010	28.10	0.84	10.51	Chile	9.26	Australia	3.95	China

Table 36. Global production of mined magnesium compounds, the three leading producing countries, and the concentration ratio of the top three producing countries (thousand metric tons).

Year	World mine production	Concentration ratio	1st Mine production	1st Country	2nd Mine production	2nd Country	3rd Mine production	3rd Country
1990	10,500.00	0.50	2,170.00	China	1,600.00	USSR	1,500.00	N. Korea
1991	9,790.00	0.47	1,650.00	China	1,600.00	N. Korea	1,400.00	USSR
1992	10,200.00	0.43	1,600.00	N. Korea	1,510.00	China	1,267.00	Czechoslovakia[2]
1993	8,280.00	0.49	1,600.00	N. Korea	1,230.00	China	1,200.00	Slovakia
1994	9,020.00	0.45	1,600.00	N. Korea	1,279.61	Turkey	1,200.00	Slovakia
1995	10,600.00	0.53	2,050.00	China	1,928.06	Turkey	1,600.00	N. Korea
1996	11,000.00	0.55	2,339.14	Turkey	2,100.00	China	1,600.00	N. Korea
1997	10,100.00	0.54	2,400.00	China	1,600.00	N. Korea	1,409.77	Turkey
1998	11,400.00	0.58	2,703.34	Turkey	2,400.00	China	1,500.00	N. Korea
1999	9,830.00	0.53	2,450.00	China	1,724.74	Turkey	1,000.00	N. Korea
2000	12,700.00	0.61	4,070.00	China	2,672.09	Turkey	1,000.00	Russia
2001	11,100.00	0.54	3,580.00	China	1,450.03	Turkey	1,000.00	Russia
2002	14,100.00	0.61	4,560.00	China	3,044.44	Turkey	1,000.00	Russia
2003	14,100.00	0.66	4,900.00	China	3,224.28	Turkey	1,200.00	Russia
2004	16,500.00	0.69	6,500.00	China	3,732.95	Turkey	1,200.00	N. Korea
2005	15,200.00	0.67	6,600.00	China	2,372.21	Turkey	1,200.00	N. Korea
2006	14,400.00	0.69	6,700.00	China	2,088.03	Turkey	1,200.00	Russia
2007	20,300.00	0.79	14,000.00	China	1,200.00	Russia	802.41	Turkey
2008	21,500.00	0.81	15,600.00	China	1,200.00	Russia	677.78	Turkey
2009	18,200.00	0.82	13,000.00	China	1,000.00	Russia	861.18	Turkey
2010	19,900.00	0.81	14,000.00	China	1,200.00	Russia	1,000.00	Turkey

Table 37. Global production of refined magnesium metal, the three leading producing countries, and the concentration ratio of the top three producing countries (thousand metric tons).

Year	World refined primary production	U.S. refined primary production	Concentration ratio	1st Refined primary production	1st Country	2nd Refined primary production	2nd Country	3rd Refined primary production	3rd Country
1990	354.000	139.000	0.46	88.000	USSR	48.200	Norway	25.300	Canada
1991	342.000	131.000	0.47	80.000	USSR	44.322	Norway	35.500	Canada
1992	295.000	137.000	0.33	40.000	Russia	30.404	Norway	25.800	Canada
1993	269.000	132.000	0.30	30.000	Russia	27.300	Norway	23.000	Canada
1994	282.000	128.000	0.33	35.400	Russia	28.900	Canada	27.635	Norway
1995	395.000	142.000	0.45	93.600	China	48.100	Canada	37.500	Russia
1996	378.000	133.000	0.44	73.100	China	54.000	Canada	37.800	Norway
1997	384.000	125.000	0.45	75.990	China	57.700	Canada	39.500	Russia
1998	396.000	106.000	0.48	77.100	Canada	70.500	China	41.500	Russia
1999	341.000	W	0.70	120.000	China	73.700	Canada	45.000	Russia
2000	422.000	W	0.75	190.000	China	80.000	Canada	45.000	Russia
2001	420.000	W	0.77	200.000	China	83.000	Canada	40.000	Russia
2002	432.000	W	0.86	250.000	China	80.000	Canada	40.000	Russia
2003	509.000	W	0.91	340.000	China	78.000	Canada	43.000	Russia
2004	595.000	W	0.91	442.000	China	54.000	Canada	45.000	Russia
2005	622.000	W	0.91	470.000	China	50.000	Canada	45.000	Russia
2006	675.000	W	0.92	520.000	China	65.000	Canada	35.000	Russia
2007	751.000	W	0.92	625.000	China	37.000	Russia	29.600	Israel
2008	670.000	W	0.94	559.000	China	37.000	Russia	32.051	Israel
2009	598.000	W	0.93	501.000	China	37.000	Russia	21.000	Kazakhstan
2010	757.000	W	0.95	654.000	China	37.000	Russia	25.000	Israel

Table 38. Global production of mined manganese, the three leading producing countries, and the concentration ratio of the top three producing cou
metric tons).

	Manganese ore, metal content						
	World mine production	Concentration ratio	1st		2nd		3r
Year	World mine production	Concentration ratio	1st Mine production	1st Country	2nd Mine production	2nd Country	3rd Mine production
1990	9.08	0.43	1.91	S. Africa	1.12	Gabon	0.91
1991	7.60	0.42	1.37	S. Africa	1.03	China	0.78
1992	7.26	0.55	1.85	Ukraine	1.08	S. Africa	1.06
1993	7.07	0.51	1.35	Ukraine	1.17	China	1.08
1994	6.53	0.49	1.21	S. Africa	1.05	Ukraine	0.94
1995	7.97	0.48	1.38	China	1.35	S. Africa	1.10
1996	8.17	0.48	1.52	China	1.38	S. Africa	1.04
1997	7.66	0.46	1.32	S. Africa	1.20	China	1.03
1998	7.33	0.49	1.30	S. Africa	1.26	Brazil	1.06
1999	6.39	0.49	1.34	S. Africa	0.93	Australia	0.88
2000	6.96	0.48	1.58	S. Africa	0.93	Ukraine	0.80
2001	7.57	0.45	1.48	S. Africa	0.99	Brazil	0.95
2002	7.77	0.46	1.50	S. Africa	1.10	Brazil	0.98
2003	8.79	0.47	1.59	S. Africa	1.29	Brazil	1.25
2004	9.91	0.49	1.91	S. Africa	1.57	Australia	1.35
2005	11.01	0.46	2.10	S. Africa	1.50	Australia	1.50
2006	11.48	0.53	2.30	S. Africa	2.19	Australia	1.60
2007	12.11	0.59	2.60	S. Africa	2.54	Australia	2.00
2008	13.00	0.57	2.90	S. Africa	2.32	Australia	2.20
2009	10.80	0.60	2.40	China	2.14	Australia	1.90
2010	13.97	0.62	3.10	Australia	2.90	S. Africa	2.60

ntries (thousand								
rd								
	3rd							
Australia								
Brazil								
China								
S. Africa								
Australia								
Ukraine								
Ukraine								
Ukraine								
China								
Gabon								
Gabon								
Australia								
Australia								
Australia								
Brazil								
China								
China								
China								
China								
S. Africa								
China								
		[1]Estimated based on the typical percentage of manganese content.						

[1]Estimated based on the typical percentage of manganese content.

Table 39. Global production of mined ferromanganese, the three leading producing countries, and the concentration ratio of the top three producing countries (thousand metric tons).

Year	World mine production	Concentration ratio	1st Mine production	1st Country	2nd Mine production	2nd Country	3rd Mine production	3rd Country
1990	3,531.30	0.36	545.89	USSR	379.20	China	357.08	Japan
1991	3,207.40	0.43	537.20	China	477.95	USSR	366.56	Japan
1992	3,009.90	0.38	592.50	China	285.98	Japan	268.60	France
1993	2,851.90	0.42	584.60	China	310.47	S. Africa	302.57	Japan
1994	2,946.70	0.50	724.43	China	466.89	S. Africa	284.40	France
1995	2,962.50	0.52	793.95	China	400.53	S. Africa	342.07	France
1996	3,167.90	0.53	908.50	China	432.92	S. Africa	345.23	France
1997	3,160.00	0.53	932.20	China	394.21	S. Africa	336.54	France
1998	2,994.10	0.53	829.50	China	428.18	S. Africa	332.59	France
1999	2,899.30	0.56	869.00	China	416.33	S. Africa	347.60	France
2000	3,028.07	0.36	471.53	S. Africa	347.60	France	267.08	Ukraine
2001	3,160.79	0.53	924.30	China	413.96	S. Africa	339.70	France
2002	2,847.16	0.55	782.10	China	488.97	S. Africa	281.81	Japan
2003	3,135.51	0.56	987.50	China	479.82	S. Africa	293.75	Japan
2004	3,717.74	0.59	1,350.90	China	483.41	S. Africa	359.44	Ukraine
2005	3,576.33	0.59	1,303.50	China	450.75	S. Africa	354.41	Japan
2006	4,102.49	0.59	1,580.00	China	518.43	S. Africa	320.87	Japan
2007	4,618.01	0.62	1,998.70	China	551.94	S. Africa	331.92	Japan
2008	4,632.61	0.62	2,133.00	China	397.37	S. Africa	340.63	Japan
2009	3,560.48	0.70	1,911.80	China	307.68	India	285.49	Japan
2010	4,498.23	0.64	2,093.50	China	418.70	S. Africa	358.08	Japan

Table 40. Global production of mined silicomanganese, the three leading producing countries, and the concentration ratio of the top three producing countries (thousand metric tons).

Year	World mine production	Concentration ratio	1st Mine production	1st Country	2nd Mine production	2nd Country	3rd Mine production	3rd Country
1990	2,433.20	0.53	858.00	USSR	244.20	China	177.54	S. Africa
1991	2,322.60	0.51	726.00	USSR	273.90	China	179.52	Brazil
1992	2,417.40	0.50	726.00	Ukraine	277.20	China	198.00	Brazil
1993	2,188.30	0.47	485.10	Ukraine	346.50	China	187.44	Brazil
1994	1,881.00	0.54	433.62	China	396.00	Ukraine	191.40	S. Africa
1995	1,980.00	0.56	547.80	China	396.00	Ukraine	165.66	S. Africa
1996	2,098.80	0.53	554.40	China	396.00	Ukraine	167.64	S. Africa
1997	2,090.88	0.51	508.20	China	369.60	Ukraine	188.76	S. Africa
1998	1,907.40	0.48	421.74	China	320.76	Ukraine	174.90	S. Africa
1999	1,953.60	0.54	542.52	China	329.28	Ukraine	176.22	S. Africa
2000	2,345.00	0.53	594.00	China	451.47	Ukraine	204.60	S. Africa
2001	2,498.06	0.56	772.20	China	463.58	Ukraine	166.98	S. Africa
2002	2,879.21	0.60	1,042.80	China	483.51	Ukraine	208.43	S. Africa
2003	3,064.32	0.61	1,188.00	China	488.40	Ukraine	178.20	S. Africa
2004	3,977.39	0.66	1,716.00	China	699.60	Ukraine	220.44	S. Africa
2005	4,290.94	0.71	1,980.00	China	686.40	Ukraine	393.61	India
2006	4,932.21	0.74	2,376.00	China	770.88	Ukraine	516.75	India
2007	5,603.06	0.77	2,864.40	China	845.46	Ukraine	601.53	India
2008	5,689.55	0.79	3,300.00	China	590.63	Ukraine	588.36	India
2009	5,671.28	0.85	3,583.80	China	725.89	India	489.65	Ukraine
2010	6,246.66	0.81	3,762.00	China	660.00	India	620.66	Ukraine

Table 41. Global production of mined mercury, the three leading producing countries, and the concentration ratio of the top three producing countries (thousand metric tons).

Year	World mine production	Concentration ratio	1st Mine production	1st Country	2nd Mine production	2nd Country	3rd Mine production	3rd Country
1990	4.10	0.62	1.00	China	0.80	USSR	0.74	Mexico
1991	2.54	0.76	0.76	China	0.75	USSR	0.43	Algeria
1992	1.96	0.72	0.58	China	0.48	Algeria	0.35	Kyrgyzstan
1993	2.39	0.56	0.52	China	0.46	Algeria	0.35	Kyrgyzstan
1994	1.96	0.64	0.47	China	0.41	Algeria	0.38	Kyrgyzstan
1995	3.19	0.83	1.50	Spain	0.78	China	0.38	Kyrgyzstan
1996	2.56	0.76	0.86	Spain	0.58	Kyrgyzstan	0.51	China
1997	2.41	0.76	0.83	China	0.55	Kyrgyzstan	0.45	Algeria
1998	1.58	0.73	0.68	Spain	0.25	Kyrgyzstan	0.23	China
1999	1.32	0.74	0.43	Spain	0.30	Kyrgyzstan	0.24	Algeria
2000	1.36	0.72	0.50	Spain	0.26	Kyrgyzstan	0.22	Algeria
2001	1.50	0.75	0.50	Spain	0.32	Algeria	0.30	Kyrgyzstan
2002	1.98	0.77	0.73	Spain	0.50	China	0.31	Algeria
2003	1.73	0.82	0.61	China	0.50	Spain	0.30	Kyrgyzstan
2004	1.90	0.89	1.14	China	0.30	Kyrgyzstan	0.25	Spain
2005	1.52	0.92	1.10	China	0.20	Kyrgyzstan	0.10	Peru
2006	1.15	0.92	0.76	China	0.25	Kyrgyzstan	0.05	Russia
2007	1.20	0.92	0.80	China	0.25	Kyrgyzstan	0.05	Russia
2008	1.82	0.93	1.30	China	0.25	Kyrgyzstan	0.14	Peru
2009	1.96	0.89	1.40	China	0.25	Kyrgyzstan	0.09	Peru
2010	2.25	0.90	1.60	China	0.25	Kyrgyzstan	0.18	Chile

Table 42. Global production of mined mica, the three leading producing countries, and the concentration ratio of the top three producing countries (thousand metric tons).

Year	World mine production	U.S. mine production	Concentration ratio	1st Mine production	1st Country	2nd Mine production	2nd Country	3rd Mine production	3rd Country
1990	217	109.00	0.31	45	USSR	16.00	Canada	6.68	India
1991	211	103.00	0.31	40	USSR	17.00	Canada	8.60	Taiwain
1992	205	85.30	0.31	35	Russia	17.50	Canada	11.04	Taiwain
1993	301	87.90	0.52	129	Russia	17.50	Canada	9.75	Taiwain
1994	313	109.00	0.50	100	Russia	37.47	Korea	17.50	Canada
1995	328	108.00	0.49	100	Russia	43.71	Korea	17.50	Canada
1996	297	94.70	0.52	100	Russia	35.92	Korea	17.50	Canada
1997	309	112.00	0.49	100	Russia	34.49	Korea	17.50	Canada
1998	289	87.00	0.54	100	Russia	38.46	Korea	17.50	Canada
1999	278	95.40	0.51	100	Russia	24.73	Korea	17.50	Canada
2000	328	101.00	0.56	100	Russia	65.25	Korea	17.50	Canada
2001	368	97.80	0.62	109	Korea	100.00	Russia	17.50	Canada
2002	278	81.10	0.53	100	Russia	29.87	Korea	17.50	Canada
2003	362	78.60	0.57	100	Russia	74.49	Finland	33.65	Korea
2004	400	99.20	0.57	100	Russia	68.80	Finland	59.24	Korea
2005	359	78.10	0.57	100	Russia	68.85	Finland	36.62	Korea
2006	1,090	110.00	0.80	700	China	100.00	Russia	71.07	Finland
2007	1,120	96.60	0.80	720	China	100.00	Russia	71.45	Finland
2008	1,140	85.30	0.81	750	China	100.00	Russia	70.71	Finland
2009	1,020	--	0.85	700	China	100.00	Russia	70.00	Finland

Table 43. Global production of mined molybdenum, the three leading producing countries, and the concentration ratio of the top three producing countries (thousand metric tons).

Year	World mine production	U.S. mine production	Concentration ratio	1st Mine production	1st Country	2nd Mine production	2nd Country	3rd Mine production	3rd Country
1990	127.00	61.6	0.36	17.00	USSR	15.70	China	13.60	Chile
1991	115.00	53.4	0.38	16.00	USSR	14.43	Chile	13.20	China
1992	114.00	49.7	0.39	19.20	China	14.50	Chile	10.80	Russia
1993	99.20	36.8	0.44	18.30	China	14.90	Chile	10.30	Russia
1994	108.00	46.8	0.44	21.40	China	15.95	Chile	10.25	Canada
1995	136.00	60.9	0.44	33.00	China	17.89	Chile	9.11	Canada
1996	127.00	56	0.44	29.60	China	17.42	Chile	8.88	Canada
1997	139.00	60.1	0.45	33.30	China	21.34	Chile	8.22	Canada
1998	136.00	53.34	0.47	30.00	China	25.30	Chile	8.47	Canada
1999	129.00	42.4	0.50	29.70	China	27.31	Chile	7.96	Mexico
2000	135.00	40.9	0.52	33.64	Chile	28.80	China	7.46	Canada
2001	133.00	37.6	0.54	33.49	Chile	28.20	China	9.50	Peru
2002	122.00	32.3	0.55	29.47	Chile	29.30	China	8.61	Peru
2003	131.00	33.5	0.56	33.37	Chile	31.00	China	9.56	Peru
2004	159.00	41.5	0.60	41.88	Chile	38.50	China	14.25	Peru
2005	186.00	58	0.57	48.04	Chile	40.00	China	17.33	Peru
2006	186.00	59.8	0.56	43.90	China	43.28	Chile	17.21	Peru
2007	212.00	57	0.61	66.70	China	44.91	Chile	16.74	Peru
2008	218.00	55.9	0.60	81.00	China	33.69	Chile	16.72	Peru
2009	221.00	47.8	0.64	93.50	China	34.93	Chile	12.30	Peru

Table 44. Global production of ferromolybdenum, the three leading producing countries, and the concentration ratio of the top three producing countries (thousand metric tons).

Year	World ferromoly production	Concentration ratio	1st Ferromoly production	1st Country	2nd Ferromoly production	2nd Country	3rd Ferromoly production	3rd Country
2003	91.0	0.86	52.40	China	16.00	UK	10.20	Chile and Belgium
2004	107.3	0.88	63.60	China	15.60	Chile and Belgium	15.00	UK
2005	102.6	0.76	51.10	China	16.40	Chile and Belgium	10.10	UK
2006	107.2	0.73	49.00	China	18.70	Chile and Belgium	10.50	UK
2007	128.8	0.71	60.00	China	21.10	Chile and Belgium	10.30	UK
2008	124.5	0.66	50.00	China	22.90	Chile and Belgium	9.80	UK
2009	115.6	0.60	50.00	China	13.80	Chile and Belgium	6.10	UK
2010	140.6	0.56	50.00	China	18.30	Chile and Belgium	10.10	UK

Table 45. Global production of mined nickel, the three leading producing countries, and the concentration ratio of the top three producing countries (thousand metric tons).

Year	World mine production	Concentration ratio	1st Mine production	1st Country	2nd Mine production	2nd Country	3rd Mine production	3rd Country
1990	974	0.58	280.00	USSR	196.00	Canada	85.10	New Caledonia
1991	1,010	0.58	280.00	USSR	192.26	Canada	114.49	New Caledonia
1992	1,010	0.57	280.00	Russia	186.38	Canada	113.00	New Caledonia
1993	928	0.57	244.00	Russia	188.08	Canada	97.09	New Caledonia
1994	932	0.52	240.00	Russia	149.89	Canada	97.32	New Caledonia
1995	1,040	0.53	251.00	Russia	181.82	Canada	119.91	New Caledonia
1996	1,060	0.51	230.00	Russia	192.65	Canada	122.49	New Caledonia
1997	1,140	0.53	280.00	Russia	190.53	Canada	136.47	New Caledonia
1998	1,180	0.54	290.00	Russia	208.30	Canada	143.51	Australia
1999	1,170	0.52	300.00	Russia	186.24	Canada	119.60	Australia
2000	1,290	0.52	315.00	Russia	190.79	Canada	166.50	Australia
2001	1,350	0.53	320.00	Russia	205.00	Australia	194.06	Canada
2002	1,350	0.51	310.00	Russia	189.30	Canada	188.00	Australia
2003	1,330	0.46	259.16	Russia	190.21	Australia	163.24	Canada
2004	1,370	0.46	268.55	Russia	168.80	Australia	186.70	Canada
2005	1,460	0.46	277.18	Russia	199.93	Canada	188.90	Australia
2006	1,570	0.44	277.00	Russia	232.95	Canada	185.00	Australia
2007	1,670	0.46	279.77	Russia	254.92	Canada	229.00	Indonesia
2008	1,560	0.47	266.81	Russia	259.65	Canada	199.20	Australia
2009	1,400	0.45	261.85	Russia	202.80	Indonesia	165.00	Australia

Table 46. Global production of nickel chemical, the three leading producing countries, and the concentration ratio of the top three producing countries (thousand metric tons).

Year	World chemical production	Concentration ratio	1st Refined production	1st Country	2nd Chemical production	2nd Country	3rd Chemical production	3rd Country
1990	2.73	--	1.64	Finland	1.09	France	--	NA
1991	8.55	0.88	3.00	USSR	2.38	Japan	2.16	Finland
1992	9.52	0.87	3.00	Russia	2.89	Finland	2.43	Japan
1993	8.58	0.86	3.13	Finland	2.26	Japan	2.00	Russia
1994	10.20	0.84	4.12	Finland	2.40	Japan	2.00	Russia
1995	10.20	0.84	4.28	Finland	2.28	Japan	2.00	Russia
1996	17.30	0.74	6.00	S. Africa	4.51	Finland	2.32	Japan
1997	17.80	0.76	6.00	S. Africa	4.99	Finland	2.54	Japan
1998	19.00	0.77	7.64	S. Africa	4.52	Finland	2.51	Japan
1999	19.50	0.75	7.86	S. Africa	4.14	Finland	2.57	Japan
2000	17.10	0.71	5.72	S. Africa	3.71	Finland	2.72	Japan
2001	16.90	0.71	5.94	S. Africa	3.70	Finland	2.39	Japan
2002	19.80	0.76	6.90	S. Africa	6.20	Finland	2.00	France/Russia
2003	28.10	0.83	15.34	S. Africa	5.57	Finland	2.50	Russia
2004	14.90	1.42	9.50	Finland[1]	7.17	S. Africa[2]	4.50	China[1]
2005	15.40	1.09	7.40	S. Africa[2]	5.00	China[1]	4.45	Finland[1]
2006	16.20	1.10	7.60	S. Africa[2]	5.17	Finland[1]	5.00	China[1]
2007	14.80	1.22	6.80	S. Africa[2]	6.00	China[1]	5.20	Finland[1]
2008	14.60	1.57	8.14	Finland[1]	8.00	China[1]	6.80	S. Africa[2]
2009	13.80	1.43	8.00	China[1]	6.80	S. Africa[2]	5.00	Finland[1]

Table 47. Global production of ferronickel, the three leading producing countries, and the concentration ratio of the top three producing countries (thousand metric tons).

Year	World ferronickel production	Concentration ratio	1st Ferronickel production	1st Country	2nd Ferronickel production	2nd Country	3rd Ferronickel production	3rd Country
1990	198	0.59	56.50	Japan	32.30	New Caledonia	28.70	Dominican Republic
1991	207	0.64	68.05	Japan	34.41	New Caledonia	29.06	Dominican Republic
1992	193	0.61	57.45	Japan	31.90	New Caledonia	27.53	Dominican Republic
1993	175	0.64	51.12	Japan	36.88	New Caledonia	23.86	Dominican Republic
1994	190	0.63	50.19	Japan	39.49	New Caledonia	30.76	Dominican Republic
1995	234	0.61	69.88	Japan	42.20	New Caledonia	30.90	Dominican Republic
1996	232	0.60	66.80	Japan	42.17	New Caledonia	30.38	Dominican Republic
1997	245	0.61	72.08	Japan	44.31	New Caledonia	32.56	Dominican Republic
1998	218	0.65	69.20	Japan	44.49	New Caledonia	28.19	Colombia
1999	207	0.68	67.17	Japan	45.29	Norway	28.26	Colombia
2000	217	0.68	74.75	Japan	43.91	Norway	27.83	Dominican Republic
2001	232	0.66	68.11	Japan	45.91	New Caledonia	38.44	Colombia
2002	266	0.63	74.42	Japan	48.65	New Caledonia	43.99	Colombia
2003	272	0.64	74.80	Japan	50.67	New Caledonia	47.87	Colombia
2004	275	0.60	73.66	Japan	48.82	Colombia	43.02	New Caledonia
2005	301	0.58	76.39	Japan	52.75	Colombia	46.74	New Caledonia
2006	332	0.52	66.67	Japan	57.14	Colombia	48.72	New Caledonia
2007	395	0.41	68.35	Japan	49.31	Colombia	44.95	New Caledonia
2008	350	0.40	59.26	Japan	41.64	Colombia	37.47	New Caledonia
2009	363	0.58	100.00	China	58.94	Japan	51.80	Colombia

Table 48. Global production of nickel metal, the three leading producing countries, and the concentration ratio of the top three producing countries (thousand metric tons).

Year	World metal production	Concentration ratio	1st Metal production	1st Country	2nd Metal production	2nd Country	3rd Metal production	3rd Country
1990	486	0.67	240.00	USSR	57.80	Norway	28.20	S. Africa
1991	470	0.74	259.40	USSR	58.73	Norway	29.03	UK
1992	378	0.81	221.00	Russia	55.69	Norway	30.80	China
1993	378	0.67	167.00	Russia	56.82	Norway	30.54	China
1994	401	0.66	164.50	Russia	67.96	Norway	31.30	China
1995	473	0.60	181.00	Russia	58.32	Australia	42.20	Norway
1996	493	0.59	170.00	Russia	61.58	Norway	61.38	Australia
1997	534	0.62	208.00	Russia	62.70	Norway	58.82	Australia
1998	569	0.60	208.00	Russia	70.15	Norway	64.32	Australia
1999	603	0.60	215.00	Russia	74.14	Norway	73.40	Australia
2000	635	0.60	225.00	Russia	98.70	Australia	58.68	Norway
2001	683	0.64	252.00	Russia	116.90	Australia	68.22	Norway
2002	672	0.64	239.00	Russia	120.80	Australia	68.53	Norway
2003	681	0.65	247.00	Russia	115.80	Australia	77.18	Norway
2004	701	0.62	244.36	Russia	112.40	Australia	75.80	China
2005	730	0.63	249.45	Russia	112.60	Australia	95.10	China
2006	741	0.62	255.05	Russia	105.10	Australia	102.00	China
2007	748	0.62	248.36	Russia	116.00	China	100.30	Australia
2008	742	0.62	242.41	Russia	129.00	China	89.50	Australia
2009	775	0.68	237.27	Russia	165.00	China	123.20	Australia

Table 49. Global production of nickel oxide, the three leading producing countries, and the concentration ratio of the top three producing countries (thousand metric tons).

Year	World oxide production	Concentration ratio	1st Oxide production	1st Country	2nd Oxide production	2nd Country	3rd Oxide production	3rd Country
1990	55.60	1.00	21.50	Japan	21.10	Cuba	13.00	USSR
1991	56.00	1.00	22.47	Japan	18.53	Cuba	15.00	USSR
1992	59.20	1.00	27.52	Japan	16.72	Cuba	15.00	Russia
1993	55.60	1.00	28.81	Japan	16.00	Cuba	10.80	Russia
1994	53.20	1.00	34.71	Japan	13.93	Cuba	4.60	Russia
1995	61.50	1.00	35.97	Japan	21.39	Cuba	4.10	Russia
1996	69.50	1.00	34.77	Japan	26.73	Cuba	8.00	Russia
1997	72.50	1.00	33.57	Cuba	26.90	Japan	12.00	Russia
1998	73.60	1.00	38.19	Cuba	25.44	Japan	10.00	Russia
1999	84.80	1.01	38.84	Cuba	34.48	Japan	12.00	Russia
2000	101.00	1.00	47.02	Japan	39.52	Cuba	14.00	Russia
2001	104.00	1.00	50.77	Japan	40.75	Cuba	12.00	Russia
2002	93.70	1.00	48.95	Japan	38.74	Cuba	6.00	Russia
2003	101.00	1.00	52.70	Japan	42.28	Cuba	6.37	Russia
2004	103.00	1.00	60.30	Japan	38.82	Cuba	3.81	Russia
2005	99.90	1.00	56.70	Japan	39.12	Cuba	4.08	Russia
2006	95.70	1.00	53.88	Japan	39.12	Cuba	2.71	Russia
2007	100.00	1.00	60.15	Japan	39.91	Cuba	0.24	Russia
2008	89.40	1.00	54.90	Japan	34.48	Cuba	--	NA
2009	91.70	1.00	57.19	Japan	34.50	Cuba	--	NA

Table 50. Global production of unspecified nickel, the three leading producing countries, and the concentration ratio of the top three producing countries (thousand metric tons).

Year	World unspecified production	Concentration ratio	1st Unspecified production	1stCountry	2nd Unspecified production	2nd Country	3rd Unspecified production	3rd Country
1990	178	1.00	135.00	Canada	43.00	Australia	--	NA
1991	151	1.20	131.50	Canada	49.40	Australia	--	NA
1992	192	1.00	135.20	Canada	57.00	Australia	--	NA
1993	178	1.00	123.14	Canada	55.00	Australia	--	NA
1994	172	1.00	105.14	Canada	67.00	Australia	--	NA
1995	144	1.00	125.31	Canada	18.61	Australia	--	NA
1996	143	1.00	130.14	Canada	12.64	Australia	--	NA
1997	146	1.00	131.64	Canada	14.76	Australia	--	NA
1998	162	1.00	146.76	Canada	15.26	Australia	--	NA
1999	134	1.00	124.23	Canada	10.20	Australia	--	NA
2000	148	1.00	134.23	Canada	13.50	Australia	--	NA
2001	152	1.00	140.59	Canada	11.20	Australia	--	NA
2002	154	1.00	144.48	Canada	9.50	Australia	--	NA
2003	136	1.00	124.42	Canada	11.80	Australia	--	NA
2004	177	0.91	151.52	Canada	10.20	Australia	--	NA
2005	159	0.94	139.68	Canada	9.70	Australia	--	NA
2006	168	0.94	146.90	Canada	11.40	Australia	--	NA
2007	179	0.94	153.65	Canada	14.20	Australia	--	NA
2008	203	0.92	167.73	Canada	19.40	Australia	--	NA
2009	138	0.91	116.91	Canada	8.00	Australia	--	NA

Table 51. Global production of mined niobium, the three leading producing countries, and the concentration ratio of the top three producing countries (thousand metric tons).

Year	World mine production	Concetration ratio	1st Mine production	1st Country	2nd Mine production	2nd Country	3rd Mine production	3rd Country
1990	15,300	0.99	12,371	Brazil	2,384	Canada	359	Zaire
1991	15,700	0.99	12,866	Brazil	2,365	Canada	365	Zaire
1992	15,300	0.99	12,545	Brazil	2,308	Canada	358	Zaire
1993	12,400	0.99	9,580	Brazil	2,395	Canada	355	Congo
1994	15,700	1.00	13,240	Brazil	2,317	Canada	81	Australia
1995	15,600	1.00	13,140	Brazil	2,357	Canada	109	Australia
1996	16,200	1.00	13,745	Brazil	2,331	Canada	112	Australia
1997	20,500	1.00	18,000	Brazil	2,300	Canada	125	Australia
1998	26,200	1.00	23,600	Brazil	2,370	Canada	140	Australia
1999	24,600	0.99	21,900	Brazil	2,370	Canada	140	Australia
2000	24,800	0.98	21,800	Brazil	2,291	Canada	200	Nigeria
2001	31,100	0.99	27,300	Brazil	3,195	Canada	250	Nigeria
2002	33,300	0.99	28,873	Brazil	3,345	Canada	695	Congo
2003	40,400	1.00	37,920	Brazil	2,263	Canada	386	Congo
2004	27,600	1.00	23,779	Brazil	3,599	Canada	87	Mozambique
2005	43,100	1.00	39,162	Brazil	3,710	Canada	87	Rwanda
2006	52,800	1.00	48,129	Brazil	4,157	Canada	387	Nigeria
2007	62,000	1.00	57,267	Brazil	4,337	Canada	180	Nigeria
2008	63,000	0.99	58,000	Brazil	4,383	Canada	194	Nigeria
2009	62,900	0.99	58,000	Brazil	4,330	Canada	180	Nigeria

Table 52. Global production of ferroniobium, the three leading producing countries, and the concentration ratio of the top three producing countries (thousand metric tons).

Year	World mine production	Concentration ratio	1st Mine production	1st Country	2nd Mine production	2nd Country	3rd Mine production	3rd Country
2004	28,800	1.00	25,169	Brazil	3,559	Canada	40	India
2005	29,300	1.00	25,621	Brazil	3,710	Canada	--	NA
2006	31,600	1.00	27,434	Brazil	4,157	Canada	--	NA
2007	39,000	1.00	34,612	Brazil	4,337	Canada	80	Russia
2008	29,900	1.00	25,403	Brazil	4,385	Canada	80	Russia
2009	29,400	1.00	25,410	Brazil	3,960	Canada	79	Russia

Table 53. Global production of mined phosphate rock, the three leading producing countries, and the concentration ratio of the top three producing countries (thousand metric tons of phosphorus oxide (P_2O_5) equivalent).

Year	World mine production	U.S. mine production	Concetration ratio	1st Mine production	1st Country	2nd Mine production	2nd Country	3rd Mine production	3rd Country
1990	50,500	14,200	0.49	11,200	USSR	6,910	Morocco	6,400	China
1991	46,300	14,500	0.27	9,250	USSR	1,880	Tunisia	1,210	S. Africa
1992	42,800	14,100	0.39	6,400	China	6,180	Morocco	4,000	Russia
1993	36,800	10,700	0.42	6,350	China	5,778	Morocco	3,300	Russia
1994	39,800	12,180	0.41	7,430	China	6,274	Morocco	2,800	Russia
1995	40,700	12,800	0.38	6,399	Morocco	5,790	China	3,100	Russia
1996	42,000	13,300	0.38	6,552	Morocco	6,300	China	3,200	Russia
1997	45,500	13,300	0.44	7,848	Morocco	7,530	China	4,660	Russia
1998	46,100	12,900	0.42	7,850	Morocco	7,500	China	4,200	Russia
1999	42,600	11,800	0.41	7,500	Morocco	6,000	China	4,100	Russia
2000	41,600	11,200	0.41	7,200	Morocco	5,820	China	3,900	Russia
2001	40,000	9,230	0.44	7,400	Morocco	6,300	China	4,000	Russia
2002	42,600	10,700	0.43	7,341	Morocco	6,900	China	4,000	Russia
2003	43,000	10,300	0.44	7,550	China	7,424	Morocco	4,000	Russia
2004	44,600	10,400	0.45	8,507	Morocco	7,650	China	4,000	Russia
2005	46,900	10,300	0.48	9,195	China	9,130	Morocco	4,000	Russia
2006	46,700	8,680	0.52	11,600	China	8,700	Morocco	4,000	Russia
2007	50,800	8,480	0.56	15,100	China	8,900	Morocco	4,200	Russia
2008	51,000	8,590	0.53	15,200	China	7,850	Morocco	3,800	Russia
2009	50,000	7,640	0.55	18,000	China	6,000	Morocco	3,500	Russia

Table 54. Global production of mined platinum, the three leading producing countries, and the concentration ratio of the top three producing countries (thousand metric tons).

Year	World mine production	Concetration ratio	1st Mine production	1st Country	2nd Mine production	2nd Country	3rd Mine production	3rd Country
1990	129	0.96	87.80	S. Africa	31.00	USSR	5.04	Canada
1991	128	0.97	88.90	S. Africa	30.00	USSR	4.69	Canada
1992	132	0.97	94.90	S. Africa	28.00	Russia	4.80	Canada
1993	137	0.98	109.00	S. Africa	20.00	Russia	5.00	Canada
1994	139	0.97	114.00	S. Africa	15.00	Russia	6.00	Canada
1995	139	0.97	102.00	S. Africa	27.00	Russia	5.95	Canada
1996	139	0.97	105.00	S. Africa	25.00	Russia	5.16	Canada
1997	155	0.97	115.86	S. Africa	30.00	Russia	4.81	Canada
1998	160	0.95	116.48	S. Africa	30.00	Russia	5.64	Canada
1999	164	0.97	121.30	S. Africa	32.00	Russia	5.66	Canada
2000	160	0.97	114.46	S. Africa	34.00	Russia	6.30	Canada
2001	172	0.96	130.31	S. Africa	27.00	Russia	7.73	Canada
2002	178	0.95	132.90	S. Africa	27.00	Russia	9.20	Canada
2003	195	0.94	148.35	S. Africa	28.00	Russia	6.99	Canada
2004	194	0.96	153.24	S. Africa	28.00	Russia	4.44	Zimbabwe
2005	211	0.94	163.71	S. Africa	29.00	Russia	6.08	Canada
2006	218	0.94	168.13	S. Africa	29.00	Russia	8.51	Canada
2007	209	0.94	160.94	S. Africa	27.00	Russia	8.00	Canada
2008	193	0.93	146.14	S. Africa	25.00	Russia	8.50	Canada
2009	184	0.94	140.82	S. Africa	24.50	Russia	7.23	Zimbabwe

Table 55. Global production of mined palladium, the three leading producing countries, and the concentration ratio of the top three producing countries (thousand metric tons).

Year	World mine production	U.S. mine production	Concetration ratio	1st Mine production	1st Country	2nd Mine production	2nd Country	3rd Mine production	3rd Country
1990	135	5.93	0.94	84.00	USSR	38.30	S. Africa	5.27	Canada
1991	133	5.2	0.95	82.00	USSR	38.00	S. Africa	6.44	Canada
1992	124	5.44	0.94	70.00	Russia	41.00	S. Africa	5.80	Canada
1993	113	6.78	0.92	50.00	Russia	48.00	S. Africa	6.00	Canada
1994	103	6.44	0.92	47.80	S. Africa	40.00	Russia	7.00	Canada
1995	153	5.26	0.95	85.00	Russia	51.00	S. Africa	9.32	Canada
1996	150	6.1	0.94	80.00	Russia	52.60	S. Africa	8.08	Canada
1997	144	8.43	0.93	70.00	Russia	55.68	S. Africa	7.55	Canada
1998	153	10.6	0.89	70.00	Russia	56.61	S. Africa	8.91	Canada
1999	151	9.8	0.89	67.00	Russia	58.16	S. Africa	8.94	Canada
2000	153	10.3	0.89	71.00	Russia	55.82	S. Africa	9.95	Canada
2001	187	12.1	0.90	96.00	Russia	62.60	S. Africa	8.97	Canada
2002	196	14.8	0.88	96.00	Russia	63.76	S. Africa	12.21	Canada
2003	207	14	0.87	97.00	Russia	70.95	S. Africa	12.81	Canada
2004	211	13.7	0.88	97.00	Russia	76.40	S. Africa	12.00	Canada
2005	216	13.3	0.88	97.40	Russia	82.96	S. Africa	10.42	Canada
2006	222	14.4	0.88	98.40	Russia	86.27	S. Africa	10.49	Canada
2007	223	12.8	0.87	96.80	Russia	83.64	S. Africa	14.10	Canada
2008	203	11.9	0.88	87.70	Russia	75.54	S. Africa	14.70	Canada
2009	194	12.7	0.86	83.20	Russia	75.12	S. Africa	8.10	Canada

Table 56. Global production of other mined platinum group metals (PGMs), the three leading producing countries, and the concentration ratio of the top three producing countries (thousand metric tons).

Year	World mine production	Concetration ratio	1st Mine production	1st Country	2nd Mine production	2nd Country	3rd Mine production	3rd Country
1990	27.20	1.00	15.80	S. Africa	10.00	USSR	1.40	Canada
1991	26.10	1.00	16.00	S. Africa	9.50	USSR	0.59	Canada
1992	24.30	1.00	17.00	S. Africa	6.00	Russia	1.31	Canada
1993	24.40	1.00	19.00	S. Africa	4.00	Russia	1.44	Canada
1994	27.10	1.00	22.10	S. Africa	3.00	Russia	1.97	Canada
1995	34.20	1.00	29.80	S. Africa	3.60	Russia	0.80	Canada
1996	34.80	1.00	30.64	S. Africa	3.50	Russia	0.70	Canada
1997	39.20	1.00	25.07	S. Africa	13.50	Russia	0.65	Canada
1998	41.30	1.00	26.86	S. Africa	13.50	Russia	0.74	Canada
1999	51.20	1.00	37.01	S. Africa	13.40	Russia	0.72	Canada
2000	51.40	1.00	36.49	S. Africa	14.10	Russia	0.72	Canada
2001	52.30	1.00	37.01	S. Africa	14.50	Russia	0.72	Canada
2002	57.90	0.99	40.00	S. Africa	14.50	Russia	2.96	Canada
2003	64.40	0.99	46.86	S. Africa	15.00	Russia	1.73	Canada
2004	66.60	0.99	46.76	S. Africa	15.00	Russia	4.00	Canada
2005	77.70	0.99	56.41	S. Africa	15.50	Russia	5.00	Canada
2006	74.60	0.99	53.14	S. Africa	15.60	Russia	5.00	Canada
2007	79.60	0.98	59.45	S. Africa	14.50	Russia	4.00	Canada
2008	72.30	0.98	54.00	S. Africa	12.50	Russia	4.00	Canada
2009	70.80	0.99	55.46	S. Africa	11.90	Russia	2.60	Canada

Table 57. Global production of refined potash, the three leading producing countries, and the concentration ratio of the top three producing countries (thousand metric tons of K_2O equivalent).

Year	World mine production	Concetration ratio	1st Mine production	1st Country	2nd Mine production	2nd Country	3rd Mine production	3rd Country
1990	27.50	0.76	9.00	USSR	6.99	Canada	4.96	Germany[1]
1991	26.10	0.76	8.56	USSR	7.41	Canada	3.86	Germany
1992	23.90	0.59	7.27	Canada	3.47	Russia	3.46	Germany
1993	20.40	0.60	6.84	Canada	2.86	Germany	2.63	Russia
1994	23.10	0.62	8.04	Canada	3.29	Germany	3.02	Belarus
1995	24.80	0.63	9.07	Canada	3.28	Germany	3.21	Belarus
1996	23.30	0.61	8.12	Canada	3.33	Germany	2.72	Belarus
1997	25.20	0.63	8.99	Canada	3.42	Germany	3.40	Russia
1998	26.00	0.63	9.20	Canada	3.58	Germany	3.50	Russia
1999	27.30	0.63	8.48	Canada	4.55	Belarus	4.20	Russia
2000	27.00	0.62	9.20	Canada	3.79	Belarus	3.70	Russia
2001	26.40	0.62	8.24	Canada	4.30	Russia	3.70	Belarus
2002	27.10	0.62	8.52	Canada	4.40	Russia	3.80	Belarus
2003	29.90	0.63	9.10	Canada	5.47	Russia	4.23	Belarus
2004	32.20	0.66	10.10	Canada	6.41	Russia	4.60	Belarus
2005	33.80	0.65	10.14	Canada	7.14	Russia	4.84	Belarus
2006	30.40	0.55	8.52	Canada	4.61	Belarus	3.72	Russia
2007	35.70	0.65	11.09	Canada	7.28	Russia	4.97	Belarus
2008	34.50	0.64	10.46	Canada	6.73	Russia	4.97	Belarus
2009	20.80	0.53	4.32	Canada	3.70	Russia	3.00	China

Table 58. Global production of mined rare earths, the three leading producing countries, and the concentration ratio of the top three producing countries (million metric tons).

Year	World mine production	Concetration ratio	1st Mine production	1st Country	2nd Mine production	2nd Country	3rd Mine production	3rd Country
1990	60.10	0.52	16.50	China	8.50	USSR	6.05	Australia
1991	49.90	0.57	16.10	China	8.50	USSR	3.85	Australia
1992	56.80	0.57	21.30	China	8.00	USSR	3.30	Australia
1993	27.50	0.31	4.50	Fmr Sov Rep	2.50	India	1.65	Australia
1994	56.60	0.62	30.70	China	2.50	India	2.00	Fmr Sov Rep
1995	75.70	0.70	48.00	China	2.70	India	2.00	Fmr Sov Rep
1996	80.60	0.74	55.00	China	2.70	India	2.00	Fmr Sov Rep
1997	68.30	0.84	53.00	China	2.70	India	2.00	Fmr Sov Rep
1998	77.10	0.90	60.00	China	7.05	Kyrgyzstan	2.70	India
1999	81.60	0.97	70.00	China	6.12	Kyrgyzstan	2.70	India
2000	92.70	0.98	73.00	China	15.54	Kyrgyzstan	2.70	India
2001	89.50	1.00	80.60	China	5.80	Kyrgyzstan	2.70	India
2002	93.00	1.00	88.00	China	2.70	India	2.10	Kyrgyzstan
2003	97.10	1.00	92.00	China	2.70	India	2.00	Kyrgyzstan
2004	102.00	1.00	98.00	China	2.70	India	0.80	Malaysia
2005	122.00	1.00	119.00	China	2.70	India	0.53	Brazil
2006	137.00	0.99	133.00	China	2.70	India	0.53	Brazil
2007	124.00	0.99	120.00	China	2.70	India	0.65	Brazil
2008	128.00	1.00	125.00	China	2.70	India	0.55	Brazil
2009	132.00	1.00	129.00	China	2.70	India	0.55	Brazil

Table 59. Global production of mined monazite, the three leading producing countries, and the concentration ratio of the top three producing countries (million metric tons).

Year	World mine production	Concetration ratio	1st Mine production	1st Country	2nd Mine production	2nd Country	3rd Mine production	3rd Country
1990	24.90	0.76	11.00	Australia	4.50	India	3.32	Malaysia
1991	16.60	0.78	7.00	Australia	4.00	India	1.98	Malaysia
1992	14.70	0.80	6.00	Australia	4.00	India	1.80	China
1993	12.10	0.78	3.00	Australia	4.60	India	1.80	China
1994	6.81	0.94	4.60	India	1.40	Brazil	0.43	Malaysia
1995	7.62	0.95	5.00	India	1.40	Brazil	0.82	Malaysia
1996	5.82	1.00	5.00	India	0.62	Malaysia	0.20	Sri Lanka
1997	6.28	0.95	5.00	India	0.77	Malaysia	0.20	Brazil/Sri Lanka[1]
1998	5.92	0.97	5.00	India	0.52	Malaysia	0.20	Brazil/Sri Lanka[1]
1999	6.55	0.97	5.00	India	1.15	Malaysia	0.20	Brazil/Sri Lanka[1]
2000	6.02	1.00	5.00	India	0.82	Malaysia	0.20	Brazil
2001	5.64	1.00	5.00	India	0.64	Malaysia	--	NA
2002	5.44	1.00	5.00	India	0.44	Malaysia	--	NA
2003	5.80	1.00	5.00	India	0.80	Malaysia	--	NA
2004	7.41	1.00	5.00	India	1.68	Malaysia	0.73	Brazil
2005	6.28	1.00	5.00	India	0.96	Brazil	0.32	Malaysia
2006	6.85	1.00	5.00	India	0.96	Brazil	0.89	Malaysia
2007	6.86	1.00	5.00	India	1.17	Brazil	0.68	Malaysia
2008	6.90	1.00	5.00	India	1.20	Brazil	0.70	Malaysia
2009	6.80	1.00	5.00	India	1.20	Brazil	0.60	Malaysia

Table 60. Global production of mined rhenium, the three leading producing countries, and the concentration ratio of the top three producing countries (thousand metric tons).

Year	World mine production	U.S. mine production	Concetration ratio	1st Mine production	1st Country	2nd Mine production	2nd Country	3rd Mine production	3rd Country
1996	21.20	14	0.29	2.60	Chile	2.00	Peru	1.50	Canada
1997	26.70	15.4	0.24	2.50	Chile	2.00	Peru	1.80	Kazakhstan
1998	34.20	6.9	0.58	15.30	Chile	2.40	Kazakhstan	2.30	Peru
1999	35.30	6.2	0.64	15.50	Chile	4.80	Peru	2.40	Kazakhstan
2000	36.00	7.2	0.62	15.20	Chile	4.80	Peru	2.40	Kazakhstan
2001	32.70	5	0.72	16.00	Chile	5.00	Peru	2.50	Kazakhstan
2002	31.60	3.4	0.74	15.70	Chile	5.00	Peru	2.60	Kazakhstan
2003	38.30	6.3	0.70	19.30	Chile	5.00	Peru	2.60	Kazakhstan
2004	42.90	6.5	0.73	21.30	Chile	5.00	Peru	5.00	Kazakhstan
2005	47.30	7.9	0.73	21.50	Chile	8.00	Kazakhstan	5.00	Peru
2006	46.70	8.1	0.70	19.80	Chile	8.00	Kazakhstan	5.00	Peru
2007	47.50	7.1	0.70	22.90	Chile	5.50	Kazakhstan	5.00	Peru
2008	54.90	7.9	0.69	27.60	Chile	5.50	Kazakhstan	5.00	Peru
2009	45.40	5.6	0.73	25.00	Chile	5.00	Peru	3.00	Kazakhstan

Table 61. Global production of mined selenium, the three leading producing countries, and the concentration ratio of the top three producing countries (thousand kilograms).

Year	World mine production	U.S. mine production	Concetration ratio	1st Mine production	1st Country	2nd Mine production	2nd Country	3rd Mine production	3rd Country
1990	1,770.00	287.05	0.61	495.00	Japan	342.00	Canada	250.00	Belgium
1991	1,640.00	260.05	0.61	537.30	Japan	250.00	Belgium	207.29	Canada
1992	1,770.00	243.00	0.63	573.00	Japan	294.06	Canada	250.00	Belgium
1993	1,740.00	283.00	0.62	540.94	Japan	295.00	Canada	250.00	Belgium
1994	2,160.00	360.00	0.66	614.13	Japan	566.00	Canada	250.00	Belgium
1995	2,070.00	373.00	0.65	553.00	Canada	547.73	Japan	250.00	Belgium
1996	2,250.00	379.00	0.68	694.00	Canada	588.19	Japan	250.00	Belgium
1997	1,720.00	[1]	0.81	592.00	Canada	546.37	Japan	250.00	Belgium
1998	1,470.00	[1]	0.78	549.62	Japan	398.00	Canada	200.00	Belgium
1999	1,410.00	[1]	0.78	546.29	Japan	359.00	Canada	200.00	Belgium
2000	1,460.00	[1]	0.80	612.32	Japan	350.00	Canada	200.00	Belgium
2001	1,420.00	[1]	0.83	735.09	Japan	238.00	Canada	200.00	Belgium
2002	1,410.00	[1]	0.80	752.10	Japan	200.00	Belgium	175.00	Canada
2003	1,570.00	[1]	0.78	733.97	Japan	288.06	Canada	200.00	Belgium
2004	1,440.00	[1]	0.74	599.17	Japan	271.07	Canada	200.00	Belgium
2005	2,020.00	[1]	0.74	680.00	Germany	624.63	Japan	200.00	Belgium
2006	2,090.00	[1]	0.76	730.10	Japan	650.00	Germany	200.00	Belgium
2007	2,200.00	[1]	0.75	805.60	Japan	650.00	Germany	200.00	Belgium
2008	2,180.00	[1]	0.74	754.00	Japan	650.00	Germany	200.00	Belgium
2009	2,190.00	[1]	0.72	722.20	Japan	650.00	Germany	200.00	Belgium

Table 62. Global production of mined silicon, the three leading producing countries, and the concentration ratio of the top three producing countries (thousanc

Year	World mine production	U.S. mine production	Concetration ratio	1st Mine production	1st Country	2nd Mine production	2nd Country	3rd Mine production
1990[1]	722.61	137.98	0.42	128.98	Brazil	98.00	Canada	75.07
1991[2]	--	--	--	--	NA	--	NA	--
1992[1]	557.62	155.82	0.41	91.86	Brazil	71.54	Norway	64.68
1993[1]	552.72	155.82	0.44	103.88	Brazil	79.38	Norway	57.82
1994[1]	547.82	154.84	0.48	107.80	Brazil	90.16	Norway	64.68
1995[1]	594.86	154.84	0.48	113.68	Brazil	98.98	Norway	70.02
1996[1]	671.30	167.58	0.49	147.05	Brazil	107.80	Norway	72.32
1997[1]	680.12	179.34	0.46	134.15	Brazil	107.80	Norway	72.52
1998[1]	672.28	184.24	0.45	121.52	Brazil	107.80	Norway	73.50
1999	1,054.48	182.28	0.57	387.10	China	117.60	Brazil	98.00
2000	1,158.99	171.50	0.63	470.40	China	163.02	Brazil	98.00
2001	1,080.72	128.43	0.65	490.00	China	109.88	Brazil	98.00
2002	1,242.62	107.30	0.65	568.40	China	130.72	Brazil	102.90
2003	1,354.85	131.01	0.66	666.40	China	130.72	Brazil	98.00
2004	1,480.05	141.60	0.69	735.00	China	177.32	Brazil	102.90
2005	1,508.83	140.22	0.70	823.20	China	130.73	Brazil	102.90
2006	1,463.34	[3]	0.76	882.00	China	130.34	Brazil	98.00
2007	1,567.63	[3]	0.77	931.00	China	142.87	Norway	130.34
2008	1,650.79	[3]	0.77	960.40	China	176.53	Norway	129.30
2009	1,751.73	[3]	0.86	1,205.40	China	166.25	Norway	129.36
2010	2,141.01	[3]	0.82	1,470.00	China	166.60	Norway	129.36

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Table 63. Global production of mined ferrosilicon, the three leading producing countries, and the concentration ratio of the top three producing countries (thousand metric tons).

Year	World mine production	U.S. mine production	Concetration ratio	1st Mine production	1st Country	2nd Mine production	2nd Country	3rd Mine production	3rd Country
1990	3,341.00	281.90	0.69	1,469.40	USSR	585.00	China	258.38	Norway
1991[1]	--	--	--	--	NA	--	NA	--	NA
1992	2,645.50	224.90	0.45	542.10	China	325.00	Kazakhstan	325.00	Russia
1993	2,606.50	210.00	0.46	672.75	China	271.70	Kazakhstan	260.00	Russia
1994	2,476.50	233.40	0.50	715.00	China	294.40	Norway	227.50	Russia
1995	2,606.50	232.70	0.55	786.50	China	308.67	Norway	350.00	Russia
1996	2,782.00	235.30	0.56	968.50	China	300.58	Norway	299.00	Russia
1997	2,671.50	233.40	0.54	812.50	China	331.50	Russia	305.50	Norway
1998	2,535.00	217.10	0.58	838.50	China	322.40	Russia	305.50	Norway
1999	2,535.00	211.30	0.56	728.00	China	390.65	Russia	299.00	Norway
2000	2,762.50	162.50	0.59	910.00	China	423.80	Russia	299.00	Norway
2001	2,626.00	124.00	0.61	858.00	China	459.62	Russia	292.50	Norway
2002	2,736.50	118.30	0.62	975.00	China	455.65	Russia	253.50	Norway
2003	3,217.50	96.20	0.65	1,430.00	China	494.00	Russia	162.50	Norway
2004	3,649.00	110.90	0.72	1,950.00	China	468.65	Russia	195.00	Norway
2005	3,776.50	106.50	0.73	2,145.00	China	482.30	Russia	148.20	Ukraine
2006	4,167.82	126.20	0.79	2,613.00	China	573.50	Russia	109.85	Ukraine
2007	4,748.50	143.10	0.80	3,061.50	China	582.47	Russia	141.70	Ukraine
2008	4,827.25	162.90	0.81	3,185.00	China	552.50	Russia	162.87	Norway
2009	4,754.60	134.80	0.83	3,315.00	China	484.25	Russia	134.77	Norway
2010	5,008.59	159.90	0.83	3,445.00	China	595.40	Russia	127.08	Ukraine

Table 64. Global production of mined silver, the three leading producing countries, and the concentration ratio of the top three producing countries (thousand metric tons).

Year	World mine production	U.S. mine production	Concetration ratio	1st Mine production	1st Country	2nd Mine production	2nd Country	3rd Mine production	3rd Country
1990	16.60	2.12	0.41	2.50	USSR	2.42	Mexico	1.93	Peru
1991	15.60	1.86	0.41	2.30	Mexico	2.20	USSR	1.93	Peru
1992	14.90	1.80	0.33	2.10	Mexico	1.61	Peru	1.22	Australia/Canada[1]
1993	14.10	1.60	0.35	2.14	Mexico	1.67	Peru	1.09	Australia
1994	14.00	1.49	0.36	2.22	Mexico	1.77	Peru	1.06	Poland
1995	14.90	1.56	0.37	2.32	Mexico	1.93	Peru	1.29	Canada
1996	15.10	1.57	0.38	2.53	Mexico	1.97	Peru	1.31	Canada
1997	16.50	2.18	0.37	2.68	Mexico	2.09	Peru	1.30	China
1998	17.20	2.06	0.37	2.89	Mexico	2.03	Peru	1.47	Australia
1999	17.10	1.95	0.38	2.47	Mexico	2.23	Peru	1.72	Australia
2000	18.10	1.98	0.39	2.62	Mexico	2.44	Peru	2.06	Australia
2001	18.70	1.74	0.39	2.76	Mexico	2.57	Peru	1.97	Australia
2002	18.80	1.35	0.41	2.87	Peru	2.73	Mexico	2.20	China
2003	18.80	1.24	0.42	2.92	Peru	2.57	Mexico	2.40	China
2004	20.00	1.25	0.40	3.06	Peru	2.57	Mexico	2.45	China
2005	20.80	1.23	0.40	3.21	Peru	2.59	Mexico	2.50	China
2006	20.10	1.16	0.45	3.47	Peru	2.97	Mexico	2.60	China
2007	20.80	1.28	0.45	3.49	Peru	3.14	Mexico	2.70	China
2008	21.40	1.25	0.45	3.69	Peru	3.24	Mexico	2.80	China
2009	22.00	1.25	0.47	3.85	Peru	3.55	Mexico	2.90	China

Table 65. Global production of mined strontium, the three leading producing countries, and the concentration ratio of the top three producing countries (thousand metric tons).

Year	World mine production	Concetration ratio	1st Mine production	1st Country	2nd Mine production	2nd Country	3rd Mine production	3rd Country
1990	240.00	0.73	73.80	Turkey	66.30	Mexico	34.10	Iran
1991	199.00	0.81	70.00	Turkey	62.20	Mexico	28.50	Iran
1992	195.00	0.88	72.50	Spain	61.10	Mexico	37.94	Turkey
1993	201.00	0.84	71.90	Mexico	52.97	Spain	43.70	Turkey
1994	274.00	0.87	111.00	Mexico	102.05	Spain	25.00	Turkey
1995	311.00	0.88	138.00	Mexico	105.87	Spain	30.00	Turkey
1996	297.00	0.97	143.89	Mexico	114.83	Spain	30.00	Turkey
1997	264.00	0.97	134.71	Mexico	92.00	Spain	30.00	Turkey
1998	264.00	0.98	118.23	Mexico	111.00	Spain	30.00	Turkey
1999	358.00	0.99	164.68	Mexico	128.46	Spain	60.54	Turkey
2000	396.00	0.90	157.42	Mexico	148.35	Spain	50.00	China
2001	399.00	0.85	145.79	Mexico	129.79	Spain	63.64	Turkey
2002	444.00	0.82	171.29	Spain	100.00	China	94.02	Mexico
2003	492.00	0.84	152.38	Spain	130.33	Mexico	130.00	China
2004	525.00	0.82	192.94	Spain	150.00	China	87.61	Mexico
2005	509.00	0.94	188.00	Spain	180.00	China	110.83	Mexico
2006	524.00	0.94	188.00	Spain	180.00	China	125.00	Mexico
2007	518.00	0.97	190.00	China	188.00	Spain	125.00	Mexico
2008	656.00	0.96	336.00	Spain	200.00	China	96.90	Mexico
2009	400.00	0.96	210.00	China	138.00	Spain	37.60	Mexico

Table 66. Global production of mined sulfur, the three leading producing countries, and the concentration ratio of the top three producing countries (thousand metric tons).

Year	World mine production	U.S. mine production	Concetration ratio	1st Mine production	1st Country	2nd Mine production	2nd Country	3rd Mine production	3rd Country
1990	57.80	11.60	0.37	9.03	USSR	6.79	Canada	5.37	China
1991	54.60	10.80	0.39	8.10	USSR	7.13	Canada	5.91	China
1992	50.70	10.70	0.33	7.49	Canada	5.90	China	3.50	Russia
1993	51.60	11.10	0.36	8.43	Canada	6.36	China	3.72	Russia
1994	53.40	11.50	0.36	8.85	Canada	7.02	China	3.62	Russia
1995	54.00	11.80	0.37	8.95	Canada	7.03	China	3.84	Russia
1996	55.20	11.80	0.37	9.49	Canada	7.26	China	3.80	Russia
1997	56.90	12.00	0.37	9.48	Canada	7.67	China	3.75	Russia
1998	57.40	11.70	0.36	9.69	Canada	6.17	China	4.65	Russia
1999	58.50	11.50	0.36	9.82	Canada	5.77	China	5.27	Russia
2000	59.30	10.50	0.35	9.45	Canada	5.79	Russia	5.56	China
2001	61.40	9.47	0.34	9.44	Canada	6.13	Russia	5.51	China
2002	62.00	9.27	0.35	8.93	Canada	6.54	Russia	5.98	China
2003	64.10	9.60	0.35	9.03	Canada	6.72	Russia	6.50	China
2004	66.40	10.10	0.35	9.10	Canada	7.15	China	6.92	Russia
2005	68.20	9.50	0.35	8.97	Canada	7.71	China	6.95	Russia
2006	67.50	9.06	0.34	9.08	Canada	7.06	China	6.95	Russia
2007	68.20	9.10	0.36	8.79	Canada	8.46	China	7.05	Russia
2008	68.70	9.30	0.35	8.61	China	8.16	Canada	7.17	Russia
2009	67.50	8.94	0.35	9.37	China	7.47	Canada	7.07	Russia

Table 67. Global production of mined tantalum, the three leading producing countries, and the concentration ratio of the top three producing countries (thousand metric tons).

Year	World mine production	Concetration ratio	1st Mine production	1st Country	2nd Mine production	2nd Country	3rd Mine production	3rd Country
1990	396	0.86	165	Australia	90	Brazil	86	Canada
1991	477	0.83	218	Australia	93	Canada	84	Brazil
1992	399	0.83	224	Australia	60	Brazil	48	Canada
1993	292	0.84	170	Australia	50	Brazil	25	Canada
1994	333	0.97	238	Australia	50	Brazil	36	Canada
1995	361	0.99	274	Australia	50	Brazil	33	Canada
1996	436	0.89	276	Australia	55	Brazil	55	Canada
1997	562	0.87	302	Australia	125	Brazil	60	Rwanda
1998	779	0.89	330	Australia	310	Brazil	57	Canada
1999	656	0.87	350	Australia	165	Brazil	54	Canada
2000	1,070	0.75	485	Australia	190	Brazil	130	Congo
2001	1,170	0.81	660	Australia	210	Brazil	77	Canada
2002	1,340	0.85	807	Australia	190	Brazil	144	Zimbabwe
2003	1,390	0.85	973	Australia	156	Brazil	55	Canada
2004	1,430	0.86	807	Australia	213	Brazil	205	Mozambique
2005	1,380	0.83	854	Australia	216	Brazil	81	Mozambique
2006	870	0.82	478	Australia	176	Brazil	57	Ethiopia
2007	872	0.85	441	Australia	180	Brazil	120	Rwanda
2008	1,190	0.72	557	Australia	180	Brazil	120	Rwanda
2009	670	0.59	180	Brazil	113	Mozambique	104	Rwanda

Table 68. Global production of refined tellurium, the three leading producing countries, and the concentration ratio of the top three producing countries (thousand kilograms).

Year	World mine production	Concetration ratio	1st Mine production	1st Country	2nd Mine production	2nd Country	3rd Mine production	3rd Country
1990	67.40	1.00	49.70	Japan	9.86	Canada	7.84	Peru
1991	82.91	1.00	57.18	Japan	13.36	Peru	12.37	Canada
1992	97.59	1.00	57.18	Japan	21.78	Canada	18.63	Peru
1993	88.17	1.00	46.77	Japan	24.00	Canada	17.40	Peru
1994	117.26	1.00	47.26	Japan	42.00	Canada	28.00	Peru
1995	175.22	1.00	102.00	Canada	43.13	Japan	30.09	Peru
1996	122.03	1.00	59.00	Canada	37.95	Japan	25.09	Peru
1997	109.10	1.00	59.00	Canada	25.26	Japan	24.75	Peru
1998	122.66	1.00	62.00	Canada	38.98	Japan	21.68	Peru
1999	116.38	1.00	64.00	Canada	35.27	Japan	17.11	Peru
2000	110.71	1.00	53.00	Canada	35.69	Japan	22.02	Peru
2001	109.11	1.00	51.00	Canada	39.01	Japan	19.11	Peru
2002	89.26	1.00	39.00	Canada	28.66	Japan	21.60	Peru
2003	95.15	1.00	40.00	Canada	33.15	Japan	22.00	Peru
2004	110.00	1.00	55.00	Canada	33.00	Japan	22.00	Peru
2005	111.88	0.90	34.00	Japan	34.00	Russia	32.88	Peru
2006	116.00	0.91	37.00	Peru	35.00	Japan	34.00	Russia
2007	124.00	0.89	41.00	Japan	35.00	Peru	34.00	Russia
2008	127.50	0.85	46.50	Japan	34.00	Russia	28.00	Peru
2009	129.20	0.88	49.20	Japan	34.00	Russia	30.00	Peru

Table 69. Global production of mined tin, the three leading producing countries, and the concentration ratio of the top three producing countries (thousand metric tons).

Year	World mine production	Concetration ratio	1st Mine production	1st Country	2nd Mine production	2nd Country	3rd Mine production	3rd Country
1990	221	0.50	42.0	China	39.1	Brazil	28.5	Malaysia
1991	201	0.50	42.1	China	30.1	Indonesia	29.3	Brazil
1992	191	0.52	43.8	China	29.4	Indonesia	27.0	Brazil
1993	190	0.55	49.1	China	29.0	Indonesia	26.5	Brazil
1994	178	0.59	54.1	China	30.3	Indonesia	20.3	Peru
1995	201	0.65	61.9	China	46.1	Indonesia	22.3	Peru
1996	220	0.68	69.6	China	52.3	Indonesia	27.0	Peru
1997	217	0.69	67.5	China	55.2	Indonesia	28.0	Peru
1998	231	0.75	70.1	China	54.0	Indonesia	49.6	Peru
1999	246	0.76	80.1	China	59.2	Peru	47.8	Indonesia
2000	278	0.80	99.4	China	70.9	Peru	51.6	Indonesia
2001	246	0.79	95.0	China	61.9	Indonesia	38.2	Peru
2002	235	0.80	88.1	Indonesia	62.0	China	38.8	Peru
2003	261	0.82	102.0	China	71.7	Indonesia	40.2	Peru
2004	302	0.83	118.0	China	67.7	Peru	65.8	Indonesia
2005	296	0.83	126.0	China	78.4	Indonesia	42.2	Peru
2006	291	0.84	126.0	China	80.9	Indonesia	38.5	Peru
2007	301	0.83	146.0	China	66.1	Indonesia	39.0	Peru
2008	257	0.79	110.0	China	53.2	Indonesia	39.0	Peru
2009	260	0.80	115.0	China	55.0	Indonesia	37.5	Peru

Table 70. Global production of smeltered tin, the three leading producing countries, and the concentration ratio of the top three producing countries (thousand metric tons).

Year	World smelter production	Concentration ratio	1st Smelter production	1st Country	2nd Smelter production	2nd Country	3rd Smelter production	3rd Country
1990	246	0.50	49.1	Malaysia	37.80	Brazil	35.00	China
1991	205	0.53	42.72	Malaysia	36.40	China	30.42	Indonesia
1992	218	0.54	45.60	Malaysia	39.60	China	31.92	Indonesia
1993	215	0.57	52.10	China	40.08	Malaysia	30.42	Indonesia
1994	216	0.63	67.80	China	37.99	Malaysia	31.00	Indonesia
1995	223	0.65	67.70	China	39.43	Malaysia	38.63	Indonesia
1996	228	0.65	71.50	China	39.00	Indonesia	38.05	Malaysia
1997	259	0.60	67.70	China	52.66	Indonesia	34.82	Malaysia
1998	247	0.65	79.30	China	53.40	Indonesia	27.20	Malaysia
1999	267	0.64	90.80	China	49.11	Indonesia	30.62	Peru
2000	228	0.86	112.00	China	46.43	Indonesia	37.41	Peru
2001	289	0.65	105.00	China	53.47	Indonesia	30.42	Malaysia
2002	280	0.66	82.00	China	67.46	Indonesia	35.83	Peru
2003	282	0.72	98.00	China	66.28	Indonesia	39.18	Peru
2004	306	0.67	115.00	China	49.87	Indonesia	41.61	Peru
2005	344	0.65	122.00	China	65.30	Indonesia	36.92	Malaysia
2006	339	0.70	132.00	China	65.36	Indonesia	40.50	Peru
2007	346	0.72	149.00	China	64.13	Indonesia	36.00	Peru
2008	322	0.69	129.00	China	53.42	Indonesia	38.87	Peru
2009	342	0.67	135.00	China	54.00	Indonesia	38.90	Peru

Table 71. Global production of titanium sponge, the three leading producing countries, and the concentration ratio of the top three produci
(thousand metric tons).

Year	World sponge production	Concentration ratio	1st Sponge production	1st Country	2nd Sponge production	2nd Country	3rd Sponge production
1994	33.00	0.95	14.40	Japan	12.00	Russia	5.00
1995	39.70	0.95	16.70	Japan	16.00	Russia	5.00
1996	51.00	0.96	21.10	Japan	18.00	Russia	10.00
1997	51.00	0.96	21.00	Japan	18.00	Russia	10.00
1998	60.00	0.94	24.20	Japan	22.00	Russia	10.00
1999	48.00	0.87	18.90	Japan	14.00	Russia	9.00
2000	54.00	0.87	20.00	Russia	18.80	Japan	8.38
2001	71.00	0.87	24.90	Japan	23.00	Russia	14.00
2002	72.00	0.86	25.20	Japan	23.00	Russia	14.00
2003	65.30	0.83	23.00	Russia	18.90	Japan	12.50
2004	75.00	0.83	23.10	Japan	23.00	Russia	16.50
2005	96.00	0.82	30.80	Japan	29.00	Russia	19.00
2006	121.00	0.77	37.80	Japan	32.00	Russia	23.00
2007	153.00	0.77	45.20	China	38.90	Japan	34.20
2008	155.00	0.77	49.60	China	40.90	Japan	29.50
2009	163.00	0.69	61.50	China	26.60	Russia	25.00
2010	137.00	0.84	57.80	China	31.60	Japan	25.80

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Table 72. Global production of mined tungsten concentrate, the three leading producing countries, and the concentration ratio of the top three producing countries (thousand metric tons).

Year	World mine production	Concetration ratio	1st Mine production	1st Country	2nd Mine production	2nd Country	3rd Mine production	3rd Country
1990	51.90	0.82	32.00	China	8.80	USSR	1.54	Peru
1991	48.20	0.85	31.80	China	8.00	USSR	1.31	Austria
1992	42.90	0.85	25.00	China	10.00	Russia	1.49	Austria
1993	34.30	0.89	21.60	China	8.00	Russia	1.00	N. Korea
1994	34.00	0.94	27.00	China	4.00	Russia	0.90	N. Korea
1995	38.50	0.88	27.40	China	5.40	Russia	0.90	N. Korea
1996	34.70	0.89	26.50	China	3.00	Russia	1.41	Austria
1997	33.20	0.89	25.00	China	3.00	Russia	1.40	Austria
1998	37.00	0.93	30.00	China	3.00	Russia	1.40	Austria
1999	37.70	0.96	31.10	China	3.50	Russia	1.61	Austria
2000	44.00	0.96	37.00	China	3.50	Russia	1.60	Austria
2001	50.80	0.96	42.10	China	5.10	Russia	1.43	Austria
2002	66.20	0.95	55.10	China	5.30	Russia	2.30	Canada
2003	47.20	0.92	36.20	China	3.64	Canada	3.60	Russia
2004	66.30	0.97	59.90	China	2.80	Russia	1.34	Austria
2005	59.50	0.93	51.20	China	2.80	Russia	1.28	Austria
2006	56.40	0.88	45.00	China	2.80	Russia	1.98	Canada
2007	54.10	0.86	41.00	China	3.30	Russia	2.31	Canada
2008	62.20	0.89	50.00	China	3.00	Russia	2.28	Canada
2009	61.30	0.90	51.00	China	2.50	Russia	1.96	Canada

Table 73. Global production of mined vanadium, the three leading producing countries, and the concentration ratio of the top three producing countries (thousand metric tons).

Year	World mine production	Concetration ratio	1st Mine production	1st Country	2nd Mine production	2nd Country	3rd Mine production	3rd Country
1990	33.90	0.99	17.10	S. Africa	12.00	USSR	4.50	China
1991	31.70	0.99	15.00	S. Africa	12.00	USSR	4.50	China
1992	31.60	0.95	14.29	S. Africa	11.00	Russia	4.70	China
1993	33.90	0.97	15.10	S. Africa	12.80	Russia	5.00	China
1994	34.70	0.97	16.35	S. Africa	11.90	Russia	5.40	China
1995	42.10	0.97	16.30	S. Africa	13.70	China	11.00	Russia
1996	40.90	0.97	14.77	S. Africa	14.00	China	11.00	Russia
1997	40.70	0.97	15.59	S. Africa	15.00	China	9.00	Russia
1998	42.50	0.97	18.87	S. Africa	15.50	China	7.00	Russia
1999	36.00	0.97	17.61	S. Africa	10.40	China	7.00	Russia
2000	40.00	0.94	18.02	S. Africa	12.00	China	7.50	Russia
2001	41.30	0.91	18.18	S. Africa	12.00	China	7.50	Russia
2002	50.50	0.92	25.23	S. Africa	13.20	China	8.00	Russia
2003	47.30	0.98	27.17	S. Africa	13.20	China	5.80	Russia
2004	51.40	0.98	23.30	S. Africa	16.00	China	10.90	Russia
2005	55.80	0.98	22.60	S. Africa	17.00	China	15.10	Russia
2006	57.40	0.98	23.78	S. Africa	17.50	China	15.10	Russia
2007	58.00	0.98	23.49	S. Africa	19.00	China	14.50	Russia
2008	55.80	0.98	20.30	S. Africa	20.00	China	14.50	Russia
2009	50.90	0.98	21.00	China	14.50	Russia	14.34	S. Africa
2010	57.00	0.98	22.00	China	19.00	S. Africa	15.00	Russia

Table 74. Global production of ferrovanadium, the three leading producing countries, and the concentration ratio of the top three producing countries (thousand metric tons).

Year	World FeV production	Concentration ratio	1st FeV production	1st Country	2nd FeV production	2nd Country	3rd FeV production	3rd Country
2000	43.6	0.98	20.5	Russia	18.0	S. Africa	4.1	Japan
2001	41.6	0.98	18.8	Russia	18.2	S. Africa	3.6	Japan
2002	44.9	0.98	25.2	S. Africa	15.1	Russia	3.6	Japan
2003	39.7	0.97	27.2	S. Africa	8.0	Russia	3.5	Japan
2004	41.9	0.98	25.0	S. Africa	13.7	Russia	2.2	Japan
2005	37.9	0.97	22.0	S. Africa	12.9	Russia	2.0	Japan
2006	31.1	0.93	18.0	S. Africa	11.0	Russia	0.0	Japan
2007	33.6	0.92	19.0	S. Africa	12.0	Russia	0.0	Japan
2008	40.0	0.86	19.0	S. Africa	12.0	Russia	3.5	Japan
2009	33.7	0.92	17.0	S. Africa	11.5	Russia	2.6	Japan
2010	33.9	0.92	18.0	S. Africa	11.0	Russia	2.2	Japan

Table 75. Global production of mined yttrium, the three leading producing countries, and the concentration ratio of the top three producing countries (metric tons).

Year	World mine production	Concetration ratio	1st Mine production	1st Country	2nd Mine production	2nd Country	3rd Mine production	3rd Country
1994	730	0.84	500	China	60	Australia	50	India
1995	1,450	0.93	1,274	China	55	India	15	Brazil
1996	1,600	0.91	1,400	China	55	India	7	Malaysia
1997	2,370	0.95	2,200	China	30	India	15	Brazil
1998	2,400	0.95	2,200	China	55	India	15	Brazil
1999	2,400	0.95	2,200	China	55	India	15	Brazil
2000	2,400	0.99	2,300	China	55	India	11	Malaysia
2001	2,400	1.00	2,300	China	55	India	36	Thailand
2002	2,400	0.99	2,300	China	55	India	20	Thailand
2003	2,400	0.98	2,300	China	55	India	5	Malaysia
2004	2,400	0.98	2,300	China	55	India	5	Malaysia
2005	6,080	1.00	6,000	China	55	India	15	Malaysia
2006	8,900	1.00	8,800	China	55	India	15	Brazil
2007	8,900	1.00	8,800	China	55	India	15	Brazil
2008	8,900	1.00	8,800	China	55	India	15	Brazil
2009	8,900	1.00	8,800	China	55	India	15	Brazil
2010	8,900	1.00	8,800	China	55	India	15	Brazil

Table 77. Global production of mined zinc, the three leading producing countries, and the concentration ratio of the top three producing countries (thousand metric tons).

Year	World mine production	Concetration ratio	1st Mine production	1st Country	2nd Mine production	2nd Country	3rd Mine production	3rd Country
1990	7,150.00	0.39	1,200.00	Canada	940.00	Australia	619.00	China
1991	7,270.00	0.40	1,156.58	Canada	1,024.00	Australia	750.00	China
1992	7,250.00	0.43	1,324.68	Canada	1,025.00	Australia	758.00	China
1993	6,910.00	0.40	1,010.00	Australia	1,004.37	Canada	775.00	China
1994	7,050.00	0.42	1,010.71	Canada	995.00	Australia	990.00	China
1995	7,280.00	0.42	1,121.17	Canada	1,010.00	China	937.00	Australia
1996	7,480.00	0.46	1,222.39	Canada	1,120.00	China	1,071.00	Australia
1997	7,540.00	0.44	1,200.00	China	1,076.39	Canada	1,036.00	Australia
1998	7,570.00	0.45	1,270.00	China	1,061.65	Canada	1,059.00	Australia
1999	7,960.00	0.45	1,480.00	China	1,163.00	Australia	963.32	Canada
2000	8,770.00	0.48	1,780.00	China	1,420.00	Australia	1,002.24	Canada
2001	8,928.25	0.48	1,700.00	China	1,519.00	Australia	1,056.63	Peru
2002	8,880.00	0.48	1,550.00	China	1,469.00	Australia	1,233.00	Peru
2003	9,530.00	0.51	2,030.00	China	1,479.00	Australia	1,372.79	Peru
2004	9,610.00	0.51	2,390.00	China	1,334.00	Australia	1,209.01	Peru
2005	10,000.00	0.51	2,550.00	China	1,367.00	Australia	1,202.67	Peru
2006	10,300.00	0.52	2,840.00	China	1,362.00	Australia	1,203.79	Peru
2007	11,000.00	0.55	3,040.00	China	1,514.00	Australia	1,444.35	Peru
2008	11,600.00	0.55	3,200.00	China	1,603.00	Peru	1,519.13	Australia
2009	11,200.00	0.53	3,100.00	China	1,509.13	Peru	1,290.00	Australia

Table 78. Global production of smeltered zinc, three leading producing countries, and the concentration ratio of the top three producing countries (thousand metric tons).

Year	World smelter production	Concentration ratio	1st Smelter production	1st Country	2nd Smelter production	2nd Country	3rd Smelter production	3rd Country
1990	7,180.00	0.31	890.00	USSR	732.00	Japan	592.00	Canada
1991	7,310.00	0.31	800.00	USSR	778.70	Japan	660.55	Canada
1992	7,260.00	0.30	780.60	Japan	719.00	China	671.70	Canada
1993	7,360.00	0.31	857.00	China	744.57	Japan	659.88	Canada
1994	7,330.00	0.33	1,000.00	China	713.03	Japan	690.97	Canada
1995	7,370.00	0.34	1,080.00	China	720.35	Canada	711.05	Japan
1996	7,610.00	0.33	1,180.00	China	715.55	Canada	642.27	Japan
1997	7,920.00	0.35	1,430.00	China	703.80	Canada	650.21	Japan
1998	8,120.00	0.36	1,490.00	China	745.13	Canada	652.29	Japan
1999	8,550.00	0.37	1,700.00	China	776.93	Canada	683.62	Japan
2000	9,020.00	0.38	1,980.00	China	779.89	Canada	698.75	Japan
2001	9,320.00	0.36	2,040.00	China	648.05	Japan	661.17	Canada
2002	9,480.00	0.38	2,100.00	China	793.41	Canada	673.91	Japan
2003	10,100.00	0.37	2,320.00	China	761.20	Canada	686.12	Japan
2004	10,600.00	0.40	2,720.00	China	805.44	Canada	668.67	S. Korea
2005	10,300.00	0.41	2,780.00	China	724.04	Canada	675.22	Japan
2006	10,800.00	0.43	3,170.00	China	824.46	Canada	662.52	S. Korea
2007	11,400.00	0.46	3,740.00	China	802.10	Canada	690.00	S. Korea
2008	11,700.00	0.47	4,000.00	China	764.32	Canada	738.00	S. Korea
2009	11,400.00	0.50	4,360.00	China	685.50	Canada	643.00	Japan

Table 79. Global production of mined zirconium, the three leading producing countries, and the concentration ratio of the top three producing countries (thousand metric tons).

Year	World mine production	Concetration ratio	1st Mine production	1st Country	2nd Mine production	2nd Country	3rd Mine production	3rd Country
1990	852.00	0.80	437.00	Australia	151.50	S. Africa	90.00	USSR
1991	795.00	0.76	292.00	Australia	230.00	S. Africa	80.00	USSR
1992	856.00	0.79	355.00	Australia	243.00	S. Africa	75.00	Ukraine
1993	796.00	0.91	414.00	Australia	243.00	S. Africa	70.00	Ukraine
1994	897.00	0.91	511.00	Australia	240.00	S. Africa	65.00	Ukraine
1995	918.00	0.91	518.00	Australia	260.00	S. Africa	60.00	Ukraine
1996	894.00	0.91	502.00	Australia	260.00	S. Africa	55.00	Ukraine
1997	822.00	0.91	416.00	Australia	265.30	S. Africa	65.00	Ukraine
1998	732.00	0.90	369.00	Australia	265.00	S. Africa	25.00	Ukraine
1999	673.00	0.90	359.00	Australia	219.00	S. Africa	27.16	Brazil
2000	731.00	0.90	374.00	Australia	253.00	S. Africa	30.00	Ukraine
2001	745.00	0.90	393.00	Australia	245.00	S. Africa	33.60	Ukraine
2002	973.00	0.90	429.00	S. Africa	412.00	Australia	35.00	China
2003	1,040.00	0.88	462.00	Australia	404.00	S. Africa	50.00	China
2004	1,070.00	0.87	441.00	Australia	368.00	S. Africa	120.00	China
2005	1,060.00	0.87	427.00	Australia	376.00	S. Africa	120.00	China
2006	1,240.00	0.86	492.00	Australia	435.00	S. Africa	135.00	China
2007	1,410.00	0.81	601.00	Australia	405.00	S. Africa	140.00	China
2008	1,310.00	0.84	550.00	Australia	405.00	S. Africa	140.00	China
2009	1,180.00	0.84	476.00	Australia	390.00	S. Africa	130.00	China
2010	1,250.00	0.85	518.00	Australia	400.00	S. Africa	140.00	China

Table 80. Statistics on U.S. usage of select mined mineral commodities (thousand metric tons).

	2005	2006	2007	2008	2009
Alumina Consumption	5,750	5,240	6,010	5,490	3,660
Alumina Production	5,220	5,030	4,240	4,300	2,370
Alumina Exports	1,210	1,540	1,160	1,150	946
Alumina Imports	1,860	1,860	2,440	2,530	1,860
Alumina 1st	Australia	Australia	Australia	Australia	Australia
Alumina 2nd	Suriname	Suriname	Jamaica	Brazil	Suriname
Alumina 3rd	Jamaica	Canada	Brazil	Jamaica	Brazil
Alumina Consumption	0.20	0.15	0.23	0.16	0.17
Alumina Production	--	--	W	--	--
Alumina Exports	--	--	--	--	--
Alumina Imports	0.20	0.15	0.23	0.16	0.17
Alumina 1st	China	Bolivia	Bolivia	Bolivia	Bolivia
Alumina 2nd	Hong Kong	China	China	China	Italy
Antimony 3rd	Peru	Belgium	Italy	Canada	China
Barite Consumption	2,966	3,047	2,980	2,506	906
Barite Production	489	589	455	648	383
Barite Exports	93	72	15	62	49
Barite Imports	2,570	2,530	2,540	1,920	572
Barite 1st	China	China	China	China	China
Barite 2nd	India	India	India	India	India
Barite 3rd	Morocco	Morocco	Germany	Mexico	Morocco
Bauxite Consumption	11,766	11,580	9,825	10,486	6,961
Bauxite Production	--	--	--	--	--
Bauxite Exports	34	20	15	14	9
Bauxite Imports	11,800	11,600	9,840	10,500	6,970
Bauxite 1st	Jamaica	Jamaica	Jamaica	Jamaica	Jamaica
Bauxite 2nd	Brazil	Guinea	Guinea	Guinea	Guinea
Bauxite 3rd	Guinea	Brazil	Brazil	Brazil	Brazil
Beryllium Consumption	0.16	0.18	0.19	0.22	0.15
Beryllium Production	0.11	0.16	0.15	0.18	0.12
Beryllium Exports	--	--	--	--	--
Beryllium Imports	--	--	0.00050	--	0.00072
Beryllium 1st	NA	NA	South Africa	NA	Uganda
Beryllium 2nd	NA	NA	NA	NA	NA
Beryllium 3rd	NA	NA	NA	NA	NA
Bromine Consumption	W	W	W	W	W
Bromine Production	226	243	W	W	W
Bromine Exports	2.91	4.47	--	6.14	3.81
Bromine Imports	2.74	0.81	2.27	1.95	1.39
Bromine 1st	NA	NA	NA	Israel	Israel
Bromine 2nd	NA	NA	NA	NA	NA
Bromine 3rd	NA	NA	NA	NA	NA
Chromium Consumption	W	W	W	W	W
Chromium Production	--	--	--	--	--
Chromium Exports	13.70	17.40	12.00	2.28	0.74
Chromium Imports	52.90	53.80	46.40	64.30	23.00
Chromium 1st	South Africa	South Africa	South Africa	South Africa	South Africa
Chromium 2nd	Canada	Canada	Canada	NA	NA
Chromium 3rd	NA	China	China	NA	NA
Copper Consumption	153,863.22	162,892.19	137,866.84	155,699.64	148,849.14
Copper Production	154,000	163,000	138,000	156,000	149,000
Copper Exports	137	108	134	301	151
Copper Imports	0.22	0.19	0.84	0.64	0.14
Copper 1st	Mexico	Canada	Canada	Canada	Canada
Copper 2nd	Canada	Other	Peru	Peru	NA
Copper 3rd	NA	NA	United Kingdom	NA	NA
Feldspar Consumption	761	754.78	723.59	637.43	544.60
Feldspar Production	750	760	730	650	550
Feldspar Exports	15.20	10.40	9.98	14.60	7.52
Feldspar Imports	26.20	5.18	3.57	2.03	2.12
Feldspar 1st	Turkey	Mexico	Mexico	Mexico	Mexico
Feldspar 2nd	Mexico	Other	Canada	Germany	Germany
Feldspar 3rd	Other	NA	Germany	Australia	United Kingdom
Gold Consumption	0.26	0.25	0.24	0.26	0.27
Gold Production	0.26	0.25	0.24	0.23	0.22
Gold Exports	0.001	0.003	0.003	0.002	0.002
Gold Imports	0.002	0.001	0.001	0.028	0.047
Gold 1st	Canada	Canada	Canada	Mexico	Mexico
Gold 2nd	Australia	Burkina Faso	Guatemala	Canada	Canada
Gold 3rd	Mexico	Australia	Mexico	Australia	Ghana
Graphite Consumption	42.40	30.40	42.90	50.35	21.70
Graphite Production	--	--	--	--	--
Graphite Exports	22.100	22.200	15.700	7.950	11.400
Graphite Imports	64.500	52.600	58.600	58.300	33.100

Graphite 1st	China	China	China	China	China
Graphite 2nd	Mexico	Mexico	Canada	Canada	Mexico
Graphite 3rd	Canada	Canada	Mexico	Mexico	Canada
Iodine Consumption	0.83	0.62	0.63	0.69	0.53
Iodine Production	--	--	--	--	--
Iodine Exports	2.66	1.58	1.06	0.95	1.16
Iodine Imports	6.25	5.64	6.06	6.30	5.19
Iodine 1st	Chile	Chile	Chile	Chile	Chile
Iodine 2nd	Japan	Japan	Japan	Japan	Japan
Iodine 3rd	France	France	France	France	India
Iron Consumption	182,036	173,724	169,138	175,955	81,413
Iron Production	176,000	169,000	166,000	173,000	80,800
Iron Exports	150	106	108	323	152
Iron Imports	6,186	4,830	3,246	3,278	765
Iron 1st	Canada	Brazil	Brazil	Brazil	Canada
Iron 2nd	Brazil	Canada	Canada	Canada	Chile
Iron 3rd	Chile	Trinidad & Tobago	Chile	Chile	Brazil
Lead Consumption	131	144	133	119	70
Lead Production	429	444	410	406	369
Lead Exports	298	300	277	287	299
Lead Imports	--	--	--	--	--
Lead 1st	NA	NA	NA	NA	NA
Lead 2nd	NA	NA	NA	NA	NA
Lead 3rd	NA	NA	NA	NA	NA
Lithium Consumption	2.50	2.50	2.40	2.30	1.30
Lithium Production	W	W	W	W	W
Lithium Exports	1.72	1.50	1.44	1.45	0.92
Lithium Imports	3.58	3.26	3.14	3.16	1.89
Lithium 1st	Chile	Chile	Chile	Chile	Argentina
Lithium 2nd	Argentina	Argentina	Argentina	Argentina	Chile
Magnesium compounds Co	--	--	--	--	--
Magnesium compounds Pr	W	W	W	W	W
Magnesium compounds Ex	21.80	9.02	11.70	21.00	10.50
Magnesium compounds Im	15.00	15.20	9.00	15.80	6.27
Magnesium compounds 1	China	China	China	China	China
Magnesium compounds 2	Japan	Israel	Israel	Israel	Israel
Magnesium compounds 3	Israel	Japan	Japan	Japan	Japan
Manganese Consumption	368	365	351	464	422
Manganese Production	--	--	--	--	--
Manganese Exports	13.50	2.24	29.00	48.30	15.30
Manganese Imports	656	572	602	571	269
Manganese 1st	Gabon	Gabon	Gabon	Gabon	Gabon
Manganese 2nd	South Africa	South Africa	South Africa	Australia	Ghana
Manganese 3rd	Australia	Colombia	Australia	Brazil	Australia
Mercury Consumption	--	--	--	--	--
Mercury Production	--	--	--	--	--
Mercury Exports	0.32	0.39	0.08	0.73	0.75
Mercury Imports	0.21	0.09	0.07	0.16	0.21
Mercury 1st	Peru	Russia	Peru	Peru	Peru
Mercury 2nd	Chile	Peru	Canada	Germany	Chile
Mercury 3rd	Israel	Germany	Germany	Canada	Germany
Mica Consumption	226.00	271.28	229.99	199.70	139.25
Mica Production	198.00	233.00	196.00	182.00	127.00
Mica Exports	10.80	8.62	9.01	11.10	9.15
Mica Imports	38.80	46.90	43.00	28.80	21.40
Mica 1st	NA	NA	NA	NA	NA
Mica 2nd	NA	NA	NA	NA	NA
Mica 3rd	NA	NA	NA	NA	NA
Molybdenum Consumption	23.50	33.50	35.60	33.40	25.72
Molybdenum Production	58.00	59.80	57.00	55.90	47.80
Molybdenum Exports	46.40	37.20	33.80	32.70	29.60
Molybdenum Imports	11.90	10.90	12.40	10.20	7.52
Molybdenum 1st	Chile	Chile	Mexico	Mexico	Canada
Molybdenum 2nd	Mexico	Mexico	Canada	Canada	Chile
Molybdenum 3rd	Canada	Canada	Chile	Chile	Mexico
Niobium Consumption	--	--	--	--	--
Niobium Production	--	--	--	--	--
Niobium Exports	0.043	0.069	0.163	0.063	0.017
Niobium Imports	0.010	0.005	0.001	0.016	0.005
Niobium 1st	United Kingdom	Brazil	China	China	China
Niobium 2nd	China	China			Netherlands
Niobium 3rd	India	Singapore			
Perlite Consumption	770	731	717	674	424
Perlite Production	606	516	516	524	304
Perlite Exports	32	30	28	37	33
Perlite Imports	196	245	229	187	153

Import sources:					
Perlite 1st	Greece	Greece	Greece	Greece	Greece
Perlite 2nd	NA	NA	NA	NA	NA
Perlite 3rd	NA	NA	NA	NA	NA
Phosphate rock Consumpti	37,830	32,620	33,770	31,650	27,500
Phosphate rock Production	35,200	30,200	31,100	28,900	25,500
Phosphate rock Exports	--	--	--	--	--
Phosphate rock Imports	2,630	2,420	2,670	2,750	2,000
Phosphate rock 1st	Morocco	Morocco	Morocco	Morocco	Morocco
Phosphate rock 2nd	NA	NA	NA	NA	NA
Phosphate rock 3rd	NA	NA	NA	NA	NA
Potash Consumption	10,000	9,000	10,000	11,000	4,600
Potash Production	2,500	2,400	2,600	2,500	1,700
Potash Exports	569	809	510	694	705
Potash Imports	8,110	7,380	8,190	9,560	3,670
Potash 1st	Canada	Canada	Canada	Canada	Canada
Potash 2nd	Belarus	Belarus	Belarus	Russia	Russia
Potash 3rd	Russia	Russia	Chile	Belarus	Germany
Silver Consumption	--	--	--	--	--
Silver Production	1.23	1.16	1.28	1.25	1.25
Silver Exports	0.00	0.00	0.02	0.13	0.12
Silver Imports	0.00	-	0.00	0.00	0.00
Silver 1st	Canada	NA	Israel	Israel	Israel
Silver 2nd	NA	NA	Guatemala	NA	NA
Silver 3rd	NA	NA	NA	NA	NA
Tantalum Consumption	0.21	0.08	0.15	0.26	0.02
Tantalum Production	--	--	--	--	--
Tantalum Exports	0.17	0.25	0.15	0.10	0.09
Tantalum Imports	0.38	0.32	0.29	0.36	0.11
Tantalum 1st	Australia	Australia	Australia	Australia	Mozambique
Tantalum 2nd	Canada	Canada	Canada	Canada	Canada
Tantalum 3rd	China	Nigeria	Mozambique	Mozambique	Australia
Titanium	**2005**	**2006**	**2007**	**2008**	**2009**
Titanium Consumption	1,720	1,870	1,950	1,440	1,360
Titanium Production	300	300	300	200	200
Titanium Exports	20.90	32.80	9.73	14.90	14.80
Titanium Imports	1,190	1,230	1,460	1,380	943
Ilmenite 1st	Australia	Australia	Australia	Australia	Mozambique
Ilmenite 2nd	Other	Other	Other	Mozambique	Australia
Ilmenite 3rd	NA	NA	NA	South Africa	Other
Titaniferous slag 1st	South Africa	South Africa	South Africa	South Africa	South Africa
Titaniferous slag 2nd	Canada	Canada	Canada	Canada	Canada
Titaniferous slag 3rd	Other	Other	Other	NA	NA
Rutile, natural 1st	South Africa	South Africa	South Africa	South Africa	Australia
Rutile, natural 2nd	Australia	Australia	Australia	Australia	South Africa
Rutile, natural 3rd	Ukraine	Sierra Leone	Sierra Leone	Canada	Other
Rutile, synthetic 1st	Australia	Australia	Australia	Australia	Australia
Rutile, synthetic 2nd	Malaysia	Malaysia	Malaysia	Malaysia	Malaysia
Rutile, synthetic 3rd	Other	Other	Other	Other	Other
Tungsten Consumption	W	W	W	W	W
Tungsten Production	--	--	W	W	W
Tungsten Exports	0.05	0.13	0.11	0.50	0.04
Tungsten Imports	2.08	2.29	3.88	3.99	3.59
Tungsten 1st	Portugal	Bolivia	Bolivia	Bolivia	Bolivia
Tungsten 2nd	Bolivia	Portugal	Canada	Canada	Canada
Tungsten 3rd	Canada	Canada	Portugal	Portugal	Portugal
Zinc Consumption	W	W	W	W	W
Zinc Production	748	727	803	778	736
Zinc Exports	786	825	816	725	785
Zinc Imports	156.00	383.00	271.00	63.20	74.20
Import sources:					
Zinc 1st	Peru	Peru	Peru	Peru	Peru
Zinc 2nd	Australia	Australia	Mexico	Irland	Ireland
Zinc 3rd	Irland	Irland	Irland	Mexico	Mexico

Table 81. Statistics on U.S. usage of select processed mineral commodities.					
	2005	**2006**	**2007**	**2008**	**2009**
Aluminum (000mt) Consumption	6,530	5,700	5,170	3,940	3,320
Aluminum (000mt) Production	--	--	--	--	--
Aluminum (000mt) Primary	2,481	2,284	2,554	2,658	1,727
Aluminum (000mt) Secondary	3,030	4,380	4,120	3,630	2,820
Aluminum (000mt) Exports	2,370	2,820	2,840	3,280	2,710
Aluminum (000mt) Imports	5,330	5,180	4,490	4,200	4,110
Aluminum (000mt) 1st	Canada	Canada	Canada	Canada	Canada
Aluminum (000mt) 2nd	Russia	Russia	Russia	Russia	Russia
Aluminum (000mt) 3rd	China	China	China	China	China
Antimony (mt) Consumption	9,140	10,500	9,690	8,140	6,770
Antimony (mt) Production	3,620	3,520	3,480	3,180	3,020
Antimony (mt) Exports	740	459	305	366	385
Antimony (mt) Imports	6,370	7,260	5,920	7,050	4,750
Antimony (mt) 1st	China	China	China	China	China
Antimony (mt) 2nd	Mexico	Peru	Mexico	Mexico	Mexico
Antimony (mt) 3rd	Belgium	Mexico	Belgium	Peru	Peru
Bismuth (mt) Consumption	2,390	1,960	2,630	1,090	820
Bismuth (mt) Production	--	--	--	--	--
Bismuth (mt) Exports	142	311	421	375	397
Bismuth (mt) Imports	2,530	2,300	3,070	1,930	1,250
Bismuth (mt) 1st	Belgium	Belgium	United Kingdom	China	China
Bismuth (mt) 2nd	China	Mexico	Belgium	Belgium	Belgium
Bismuth (mt) 3rd	Mexico	United Kingdom	China	United Kingdom	South Korea
Boron (000mt) Consumption	W	W	W	W	W
Boron (000mt) Production	W	W	W	W	W
Boron (000mt) Exports	183	221	248	303	171
Boron (000mt) Imports	52	85	67	50	36
Boron (000mt) 1st	Turkey	Turkey	Turkey	Turkey	Turkey
Boron (000mt) 2nd	Chile	Chile	Chile	Chile	Chile
Boron (000mt) 3rd	Peru	Bolivia	Bolivia	Bolivia	Russia
Cadmium (mt) Consumption	2,060	530	594	528	199
Cadmium (mt) Production	1,470	723	735	777	633
Cadmium (mt) Exports	686	483	424	421	661
Cadmium (mt) Imports	288	180	316	197	122
Cadmium (mt) 1st	Mexico	Australia	Mexico	Canada	Australia
Cadmium (mt) 2nd	Australia	Canada	Australia	Australia	Peru
Cadmium (mt) 3rd	Canada	India	Canada	Mexico	Canada
Chromium (mt) Ferrochromium Cons	548,000	589,000	493,000	432,000	160,000
Chromium (mt) Ferrochromium Proc	W	W	W	W	W
Chromium (mt) Ferrochromium Exports				998,000	411,000
Chromium (mt) Ferrochromium Impo	264,000	249,000	242,000	297,000	137,000
Chromium (mt) 1st	South Africa	South Africa	South Africa	South Africa	South Africa
Chromium (mt) 2nd	Kazakhstan	Kazakhstan	Kazakhstan	Kazakhstan	Kazakhstan
Chromium (mt) 3rd	Russia	Russia	Russia	Russia	Russia
Stainless Steel Consumption	1,480,000	1,500,000	1,430,000	1,330,000	1,260,000
Stainless Steel Production	373,000	419,000	360,000	324,000	276,000
Stainless Steel Exports	371,000	410,000	476,000	471,000	414,000
Stainless Steel Imports	770,000	872,000	809,000	783,000	416,000
Cobalt (mt)	**2005**	**2006**	**2007**	**2008**	**2009**
Cobalt (mt) Consumption	--	--	--	--	--
Cobalt (mt) Reported	9,150	9,280	9,320	8,810	7,460
Cobalt (mt) Apparent	11,800	11,000	9,630	10,100	7,520
Cobalt (mt) Exports	2,440	2,850	3,100	2,850	2,440
Cobalt (mt) Imports	9,350	9,950	8,960	8,430	7,680
Cobalt (mt) 1st	Norway	Russia	Norway	Norway	Norway
Cobalt (mt) 2nd	Russia	Norway	Russia	China	Russia
Cobalt (mt) 3rd	Canada	China	Canada	Russia	Canada
Copper (mt) Consumption Reported	2,270,000	2,110,000	2,140,000	2,020,000	1,650,000
Copper (mt) Consumption Apparent	2,420,000	2,200,000	2,270,000	1,990,000	1,580,000
Copper (mt) Production	2,762,175	2,740,076	2,875,320	2,718,655	2,554,082
Copper (mt) Smelter	523,575	501,576	617,720	574,655	597,682
Copper (mt) Refinery	1,260,000	1,250,000	1,310,000	1,270,000	1,160,000
Copper (mt) Secondary	953,000	969,000	925,000	852,000	774,000
Copper (mt) Copper-Sulfate	25,600	19,500	22,600	22,000	22,400
Copper (mt) Exports	39,500	106,000	51,100	36,500	80,800
Copper (mt) Imports	1,000,000	1,070,000	829,000	724,000	664,000
Copper (mt) 1st	Chile	Chile	Chile	Chile	Chile
Copper (mt) 2nd	Canada	Canada	Canada	Canada	Canada
Copper (mt 3rd	Peru	Peru	Peru	Peru	Peru
Gallium (kg) Consumption	18,700	20,300	25,100	28,700	24,900
Gallium (kg) Production	--	--	--	--	--
Gallium (kg) Exports	--	--	--	--	--
Gallium (kg) Imports	15,800	26,900	37,100	41,100	35,900
Gallium (kg) 1st	Japan	China	Germany	Germany	Canada
Gallium (kg) 2nd	Russia	Ukraine	Canada	Canada	Germany
Gallium (kg) 3rd	Hungary	Germany	Ukraine	China	United Kingdom
Germanium (kg)	**2005**	**2006**	**2007**	**2008**	**2009**
Germanium (kg) Consumption	27,800	55,000	52,400	54,500	38,800
Germanium (kg) Production	--	--	--	--	--
Germanium (kg) Exports	--	--	--	--	--
Germanium (kg) Imports	16,700	24,100	25,400	40,200	29,400

Germanium (kg) 1st	Belgium	Belgium	Belgium	Belgium	China
Germanium (kg) 2nd	China	Germany	Germany	China	Russia
Germanium (kg) 3rd	Germany	China	Russia	Russia	Belgium
Gold Consumption	196,800	205,270	197,050	217,490	200,520
Gold Production	256,000	252,000	238,000	233,000	223,000
Gold Exports	182,000	228,000	392,000	459,000	281,000
Gold Imports	105,000	136,000	113,000	118,000	127,000
Gold 1st	Canada	Canada	Canada	Canada	Canada
Gold 2nd	Mexico	Mexico	Mexico	Mexico	Mexico
Gold 3rd	Brazil	Brazil	Chile	United Kingdom	Colombia
Indium (mt) Consumption	--	--	--	--	--
Indium (mt) Production	--	--	--	--	--
Indium (mt) Exports	--	--	--	--	--
Indium (mt) Imports	142	100	147	144	105
Indium (mt) 1st	China	China	China	China	Canada
Indium (mt) 2nd	Japan	Canada	Canada	Canada	China
Indium (mt) 3rd	Canada	Japan	Japan	Japan	Japan
Iron & Steel (000 mt) Consumption	109	120	116	102	63
Iron & Steel (000 mt) Production Iron	37,420	38,140	36,550	33,960	19,000
Iron & Steel (000 mt) Production Pi	37,200	37,900	36,300	33,700	19,000
Iron & Steel (000 mt) Production D	220	240	250	260	-
Iron & Steel (000 mt) Raw steel	94,900	98,200	98,100	91,800	59,400
Iron & Steel (000 mt) Exports Iron	51	813	71	51	11
Iron & Steel (000 mt) Exports Pig ir	51	813	71	51	11
Iron & Steel (000 mt) Exports Direc	< 500mt	< 500mt	< 500mt	< 500mt	< 500mt
Iron & Steel (000 mt) Steel mill produ	8,520	8,830	10,100	12,200	8,420
Iron & Steel (000 mt) Imports	16,700	24,100	25,400	40,200	29,400
Iron & Steel (000 mt) Iron	8,200	9,340	7,550	7,320	3,440
Iron & Steel (000 mt) Pig iron	6,030	6,730	5,220	4,980	2,420
Iron & Steel (000 mt) Direct reduce	2,170	2,610	2,330	2,340	1,020
Iron & Steel (000 mt) Steel mill produ	29,100	41,100	30,200	29,000	14,700
Iron & Steel (000 mt 1st	Canada	Canada	Canada	Canada	Canada
Iron & Steel (000 mt) 2nd	Mexico	China	China	China	Mexico
Iron & Steel (000 mt) 3rd	Brazil	Mexico/Russia	Mexico	Mexico	China
Lead (mt) Consumption	1,490,000	1,490,000	1,570,000	1,440,000	1,290,000
Lead (mt) Production	1,293,000	1,313,000	1,303,000	1,275,000	1,213,000
Lead (mt) Primary	143,000	153,000	123,000	135,000	103,000
Lead (mt) Secondary	1,150,000	1,160,000	1,180,000	1,140,000	1,110,000
Lead (mt) Exports	454,600	366,500	356,500	351,800	369,000
Imports					
Lead (mt) Base Bullion	--	539	1,990	2,740	844
Lead (mt) 1st	NA	Canada	Colombia	Mexico	Mexico
Lead (mt) 2nd	NA	Colombia	Venezuela	Colombia	Other
Lead (mt) 3rd	NA	NA	Netherlands	Venezuela	NA
Lead (mt) Pig & Bars (Lead content)	298,000	331,000	263,000	309,000	251,000
Lead (mt) 1st	Canada	Canada	Canada	Canada	Canada
Lead (mt) 2nd	Australia	China	Mexico	Mexico	Mexico
Lead (mt) 3rd	Peru	Peru	Peru	Peru	Kazakhstan
Magnesium Compounds (000 mt) Con	--	--	--	--	--
Magnesium Compounds (000 mt) Pr	137	133	125	170	147
Magnesium Compounds (000 mt) Pr	W	W	W	W	W
Magnesium Compounds (000 mt) Ex	5	6	4	1	1
Magnesium Compounds (000 mt) Ex	25	20	22	22	8
Magnesium Compounds (000 mt) Im	152	163	134	167	126
Magnesium Compounds (000 mt) 1s	China	China	China	China	China
Magnesium Compounds (000 mt) 2n	Canada	Canada	Canada	Canada	Canada
Magnesium Compounds (000 mt) 3r	Brazil	Hong Kong	Turkey	Brazil	Brazil
Refractory magnesia	478	433	437	386	151
Refractory magnesia 1st	China	China	China	China	China
Refractory magnesia 2nd	Brazil	Austria	Austria	Austria	Brazil
Refractory magnesia 3rd	Hong Kong	Austrialia	Australia	Greece	Austria
Magnesium (mt) Consumption	82,100	77,600	72,200	64,500	50,900
Magnesium (mt) Production	73,300	94,900	89,300	88,400	68,600
Magnesium (mt) Exports	9,650	12,300	14,800	14,400	19,600
Magnesium (mt) Imports	84,700	75,300	71,800	83,300	47,300
Magnesium (mt) 1st	Canada	Canada	Canada	Israel	Israel
Magnesium (mt) 2nd	Israel	Russia	Israel	China	Canada
Magnesium (mt) 3rd	Russia	Israel	Russia	Canada	China
Manganese Compounds (mt) Consum	773	1,060	979	844	445
Manganese Compounds (mt) Producti	W	W	W	W	W
Manganese Compounds (mt) Exports	2,670	3,900	3,280	4,580	3,470
Manganese Compounds (mt) Imports	32,390	32,900	37,998	31,692	23,000
Manganese Compounds (mt) 1st	China	China	China	China	China
Manganese Compounds (mt) 2nd	South Africa	South Africa	South Africa	South Africa	South Africa
Manganese Compounds (mt) 3rd	Spain	Canada	Germany	Germany	Canada
Molybdenum (mt) Consumption	18,900	19,000	21,000	21,100	18,100
Molybdenum (mt) Production	78,500	78,000	72,800	72,900	59,900
Molybdenum (mt) Exports	2,090	2,010	1,220	1,290	827
Molybdenum (mt) Imports	4,050	3,060	4,100	2,320	2,030
Molybdenum (mt) 1st	China	China	China	Chile	Chile
Molybdenum (mt) 2nd	Canada	Chile	Chile	China	Canada
Molybdenum (mt 3rd	Chile	Canada	Canada	Canada	United Kingdom
Nickel (mt) Consumption	199,000	205,000	200,000	187,000	163,000

Nickel (mt) Production	237,520	245,360	284,920	245,240	231,720
Nickel (mt) Exports	63,230	67,350	116,100	106,200	97,030
Nickel (mt) Imports	159,000	173,000	141,000	149,000	118,000
Nickel (mt) 1st	Canada	Canada	Canada	Canada	Canada
Nickel (mt) 2nd	Russia	Russia	Russia	Russia	Russia
Nickel (mt) 3rd	Norway	Australia	Australia	Australia	Norway
Niobium (mt) Consumption	7,430	10,100	9,020	8,450	4,210
Niobium (mt) Production	--	--	--	--	--
Niobium (mt) Exports	337	561	1,100	781	195
Niobium (mt) Imports	8,360	12,840	12,900	11,000	4,490
Niobium (mt) 1st	Brazil	Brazil	Brazil	Brazil	Brazil
Niobium (mt) 2nd	Canada	Canada	Canada	Canada	Canada
Niobium (mt) 3rd	Germany	Germany	Germany	Germany	Germany
Platinum Group Metals (kg) Consum	126,000	80,500	84,100	106,000	52,100
Platinum Group Metals (kg) Consum	89,600	72,700	156,000	138,000	171,000
Platinum Group Metals (kg) Productio					
Platinum Group Metals (kg) Producti	5,220	5,660	7,410	7,650	7,820
Platinum Group Metals (kg) Producti	6,360	6,870	8,930	7,400	7,210
Platinum Group Metals (kg) Exports	1,070	3,390	8,190	6,450	4,020
Platinum Group Metals (kg) Exports	27,000	53,100	41,800	26,400	30,300
Platinum Group Metals (kg) Exports	20,700	45,500	28,900	15,600	15,600
Platinum Group Metals (kg) Exports	615	1,600	2,210	1,980	1,220
Platinum Group Metals (kg) Imports	3,010	2,800	3,410	2,550	1,520
Platinum Group Metals (kg) 1st	United Kingdom	United Kingdom	United Kingdom	South Africa	South Africa
Platinum Group Metals (kg) 2nd	South Africa	South Africa	South Africa	United Kingdom	United Kingdom
Platinum Group Metals (kg) 3rd	Germany	Germany	Germany	Germany	Germany
Osmium	39	56	23	11	68
Osmium 1st	Russia	South Africa	Germany	China	South Africa
Osmium 2nd	South Africa	China	China	Germany	China
Osmium 3rd	Germany/China	Germany	South Africa	NA	NA
Palladium	139,000	119,000	113,000	120,000	69,700
Palladium 1st	Russia	Russia	Russia	Russia	Russia
Palladium 2nd	South Africa	United Kingdom	South Africa	South Africa	South Africa
Palladium 3rd	United Kingdom	South Africa	United Kingdom	United Kingdom	United Kingdom
Platinum	106,000	114,000	181,000	150,000	183,000
Platinum 1st	South Africa	South Africa	Germany	South Africa	Japan
Platinum 2nd	United Kingdom	Germany	South Africa	Brazil	Germany
Platinum 3rd	Canada	United Kingdom	South Korea	Chile	South Africa
Rhodium	13,600	15,900	16,600	12,600	11,200
Rhodium 1st	South Africa	South Africa	South Africa	South Africa	South Africa
Rhodium 2nd	United Kingdom	United Kingdom	United Kingdom	United Kingdom	Russia
Rhodium 3rd	Russia	Belgium	Belgium	Russia	Belgium
Ruthenium	23,200	36,000	48,700	49,800	21,200
Ruthenium 1st	South Africa	South Africa	South Africa	Germany	South Africa
Ruthenium 2nd	Germany	Germany	Germany	South Africa	Germany
Ruthenium 3rd	United Kingdom	Russia	United Kingdom	Russia	United Kingdom
REE (kg) Consumption	582	742	676	616	448
REE (kg) Production	--	--	--	--	--
REE (kg) Exports	636	611	1,470	1,390	4930
REE (kg) Imports	733,000	723,000	653,000	566,000	188000
REE (kg) 1st	China	China	China	China	China
REE (kg) 2nd	Japan	Japan	Japan	Japan	Japan
REE (kg) 3rd	Austria	United Kingdom	United Kingdom	United Kingdom	United Kingdom
Rhenium (kg) Consumption	30,200	40,200	38,800	40,600	30,500
Rhenium (kg) Production	7,900	8,100	7,100	7,900	5,600
Rhenium (kg) Exports	--	--	--	--	--
Rhenium (kg) Imports	21,800	22,000	30,500	35,900	21,500
Rhenium (kg) 1st	Chile	Chile	Chile	Chile	Chile
Rhenium (kg) 2nd	Germany	Germany	Netherlands	Netherlands	Germany
Rhenium (kg) 3rd	United Kingdom	United Kingdom	Germany	Germany	Netherlands
Selinium (kg) Consumption	--	--	--	--	--
Selinium (kg) Production	W	W	W	W	W
Selinium (kg) Exports	254,000	204,000	592,000	562,000	618,000
Selinium (kg) Imports	575,000	398,000	536,000	508,000	260,000
Selinium (kg) 1st	Belgium	Belgium	Belgium	Belgium	Germany
Selinium (kg) 2nd	Canada	Japan	Germany	Germany	Canada
Selinium (kg) 3rd	Philippines	Canada	Japan	Canada	Mexico
Silicon (000 mt)	**2005**	**2006**	**2007**	**2008**	**2009**
Silicon (000 mt) Consumption	275	W	W	W	W
Silicon (000 mt) Production	145	W	W	W	W
Silicon (000 mt) Exports	23	27	28	35	38
Silicon (000 mt) Imports	152	146	147	168	113
Silicon (000 mt) 1st	Brazil	Brazil	Brazil	Brazil	Brazil
Silicon (000 mt) 2nd	South Africa	South Africa	South Africa	South Africa	South Africa
Silicon (000 mt) 3rd	Canada	Canada	Canada	Canada	Australia
Silver Consumption	--	--	--	--	--
Silver Production (mt)	2,530	2,210	791	779	796
Silver Exports (kg)	338,000	1,670,000	781,000	555,000	356,000
Silver Imports (kg)	3,880,000	4,280,000	4,210,000	3,860,000	2,800,000
Silver 1st	Mexico	Mexico	Mexico	Mexico	Mexico
Silver 2nd	Canada	Canada	Canada	Canada	Canada
Silver 3rd	Peru	Peru	Peru	Peru	Peru
Strontium (mt) Consumption	--	8,830	8,400	10,900	11,800

Strontium (mt) Production	--	--	--	--	--
Strontium (mt) Exports	--	699	688	594	532
Strontium (mt) Imports	770	617	454	170	70.1
Strontium (mt) 1st	Japan	Japan	Japan	Japan	Japan
Strontium (mt) 2nd	China	China	China	China	China
Strontium (mt) 3rd	South Korea	South Korea	South Korea	Brazil	Switzerland
Tantalum (mt) Consumption	852	498	644	629	473
Tantalum (mt) Production	--	--	--	--	--
Tantalum (mt) Exports	809	702	365	566	232
Tantalum (mt) Imports	1,242	835	864.13	939	688.15
Tantalum (mt) 1st	China	Germany	China	China	China
Tantalum (mt) 2nd	Japan	Kazakhstan	Portugal	Germany	Kazakhstan
Tantalum (mt) 3rd	Kazakhstan	Japan	Kazakhstan	Kazakhstan	Germany
Tellurium (kg) Consumption	--	--	--	--	--
Tellurium (kg) Production	W	W	W	W	W
Tellurium (kg) Exports	51,000	3,550	15,100	50,000	8,130
Tellurium (kg) Imports	42,200	31,100	43,700	102,000	84,000
Tellurium (kg) 1st	Belgium	Belgium	China	China	China
Tellurium (kg) 2nd	Canada	Canada	Philippines	Canada	Canada
Tellurium (kg) 3rd	China	China	Canada	Belgium	Philippines
Tin (mt) Consumption	40,570	37,680	31,190	29,350	32,650
Tin (mt) Production	11,700	11,600	12,200	11,700	11,100
Tin (mt) Exports	4,330	5,490	6,410	9,800	3,170
Tin (mt) Imports	37,500	43,300	34,600	36,300	33,000
Tin (mt) 1st	Peru	Peru	Peru	Peru	Peru
Tin (mt) 2nd	Bolivia	Bolivia	Bolivia	Bolivia	Bolivia
Tin (mt) 3rd	Indonesia	Indonesia	China	China	Indonesia
Titanium (mt) Consumption	26,100	28,400	33,700	W	W
Titanium (mt) Production	--	--	--	--	--
Titanium (mt) Exports	1,910	1,380	2,000	2,370	820
Titanium (mt) Imports	15,800	24,400	25,900	23,900	16,600
Titanium (mt) 1st	Kazakhstan	Kazakhstan	Kazakhstan	Kazakhstan	Kazakhstan
Titanium (mt) 2nd	Japan	Japan	Japan	Japan	Japan
Titanium (mt) 3rd	Russia	Ukraine	China	Ukraine	China
Tungsten (mt) Concentrates	--	--	--	--	--
Tungsten (mt) Consumption	W	W	W	W	W
Tungsten (mt) Production	--	--	W	W	W
Tungsten (mt) Exports	52	130	109	496	38
Tungsten (mt) Imports	2,080	2,290	3,880	3,990	3,590
Tungsten (mt) 1st	Portugal	Bolivia	Bolivia	Bolivia	Bolivia
Tungsten (mt) 2nd	Bolivia	Portugal	Canada	Canada	Canada
Tungsten (mt) 3rd	Canada	Rwanda	Portugal	Portugal	Portugal
APT Consumption	9,530	11,300	12,000	9,700	6,860
APT Production	W	W	W	W	W
APT Exports	774	350	731	621	375
APT Imports	1,920	2,900	2,700	2,511	2,540
Import sources:					
APT 1st	China	China	China	China	China
APT 2nd	Germany	Germany	Germany	Germany	Germany
3rd	Hong Kong	Russia			Vietnam
Vanadium (mt) Consumption	3,910	4,030	4,970	5,170	4,690
Vanadium (mt) Production	--	--	W	W	W
Vanadium (mt) Exports	500	515	206	452	672
Vanadium (mt) Imports	11,900	2,140	2,220	2,800	353
Vanadium (mt) 1st	Czech Republic	Czech Republic	South Korea	South Korea	Canada
Vanadium (mt) 2nd	Swaziland	Canada	Czech Republic	Canada	South Korea
Vanadium (mt) 3rd	Canada	South Korea	Canada	Austria	Austria
Zinc (mt) Consumption	466,000	501,000	436,000	370,000	306,000
Zinc (mt) Production	351,000	269,000	278,000	286,000	203,000
Zinc (mt) Exports	784	2,530	8,070	3,250	2,960
Zinc (mt) Imports	700,000	895,000	758,000	725,000	686,000

Table 82. Count of production rankings for mined minerals (2007).				
	First	Second	Third	Total
Argentina		1		1
Australia	3	5	1	9
Belarus			1	1
Belgium			1	1
Bolivia		1		1
Brazil	2	2	5	9
Canada	2	3	4	9
Chile	4	1	1	6
China	22	4	7	33
Finland			1	1
Germany		1		1
India	1	4	1	6
Indonesia		1	1	2
Italy		1		1
Japan	2	1	1	4
Kazakhstan		2		2
Kyrgyzstan		1		1
Madagascar			1	1
Malaysia			1	1
Mexico		3		3
Mongolia			1	1
Morocco		1	2	3
Mozambique		1		1
Nigeria			1	1
Norway		1		1
People's Republic of the Congo	1			1
Peru	1	2	6	9
Russia	2	6	6	14
Rwanda				0
South Africa	5	2	1	8
South Korea		1		1
Spain		1		1
Turkey	2		1	3
Zambia			1	1

Table 1

Table 83. Count of production rankings for processed minerals (2007).				
	First	Second	Third	Total
Argentina			1	1
Australia		1	2	3
Belarus			1	1
Belgium		1	2	3
Bolivia		1		1
Canada	3	2	3	8
Chile		2		2
China	22	3	2	27
Colombia		1		1
Cuba		1		1
Finland		1	1	2
Germany		3		3
Indonesia		1		1
Israel	1	1		2
Japan	4	2	4	10
Jordan			1	1
Kazakhstan		2	1	3
Mexico		1		1
New Calendonia			1	1
Peru		1	2	3
Russia	2	3	4	9
South Africa	2			2
South Korea		1	1	2

Table 1

Table 84. Count of import rankings for mined minerals (2007).				
	First	Second	Third	Total
Argentina		1		1
Australia	4	1	1	6
Belarus		1		1
Bolivia	2			2
Brazil	1		2	3
Canada	3	9		12
Chile	2		1	3
China	4	1	1	6
France			1	1
Gabon	1			1
Germany			3	3
Greece	1			1
Guatemala		2		2
Guinea		1		1
India		1		1
Ireland			1	1
Israel	2	1		3
Italy			1	1
Jamaica	1	1		2
Japan		1	1	2
Malaysia		1		1
Mexico	2	1	2	5
Mozambique			1	1
Peru	2	1		3
Portugal			1	1
Sierra Leone			1	1
South Africa	4	1		5
United Kingdom			1	1
Other		1	2	3

Table 1

Table 85. Count of import rankings for processed minerals (2007).				
	First	Second	Third	Total
Australia		1	2	3
Austria		1		1
Belgium	2	1	2	5
Bolivia	1	1	1	3
Brazil	2			2
Canada	6	7	6	19
Chile	2	2	1	5
China	10	3	4	17
Colombia	1			1
Czech Republic		1		1
Germany	3	4	4	11
Israel		1		1
Japan	1	2	2	5
Kazakhstan	1	1	1	3
Mexico	2	3	1	6
Netherlands		1	1	2
Norway	1			1
Peru	1		3	4
Phillipines		1		1
Portugal		1	1	2
Russia	1	3	3	7
South Africa	3	5	1	9
South Korea	1		2	3
Turkey	1		1	2
United Kingdom	2	1	3	6
Ukraine			1	1
Venezuela		1		1