

Statistics Report

No. ICTC 1/2023

Mineral Statistics of Thailand
2018 - 2022

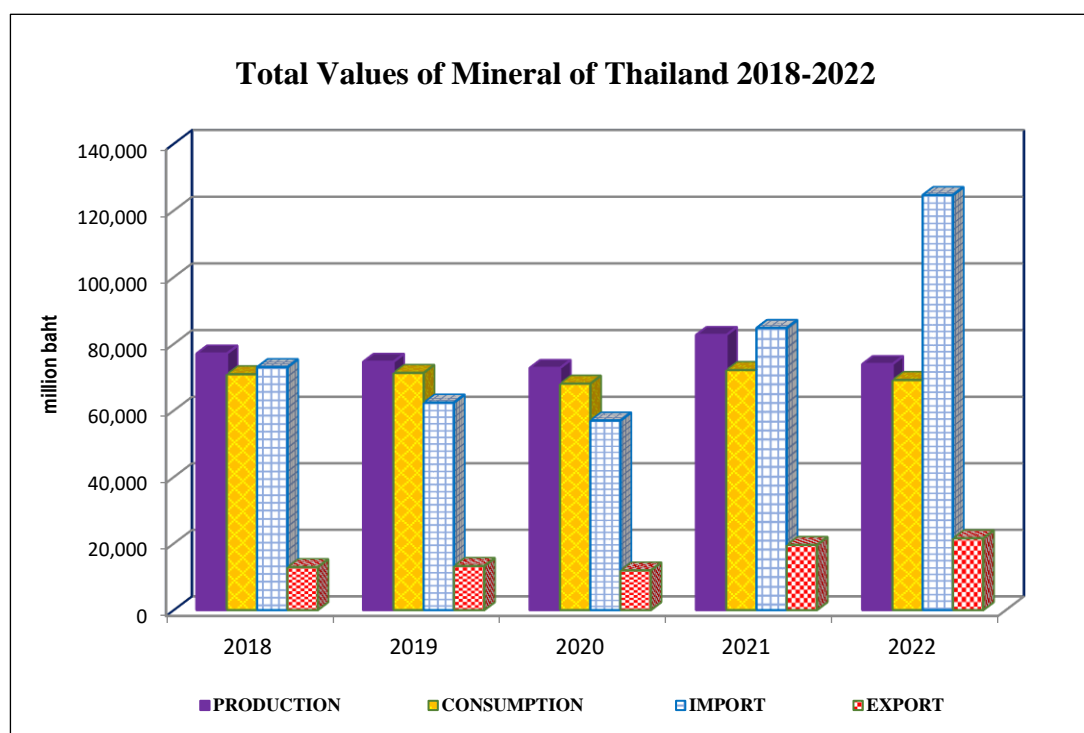
Statistics Group
Information and Communication Technology Center
Department of Primary Industries and Mines

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Information and Communication Technology Center

Department of Primary Industries and Mines

Director – Information and Communication Technology Center

Ms. Phornchalanphak Phenkunaphorn

Chief – Statistics Group

Ms. Patcharee Chotiyasiti

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Department of Primary Industries and Mines,

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A N D E S I T E

	Tonnes				
	2018	2019	2020	2021	2022
<u>Production</u>					
Northern Region					
Chiang Mai	484,820	52,626	562,221	837,155	761,439
Phetchabun	459,584	296,016	445,557	735,016	-
Nakhon Sawan	-	-	286,451	-	-
Uttaradit	320,559	268,964	656,960	-	53,982
Central Region					
Sara Buri	-	368,145	477,417	145,159	6,317
Total Production	1,264,963	985,751	2,428,606	1,717,330	821,738
Value (Million Baht)	253.0	197.2	485.7	343.5	164.3
<u>Consumption</u>					
Total Consumption	1,040,277	1,349,235	2,177,153	1,558,114	859,080
Value (Million Baht)	208.1	269.8	435.4	311.6	171.8

ANHYDRITE

Tonnes

	2018	2019	2020	2021	2022
<u>Production</u>					
Northern Region					
Nakhon Sawan	-	-	8,000	12,400	1,430
Southern Region					
Nakhon Si Thammarat	142,150	91,585	117,600	117,200	148,900
Surat Thani	1,375,078	1,328,002	1,141,226	1,484,557	1,674,307
Total Production	1,517,228	1,419,587	1,266,826	1,614,157	1,824,637
Value (Million Baht)	904.2	838.8	740.7	949.7	1,157.9
<u>Export</u>					
Unground					
Asia					
Cambodia	1,100	74,550	112,227	100,500	99,500
India	164,757	236,250	172,000	45,000	50,000
Indonesia	29,000	22,350	30,800	22,550	16,800
Japan	641,900	457,050	526,880	552,300	498,550
Korea, South	257,950	214,800	235,400	273,300	277,500
Malaysia	241,000	140,100	56,700	67,400	134,500
Myanmar		11,500	-	-	-
Vietnam	192,500	209,480	232,870	470,705	779,850
Total Export	1,528,207	1,366,080	1,366,877	1,531,755	1,856,700
Value (Million Baht)	913.3	797.8	813.1	932.9	1,241.1
<u>Consumption</u>					
Total Consumption	-	4,546	10,871	14,900	208,572
Value (Million Baht)	-	2.6	6.4	8.8	134.5
<u>Import¹</u>					
Total Import	0**	0**	1	2	27
Value (Million Baht)	0.0*	0.0*	0.0*	0.0*	0.4

0** denoting the amount of less than 0.1 tonnes

0.0* denoting the amount of less than 0.05 million baht

1 data from 'www.customs.go.th'

A N T H R A C I T E

Tonnes

	2018	2019	2020	2021	2022
<u>Import</u>¹					
Total Import	173,288	125,723	153,844	108,168	96,634
Value (Million Baht)	760.8	566.5	578.6	471.6	1,223.5

1 data from 'www.customs.go.th'

ANTIMONY

Tonnes

	2018	2019	2020	2021	2022
<u>Export</u>					
Ore					
Asia					
China	888	3,147	266	3,188	2,353
Japan	0.1	-	-	-	-
Taiwan	0**	-	-	-	-
Vietnam	1,108	477	461	631	252
Europe					
Netherlands	26	-	-	-	-
U.K.	0**	-	-	-	-
Total Export	2,022	3,624	727	3,818	2,605
Value (Million Baht)	86.8	64.9	20.4	239.0	257.8
<u>Import¹</u>					
Total Import	1,914	3,989	1,361	5,794	3,680
Value (Million Baht)	54.5	60.5	52.8	634.1	513.5

0** denoting the amount of less than 0.1 tonnes

1 data from 'www.customs.go.th'

BALL CLAY

Tonnes

	2018	2019	2020	2021	2022
<u>Production</u>					
Northern Region					
Lampang	490,837	241,244	1,687	-	-
Phayao	-	-	-	16,800	30,000
Central Region					
Prachin Buri	-	-	1,500	3,095	4,000
Sara Buri	84,948	89,097	10,000	65,000	56,904
Southern Region					
Nakhon Si Thammarat	3,780	2,445	12,590	-	-
Total Production	579,565	332,786	25,777	84,895	90,904
Value (Million Baht)	318.8	183.0	14.2	46.7	50.0
<u>Export</u>					
Asia					
Bangladesh	2,908	596	140	2,844	19,597
Belgium	-	-	-	440	-
China	2,680	1,155	644	2,610	9,365
India	24	-	-	-	925
Indonesia	4,112	2,145	1,438	4,560	14,306
Japan	200	260	200	500	300
Korea (South)	-	-	-	-	420
Malaysia	7,845	5,832	4,978	5,573	10,230
Philippines	-	-	-	24	264
Sri Lanka	-	-	-	24	-
Vietnam	4,084	2,870	1,633	2,137	14,452
Total Export	21,853	12,858	9,033	18,712	69,859
Value (Million Baht)	97.9	56.3	34.2	85.5	426.1

Tonnes

	2018	2019	2020	2021	2022
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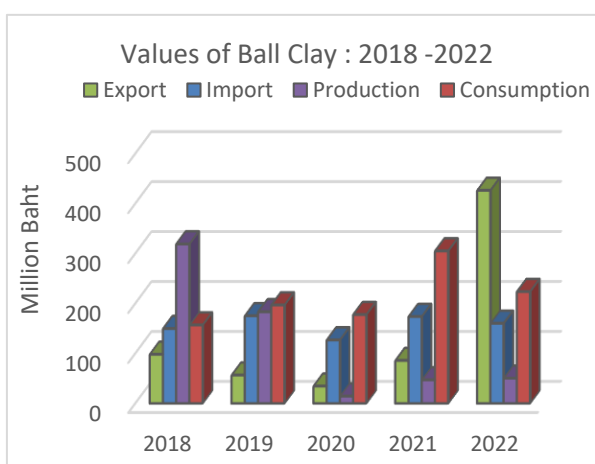
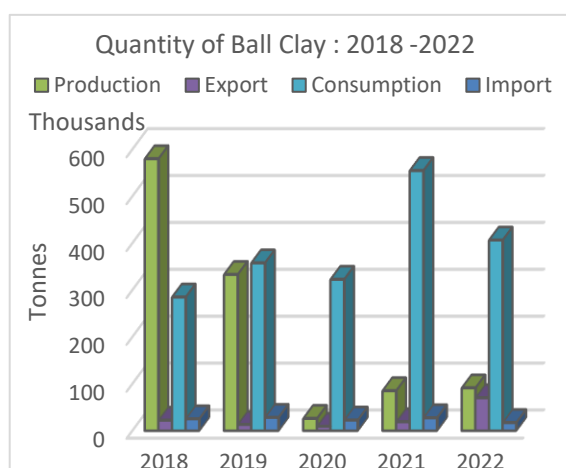
Consumption

Total Consumption	284,563	357,420	322,490	554,415	406,166
Value (Million Baht)	156.5	196.6	177.4	304.9	223.4

Import¹

Total Import	24,895	27,961	22,273	27,083	16,877
Value (Million Baht)	149.5	175.0	126.6	173.5	159.9

1 data from 'www.customs.go.th'



1 data from 'www.customs.go.th'

B A R I T E

Tonnes

	2018	2019	2020	2021	2022
<u>Production</u>					
1. Ground (Chemical grade)					
Northeastern Region					
Loei	1,647	1,757	1,260	1,218	963
Total Production	1,647	1,757	1,260	1,218	963
Value (Million Baht)	16.0	17.0	12.2	11.8	9.3
2. Ground (Drilling Mud grade)					
Northern Region					
Phrae	52,694	31,557	-	-	-
Total Production	52,694	31,557	-	-	-
Value (Million Baht)	246.1	147.4	-	-	-
3. Unground					
Northeastern Region					
Loei	-	-	3,404	2,770	546
Southern Region					
Nakhon Si Thammarat	13,149	330	17,730	1,000	5,000
Total Production	13,149	330	21,134	3,770	5,546
Value (Million Baht)	19.5	0.5	31.4	5.6	8.2

Tonnes

	2018	2019	2020	2021	2022
Export					
1. Ground (Chemical grade)					
Asia					
China	-	5	-	-	-
Japan	80	64	64	64	16
Jordan	40	-	-	-	-
Korea, South	252	252	252	335	393
Malaysia	803	503	560	377	354
Saudi Arabia	-	-	-	20	-
Singapore	140	120	100	160	60
Taiwan	391	286	284	244	140
Australia / Oceania					
Australia	24	-	-	-	120
Total Export	1,730	1,230	1,260	1,200	1,083
Value (Million Baht)	18.4	12.3	14.2	12.8	12.9
2. Ground (Drilling Mud grade)					
Asia					
Brunei	4,002	-	-	-	-
Indonesia	1,000	-	-	-	-
Malaysia	450	-	-	-	1,140
Total Export	5,452	-	-	-	1,140
Value (Million Baht)	32.8	-	-	-	48.6

	Tonnes				
	2018	2019	2020	2021	2022
<u>Consumption</u>					
1. Ground (Chemical grade)	-	1,091	676	-	-
Value (Million Baht)	-	10.6	6.6	-	-
2. Ground (Drilling mud)	54,221	30,745	-	-	-
Value (Million Baht)	253.2	143.6	-	-	-
3. Unground	4,522	2,199	17,456	14,021	526
Value (Million Baht)	6.7	3.3	25.9	20.8	0.8
<u>Import</u>¹					
Total Import	90,092	161,560	128,380	89,981	110,749
Value (Million Baht)	197.0	274.1	221.7	178.1	230.9

1 data from 'www.customs.go.th'

B A S A L T

Tonnes

	2018	2019	2020	2021	2022
<u>Production</u>					
Northeastern Region					
Buri Ram	4,849,318	3,673,749	3,756,134	3,642,024	3,775,699
Nakhon Ratchasima	1,868,623	2,419,020	1,996,172	2,127,828	2,060,923
Si Sa Ket	919,286	664,489	391,258	-	248,285
Surin	2,169,304	2,237,881	3,139,350	3,300,022	3,088,977
Ubon Ratchathani	4,226,687	3,623,530	4,037,957	4,653,779	4,030,150
Central Region					
Lop Buri	268,362	67,687	305,207	328,267	184,548
Trat	-	-	48,250	-	-
Total Production	14,301,580	12,686,356	13,674,328	14,051,920	13,388,582
Value (Million Baht)	2,860.3	2,537.3	2,734.8	2,810.4	2,677.7
<u>Consumption</u>					
Total Consumption	12,486,969	12,165,737	14,390,606	14,451,214	13,645,310
Value (Million Baht)	2,497.4	2,433.1	2,878.1	2,890.2	2,729.1
<u>Import</u>¹					
Total Import	201,574	131,889	28,604	10,678	7,065
Value (Million Baht)	177.7	131.9	119.0	63.7	61.0

1 data from 'www.customs.go.th'

BENTONITE

Tonnes

	2018	2019	2020	2021	2022
<u>Import</u>¹					
Total Import	127,807	137,667	122,247	151,974	140,918
Value (Million Baht)	776.4	763.2	683.7	944.8	1,049.9

1 data from 'www.customs.go.th'

CALCITE

Tonnes

	2018	2019	2020	2021	2022
<u>Production</u>					
Central Region					
Lop Buri	1,467,822	1,440,030	1,430,044	1,639,588	1,397,580
Total Production	1,467,822	1,440,030	1,430,044	1,639,588	1,397,580
Value (Million Baht)	1,100.9	1,080.0	1,072.5	1,229.7	1,048.2
<u>Consumption</u>					
Total Consumption	1,408,695	1,448,141	1,398,348	1,561,578	1,323,299
Value (Million Baht)	1,056.5	1,086.1	1,048.8	1,171.2	992.5
<u>Import¹</u>					
Total Import	304	1	47	-	-
Value (Million Baht)	0.6	0.0*	0.0*	-	-

1 data from 'www.customs.go.th'

0.0* denoting the amount of less than 0.05 million baht

CEMENT CLAY

Tonnes

	2018	2019	2020	2021	2022
<u>Production</u>					
Northern Region					
Lampang	220,406	293,221	246,859	248,669	254,048
Northeastern Region					
Nakhon Ratchasima	866,383	828,315	665,465	1,054,257	825,829
Central Region					
Lop Buri	982,712	1,514,921	1,331,062	1,247,014	1,245,613
Phetchaburi	27,980	71,408	35,560	72,800	42,460
Prachin Buri	38,893	83,445	33,228	120,200	106,200
Sara Buri	3,363,467	4,193,131	4,377,696	3,654,748	1,828,425
Southern Region					
Krabi	301,642	425,000	425,000	400,000	324,908
Nakhon Si Thammarat	36,325	46,000	91,000	179,917	123,700
Total Production	5,837,808	7,455,441	7,205,870	6,977,605	4,751,182
Value (Million Baht)	525.4	670.9	648.5	627.9	427.6
<u>Consumption</u>					
Total Consumption	5,770,321	8,630,270	6,696,958	7,914,512	5,013,323
Value (Million Baht)	519.3	776.7	602.7	712.3	451.2

C E R A M I C C L A Y

Tonnes

	2018	2019	2020	2021	2022
<u>Production</u>					
Northeastern Region					
Chaiyaphum	309,000	262,000	181,000	361,400	391,800
Central Region					
Ang Thong	-	-	71,627	79,633	60,000
Lop Buri	121,000	41,000	86,000	240,000	200,000
Sara Buri	31,653	31,686	37,550	33,262	77,899
Sing Buri	24,200	43,400	27,500	30,000	90,000
Total Production	485,853	378,086	403,677	744,295	819,699
Value (Million Baht)	267.2	207.9	222.0	409.4	450.8
<u>Consumption</u>					
Total Consumption	337,964	478,769	516,770	607,943	620,094
Value (Million Baht)	185.9	263.3	284.2	334.4	341.1

C O L U M B I T E - T A N T A L I T E

Tonnes

	2018	2019	2020	2021	2022
<u>Import (Columbite)</u>¹					
Total Import	377	357	216	25	266
Value (Million Baht)	209.0	167.4	70.7	15.8	224.2

1 data from 'www.customs.go.th'

C O P P E R

Tonnes

	2018	2019	2020	2021	2022
<u>Import (ore)¹</u>					
Total Import	384	142	3,403	8,759	3,832
Value (Million Baht)	3.9	1.2	11.4	35.3	26.3

1 data from 'www.customs.go.th'

DICKITE

Tonnes

	2018	2019	2020	2021	2022
<u>Production</u>					
Central Region					
Sara Buri	-	5,000	-	-	-
Total Production	-	5,000	-	-	-
Value (Million Baht)	-	3.0	-	-	-
<u>Consumption</u>					
Total Consumption	-	3,969	6,479	14,782	10,602
Value (Million Baht)	-	2.4	4	9	6

D O L O M I T E

Tonnes

	2018	2019	2020	2021	2022
<u>Production</u>					
Northern Region					
Phetchabun	23,431	2,270	39,879	261,400	2,500
Central Region					
Kanchanaburi	269,465	505,262	639,370	742,772	653,747
Ratchaburi	-	-	-	164,221	263,316
Southern Region					
Krabi	984,506	177,666	-	-	5,000
Phangnga	206,621	235,318	117,341	146,594	233,000
Songkhla	326,590	316,600	677,855	625,697	860,847
Surat Thani	1,310,172	1,316,103	2,046,889	1,457,156	1,405,906
Trang	319,408	297,625	251,400	560,100	505,400
Total Production	3,440,193	2,850,844	3,772,734	3,957,939	3,929,716
Value (Million Baht)	1,892.1	1,568.0	2,075.0	1,998.9	1,761.8

Export

1. Ground

Asia

Bangladesh	40	-	20	17	-
Cambodia	-	-	-	-	700
Laos	-	734	-	-	-
Philippines	-	80	118	190	195
Singapore	-	-	4	-	4

Total Export	40	814	142	207	899
Value (Million Baht)	0.3	0.8	0.8	1.1	2.2

2. Unground

Asia

Bangladesh	-	75	13,350	-	-
China	-	-	49,500	-	-
India	425,500	320,000	236,675	241,000	120,500
Indonesia	-	-	-	50,000	-
Japan	360,500	319,460	371,050	469,280	391,550
Jordan	33,200	-	-	-	-
Malaysia	222,200	342,050	515,785	513,500	454,700
Taiwan	182,000	141,000	205,670	196,500	191,503

South America

Chile	46,200	46,200	-	-	-
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Total Export	1,269,600	1,168,785	1,392,030	1,470,280	1,158,253
Value (Million Baht)	508.7	394.4	479.7	552.7	493.4

Tonnes

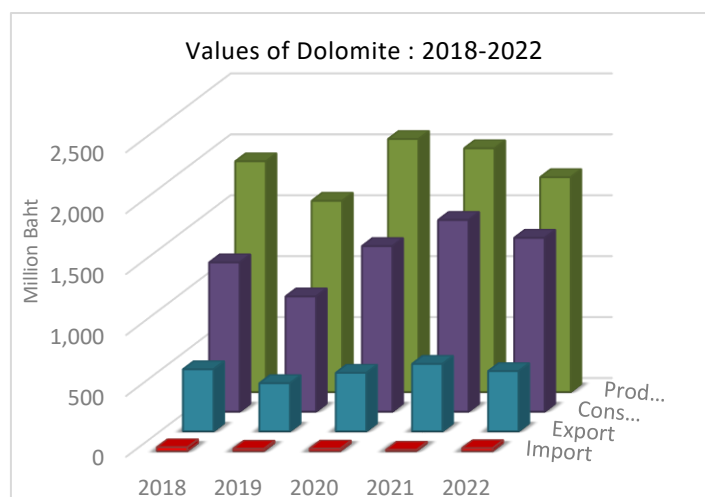
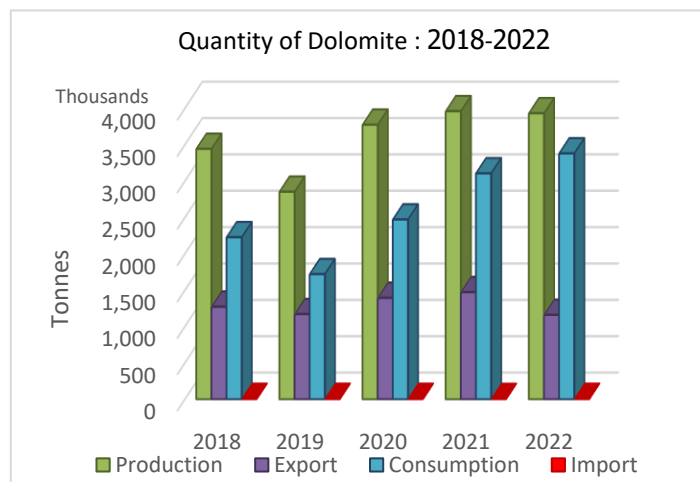
	2018	2019	2020	2021	2022
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Consumption

Total Consumption	2,225,240	1,718,019	2,469,086	3,104,023	3,377,935
Value (Million Baht)	1,223.9	944.9	1,358.0	1,572.0	1,425.7

Import¹

Total Import	1,549	1,349	1,232	602	1,798
Value (Million Baht)	30.5	18.4	19.5	9.5	23.5



1 data from 'www.customs.go.th'

D O L O M I T I C M A R L

Tonnes

	2018	2019	2020	2021	2022
<u>Production</u>					
Northern Region					
Phetchabun	-	1,585	-	1,500	-
Phrae	6,920	-	5,000	7,000	-
Total Production	6,920	1,585	5,000	8,500	-
Value (Million Baht)	2.4	0.6	1.8	2.9	-
<u>Consumption</u>					
Total Consumption	10,634	11,495	10,130	11,390	10,303
Value (Million Baht)	3.7	4.0	4.0	4.0	3.6

F E L D S P A R

Tonnes

	2018	2019	2020	2021	2022
<u>Production</u>					
1. Sodium Feldspar (Ground)					
Northern Region					
Tak	-	-	6,204	5,100	48,807
Total Production	-	-	6,204	5,100	48,807
Value (Million Baht)	-	-	8.7	7.1	68.3
2. Sodium Feldspar (Unground)					
Northern Region					
Tak	204,340	254,172	237,638	339,088	436,062
Central Region					
Kanchanaburi	2,900	2,000	800	-	-
Ratchaburi	118,200	142,030	266,318	61,270	44,081
Southern Region					
Nakhon Si Thammarat	792,363	854,941	594,384	941,539	1,424,968
Total Production	1,117,803	1,253,143	1,099,140	1,341,897	1,905,111
Value (Million Bath)	782.5	877.2	769.4	939.3	1,333.6

Tonnes

	2018	2019	2020	2021	2022
3. Sodium Feldspar (Ground)					
Asia					
Bangladesh	404,286	484,944	589,860	849,520	917,338
Cambodia	-	-	-	-	100
China	-	-	-	-	75
India	-	-	11,550	-	-
Indonesia	94,672	119,166	76,845	123,864	147,440
Malaysia	66,970	7,150	8,770	5,770	4,391
Myanmar	-	-	-	-	1,152
Philippines	-	240,240	1,764	216	96
U.A.E.	104,400	270,570	121,100	124,500	-
Vietnam	29,585	12,911	13,405	9,400	10,088
Australia / Oceania					
Australia	-	-	-	2	-
New Zealand	-	50	-	22	-
Total Export	699,913	1,135,031	823,294	1,113,294	1,080,680
Value (Million Baht)	593.4	1,396.7	637.1	888.3	1,041.8
<u>Consumption</u>					
1. Sodium Feldspar (Ground)	32,598	32,762	12,541	27,220	63,028
Value (Million Baht)	45.6	45.9	17.6	38.1	88.2
2. Sodium Feldspar (Unground)	441,345	857,771	634,231	495,876	2,146,650
Value (Million Baht)	308.9	600.4	444.0	347.1	1,502.7

	2018	2019	2020	2021	2022
					Tonnes
<u>Import</u>¹					
1. Potassium, Sodium Feldspar	30,929	21,377	22,946	33,060	21,487
Value (Million Baht)	103.4	77.7	86.4	128.8	99.0
2. Other Feldspar	13,085	19,091	13,330	15,664	21,030
Value (Million Baht)	72.3	90.0	58.8	73.5	134.5

1 data from 'www.customs.go.th'

F L U O R I T E

Tonnes

	2018	2019	2020	2021	2022
<u>Production (Metallurgical grade)</u>					
Northern Region					
Lamphun	10,500	17,000	6,240	-	35,995
Mae Hong Son	-	-	-	2,600	3,228
Phrae	6,200	747	3,567	166	-
Central Region					
Kanchanaburi	-	-	-	7,000	20,020
Total Production	16,700	17,747	9,807	9,766	59,243
Value (Million Baht)	80.9	85.6	50.0	52.5	338.0
<u>Export (Metallurgical Grade)</u>					
Asia					
China	1,080	3,050	234	2,015	4,080
India	36,968	41,323	37,829	31,752	30,804
Indonesia	-	-	-	200	633
Korea, South	154	352	-	315	6,755
Malaysia	95	-	-	-	525
Vietnam	-	-	75	-	-
Europe					
Turkey	182	958	234	-	-
Total Export	38,479	45,683	38,372	34,282	42,797
Value (Million Baht)	186.2	256.3	226.7	176.3	413.8
<u>Consumption (Metallurgical Grade)</u>					
Total Consumption	500	200	-	6,998	2,250
Value (Million Baht)	2.4	1.0	-	36.0	10.8
<u>Import¹</u>					
Total Import	1,994	11,658	9,325	10,585	5,877
Value (Million Baht)	16.2	45.5	34.5	71.1	59.9

1 data from 'www.customs.go.th'

G A R N E T

Tonnes

	2018	2019	2020	2021	2022
<u>Export</u>					
Asia					
China	900	-	-	-	-
Hong Kong	2,380	-	-	-	-
Malaysia	-	164	-	-	-
Singapore	-	350	-	-	-
U.A.E.	-	25	-	-	-
North America					
U.S.A.	1,320	-	-	-	-
Total Export	4,600	539	-	-	-
Value (Million Baht)	46.5	2.7	-	-	-

G L A S S S A N D

Tonnes

	2018	2019	2020	2021	2022
<u>Production</u>					
Northeastern Region					
Bueng Kan	44,101	36,100	14,170	13,000	27,300
Roi Et	126,000	142,212	208,000	37,400	44,000
Central Region					
Cha Choeng Sao	186,531	155,000	145,000	165,421	171,500
Chanthaburi	92,305	82,850	175,635	152,785	232,340
Rayong	1,003,579	698,208	540,704	781,043	843,323
Southern Region					
Chumphon	104,702	133,662	160,400	109,165	106,040
Songkhla	-	-	-	63,800	-
Surat Thani	-	-	9,000	-	900
Total Production	1,557,218	1,248,032	1,252,909	1,322,614	1,425,403
Value (Million Baht)	1,541.6	1,235.6	1,240.4	1,309.4	1,411.1
<u>Consumption</u>					
Total Consumption	1,529,709	1,206,501	1,278,387	1,307,804	1,222,471
Value (Million Baht)	1,514.4	1,194.4	1,265.6	1,294.7	1,210.3
<u>Import¹</u>					
Total Import	156,550	150,830	86,004	94,258	215,748
Value (Million Baht)	477.9	446.1	340.0	632.2	1,202.7

1 data from 'www.customs.go.th'

G N E I S S

Tonnes

	2018	2019	2020	2021	2022
<u>Production</u>					
Central Region					
Prachuap Khiri Khan	1,180	-	-	-	-
Total Production	1,180	-	-	-	-
Value (Million Baht)	4.7	-	-	-	-

G R A N I T E

Tonnes

	2018	2019	2020	2021	2022
<u>Production</u>					
1. Dimension Stone*					
Northern Region					
Kamphaeng Phet	-	15,099	620	3,172	5,668
Tak	1,263	2,397	1,766	1,525	1,614
Northeastern Region					
Nakhon Ratchasima	-	17	-	-	-
Central Region					
Cha Choeng Sao	51	18	-	-	-
Prachuap Khiri Khan	3,800	1,137	-	-	-
Total Production	5,114	18,668	2,386	4,697	7,282
Value (Million Baht)	32.2	117.3	12.4	24.4	37.9
2. Industrial Rock					
Northern Region					
Chiang Rai	-	-	-	26,500	535,968
Phrae	-	-	558	-	11,727
Tak	-	-	2,000	-	-
Central Region					
Cha Chaeng Sao	469,001	470,011	406,516	348,851	355,972
Chon Buri	4,803,684	5,940,980	5,149,242	6,352,958	5,817,503
Kanchanaburi	-	-	140,660	12,116	-
Prachuap Khiri Khan	153,532	124,627	316,096	-	694,041
Rayong	1,263,752	1,685,424	2,064,000	1,463,000	2,563,200
Ratchaburi	-	196,076	44,424	164,471	149,739
Southern Region					
Nakhon Si Thammarat	-	40,380	97,563	29,744	50,427
Narathiwat	1,509,184	1,508,717	1,855,050	2,245,343	440,306
Phangnga	777,316	1,023,188	1,140,372	987,895	503,323
Songkhla	2,304,526	2,874,832	3,543,728	2,877,741	2,172,841
Total Production	11,280,995	13,864,234	14,760,209	14,508,620	13,295,046
Value (Million Baht)	2,256.2	2,772.8	2,952.0	2,901.7	2,659.0

* unit : cubic meter

Tonnes

	2018	2019	2020	2021	2022
Export (Industrial Rock)					
Asia					
Singapore	212,100	444,261	128,400	153,900	140,000
Total Export	212,100	444,261	128,400	153,900	140,000
Value (Million Baht)	35.9	90.0	35.4	40.4	35.1

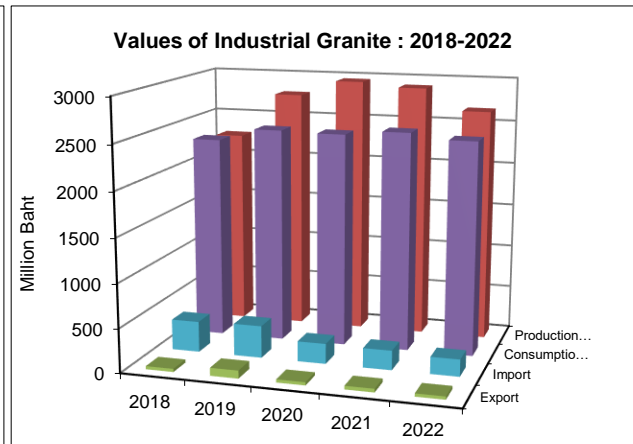
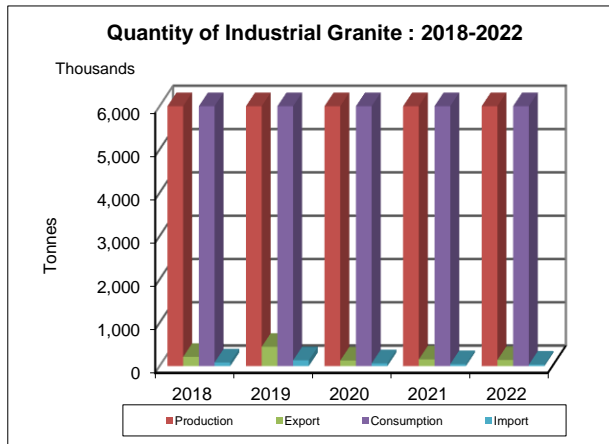
Consumption

1. Dimension Stone *	1,352	2,059	2,104	3,527	3,513
Value (Million Baht)	8.5	12.6	10.9	18.3	18.3
2. Industrial Rock	11,570,394	12,287,216	12,217,021	12,480,086	12,176,732
Value (Million Baht)	2,314.1	2,457.4	2,443.4	2,496.0	2,435.3

Import (Dimension Stone)¹

Total Import	82,568	133,251	64,418	44,904	32,689
Value (Million Baht)	351.3	366.4	229.9	222.1	194.0

* unit : cubic meter



G R A V E L

Tonnes

	2018	2019	2020	2021	2022
<u>Export (Industrial Rock)</u>					
Asia					
Malaysia	34	6	-	-	22
Singapore	216	264	48	48	-
Total Export	250	270	48	48	22
Value (Million Baht)	0.9	1.2	0.2	0.2	0.1

G R A Y W A C K E

Tonnes

	2018	2019	2020	2021	2022
<u>Production (Industrial Rock)</u>					
Central Region					
Chanthaburi	543,335	515,176	464,244	565,885	489,214
Trat	733,031	917,112	943,531	1,163,033	598,066
Total Production	1,276,366	1,432,288	1,407,775	1,728,918	1,087,280
Value (Million Baht)	255.3	286.5	281.6	345.8	217.5
<u>Consumption (Industrial Rock)</u>					
Total Consumption	1,343,459	1,414,867	1,402,537	1,418,417	1,068,125
Value (Million Baht)	268.7	283.0	280.5	283.7	213.6

G Y P S U M

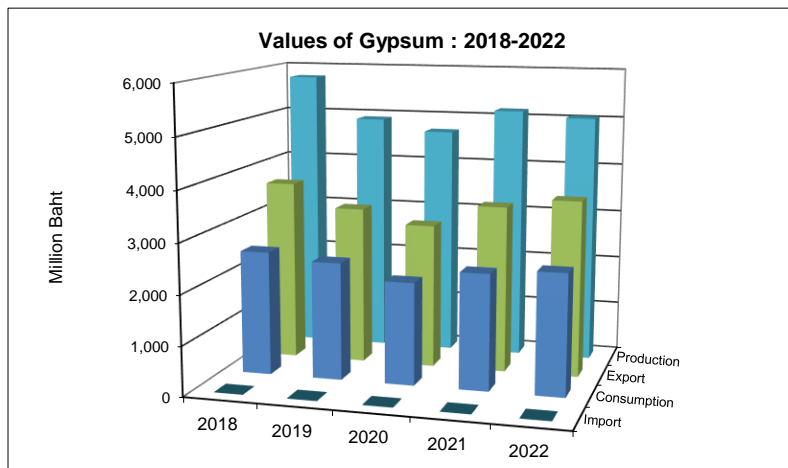
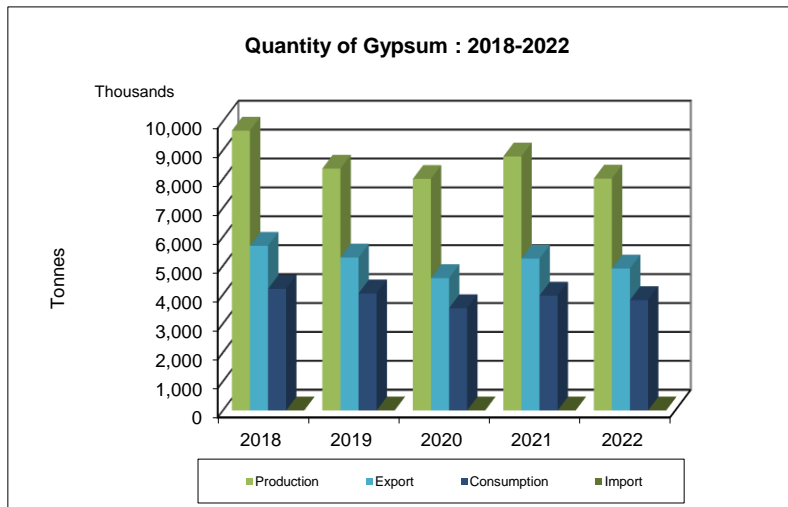
Tonnes

	2018	2019	2020	2021	2022
<u>Production</u>					
Northern Region					
Nakhon Sawan	3,868,573	4,004,497	4,045,482	4,425,073	3,957,538
Phichit	560,545	381,634	367,440	364,272	84,549
Southern Region					
Nakhon Si Thammarat	1,992,072	1,645,184	1,077,370	1,228,819	850,030
Surat Thani	3,259,239	2,336,385	2,522,001	2,770,677	3,130,808
Total Production	9,680,429	8,367,700	8,012,293	8,788,841	8,022,925
Value (Million Baht)	5,767.1	4,903.7	4,677.2	5,156.5	5,044.5
<u>Export</u>					
1. Ground					
Asia					
Cambodia	60,630	87,440	70,440	63,600	76,000
China	220	-	220	-	-
India	60	-	-	-	-
Japan	1,280	1,640	1,280	384	560
Malaysia	-	8,000	-	-	-
Myanmar	-	-	-	-	-
Taiwan	430	210	420	210	420
Total Export	62,620	97,290	72,360	64,194	76,980
Value (Million Baht)	45.1	63.6	48.6	44.8	54.2
2. Underground					
Africa					
Reunion (La Reunion)	22,000	-	-	-	-
Australia / Oceania					
Australia	8,800	8,800	8,800	-	9,900
Fiji	-	-	5,500	-	5,500
New Zealand	7,000	6,600	13,200	7,000	-

	Tonnes				
	2018	2019	2020	2021	2022
2. Unground (cont.)					
Asia					
Bangladesh	34,650	93,950	8,250	13,750	-
Brunei	17,600	-	8,800	20,680	10,010
Cambodia	264,600	233,000	177,000	235,800	189,000
China	417,490	349,950	450,600	314,150	293,936
Indonesia	1,487,025	1,196,838	1,124,925	1,391,418	1,494,214
Japan	885,310	1,069,520	969,390	779,744	619,948
Korea,South	15,000	45,500	30,000	20,000	20,800
Malaysia	959,410	1,027,330	965,030	1,137,264	1,233,370
Myanmar	-	120	-	-	-
Philippines	436,450	271,380	86,564	358,500	176,089
Singapore	11,000	-	-	-	-
Sri Lanka	89,100	85,800	-	-	-
Taiwan	83,600	86,050	96,600	142,000	132,000
Vietnam	894,810	719,550	563,858	770,984	649,365
Total Export	5,633,845	5,194,388	4,508,517	5,191,290	4,834,132
Value(Million Baht)	3,622.9	3,141.1	2,878.6	3,336.7	3,514.6
<u>Consumption</u>					
Total Consumption	4,207,417	4,051,629	3,537,593	3,970,895	3,819,486
Value (Million Baht)	2,506.2	2,370.7	2,066.0	2,334.6	2,440.4
<u>Import</u>¹					
Total Import	267	340	288	296	425
Value (Million Baht)	5.4	6.6	5.9	6.1	9.1

1 data from 'www.customs.go.th'

2018 2019 2020 2021 2022



ILMENITE

Tonnes

	2018	2019	2020	2021	2022
<u>Production</u>					
Southern Region					
Nakhon Si Thammarat	41	117	153	66	2
Total Production	41	117	153	66	2
Value (Million Baht)	0.4	1.1	1.5	0.5	0.01
<u>Export</u>					
Asia					
China	-	-	-	850	-
India	-	-	-	20,000	-
Korea,South	-	20	24	40	20
Malaysia	-	-	-	679	1,359
Philippines	8	-	-	-	-
Total Export	8	20	24	21,569	1,379
Value (Million Baht)	0.1	1.4	0.1	130.3	11.5
<u>Import</u>¹					
Total Import	1,020	1,400	421	104	160
Value (Million Baht)	14.3	17.7	5.0	4.7	4.7

0.0* denoting the amount of less than 0.05 million baht

1 data from 'www.customs.go.th'

I R O N

Tonnes

	2018	2019	2020	2021	2022
<u>Production</u>					
Central Region					
Kanchanaburi	-	-	-	11,800	8,000
Northern Region					
Nakhon Sawan	-	-	27,478	11,424	-
Northeastern Region					
Loei	-	17,660	85,761	228,570	182,000
Southern Region					
Nakhon Si Thammarat	-	-	-	73,120	-
Total Production	-	17,660	113,239	324,914	190,000
Value (Million Baht)	-	33.5	239.4	990.1	598.7
<u>Export</u>					
Asia					
China	37,582	216,643	204,639	383,842	162,931
Total Export	37,582	216,643	204,639	383,842	162,931
Value (Million Baht)	73.4	413.5	418.9	1,189.7	584.3
<u>Import¹</u>					
1.Iron Ore	5,471	712	675	2,741	2,965
Value (Million Baht)	20.9	7.6	6.1	20.1	35.7
2.Iron Pyrite	442	1,647	835	2,494	5,792
Value (Million Baht)	7.4	11.8	7.0	16.3	39.9
<u>Consumption</u>					
Total Consumption	-	192,441	61,151	228,809	100,673
Value (Million Baht)	-	435	138.2	653.7	341.1

1 data from 'www.customs.go.th'

K A O L I N

Tonnes

	2018	2019	2020	2021	2022
<u>Production</u>					
1. Kaolin (Filler)					
Northern Region					
Uttaradit	13,771	11,638	16,269	23,087	-
Total Production	13,771	11,638	16,269	23,087	-
Value (Million Baht)	26.2	22.1	30.9	43.9	-
2. Kaolin (Washed)					
Northern Region					
Lampang	-	-	-	-	-
Central Region					
Chanthaburi	1,255	1,270	795	955	842
Southern Region					
Narathiwat	5,080	6,148	6,865	4,920	5,955
Ranong	90,331	73,358	63,391	95,836	79,279
Total Production	96,666	80,776	71,051	101,711	86,076
Value (Million Baht)	92.8	77.5	68.2	97.6	82.6
3. Kaolin (Unwashed)					
Northern Region					
Lampang	206,704	266,840	332,066	443,338	384,794
Uttaradit	25,600	20,400	29,500	39,500	36,740
Central Region					
Chanthaburi	90	-	-	-	-
Kanchanaburi	165,850	249,314	151,784	196,950	262,354
Lop Buri	-	-	-	49,200	33,100
Prachin Buri	4,981	15,120	65,500	99,500	62,000
Southern Region					
Surat Thani	-	-	16,000	-	-
Total Production	403,225	551,674	594,850	828,488	778,988
Value (Million Baht)	155.2	212.4	229.0	318.9	299.9

	Tonnes				
	2018	2019	2020	2021	2022
<u>Export</u>					
1. Washed					
Asia					
Bangladesh	3,844	6,656	7,547	7,702	9,687
China	3,762	2,855	4,416	7,208	8,507
India	1,149	24	50	600	600
Indonesia	314	361	439	3,404	3,299
Japan	59	40	-	-	40
Korea, South	30	-	-	-	-
Malaysia	2,249	2,520	1,640	2,432	2,603
Philippines	600	624	960	912	936
Vietnam	3,843	4,431	3,627	6,590	7,194
Australia / Oceania					
Australia	-	-	-	1	-
Europe					
Belgium	-	-	408	-	-
Italy	-	2	-	-	-
Total Export	15,850	17,513	19,087	28,849	32,866
Value (Million Baht)	93.2	95.6	119.0	174.4	222.8
2. Kaolin (Filler)					
Asia					
China	20	-	20	-	-
Japan	-	-	-	50	-
Korea, South	24	120	39	39	39
Malaysia	-	-	-	29	-
Singapore	98	80	60	-	-
Taiwan	-	6	-	-	-
Vietnam	100	378	310	166	108
Europe					
Turkey	42	18	18	-	-
Total Export	284	602	447	284	147
Value (Million Baht)	2.7	3.7	3.1	2.0	1.5

Tonnes

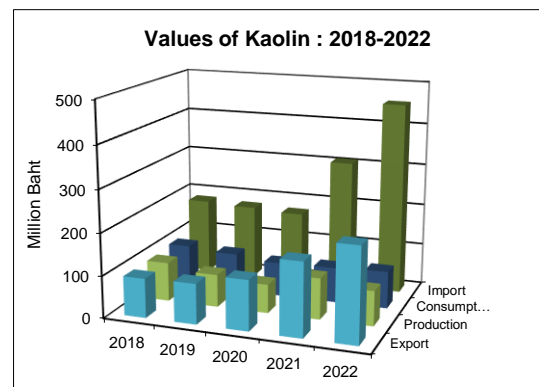
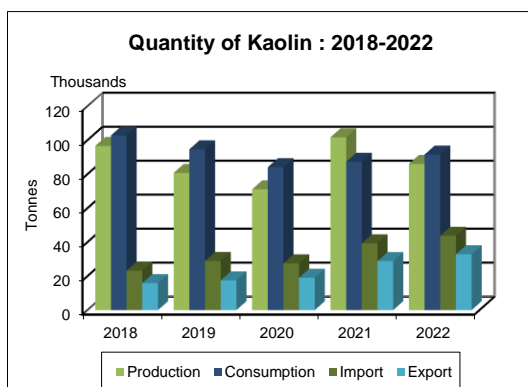
	2018	2019	2020	2021	2022
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Consumption

1. Washed	102,802	94,636	84,121	87,291	91,553
Value (Million Baht)	98.7	90.9	80.8	83.8	87.9
2. Unwashed	334,578	523,191	533,568	544,844	705,259
Value (Million Baht)	128.8	201.4	205.4	209.8	271.5
3. Filler	13,818	11,558	16,082	8,767	3,230
Value (Million Baht)	26.3	22	30.6	16.7	6.1

Import¹

1. Ceramic	23,250	28,916	27,496	39,336	43,763
Value (Million Baht)	181.0	176.0	170.5	307.2	455.7
2. Paper	4,875	5,818	9,597	8,629	10,378
Value (Million Baht)	49.6	58.2	89.7	88.6	135.7
3. Others	92,688	79,004	52,514	65,521	61,375
Value (Million Baht)	777.4	669.9	520.6	674.4	949.8



1 data from 'www.customs.go.th'

L E A D

Tonnes

	2018	2019	2020	2021	2022
<u>Import (Lead Ore)¹</u>					
Total Import	104	98	96	177	204
Value (Million Baht)	5.9	11.0	42.7	103.5	36.6

0** denoting the amount of less than 0.1 tonnes

0.0* denoting the amount of less than 0.05 million baht

1 data from 'www.customs.go.th'

LEUCOXENE

	Tonnes				
	2018	2019	2020	2021	2022
<u>Export</u>					
Asia					
China	-	-	2,000	-	-
India	-	9	-	1,274	165
Iran	-	-	224	-	-
Japan	-	21	-	-	-
Hong Kong	869	-	-	-	-
Korea, South	-	80	-	-	-
Malaysia	40	50	50	25	-
Philippines	369	383	572	308	-
Singapore	-	-	60	100	-
U.A.E.	-	200	-	-	-
Europe					
Russia	-	275	-	-	-
Ukraine	-	175	-	-	-
Total Export	1,278	1,193	2,906	1,707	165
Value (Million Baht)	45.8	40.4	70.6	65.0	15.8
<u>Import</u>¹					
Total Import	5,080	5,760	401	1,020	1,518
Value (Million Baht)	184.4	225.4	16.1	50.6	109.5

1 data from 'www.customs.go.th'

LIGNITE

Tonnes

	2018	2019	2020	2021	2022
<u>Production</u>					
Northern Region					
Lampang	14,851,950	14,071,710	13,250,574	14,221,573	13,641,283
Total Production	14,851,950	14,071,710	13,250,574	14,221,573	13,641,283
Value (Million Baht)	14,257.9	13,508.8	12,720.6	13,652.7	13,095.6
<u>Consumption</u>					
Total Consumption	14,417,889	13,973,815	13,404,786	14,166,312	14,124,565
Value (Million Baht)	13,841.2	13,414.9	12,868.6	13,599.7	13,559.6
<u>Import</u>¹					
Total Import	245,458	382,846	147,806	276,410	255,821
Value (Million Baht)	231.2	347.2	132.3	266.4	294.9

1 data from 'www.customs.go.th'

L I M E S T O N E

	2018	2019	2020	2021	2022
Tonnes					
<hr/>					
<u>Production</u>					
1. Cement Industry					
Northern Region					
Lampang	1,320,000	3,628,470	3,237,320	3,061,560	3,336,100
Nakhon Sawan	233,661	-	-	-	6,493
Central Region					
Phetchaburi	496,984	508,340	375,783	1,808,623	622,266
Sara Buri	55,825,324	54,144,189	53,845,831	65,156,662	44,855,143
Southern Region					
Nakhon Si Thammarat	6,288,717	6,992,762	7,739,671	6,069,046	6,568,575
Trang	137,816	-	-	-	-
Total Production	64,302,502	65,273,761	65,198,605	76,095,891	55,388,577
Value (Million Baht)	16,075.6	16,318.4	16,299.7	19,023.9	13,847.1
2. Other Industries					
Northern Region					
Lampang	1,127,326	1,049,308	886,749	1,086,664	1,032,979
Northeastern Region					
Nakhon Ratchasima	158,892	-	-	-	-
Central Region					
Lop Buri	-	36,400	-	-	10,000
Sara Buri	7,975,114	7,823,372	6,335,438	7,678,007	6,533,891
Total Production	9,261,332	8,909,080	7,222,187	8,764,671	7,576,870
Value (Million Baht)	2,315.3	2,227.3	1,805.5	2,191.2	1,894.2
3. Dimension Stone					
Central Region					
Ratchaburi	-	2,076	-	-	-
Sara Buri	3,765	2,011	-	-	-
Total Production	3,765	4,087	-	-	-
Value (Million Baht)	7.5	8.2	-	-	-

0.0* denoting the amount of less than 0.05 million baht

	Tonnes				
	2018	2019	2020	2021	2022
4. Construction					
Northern Region					
Chiang Mai	2,963,568	1,397,111	2,226,635	2,021,606	2,031,547
Chiang Rai	2,936,629	1,445,839	1,277,368	1,698,800	1,781,850
Kamphaeng Phet	263,400	242,136	262,782	228,040	210,796
Lampang	2,875,072	3,376,264	1,299,582	1,845,919	2,029,000
Lamphun	1,179,038	1,257,516	1,095,316	1,117,695	758,674
Nakhon Sawan	2,711,728	2,874,657	3,561,180	2,364,959	2,992,232
Nan	720,685	554,167	1,189,116	941,014	837,113
Phayao	344,072	1,465,379	314,808	431,640	488,348
Phetchabun	2,481,138	2,630,089	2,538,407	2,845,773	4,468,092
Phitsanulok	162,414	-	-	246,293	316,471
Phrae	1,199,335	1,014,231	532,709	1,181,426	1,205,717
Sukhothai	2,527,894	1,848,062	2,114,075	1,873,118	2,175,611
Tak	1,086,942	863,620	1,118,683	959,398	1,188,650
Uthai Thani	261,023	264,375	476,287	346,233	385,696
Northeastern Region					
Khon Kaen	3,269,698	3,884,946	3,093,644	3,931,861	3,949,979
Loei	7,986,729	5,464,295	7,982,245	10,583,962	10,090,239
Nakhon Ratchasima	1,732,757	2,047,867	1,894,755	2,011,202	1,807,510
Nong Bua Lamphu	2,417,411	1,405,976	2,323,963	2,128,133	1,902,066
Udon Thani	-	215,536	366,784	683,833	1,136,794
Central Region					
Cha Choeng Sao	389,073	871,138	477,426	287,248	338,967
Chai Nat	139,976	124,800	133,761	281,570	
Chanthaburi	888,283	160,616	704,832	772,136	750,064
Chon Buri	9,640,328	9,530,067	10,172,906	8,788,987	8,765,714
Kanchanaburi	2,029,787	2,266,507	1,199,094	914,080	1,556,344
Lop Buri	-	-	1,475,000	2,204,500	1,488,000
Phetchaburi	1,532,706	1,215,815	1,662,256	1,856,990	1,850,332
Prachin Buri	817,247	916,153	1,041,028	1,276,050	1,136,300
Prachuap Khiri Khar	1,225,559	962,547	1,135,028	1,228,910	1,217,726
Ratchaburi	4,213,329	4,605,151	4,437,278	4,330,038	5,241,215
Rayong	1,681,877	2,097,800	1,628,182	938,450	1,224,530
Sa Kaeo	289,688	289,854	268,700	494,049	30,317
Sara Buri	15,067,756	19,215,170	17,129,462	14,700,743	15,817,794
Suphan Buri	17,437,112	17,709,100	16,853,713	16,587,838	19,188,565

Tonnes

	2018	2019	2020	2021	2022
Southern Region					
Chumphon	1,546,697	1,504,413	848,279	1,458,176	964,363
Krabi	482,886	924,599	1,001,932	1,192,745	677,298
Nakhon Si Thammarat	5,091,528	5,909,035	6,200,119	6,898,622	6,672,040
Phangnga	919,089	729,875	1,130,074	591,159	284,000
Phatthalung	409,419	375,406	354,212	386,972	405,058
Satun	783,788	104,627	-	327,453	589,080
Songkhla	231,830	276,025	224,407	-	58,641
Surat Thani	3,683,045	2,038,865	2,834,317	3,151,744	3,244,916
Trang	560,655	570,467	499,658	369,126	371,795
Yala	1,470,848	1,207,467	1,003,339	1,110,975	1,599,989
Total Production	107,652,039	105,857,560	106,083,338	107,589,465	113,229,431
Value (Million Baht)	19,377.4	19,054.4	19,095.0	19,366.1	20,381.3
Export					
1. Construction					
Asia					
Bangladesh	150,945	377,430	246,875	684,710	842,939
Cambodia	37,000	-	-	-	-
Japan	-	-	-	0.2	0.4
Laos	-	-	-	-	61
Malaysia	5,000	-	-	-	-
Myanmar	6	-	12	-	9
Taiwan	5,000	-	-	264,441	91,462
Australia / Oceania					
Australia	31	162	108	-	-
New Caledonia	40,014	46,062	20,100	27,150	55,000
Europe					
France	-	0.2	-	-	-
Total Export	237,996	423,654	267,095	976,301	989,471
Value (Million Baht)	236.4	187.1	118.4	443.0	523.6

Tonnes

	2018	2019	2020	2021	2022
2. Other Industries					
Asia					
Cambodia	52	180	606	1,347	490
China	1,785	-	-	279	-
India	-	36	-	-	-
Japan	-	-	1	-	-
Laos	20	100	2,380	409	379
Malaysia	772	15,256	-	-	-
Myanmar	125	308	266	437	15
Singapore	6	-	-	-	-
Vietnam	-	-	-	-	12
Australia / Oceania					
Australia	316	429	613	2,118	2,933
South America					
Chile	425	500	-	-	-
Colombia	150	-	-	-	-
Total Export	3,651	16,809	3,865	4,589	3,829
Value (Million Baht)	8.7	30.9	8.4	14.1	13.4

Consumption

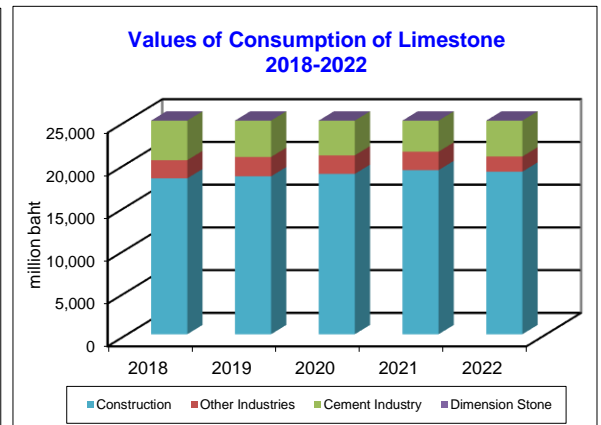
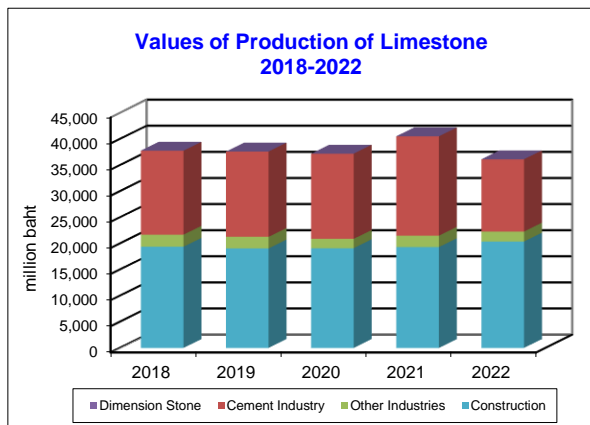
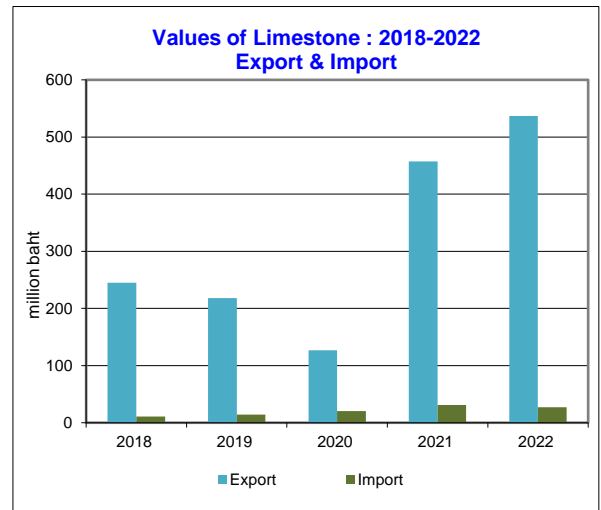
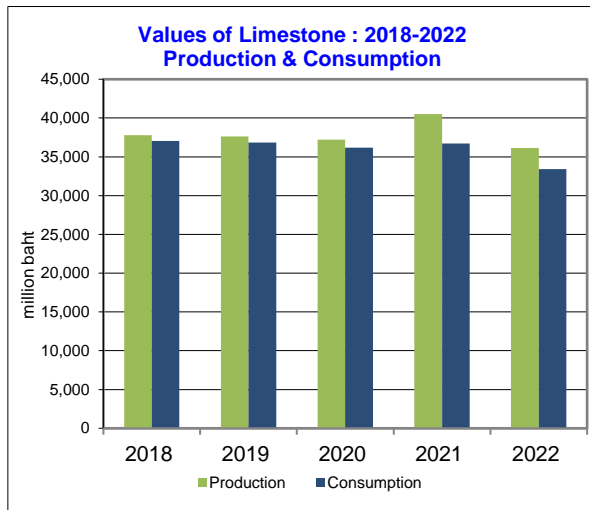
1. Cement Industry	66,707,813	64,324,112	60,942,224	61,305,081	50,523,555
Value (Million Baht)	16,677.0	16,081.0	15,235.6	15,326.3	12,630.9
2. Construction	101,374,147	102,670,780	104,245,512	106,695,518	105,680,134
Value (Million Baht)	18,247.3	18,480.7	18,764.2	19,205.2	19,022.4
3. Dimension Stone	1,549	4,536	-	848	-
Value (Million Baht)	3.1	9.1	-	3.8	-
4. Other Industries	8,487,771	9,042,913	8,675,260	8,644,824	7,086,510
Value (Million Baht)	2,121.9	2,260.7	2,168.8	2,161.2	1,771.6

Tonnes

2018 2019 2020 2021 2022

Import¹

Total Import	4,054	1,527	1,807	2,515	2,015
Value (Million Baht)	10.9	14.2	20.4	31.3	27.3



1 data from 'www.customs.go.th'

M A N G A N E S E

	Tonnes				
	2018	2019	2020	2021	2022
<u>Production</u> (Metallurgical grade)					
Northern Region					
Chiang Mai	500	4,800	1,400	-	660.0
Central Region					
Sa Kaeo	-	-	-	-	-
Southern Region					
Narathiwat	3,500	-	-	-	-
Total Production	4,000	4,800	1,400	-	660
Value (Million Baht)	21.2	25.5	7.4	-	3.5
<u>Export</u> (Metallurgical grade)					
Asia					
China	73,638	144,199	95,807	25,896	14,771
Hong Kong	0**	0**	-	-	-
Singapore	0**	0**	-	-	-
Africa					
Kenya	0.1	-	-	-	-
Total Export	73,638	144,199	95,807	25,896	14,771
Value (Million Baht)	115.0	397.3	257.9	78.8	40.7
<u>Consumption</u>					
Total Consumption	2,310	2,016	884	1,200	1,150
Value (Million Baht)	12.3	10.7	4.7	6.4	6.1
<u>Import</u> (Manganese Ore)¹					
Total Import	71,362	135,616	73,199	21,709	20,569
Value (Million Baht)	108.0	203.8	117.8	40.1	39.1

0** denoting the amount of less than 0.1 tonnes

1 data from 'www.customs.go.th'

MARBLE

Cubic metre

	2018	2019	2020	2021	2022
<u>Production</u>					
1. Dimension Stone					
Northern Region					
Kamphaeng Phet	-	-	649	1,207	211
Lamphun	-	-	190	-	-
Sukhothai	331	-	-	-	-
Northeastern Region					
Nakhon Ratchasima	1,063	1,313	-	-	-
Central Region					
Sara Buri	6,286	10,913	5,304	3,082	2,892
Total Production	7,680	12,226	6,143	4,289	3,103
Value (Million Baht)	34.6	55.3	29.2	20.4	14.7
2. Fragment					
Northern Region					
Kamphaeng Phet	278,735	245,784	174,260	224,263	138,769
Lamphun	-	-	2,280	-	-
Uttaradit	916,706	66,685	-	304,344	68,128
Total Production*	1,195,441	312,469	176,540	528,607	206,896
Value (Million Baht)	621.6	162.5	91.8	274.9	107.6

Cubic metre

	2018	2019	2020	2021	2022
<u>Consumption</u>					
1. Dimension Stone*	7,131*	20,344*	20,773*	7,134*	5,123*
Value (Million Baht)	32.1	91.5	98.7	33.9	24.3
2. Fragment*	1,283,400*	2,561,204*	341,324*	484,143*	149,126*
Value (Million Baht)	667.4	1,331.8	177.5	251.8	77.5
<u>Import¹</u>					
Total Import	54,231	45,128	22,066	20,099	33,338
Value (Million Baht)	669.2	598.7	319.7	328.9	672.7

1 data from 'www.customs.go.th'

* Cubic Meter

M A R L

	Tonnes				
	2018	2019	2020	2021	2022
<u>Production</u>					
Northern Region					
Phrae	-	8,000	-	-	13,000
Central Region					
Sara Buri	28,707	26,575	3,000	4,200	4,500
Total Production	28,707	34,575	3,000	4,200	17,500
Value (Million Baht)	2.4	2.9	0.3	0.4	1.5
<u>Consumption</u>					
Total Consumption	41,451	26,259	19,374	28,572	53,889
Value (Million Baht)	3.5	2.2	1.6	2.4	4.6

M I C A

Tonnes

	2018	2019	2020	2021	2022
<u>Import</u>¹					
Total Import	6,162	5,835	5,118	7,072	5,569
Value (Million Baht)	164.8	150.7	130.1	180.4	174.3

1 data from 'www.customs.go.th'

MONAZITE

	Tonnes				
	2018	2019	2020	2021	2022
<u>Export</u>					
Asia					
China	655	108	42	3,374	10,080
Hong Kong	210	-	-	-	-
Malaysia	-	54	-	-	-
Total Export	865	162	42	3,374	10,080
Value (Million Baht)	85.7	13.4	3.1	523.8	2,923.9

P E R L I T E

Tonnes

	2018	2019	2020	2021	2022
<u>Production</u>					
Central Region					
Lop Buri	5,600	15,000	3,500	3,500	2,500
Total Production	5,600	15,000	3,500	3,500	2,500
Value (Million Baht)	8.4	22.5	5.2	5.2	3.7
<u>Consumption</u>					
Total Consumption	5,500	5,000	3,000	3,666	4,150
Value (Million Baht)	8.3	7.5	4.5	5.5	6.2

P H O S P H A T E

Tonnes

	2018	2019	2020	2021	2022
<u>Production</u>					
Central Region					
Kanchanaburi	-	-	-	-	-
Total Production	-	-	-	-	-
Value (Million Baht)	-	-	-	-	-
<u>Consumption</u>					
Total Consumption	590	-	-	-	-
Value (Million Baht)	0.2	-	-	-	-
<u>Import</u>¹					
1. Ground	0**	-	-	-	9
Value (Million Baht)	0.0**	-	-	-	1.4
2. Unground	1	1	1	1	2
Value (Million Baht)	0.5	0.5	0.8	0.0*	0.0*

0** denoting the amount of less than 0.1 tonnes

0.0* denoting the amount of less than 0.05 million baht

1 data from 'www.customs.go.th'

PYROPHYLLITE

Tonnes

	2018	2019	2020	2021	2022
<u>Production</u>					
Central Region					
Sara Buri	50,920	6,500	31,522	26,030	30,369
Total Production	50,920	6,500	31,522	26,030	30,369
Value (Million Baht)	30.6	3.9	18.9	15.6	18.2
<u>Export</u>					
Asia					
China	-	-	-	14	-
Indonesia	1,426	1,680	1,752	3,144	2,536
Malaysia	-	150	-	-	5
Vietnam	180	1,360	3,192	3,020	2,780
Australia / Oceania					
New Zealand	-	25	-	-	-
Total Export	1,606	3,215	4,944	6,178	5,321
Value (Million Baht)	6.3	12.3	18.8	24.0	23.2
<u>Consumption</u>					
Total Consumption	32,374	33,061	27,559	26,172	31,794
Value (Million Baht)	19.4	19.8	16.5	15.7	19.1
<u>Import</u>¹					
Total Import	140	20	120	200	3,360
Value (Million Baht)	0.9	0.1	0.8	1.4	22.7

0.0* denoting the amount of less than 0.05 million baht

1 data from 'www.customs.go.th'

QUARTZ

Tonnes

	2018	2019	2020	2021	2022
<u>Production</u>					
1. Underground					
Central Region					
Kanchanaburi	66,802	14,000	31,500	5,000	-
Prachuap Khiri Khan	1,000	-	-	-	-
Total Production	67,802	14,000	31,500	5,000	-
Value (Million Baht)	50.9	10.5	23.6	3.8	-
<u>Consumption</u>					
1. Underground	15,818	19,290	31,500	23,000	-
Value (Million Baht)	11.9	14.5	23.6	17.3	-
<u>Import</u>¹					
Total Import	16,867	18,576	19,855	75,122	109,729
Value (Million Baht)	143.3	130.2	155.2	637.6	1,152.3

1 data from 'www.customs.go.th'

RHYOLITE

Tonnes

	2018	2019	2020	2021	2022
<u>Production</u>					
Central Region					
Sara Buri	637,499	1,153,507	778,997	597,777	-
Total Production	637,499	1,153,507	778,997	597,777	-
Value (Million Baht)	95.6	173.0	116.8	89.7	-
<u>Consumption</u>					
Total Consumption	658,032	906,240	799,343	530,680	-
Value (Million Baht)	98.7	135.9	119.9	79.6	-

R O C K S A L T

Tonnes

	2018	2019	2020	2021	2022
<u>Production</u>					
Northeastern Region					
Nakhon Ratchasima	1,487,364	1,580,390	1,439,877	1,563,970	1,737,090
Total Production	1,487,364	1,580,390	1,439,877	1,563,970	1,737,090
Value (Million Baht)	2,900.4	3,081.8	2,807.8	3,049.7	3,387.3
<u>Consumption</u>					
Total Consumption	1,491,766	1,528,522	1,465,622	1,556,196	1,748,267
Value (Million Baht)	2,908.9	2,980.6	2,858.0	3,034.6	3,409.1
<u>Import</u>¹					
Total Import		963	414	365	174
Value (Million Baht)		7.2	3.1	4.6	3.4

1 data from 'www.customs.go.th'

R U T I L E

Tonnes

	2018	2019	2020	2021	2022
<u>Export</u>					
Asia					
China	100	-	-	-	-
India	264	-	-	-	-
North America					
Mexico	-	29	-	-	-
Total Export	364	29	-	-	-
Value (Million Baht)	7.8	1.0	-	-	-
<u>Import¹</u>					
Total Import	2,278	4,937	4,687	2,001	2,777
Value (Million Baht)	82.8	210.5	214.6	113.4	222.0

1 data from 'www.customs.go.th'

S A N D S T O N E

Tonnes

	2018	2019	2020	2021	2022
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Production

1. Dimension Stone

Northeastern Region

Nakhon Ratchasima	826	-	-	640	950
Total Production	826	-	-	640	950
Value (Million Baht)	0.6	-	-	1.8	2.6

2. Industrial Rock

Northern Region

Lampang	-	-	-	-	28,408
Uttaradit	61,008	49,468	10,541	25,905	110,748

Northeastern Region

Bueng Kan	-	29,500	21,799	126,633	147,900
Mukda Han	25,500	23,985	-	-	-
Nakhon Phanom	236,898	352,422	239,760	234,618	157,310
Nakhon Ratchasima	-	550	680	40	-
Nong Khai	-	-	-	-	31,000
Ubon Ratchathani	303,934	501,063	774,551	504,335	710,818

Southern Region

Phangnga	135,189	252,100	149,398	150,200	37,620
Trang	-	-	21,060	89,856	70,200

Total Production	762,529	1,209,088	1,217,789	1,131,587	1,294,004
Value (Million Baht)	114.4	181.4	182.7	169.7	194.1

Export (industrial rock)

Asia

Bangladesh	5,000	-	-	-	-
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Total Export	5,000	-	-	-	-
Value (Million Baht)	2.0	-	-	-	-

Consumption

1. Dimension Stone	1,035	705	-	680	350
Value (Million Baht)	0.7	0.8	-	2	1

2. Industrial Rock	554,836	1,140,380	995,425	1,157,139	1,383,636
Value (Million Baht)	83.2	171.1	149.3	173.6	207.5

	Tonnes				
	2018	2019	2020	2021	2022
<u>Import¹</u>					
Dimension Stone	8,023	8,097	1,882	650	784
Value (Million Baht)	17.9	12.5	5.6	7.9	10.9

1 data from 'www.customs.go.th'

S E R P E N T I N E

Tonnes

	2018	2019	2020	2021	2022
<u>Production (Industrial Rock)</u>					
Southern Region					
Narathiwat	29,384	117,473	5,013	-	35,000
Total Production	29,384	117,473	5,013	-	35,000
Value (Million Baht)	4.4	17.6	0.8	-	5.2
<u>Export (industrial rock)</u>					
Asia					
Taiwan	-	-	11,000	-	-
Total Export	-	-	11,000	-	-
Value (Million Baht)	-	-	7.7	-	-
<u>Consumption</u>					
Total Consumption	11,892	-	-	-	25,000
Value (Million Baht)	1.8	-	-	-	4
<u>Import¹</u>					
Dimension Stone	-	27	404	55	27
Value (Million Baht)	-	0.1	5.1	0.7	0.2

1 data from 'www.customs.go.th'

S H A L E

Tonnes

	2018	2019	2020	2021	2022
<u>Production</u>					
Northern Region					
Lampang	-	10,300	6,500	5,000	108,125
Central Region					
Sara Buri	6,715,746	4,942,783	3,216,330	15,574,967	3,652,981
Southern Region					
Nakhon Si Thammarat	-	-	-	18,000	15,000
Total Production	6,715,746	4,953,083	3,222,830	15,597,967	3,776,106
Value (Million Baht)	1,678.9	1,238.3	805.7	3,899.5	944.0
<u>Consumption</u>					
Total Consumption	5,015,765	5,146,264	3,269,369	2,997,327	2,907,473
Value (Million Baht)	1,253.9	1,286.6	817.3	749.3	726.9

STRUVERITE

Tonnes

	2018	2019	2020	2021	2022
<u>Export</u>					
Asia					
China	128	-	31	-	-
Hong Kong	-	-	-	-	-
Total Export	128	-	31	-	-
Value (Million Baht)	41.3	-	8	-	-

T A L C

Tonnes

	2018	2019	2020	2021	2022
<u>Production</u>					
Northern Region					
Uttaradit	7,756	8,064	6,624	5,920	-
Total Production	7,756	8,064	6,624	5,920	-
Value (Million Baht)	4.7	4.8	4.0	3.6	-
<u>Consumption</u>					
Total Consumption	7,844	7,962	6,128	2,504	-
Value (Million Baht)	4.7	4.8	3.7	1.5	-
<u>Import</u>¹					
Total Import	141,898	145,985	119,903	143,640	134,829
Value (Million Baht)	1,643.5	1,627.7	1,219.7	1,645.9	1,731.7

1 data from 'www.customs.go.th'

TANTALUM

Tonnes

	2018	2019	2020	2021	2022
<u>Import (Tantalite)¹</u>					
Total Import	685	495	550	843	749
Value (Million Baht)	1,188.0	695.6	691.5	1,244.9	1,615.0

1 data from 'www.customs.go.th'

TIN

Tonnes

	2018	2019	2020	2021	2022
<u>Production</u>					
1. Production of Tin Concentrates by changwat					
Northern Region					
Chiang Mai	57	55	110	162	84
Southern Region					
Nakhon Si Thammarat	16	18	205	189	48
Ranong	2	-	-	-	-
Total Production	75	73	315	351	132
Value (Million Baht)	35.0	30.4	118.4	236.7	109.2
2. Production of Tin Concentrates by Mining Methods.					
Open Pitting	73	73	315	351	132
Dulang Washing	2	-	-	-	-
Total Production	75	73	315	351	132
Value (Million Baht)	35.0	30.4	118.4	236.7	109.2
3. Percentage of Tin Production by Mining Methods.					
Open Pitting	97.3	100	100.0	100.0	100.0
Dulang Washing	2.7	-	-	-	-
4. Production of Primary Tin Metal					
Total Production	10,721	10,956	11,265	12,062	9,490
Value (Million Baht)	5,826.2	6,385.6	6,008.2	11,078.1	10,444.0

Tonnes

	2018	2019	2020	2021	2022
<u>Export</u>					
1. Tin Metal					
Africa					
Egypt	6	-	-	-	15
Asia					
Bangladesh	10	220	55	-	220
Cambodia	-	1	-	1	-
China	-	100	525	-	-
Hong Kong	79	34	16	-	-
Israel	-	-	1	-	-
Japan	2,795	2,762	2,073	3,462	1,987
Korea, South	1,568	1,253	1,828	2,020	1,859
Malaysia	2	37	5	9	8
Pakistan	154	4	-	6	14
Philippines	6	13	27	38	9
Singapore	56	36	-	30	-
Sri Lanka	1	-	-	-	-
Singapore	-	-	17	-	-
Taiwan	557	547	812	724	392
U.A.E.	24	38	14	31	30
Vietnam	-	43	122	11	10
Switzerland	-	-	-	-	0.1
Australia / Oceania					
Australia	99	111	107	123	193
Europe					
Austria	2	-	-	-	-
Belgium	157	132	397	246	241
France	150	125	-	-	-
Germany	460	409	438	444	409
Italy	50	95	140	190	119
Netherlands	525	1,025	1,500	1,001	825
Portugal	-	-	1	-	-
Spain	595	900	875	275	-
Russia	-	-	1	-	-
Switzerland	-	-	0.1	-	-
Turkey	-	26	-	1	-
U.K.	322	317	380	533	435
North America					
U.S.A.	494	630	167	436	282
Canada	-	-	45	-	-
South America					
Ecuado	-	5	-	-	-
Total Export	8,112	8,862	9,547	9,580	7,047
Value (Million Baht)	5,424.9	5,411.1	5,373.6	10,048.1	8,523.8

Tonnes

	2018	2019	2020	2021	2022
2. Tin-Lead Alloy					
Asia					
Korea, South	0.5	-	-	-	-
Malaysia	0.3	0.2	-	-	-
Philippines	0.5	1.4	-	-	-
Europe					
Belgium	11	-	-	-	-
Spain	0.1	-	-	-	-
Total Export	12	2	-	-	-
Value (Million Baht)	5.2	1.1	-	-	-
3. Final Slag					
Europe					
Germany	526	1,716	797	321	2,414
Total Export	526	1,716	797	321	2,414
Value (Million Baht)	42.9	81.0	27.9	15.6	188.2
4. Bismuth Slime					
Asia					
Hong Kong	-	-	6.0	-	-
Korea, South	3	710	-	-	4
Total Export	3	710	6	-	4
Value (Million Baht)	4.6	10.6	25.6	-	16.1
5. Copper Dross					
Europe					
Belgium	12	21	-	-	-
Total Export	12	21	-	-	-
Value (Million Baht)	4.8	10.1	-	-	-

Tonnes

	2018	2019	2020	2021	2022
6. Hard Head					
Asia					
Bangladesh	138	341	48	-	-
Europe					
Belgium	138	341	608	891	1,278
Total Export	276	341	656	891	1,278
Value (Million Baht)	21.7	30.1	84.4	233.2	390.0
<u>Consumption</u>					
Primary Tin Metal	2,545	1,945	1,756	2,529	2,409
Value (Million Baht)	1,545.2	1,137.9	934.0	2,323.6	2,583.1
<u>Import</u>¹					
Tin ore	12,261	10,559	16,136	18,164	12,804
Value (Million Baht)	4,494.3	3,586.3	4,782.2	9,967.2	8,200.0

1 data from 'www.customs.go.th'

T R A V E R T I N E

Tonnes

	2018	2019	2020	2021	2022
<u>Production</u>					
Central Region					
Sara Buri	1,628	2,494	696	500	600
Total Production	1,628	2,494	696	500	600
Value (Million Baht)	3.3	8.5	3.1	2.2	2.7
<u>Consumption</u>					
Total Consumption	1,326	2,493	981	450	600
Value (Million Baht)	2.7	8.5	4.4	2.0	2.7

TUNGSTEN

Tonnes

	2018	2019	2020	2021	2022
<u>1. Wolfram</u>					
<u>Production</u>					
Northern Region					
Phrae	79	1	-	-	-
Total Production	79	1	-	-	-
Value (Million Baht)	24.9	0.4	-	-	-

Tonnes

	2018	2019	2020	2021	2022
<u>2. Scheelite</u>					
<u>Production</u>					
Northern Region					
Chiang Mai	48	41	110	113	116
Total Production	48	41	110	113	116
Value (Million Baht)	15.2	16.3	43.1	56.6	66.2
<u>Export</u>					
North America					
U.S.A.	66	36	-	-	144
Total Export	66	36	-	-	144
Value (Million Baht)	30.2	17.3	-	-	78.7

X E N O T I M E

	2018	2019	2020	2021	2022
					Tonnes
<hr/>					
<u>Export</u>					
Asia					
China	-	-	-	34	34
Total Export	-	-	-	34	34
Value (Million Baht)	-	-	-	2.5	2.5
<u>Import</u>					
Total Import	-	-	-	-	25
Value (Million Baht)	-	-	-	-	0.2
<hr/> <hr/>					

1 data from 'www.customs.go.th'

ZINC

Tonnes

	2018	2019	2020	2021	2022
Export					
1. Zinc Metal					
Asia					
Cambodia	33	0.1	-	0**	-
China	-	-	-	243	846
India	79	47	25	48	-
Indonesia	11	1	548	0.3	348.6
Laos	28	4	23	0.7	5
Malaysia	65	-	-	-	226
Myanmar	-	200	13	-	8
Singapore	0.5	-	-	0**	99
Sri Lanka	0**	0**	-	-	-
Taiwan	2,076	-	646	-	-
Vietnam	31	333	393	187	1,550
Europe					
Belgium	-	50	-	-	-
South America					
Colombia	-	8	-	-	-
Total Export	2,324	643	1,648	480	3,082
Value (Million Baht)	234.1	46.2	99.3	29.0	282.3

0** denoting the amount of less than 0.1 tonnes

Tonnes

	2018	2019	2020	2021	2022
2. Zinc Alloy					
Asia					
China	-	-	26	1,219	-
India	699	474	207	457	74
Indonesia	265	648	770	577	1,373
Malaysia	-	36	-	-	-
Taiwan	24	-	45	24	46
Total Export	988	1,158	1,048	2,277	1,493
Value (Million Baht)	83.4	93.8	72.7	193.2	184.5
<u>Import (Zinc Ore)¹</u>					
Total Import	318	3,414	3,265	7,673	16,595
Value (Million Baht)	2.6	12.6	12.1	23.6	88.3

0** denoting the amount of less than 0.1 tonnes

1 data from 'www.customs.go.th'

Z I R C O N

Tonnes

	2018	2019	2020	2021	2022
<u>Export</u>					
Asia					
China	1,400	2,104	-	-	-
Hong Kong	2,200	-	-	-	-
India	25	-	-	-	-
Malaysia	-	-	84	-	-
Australia / Oceania					
Australia	78	-	-	-	-
Total Export	3,703	2,104	84	-	-
Value(Million Baht)	135.7	69.7	1.3	-	-
<u>Import (Zirconium Ore)¹</u>					
Total Import	43,565	6,416	8,368	19,034	5,224
Value (Million Baht)	906.3	324.4	366.6	567.7	428.2

1 data from 'www.customs.go.th'

NUMBER OF ACTIVE MINES BY KIND OF MINERALS

	2018	2019	2020	2021	2022
Andesite	3	3	3	2	2
Antimony	0	0	0	0	0
Ball clay	3	3	2	3	3
Barite	5	6	5	6	3
Basalt (industrial rock)	41	39	39	38	35
Calcite	13	13	12	12	11
Cement clay	28	25	25	27	26
Ceramic clay	7	7	8	7	9
Dickite	0	0	0	0	1
Dolomite	19	16	18	14	11
Feldspar	14	13	12	12	12
Fluorite	3	2	2	4	6
Glass sand	18	18	20	22	28
Gneiss	1	1	0	0	0
Gold	0	0	0	0	0
Granite (dimension stone)	12	7	4	3	4
Granite (industrial rock)	24	28	28	29	25
Graywacke	1	1	3	1	2
Gypsum	45	35	37	35	37
Iron ore	5	5	6	6	6
Kaolin	18	15	18	18	15
Lignite	3	2	1	1	1
Limestone (cement)	13	14	13	13	14
Limestone (construction)	198	191	196	191	190
Limestone (dimension)	1	1	1	1	0
Limestone (others)	12	10	9	9	9
Manganese	2	2	2	1	3
Marble	14	12	8	7	5
Marl	4	4	4	4	5
Perlite	4	3	2	2	2
Phosphate	0	0	0	0	0

NUMBER OF ACTIVE MINES BY KIND OF MINERALS

	2018	2019	2020	2021	2022
Pyrophyllite	2	2	2	2	3
Quartz	4	2	1	1	0
Rhyolite (industrial rock)	1	1	1	1	0
Rock salt	5	6	7	7	7
Sand stone (dimension)	1	1	0	2	0
Sand stone (industrial rock)	9	10	10	11	11
Shale	6	6	6	6	5
Talc	1	1	1	1	0
Tin & Tin-Tungsten	2	2	2	2	2
Travertine	2	2	1	1	1
Wolfram	1	1	1	0	1
Zinc	-	-	-	-	-
Total	545	510	510	502	495

NUMBER OF WORKERS EMPLOYED IN MINES
BY KIND OF MINERAL

	2018	2019	2020	2021	2022
Andesite	29	25	25	11	12
Antimony	-	-	-	-	-
Ball clay	80	78	75	70	78
Barite	105	87	61	59	28
Basalt (industrial rock)	982	956	937	895	777
Calcite	155	182	153	272	149
Cement clay	316	347	271	289	330
Ceramic clay	117	93	143	127	145
Dolomite	296	257	332	275	231
Feldspar	247	188	194	206	218
Fluorite	177	53	67	193	119
Glass sand	124	117	125	157	153
Gneiss	7	8	-	-	-
Granite (dimension)	126	108	80	36	52
Granite (industrial rock)	612	705	759	770	846
Graywacke	16	14	55	14	14
Gypsum	900	692	997	812	1,052
Iron ore	85	73	130	113	138
Kaolin	209	204	201	207	191
Lignite	1,641	1,561	1,624	1,464	1,624
Limestone (cement)	1,046	1,099	1,054	775	851
Limestone (construction)	4,241	4,399	4,784	4,661	4,668
Limestone (dimension)	4	4	4	4	0
Limestone (others)	302	315	282	241	242
Manganese	24	24	12	5	9
Marble	274	264	179	100	62
Marl	18	25	21	7	20
Perlite	55	49	11	10	7
Phosphate	-	-	-	-	-

**NUMBER OF WORKERS EMPLOYED IN MINES
BY KIND OF MINERAL**

	2018	2019	2020	2021	2022
Pyrophyllite	7	7	7	7	13
Quartz	79	29	15	7	0
Rhyolite (industrial rock)	47	47	47	48	0
Rock salt	133	133	498	192	213
Sand stone (dimension)	6	7	-	17	5
Sand stone (industrial rock)	107	148	126	106	101
Shale	100	88	92	83	83
Talc	2	4	3	3	0
Tin & Tin-Tungsten	185	165	162	162	133
Travertine	15	14	5	8	10
Wolfram	46	71	59	0	0
Zinc	-	-	-	-	-
					558
Total	12,915	12,640	13,590	12,406	12,574

Mineral Production of Thailand 2018 - 2022

*Quantity : Tonnes
Value : Million Baht*

Mineral	2018		2019		2020		2021		2022	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
<u>Mineral Fuels and Energy</u>										
Lignite	14,851,950	14,257.9	14,071,710	13,508.8	13,250,574	12,720.6	14,221,573	13,652.7	13,641,283	13,095.6
Total		14,257.9		13,508.8		12,720.6		13,652.7		13,095.6
%		18.50		18.10		17.48		16.52		17.71
<u>Iron and Ferro Alloy</u>										
Iron ore	-	-	17,660	33.5	113,239	239.4	324,914	990.1	190,000	598.7
Manganese (metallurgical grade)	4,000	21.2	4,800	25.5	1,400	7.4	-	-	660	3.5
Tungsten										
- Scheelite	48	15.2	41	16.3	110	43.1	113	56.6	116	66.2
- Wolfram	79	24.9	1	0.4	-	-	-	-	-	-
Total		61.3		75.7		289.9		1,046.7		668.4
%		0.08		0.10		0.40		1.27		0.90
<u>Base Metals</u>										
Tin concentrates	75	35.0	73	30.5	315	118.4	351	236.6	132	109.2
Zinc ore	-	-	-	-	-	-	-	-	-	-
Total		35.0		30.5		118.4		236.6		109.2
%		0.05		0.04		0.16		0.29		0.15
<u>Light Metals and Rare Earth</u>										
Ilmenite	41	0.4	117	1.1	153	1.5	66	0.5	2	0.0**
Total		0.4		1.1		1.5		0.5		
%		-		-		-		-		0.01

Mineral Production of Thailand 2018 - 2022

Quantity : Tonnes
Value : Million Baht

Mineral	2018		2019		2020		2021		2022	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
<u>Cement Industrial Minerals</u>										
Anhydrite	1,517,228	904.2	1,419,587	838.7	1,266,826	740.7	1,614,157	949.7	1,824,637	1,157.9
Cement Clay	5,837,807	525.4	7,455,441	671.0	7,205,870	648.5	6,974,405	627.7	4,751,182	427.6
Gypsum (unground)	9,680,429	5,767.1	8,367,700	4,903.7	8,012,293	4,677.2	8,788,841	5,156.5	8,022,925	5,044.5
Limestone	64,302,502	16,075.6	65,273,761	16,318.4	65,198,605	16,299.7	76,095,891	19,023.9	55,388,577	13,847.1
Marl	28,707	2.4	38,575	3.3	3,000	0.3	4,200	0.4	17,500	1.5
Shale	6,715,747	1,678.9	4,953,083	1,238.3	3,222,830	805.7	15,597,967	3,899.5	3,776,106	944.0
Total		24,953.6		23,973.4		23,172.1		29,657.7		21,422.6
%		32.37		32.13		31.84		35.89		28.98
<u>Ceramic Industrial Minerals</u>										
Ball clay	579,565	318.8	332,786	183.0	25,777	14.2	84,895	46.7	90,904	50.0
Ceramic Clay	485,853	267.2	378,086	207.9	403,677	222.0	744,295	409.4	819,699	450.8
Dolomite	3,440,193	1,892.1	2,941,685	1,617.9	3,772,735	2,075.0	3,957,939	1,998.8	3,929,716	1,761.8
Feldspar										
- Sodium (ground)	-	-	-	-	6,204	8.7	5,100	7.1	48,807	68.3
- Sodium (unground)	1,117,803	782.5	1,253,143	877.2	1,099,140	769.4	1,341,897	939.3	1,905,111	1,333.6
Glass sand	1,557,218	1,541.6	1,224,758	1,212.5	1,252,909	1,240.4	1,322,614	1,309.4	1,425,403	1,411.2
Kaolin										
- Filler	13,771	26.2	11,638	22.1	16,269	30.9	23,087	43.9	-	-
- Unwashed	403,225	155.2	960,194	369.7	594,850	229.0	828,488	318.9	778,988	299.9
- Washed	96,666	92.8	80,776	77.5	71,051	68.2	101,711	97.6	86,076	82.6
Quartz										
- Unground	67,802	50.9	55,341	41.5	31,500	23.6	5,000	3.8	-	-
Total		5,127.3		4,609.3		4,681.4		5,174.9		5,458.2
%		6.65		6.18		6.43		6.26		7.38

Mineral Production of Thailand 2018 - 2022

*Quantity : Tonnes
Value : Million Baht*

Mineral	2018		2019		2020		2021		2022	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
<u>Dimension Stone</u>										
Gneiss	1,180	4.7	-	-	-	-	-	-	-	-
Granite	5,114*	32.2	18,668*	117.3	2,386*	12.4	4,697*	24.4	7,283*	37.9
Limestone	3,765	7.5	4,087	8.2	-	-	-	-	-	-
Marble	7,681*	34.6	12,226*	55.3	6,143*	29.2	4,289*	20.4	3,103*	14.7
Sandstone	826	0.6	-	-	-	-	640	1.8	950	2.6
Serpentine	29,384	4.4	117,473	17.6	5,013	0.8	-	-	35,000	5.3
Travertine	1,628	3.3	2,494	8.5	696	3.1	500	2.3	600	2.7
Total		87.3		206.9		45.5		48.9		63.2
%		0.11		0.28		0.06		0.06		0.09
<u>Industrial Rock</u>										
Andesite	1,264,963	252.9	985,751	197.2	2,428,606	485.7	1,717,330	343.5	821,738	164.4
Basalt	14,301,581	2,860.3	13,482,817	2,696.6	13,674,328	2,734.8	14,051,920	2,810.4	13,388,582	2,677.7
Granite	11,280,995	2,256.2	13,819,507	2,763.9	14,760,209	2,952.0	14,508,620	2,901.7	13,295,045	2,659.0
Graywacke	1,276,366	255.3	1,432,288	286.5	1,407,775	281.6	1,728,918	345.8	1,087,280	217.5
Limestone	107,652,039	19,377.4	105,857,560	19,054.4	106,079,091	19,094.2	107,589,465	19,366.1	113,229,435	20,381.3
Marble (fragment)	1,195,441*	621.6	312,469*	162.5	176,540*	91.8	528,607*	274.9	206,896*	107.6
Perlite	5,600	8.4	15,000	22.5	3,500	5.3	3,500	5.3	2,500	3.8
Quartzite	-	-	-	-	-	-	-	-	-	-
Rhyolite	637,499	95.6	1,153,507	173.0	778,997	116.8	597,777	89.7	-	-
Sandstone	762,529	114.4	1,209,088	181.4	1,217,789	182.7	1,131,587	169.7	1,294,004	194.1
Total		25,842.1		25,538.0		25,944.9		26,307.1		26,405.4
%		33.53		34.23		35.65		31.83		35.72

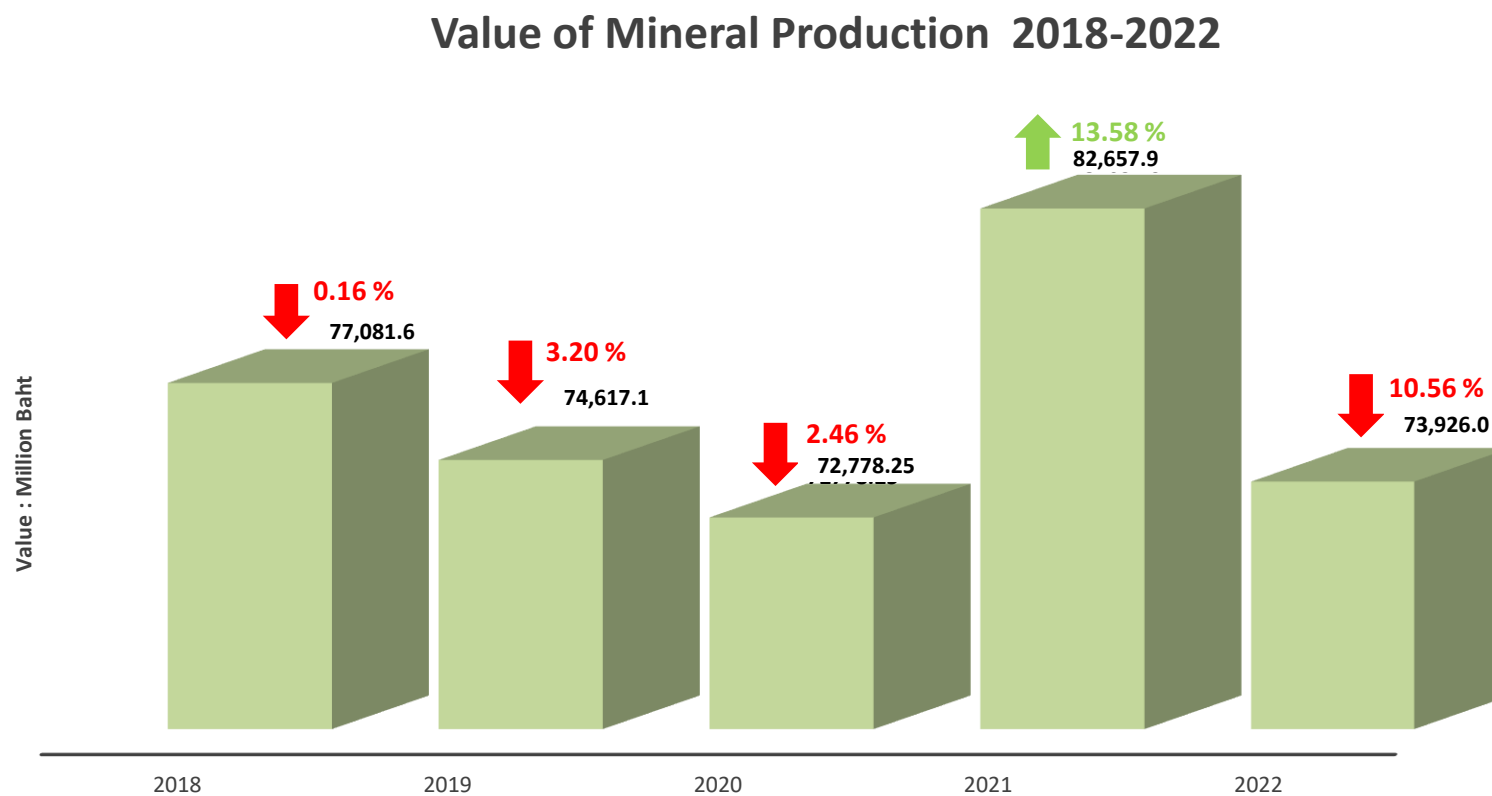
Mineral Production of Thailand 2018 - 2022

Quantity : Tonnes
Value : Million Baht

Mineral	2018		2019		2020		2021		2022	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
Other Industrial Minerals										
Barite										
- Chemical grade (ground)	1,647	15.9	1,757	17.0	1,260	12.2	1,218	11.8	963	9.3
- Drilling mud (ground)	52,694	246.1	31,557	147.4	-	-	-	-	-	-
- Unground	13,149	19.5	330	0.5	21,134	31.4	3,770	5.6	5,546	8.2
Calcite	1,467,822	1,100.9	1,440,030	1,080.0	1,430,044	1,072.5	1,599,888	1,199.9	1,397,580	1,048.2
Dickite	-	-	5,000	3.0	-	-	-	-	-	-
Dolomitic Marl	6,920	2.4	1,585	0.6	5,000	1.8	8,500	2.9	-	-
Fluorite (metallurgical grade)	16,700	80.9	22,247	107.2	9,807	50.0	9,766	52.5	59,243	338.0
Limestone	9,261,332	2,315.3	8,909,080	2,227.3	7,222,187	1,805.5	8,764,671	2,191.2	7,576,870	1,894.2
Phosphate	-	-	-	-	-	-	-	-	-	-
Pyrophyllite	50,920	30.6	6,500	3.9	31,522	18.9	26,030	15.6	30,369	18.2
Rock salt	1,487,364	2,900.4	1,580,390	3,081.8	1,439,877	2,807.8	1,563,970	3,049.7	1,737,090	3,387.3
Talc (unground)	7,756	4.7	8,064	4.8	6,624	3.9	5,920	3.6	-	-
Total		6,716.7		6,673.5		5,804.0		6,532.8		6,703.4
%		8.71		8.94		7.97		7.94		9.07
Grand Total		77,081.6		74,617.1		72,778.3		82,657.9		73,926.0

:- * = Cubic Meter :- 0.0** = denoting the amount of less than 0.05 million baht

Mineral Production of Thailand 2018 - 2022



Mineral Export of Thailand 2018 - 2022

Quantity : Tonnes
Value : million Baht

Mineral	2018		2019		2020		2021		2022	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
<u>Iron and Ferro Alloy</u>										
Iron ore	37,582	73.4	216,643	413.5	204,639	418.9	383,842	1,189.7	162,931	584.3
Manganese (metallurgical grade)	73,638	115.0	144,199	397.3	95,807	257.8	25,896	78.8	14,771	40.7
Tungsten										
- Scheelite	66	30.2	36	17.3	-	-	202.0	94.2	144.0	78.7
- Wolfram	-	-	15	0.7	-	-	-	-	-	-
Total		218.6		828.8		676.7		1,362.7		703.7
%		1.70		6.26		5.68		6.96		3.26
<u>Base Metals</u>										
Antimony ore	2,022	86.8	3,624	64.9	727	20.4	3,818	239.0	2,605	257.8
Tin										
- Final slag	526	42.9	1,716	80.9	797	27.9	321	15.6	2,414	188.2
- Hard head	138	21.7	341	30.1	656	84.4	891	233.2	1,278	390.0
- Tin-lead alloy	12	5.2	2	1.1	-	-	-	-	-	-
- Tin metal	8,112	5,424.9	8,862	5,411.1	9,547	5,373.6	9,581	10,048.1	7,047	8,523.8
- Copper dross	12	4.8	21	10.1	-	-	-	-	-	-
- Bismuth Slime	3	4.6	710	10.6	6	25.6	-	-	4	16.1
Zinc										
- Zinc alloy	987	83.4	1,158	93.8	1,048	72.7	2,277	193.2	1,493	184.5
- Zinc metal	2,324	234.1	643	46.2	1,648	99.3	480	29.0	3,082	282.3
Total		5,908.4		5,748.8		5,703.9		10,758.1		9,842.7
%		45.82		43.39		47.90	-	54.97	-	45.64

Mineral Export of Thailand 2018 - 2022

Quantity : Tonnes
Value : million Baht

Mineral	2018		2019		2020		2021		2022	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
<u>Precious Metals and Precious Stone</u>										
Garnet	4,600	46.5	539	2.7	-	-	-	-	-	-
Total		46.5		2.7		-		-		-
%		0.36		0.02		-		-		-
<u>Light Metals and Rare Earth</u>										
Ilmenite	8	0.1	20	1.4	24	0.1	21,569	130.3	1,379	11.5
Leucosene	1,278	45.8	1,193	40.4	2,906	70.6	1,707	65.0	165	15.8
Monazite	865	85.7	162	13.4	42	3.1	3,374	523.8	10,080	2,923.9
Rutile	364	7.8	29	1.0	-	-	-	-	-	-
Struverite	128	41.3	-	-	31	7.9	-	-	-	-
Xenotime	-	-	-	-	-	-	34	2.5	-	-
Zircon	3,703	135.7	2,104	69.7	84	1.3	-	-	-	-
Total		316.4		125.9		83.0		721.6		2,951.2
%		2.45		0.95		0.70		3.69		13.68
<u>Cement Industrial Minerals</u>										
Anhydrite	1,528,207	913.3	1,366,080	797.7	1,366,877	813.1	1,531,755	932.9	1,856,700	1,241.1
Gypsum										
- Ground	62,620	45.1	97,290	63.5	72,360	48.6	64,194	44.8	76,980	54.2
- Unground	5,633,845	3,622.8	5,194,388	3,141.1	4,508,517	2,878.6	5,191,290	3,336.7	4,834,132	3,514.6
Total		4,581.2		4,002.3		3,740.3		4,314.4		4,809.9
%		35.53		30.21		31.41		22.04		22.30

Mineral Export of Thailand 2018 - 2022

*Quantity : Tonnes
Value : million Baht*

Mineral	2018		2019		2020		2021		2022	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
<u>Ceramic Industrial Minerals</u>										
Ball clay	21,853	97.9	12,858	56.3	9,033	34.2	18,712	85.5	69,859	426.1
Dolomite										
- Ground	40	0.4	814	0.9	142	0.8	207	1.1	899	2.2
- Unground	1,269,600	508.7	1,168,785	394.4	1,392,030	479.6	1,470,280	552.7	1,158,253	493.4
Feldspar										
- Sodium (ground)	699,913	593.4	1,135,031	1,396.7	823,294	637.1	1,113,294	888.3	1,080,680	1,041.8
Kaolin										
- Filler	284	2.7	602	3.7	447	3.1	284	2.0	147	1.5
- Washed	15,850	93.2	17,513	95.6	19,087	118.9	28,849	174.4	32,866	222.8
Total		1,296.3		1,947.6		1,273.7		1,704.0		2,187.8
%		10.05		14.70		10.70		8.71		10.14
<u>Industrial Rock</u>										
Granite (industrial rock)	212,100	35.8	444,261	89.9	128,400	35.4	153,900	40.4	140,000	35.1
Gravel (industrial rock)	250	1.0	270	1.2	48	0.2	48	0.2	22	0.1
Limestone (industrial rock-const)	237,996	236.4	423,654	187.1	267,095	118.4	976,301	443.0	989,471	523.6
Sand stone (industrial rock)	5,000	2.0	-	-	-	-	-	-	-	-
Total		275.2		278.2		154.0		483.6		558.8
%		2.13		2.10		1.29		2.47		2.59
<u>Other Industrial Minerals</u>										
Barite										
- Chemical grade (ground)	1,731	18.4	1,230	12.3	1,260	14.2	1,200	12.8	1,083	12.9
- Drilling mud (ground)	5,452	32.8	527	3.5	-	-	-	-	1,140	48.6

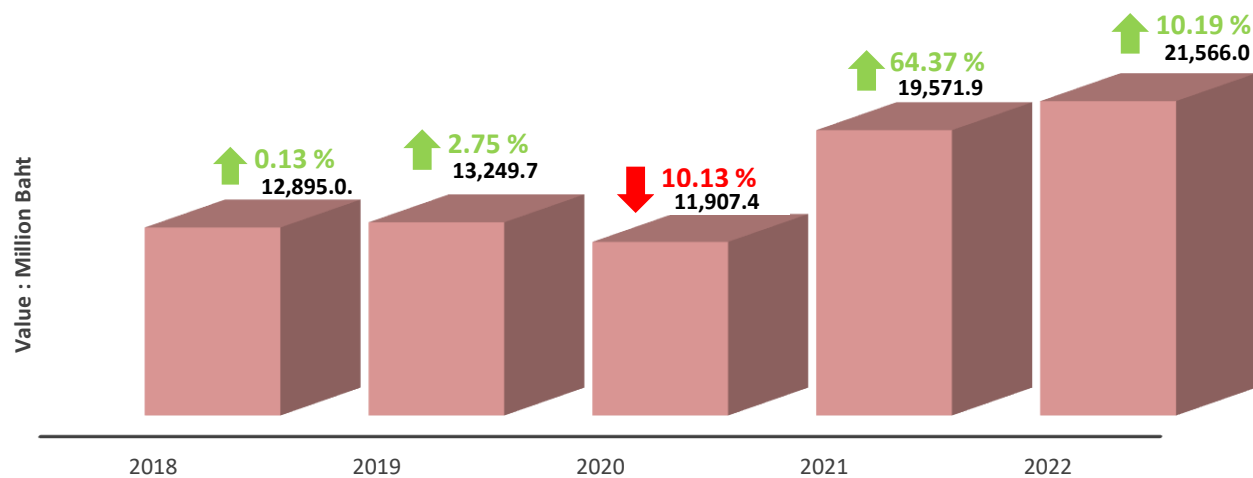
Mineral Export of Thailand 2018 - 2022

Quantity : Tonnes

Value : million Baht

Mineral	2018		2019		2020		2021		2022	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
Other Industrial Minerals (cont.)										
Diatomite	-	-	72	0.1	-	-	108	0.3	-	-
Fluorite (metallurgical grade)	38,479	186.2	45,683	256.3	38,372	226.7	34,282	176.3	42,797	413.8
Limestone (industrial rock-others)	3,652	8.7	16,809	30.9	3,865	8.4	4,589	14.1	3,829	13.4
Pyrophyllite	1,606	6.3	3,215	12.3	4,944	18.8	6,178	24.0	5,321	23.2
Serpentinite (industrial rock)	-	-	-	-	11,000	7.7	-	-	-	-
Total		252.4		315.4		275.8		227.5		511.9
%		1.96		2.38		2.32		1.16		2.37
Grand Total		12,895.0		13,249.7		11,907.4		19,571.9		21,566.0

Value of Mineral Export 2018 - 2022



Mineral Consumption of Thailand 2018 - 2022

Quantity : Tonnes

Value : Million Baht

Mineral	2018		2019		2020		2021		2022	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
<u>Mineral Fuels and Energy</u>										
Lignite	14,417,889	13,841.2	13,973,815	13,414.9	13,404,786	12,868.6	14,166,312	13,599.7	14,124,565	13,559.6
Total		13,841.2		13,414.9		12,868.6		13,599.7		13,559.6
%		19.53		18.81		18.91		18.86		19.61
<u>Iron and Ferro Alloy</u>										
Iron ore	-	-	192,441	434.9	61,151	138.2	228,809	653.7	100,673	341.1
Manganese (metallurgical grade)	2,310	12.3	2,016	10.7	884	4.7	1,200	6.4	1,150	6.1
Total		12.3		445.6		142.9		660.1		347.2
%		0.02		0.63		0.21		0.92		0.50
<u>Base Metals</u>										
Tin										
- Tin metal	2,545	1,545.2	1,945	1,137.9	1,756	934.0	2,529	2,323.6	2,409	2,583.1
Zinc										
- Zinc alloy	-	-	-	-	-	-	-	-	-	-
- Zinc metal	-	-	-	-	-	-	-	-	-	-
Total		1,545.2		1,137.9		934.0		2,323.6		2,583.1
%		2.18		1.60		1.37		3.22		3.73
<u>Cement Industrial Minerals</u>										
Anhydrite	-	-	4,546	2.6	10,871	6.4	14,900	8.8	208,572	134.5
Cement clay	5,786,258	520.8	8,630,270	776.7	6,696,958	602.7	7,914,512	712.3	5,013,323	451.2
Gypsum (unground)	4,207,417	2,506.2	4,051,629	2,370.7	3,537,593	2,066.0	3,970,895	2,334.6	3,819,486	2,440.4
Limestone	66,707,813	16,677.0	64,324,112	16,081.0	60,942,224	15,235.6	61,305,081	15,326.3	50,523,555	12,630.9
Marl	41,451	3.5	26,259	2.2	19,374	1.6	28,572	2.4	53,889	4.6
Shale	5,015,765	1,253.9	5,146,264	1,286.6	3,269,369	817.3	2,997,327	749.3	2,907,473	726.9
Total		20,961.4		20,519.8		18,729.6		19,133.7		16,388.5
%		29.57		28.78		27.52		26.52		23.70

Mineral Consumption of Thailand 2018 - 2022

Quantity : Tonnes

Value : Million Baht

Mineral	2018		2019		2020		2021		2022	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
<u>Ceramic Industrial Minerals</u>										
Ball clay	284,563	156.5	357,420	196.6	322,490	177.4	554,415	304.9	406,166	223.4
Ceramic clay	337,964	185.9	478,769	263.3	516,770	284.2	607,943	334.4	620,094	341.1
Dolomite	2,225,240	1,223.9	1,718,019	944.9	2,469,086	1,358.0	3,104,023	1,572.0	3,377,935	1,425.7
Feldspar										
- Sodium (ground)	32,598	45.6	32,762	45.9	12,541	17.6	27,220	38.1	63,028	88.2
- Sodium (unground)	441,345	308.9	857,771	600.4	634,231	444.0	495,876	347.1	2,146,650	1,502.7
Glass sand	1,529,709	1,514.4	1,206,501	1,194.4	1,278,387	1,265.6	1,307,804	1,294.7	1,222,471	1,210.2
Kaolin										
- Filler	13,818	26.3	11,558	22.0	16,082	30.6	8,767	16.7	3,230	6.1
- Unwashed	344,578	128.8	523,191	201.4	533,568	205.4	544,844	209.8	705,259	271.5
- Washed	102,802	98.7	94,636	90.9	84,121	80.8	87,291	83.8	91,553	87.9
Quartz										
- Unground	15,818	11.9	19,290	14.5	31,500	23.6	23,000	17.3	-	-
Total		3,700.9		3,574.3		3,887.2		4,218.8		5,156.8
%		5.22		5.00		5.71		5.85		7.46
<u>Dimension Stone</u>										
Granite	1,352*	8.5	2,059*	12.6	2,104*	10.9	3,527*	18.3	3,513*	18.3
Limestone	1,549	3.1	4,536	9.1	-	-	848	3.8	-	-
Marble	7,131*	32.1	20,344*	91.5	20,773*	98.7	7,134*	33.9	5,123*	24.3
Sand stone	1,035	0.7	705	0.8	-	-	680	1.9	350	1.0
Serpentine	11,892	1.8	-	-	-	-	-	-	25,000	3.8
Travertine	1,326	2.7	2,493	8.5	981	4.4	450	2.0	600	2.7
Total		48.9		122.5		114.0		59.9		50.1
%		0.07		0.17		0.17		0.08		0.07

Mineral Consumption of Thailand 2018 - 2022

Quantity : Tonnes

Value : Million Baht

Mineral	2018		2019		2020		2021		2022	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
<u>Industrial Rock</u>										
Andesite	1,040,277	208.1	1,349,235	269.8	2,177,153	435.4	1,558,114	311.6	859,080	171.8
Basalt	12,486,969	2,497.4	12,165,737	2,433.1	14,390,606	2,878.1	14,451,214	2,890.2	13,645,310	2,729.1
Granite	11,570,394	2,314.1	12,287,216	2,457.4	12,217,021	2,443.4	12,480,086	2,496.0	12,176,732	2,435.3
Grawacke	1,343,459	268.7	1,414,867	283.0	1,402,537	280.5	1,418,417	283.7	1,068,125	213.6
Limestone	101,374,147	18,247.3	102,670,780	18,480.7	104,245,512	18,764.2	106,695,518	19,205.2	105,680,134	19,022.4
Marble (fragment)	1,283,400*	667.4	2,561,204*	1,331.8	341,324*	177.5	484,143*	251.8	149,126*	77.5
Perlite	5,500	8.3	5,000	7.5	3,000	4.5	3,666	5.5	4,150	6.2
Quartzite	-	-	-	-	-	-	-	-	-	-
Rhyolite	658,032	98.7	906,240	135.9	799,343	119.9	530,680	79.6	-	-
Sand stone	554,836	83.2	1,140,380	171.1	995,425	149.3	1,157,139	173.6	1,383,636	207.5
Total		24,393.2		25,570.3		25,252.8		25,697.2		24,863.4
%		34.41		35.87		37.10		35.59		35.95
<u>Other Industrial Minerals</u>										
Barite										
- Chemical grade (ground)	-	-	1,091	10.6	676	6.6	-	-	-	-
- Drilling mud (ground)	54,221	253.2	30,745	143.6	-	-	-	-	-	-
- Unground	4,522	6.7	2,199	3.3	17,456	25.9	14,021	20.8	526	0.8
Calcite	1,408,695	1,056.5	1,448,141	1,086.1	1,398,348	1,048.8	1,561,578	1,171.2	1,323,299	992.5
Diatomite	-	-	5,000	4.5	-	-	-	-	-	-
Dickite	-	-	3,969	2.4	6,479	3.9	14,782	8.9	10,602	6.4
Dolomitic Marl	10,634	3.7	11,495	4.0	10,130	3.5	11,390	4.0	10,303	3.6
Fluorite (metallurgical grade)	500	2.4	200	1.0	-	-	6,998	36.0	2,250	10.8

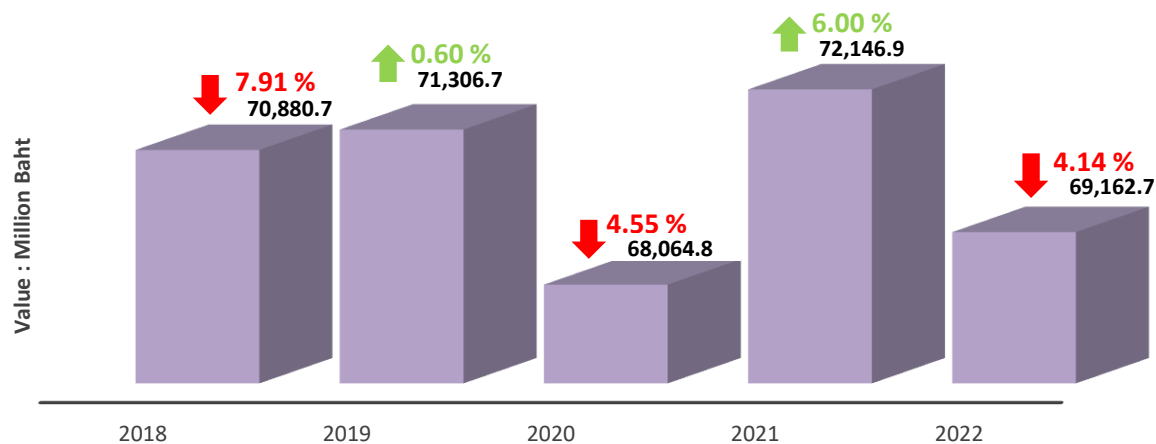
Mineral Consumption of Thailand 2018 - 2022

Quantity : Tonnes
Value : Million Baht

Mineral	2018		2019		2020		2021		2022	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
Other Industrial Minerals (cont.)										
Limestone	8,487,771	2,121.9	9,042,913	2,260.7	8,675,260	2,168.8	8,644,824	2,161.2	7,086,510	1,771.6
Phosphate	590	0.2	-	-	-	-	-	-	-	-
Pyrophyllite	32,374	19.4	33,061	19.8	27,559	16.5	26,172	15.7	31,794	19.1
Rock salt	1,491,766	2,908.9	1,528,522	2,980.6	1,465,622	2,858.0	1,556,196	3,034.6	1,748,267	3,409.1
Talc (unground)	7,844	4.7	7,962	4.8	6,128	3.7	2,504	1.5	-	-
Total		6,377.6		6,521.4		6,135.7		6,453.9		6,213.9
%		9.00		9.15		9.01		8.95		8.98
Grand Total		70,880.7		71,306.7		68,064.8		72,146.9		69,162.7

:- * = Cubic Meter :- 0.0** = denoting the amount of less than 0.05 million baht

Value of Mineral Consumption 2018-2022



Mineral Import of Thailand 2018 - 2022

Quantity : Tonnes
Value : Million Baht

Mineral	2018		2019		2020		2021		2022	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
<u>Mineral Fuels and Energy</u>										
Anthracite	173,288	760.8	125,723	566.5	153,844	578.6	108,168	471.6	96,634	1,223.5
Bituminous coal	7,877,106	21,389.1	8,146,105	21,748.6	8,201,652	19,369.4	8,655,017	23,808.7	6,052,971	27,309.1
Coal Solid Fuels from Coal	16,781,738	31,069.9	13,009,892	22,297.6	15,378,874	21,537.8	15,029,555	33,744.4	15,107,281	66,067.6
Coke	18,049	335.3	19,205	330.0	17,307	234.8	14,323	269.2	21,391	451.2
Lignite	245,458	231.2	382,846	347.2	147,806	132.3	276,410	266.4	255,821	294.9
Peat	17,369	148.2	18,164	132.8	20,748	161.0	27,742	257.5	26,906	260.5
Total		53,934.5		45,422.7		42,013.9		58,817.8		95,606.8
%		73.87		72.83		73.71		69.39		76.71
<u>Iron and Ferro Alloy</u>										
Chromite ore	2,352	48.8	1,289	19.8	1,583	16.3	1,450	15.9	1,809	28.5
Cobalt ore	0*	0.2	0*	0.3	0*	0.2	0*	0.4	0*	0.4
Columbite	377	209.0	357	167.4	216	70.7	25	15.8	266	224.2
Iron ore	5,471	20.9	712	7.6	675	6.1	2,741	20.1	2,965	35.7
Iron pyrites	442	7.4	1,647	11.8	835	7.0	2,494	16.3	5,792	39.9
Manganese ore	71,362	108.0	135,616	203.8	73,199	117.8	21,709	40.1	20,569	39.1
Molybdenite ore	12,385	1,810.4	14,946	2,562.5	9,247	1,330.7	6,100	1,727.6	6,416	2,609.0
Nickel ore	2	1.2	135	2.9	4	2.0	4	3.7	71	6.2
Total		2,205.9		2,976.1		1,550.8		1,839.9		2,983.0
%		3.02		4.77		2.72		2.17		2.39
<u>Base Metals</u>										
Aluminium ore	22,213	288.9	20,453	248.7	14,911	173.2	22,169	298.2	20,949	339.8
Antimony ore	1,914	54.5	3,989	60.5	1,361	52.8	5,794	634.1	3,680	513.5
Copper	384	3.9	142	1.2	3,403	11.4	8,759	35.3	3,832	26.3
Lead ore	104	5.9	98	11.0	96	42.7	177	103.5	204	36.6
Tin ore	12,261	4,494.3	10,559	3,586.3	16,136	4,782.2	18,164	9,967.2	12,804	8,200.0
Zinc ore	318	2.6	3,414	12.6	3,265	12.1	7,673	23.6	16,595	88.3
Total		4,850.1		3,920.3		5,074.4		11,061.9		9,204.5
%		6.64		6.29		8.90		13.05		7.39

Mineral Import of Thailand 2018 - 2022

Quantity : Tonnes
Value : Million Baht

Mineral	2018		2019		2020		2021		2022	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
<u>Precious Metals and Precious Stone</u>										
Emery	6,578	66.8	5,427	53.1	5,733	57.9	7,822	93.7	10,221	119.8
Silver ore	8	0.7	-	-	9.0	0.7	8.0	0.6	10.0	1.0
Total		67.5		53.1		58.6		94.3		120.8
%		0.09		0.09		0.10		0.11		0.10
<u>Light Metals and Rare Earth</u>										
Ilmenite ore	112	4.1	120	4.8	72	3.2	104	4.7	160	4.7
Niobium and Vanadium ore	21,771	2,086.3	22,344	1,242.7	61,478	1,148.9	82,979	2,423.8	32,428	3,127.5
Titanium ore										
- Rutile	2,278	82.8	4,937	210.5	4,687	214.6	2,001	113.4	2,777	222.0
- Leucoxene	5,080	184.4	5,760	225.4	401	16.1	1,020	50.6	1,518	109.5
- Ilmenite	1,020	14.3	1,400	17.7	421	5.0	572	23.6	-	0.0*
- Other Titanium ore	5	0.2	864	43.3	304	13.5	586	32.2	3,738	219.3
Tantalite	685	1,188.0	495	695.6	550	691.5	843	1,244.9	749	1,615.0
Zirconium ore	43,565	906.3	6,416	324.4	8,368	366.6	19,034	567.7	5,224	428.2
Total		4,466.4		2,764.4		2,459.4		4,460.9		5,726.2
%		6.12		4.43		4.32		5.26		4.59
<u>Cement Industrial Minerals</u>										
Anhydrite	0*	0.0*	0*	0.1	1	0.0*	2	0.0*	27	0.4
Gypsum	267	5.4	340	6.6	288	5.9	296	6.1	425	9.1
Limestone	4,054	10.9	1,527	14.2	1,807	20.4	2,515	31.3	2,015	27.3
Total		16.3		20.9		26.2		37.4		36.8
%		0.02		0.03		0.05		0.04		0.03

Mineral Import of Thailand 2018 - 2022

Quantity : Tonnes

Value : Million Baht

Mineral	2018		2019		2020		2021		2022	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
<u>Ceramic Industrial Minerals</u>										
Andalusite, Kyannite and Silliman	3,196	38.6	4,402	48.9	2,566	30.3	3,145	39.9	3,971	79.2
Attapulgit	86	2.9	32	0.5	-	-	500	8.7	111	1.0
Ball Clay	24,895	149.5	27,961	175.0	22,273	126.6	27,083	173.5	16,877	159.9
Dolomite	1,549	30.5	1,349	18.4	1,232	19.5	602	9.5	1,798	23.5
Feldspar										
- Potassium	-	-	-	-	-	-	-	-	-	-
- Sodium	-	-	-	-	-	-	-	-	-	-
- Potassium, Sodium	30,929	103.4	21,377	77.7	22,946	86.4	33,060	128.8	21,487	99.0
- Other Feldspar	13,085	72.3	19,091	90.0	13,330	58.8	15,664	73.5	21,030	134.5
Kaolin										
- Ceramic	23,250	181.0	28,916	176.0	27,496	170.5	39,336	307.2	43,763	455.7
- Paper	4,875	49.6	5,818	58.2	9,597	89.7	8,629	88.6	10,378	135.7
- Others	92,688	777.4	79,004	669.9	52,514	520.6	65,521	674.4	61,375	949.8
Lucite, Nepheline and Nepheline S	740	24.6	537	14.5	464	12.5	719	20.8	694	17.7
Mullite	2,623	50.8	2,040	34.0	1,727	27.1	2,847	47.4	2,622	55.1
Quartz	16,867	143.3	18,576	130.2	19,855	155.2	75,122	637.6	109,729	1,152.3
Silica sand (Glass sand)	156,550	477.9	150,830	446.1	86,004	340.0	94,258	632.2	215,748	1,202.7
Total		2,101.8		1,939.4		1,637.2		2,842.1		4,466.1
%		2.88		3.11		2.87		3.35		3.58
<u>Dimension Stone</u>										
Ecaussine	3	3.5	-	-	-	-	-	-	-	-
Granite	82,568	351.3	133,251	366.4	64,418	229.9	44,904	222.1	32,689	194.0
Marble	54,231	669.2	45,128	598.7	22,066	319.7	20,099	328.9	33,338	672.7
Sandstone	8,023	17.9	8,097	12.5	1,882	5.6	650	7.9	784	10.9
Serpentine	-	-	27	0.1	404	5.1	55	0.7	27	0.2
Slate	116	1.7	132	1.5	76	1.0	75	1.2	224	4.1
Travertine	-	-	-	-	-	-	-	-	-	-
Total		1,043.6		979.2		561.3		560.8		881.9
%		1.43		1.57		0.98		0.66		0.71

Mineral Import of Thailand 2018 - 2022

Quantity : Tonnes
Value : Million Baht

Mineral	2018		2019		2020		2021		2022	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
<u>Industrial Rock</u>										
Basalt	201,574	177.7	131,889	131.9	28,604	119.0	10,678	63.7	7,065	61.0
Flint	414,793	111.7	484,595	115.5	330,123	65.7	495,061	99.8	634,529	119.8
Pumice stone	6,332	55.9	5,699	48.7	7,167	53.3	12,788	89.6	9,292	73.3
Vermiculite, Perlite and Chlorites	4,286	41.3	3,736	37.1	3,957	44.3	4,281	47.0	6,103	52.8
Total		386.6		333.2		282.3		300.1		306.9
%		0.53		0.54		0.50		0.35		0.25
<u>Other Industrial Minerals</u>										
Apatite (ground)	1,695	7.3	875	3.9	3,321	9.8	3,313	9.1	4,042	17.7
Asbestos	40,453	574.6	40,171	512.2	35,072	457.7	32,640	466.5	34,422	709.2
Barite	90,092	197.0	161,560	274.1	128,380	221.7	89,981	178.1	110,749	230.9
Bentonite	127,807	776.4	137,667	763.2	122,247	683.7	151,974	944.8	140,918	1,049.9
Calcite	304	0.6	1	0.0*	47	0.0*	-	-	-	-
Chalk	58	1.1	45	0.8	58	0.9	46	0.8	33	0.8
Epsomite	49	0.4	58	0.5	77	0.8	63	0.6	397	3.3
Fireclay	1,709	16.5	1,248	12.8	836	11.9	1,152	14.8	761	11.2
Fluorite	1,994	16.2	11,658	45.5	9,325	34.5	10,585	71.1	5,877	59.9
Graphite	4,571	127.1	6,626	147.2	6,509	102.2	6,195	149.6	3,538	135.9
Kieserite	4,451	25.2	3,082	17.9	3,956	17.8	10,273	55.8	5,940	55.1
Magnesite	3,396	36.7	2,346	31.1	1,559	16.7	3,909	55.5	2,600	36.3
Mica	6,162	164.8	5,835	150.7	5,118	130.1	7,072	180.4	5,569	174.3
Orpiment	706	4.0	1,136	7.2	1,023	7.6	1,375	11.3	1,130	10.0
Phosphate										
- Ground	0*	0.0*	-	-	-	-	-	-	9	1.4
- Unground	1	0.5	1	0.5	1	0.8	1	0.0*	2	0.0*
Potash	-	-	-	-	-	-	-	-	-	-
Pyrophyllite	140	0.9	20	0.1	120	0.8	200	1.4	3,360	22.7
Rock salt	-	-	963	7.0	414	3.1	365	4.6	174	3.4

Mineral Import of Thailand 2018 - 2022

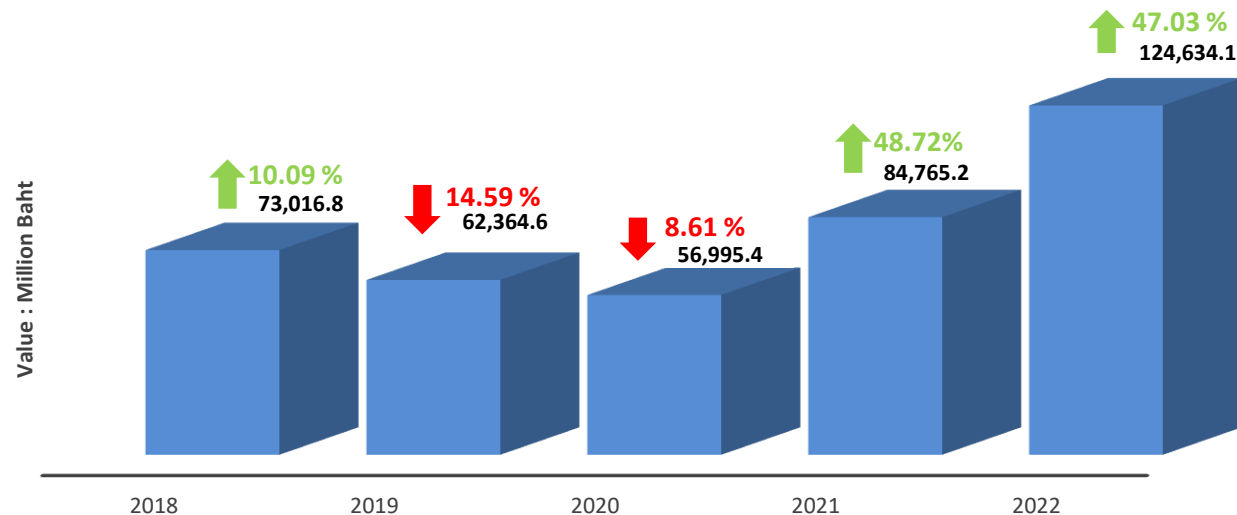
Quantity : Tonnes
Value : Million Baht

Mineral	2018		2019		2020		2021		2022	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
Other Industrial Minerals (cont.)										
Steatite	1,269	19.5	855	12.7	756	11.0	1,166	17.6	811	14.8
Sulphur	51,049	330.5	70,509	338.1	118,976	399.8	125,410	940.8	79,280	1,030.4
Talc	141,898	1,643.5	145,985	1,627.7	119,903	1,219.7	143,640	1,645.9	134,829	1,731.7
Witherite	75	1.3	125	2.1	50	0.7	75	1.3	75	2.0
Xenotime	-	-	-	-	-	-	-	-	25	0.2
Total		3,944.1		3,955.3		3,331.3		4,750.0		5,301.1
%		5.40		6.34		5.85		5.60		4.25
Grand Total		73,016.8		62,364.6		56,995.4		84,765.2		124,634.1

:- 0* denoting the amount of less than 0.1 metric tonnes :- 0.0* denoting the amount of less than 0.05 million baht

data from 'www.customs.go.th'

Value of Mineral Import 2018-2022



Mineral Royalty of Thailand 2018-2022

101

unit: Thousand Baht

Mineral	2018	2019	2020	2021	2022
Andesite (Industrial rock)	13,141.55	11,707.34	16,084.77	16,338.63	15,166.07
Anhydrite	41,973.14	56,235.23	56,376.10	64,415.52	81,615.78
Antimony	-	-	-	-	-
Ball clay	8,270.38	8,606.01	7,488.53	12,759.44	10,333.91
Barite					
- Chemical grade (ground)	725.59	1,058.15	1,216.10	754.85	812.51
- Drilling mud (ground)	5,660.69	2,947.42	-	-	-
- Unground	3,147.50	154.47	1,772.56	235.84	32.44
Basalt (Industrial rock)	109,203.16	99,841.78	117,737.85	118,695.45	109,858.00
Bentonite	-	-	-	-	-
Calcite	46,329.00	44,968.78	42,206.40	47,694.39	44,194.77
Cement clay	22,216.41	34,609.45	21,995.29	22,436.08	26,593.92
Ceramic clay	7,474.90	11,323.03	11,424.58	13,700.04	13,720.06
Conglomerate (Industrial rock)	-	-	-	-	-
Copper Metal	-	-	-	-	-
Diatomite	-	-	-	-	-
Diatomite	-	93.24	-	4.86	-
Dickite (Invention grade)	-	-	-	0.77	0.77
Dickite (Industrial grade)	-	-	222.00	141.84	401.76
Dolomite	92,772.92	99,881.80	104,528.45	118,453.16	114,714.98
Dolomitic Marl	128.83	172.39	158.28	179.90	357.39
Feldspar					
- Potassium (ground)	38.54	-	-	-	1,971.70
- Potassium (unground)	-	-	-	-	-
- Sodium (ground)	5,298.94	1,283.81	1,550.72	2,198.08	1,181.47
- Sodium (unground)	36,442.42	51,371.58	50,410.23	61,042.09	74,737.96
Fluorite	13,517.19	17,213.32	13,812.05	13,230.23	19,757.16

Mineral Royalty of Thailand 2018-2022

102

unit: Thousand Baht

Mineral	2018	2019	2020	2021	2022
Gold	-	-	-	-	187.37
Garnet	-	88.20	67.20	16.80	-
Glass sand	55,784.18	54,895.62	52,228.24	52,682.65	53,685.78
Gneiss (Dimension stone)	126.40	78.80	1,165.49	50.00	-
Granite					
- Dimension stone	1,380.47	2,235.95	1,745.81	2,486.55	753.20
- Industrial rock-construction	103,165.54	111,884.00	107,552.91	116,654.25	114,833.83
- Industrial rock-ceramic	320.00	-	-	-	-
Graywacke	9,539.60	11,416.95	12,065.30	11,726.91	14,446.69
Gypsum	253,447.10	307,174.29	255,591.10	290,963.97	307,815.21
Ilmenite	555.05	-	-	-	652.89
Iron Ore	2,286.48	25,453.75	38,426.66	65,797.94	40,005.29
Kaolin					
- Filler	1,425.23	1,311.51	1,475.41	1,682.03	1,420.23
- Unwashed	5,380.49	8,093.26	8,717.32	10,050.86	11,553.62
- Washed	4,177.75	4,344.13	4,251.06	4,976.59	5,115.96
- Washed < 75mm	-	-	1,159.68	1,870.00	2,107.60
Lead	5,621.31	-	-	-	-
Lignite	553,646.94	536,594.50	515,329.24	543,986.39	542,988.31
Limestone					
- Dimension stone	212.54	252.79	-	188.60	-
- Industrial rock-construction	783,810.18	760,944.89	756,834.92	786,325.64	794,064.75
- Industrial rock-cement	1,235,989.97	1,250,658.31	1,219,342.76	1,198,888.05	1,182,334.33
- Industrial rock-others	93,388.89	90,774.29	84,745.27	99,720.57	88,680.11

Mineral Royalty of Thailand 2018-2022

103

unit: Thousand Baht

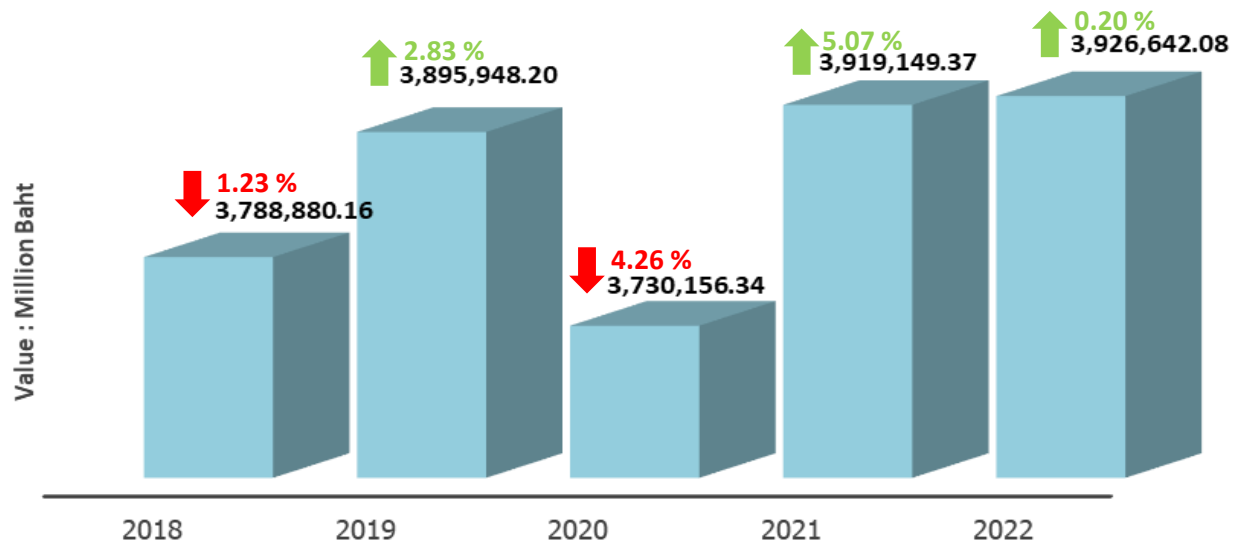
Mineral	2018	2019	2020	2021	2022
Manganese (Metallurgical grade)	614.70	2,898.74	4,071.60	3,034.13	2,316.22
Marble					
- Dimension stone	1,991.98	2,323.82	998.01	3,556.31	3,609.64
- Fragment	19,205.55	31,419.38	20,383.07	15,077.96	7,438.34
Marl	202.30	171.36	25.16	29.24	10.54
Monazite	112.44	516.32	-	-	-
Other Industrial Stone	5,823.50	6,452.70	5,427.38	3,922.56	3,424.54
Perlite (Industrial rock)	330.00	312.00	180.00	225.00	276.00
Phosphate	4.83	-	-	-	-
Potash	-	-	-	-	-
Pyrophyllite					
- Industrial grade	816.72	794.02	684.79	910.08	732.34
- Invention grade	-	5.19	-	-	-
Quartz	1,464.19	1,140.84	1,847.64	889.02	368.01
Quartzite	-	-	-	-	-
Rock salt	117,956.20	121,030.34	113,330.26	121,108.34	137,043.58
Rutile	215.46	-	-	-	-
Sand Stone					
- Dimension stone	343.47	47.61	13.40	30.25	27.64
- Industrial rock	5,993.86	6,692.27	5,859.75	6,579.61	6,670.08
Scheelite	3,520.44	995.72	1,018.91	5,043.57	8,604.73
Shale (Industrial rock-cement)	99,621.74	98,949.62	58,753.61	51,612.73	64,198.78
Shale (Industrial rock-other)	-	-	30.00	200.00	270.00
Struverite	984.15	776.60	-	-	-

Mineral Royalty of Thailand 2018-2022

unit: Thousand Baht

Mineral	2018	2019	2020	2021	2022
Talc	185.47	193.54	158.98	145.15	117.50
Tin	11,320.77	11,965.33	9,229.59	25,529.55	15,330.32
- Final slag	-	-	-	-	-
- Copper slag	-	-	-	830.11	-
Travertine (Dimension)	385.38	674.64	180.00	54.00	108.00
Wolfram	960.99	720.75	-	-	-
Xenotime	-	-	72.11	-	-
Zinc Metal	-	-	-	-	-
Zircon	226.72	198.38	209.80	22.79	-
Total	3,788,880.16	3,895,948.20	3,730,156.34	3,919,149.37	3,926,642.08

Mineral Royalty of Thailand 2018-2022



Total Values of Mineral of Thailand 2018-2022

Million Baht

	2018	2019	2020	2021	2022
PRODUCTION	77,081.6	74,617.1	72,778.3	82,658.0	73,926.0
CONSUMPTION	70,880.7	71,306.7	68,064.8	72,146.9	69,162.7
IMPORT	73,016.8	62,364.6	56,995.4	84,765.2	124,634.1
EXPORT	12,895.0	13,249.7	11,907.4	19,571.9	21,566.0

