

Statistics Report

No. ICTC 1/2560

Mineral Statistics of Thailand

2012 - 2016

Statistics Group

Information and Communication Technology Center

Department of Primary Industries and Mines

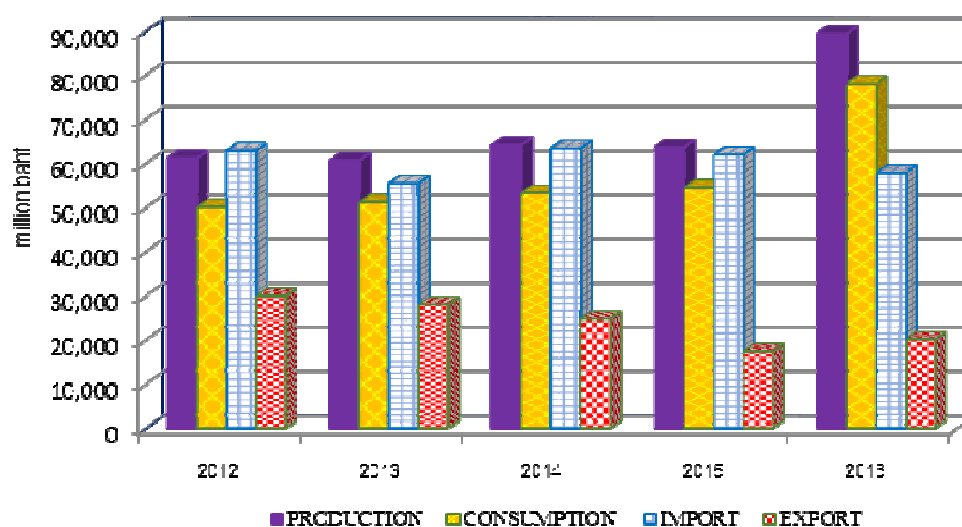
Statistics Report

No. ICTC 1/2560

Mineral Statistics of Thailand

2012 - 2016

Total Values of Mineral of Thailand 2012-2016



Statistics Group

Information and Communication Technology Center

Department of Primary Industries and Mines

Director General – Department of Primary Industries and Mines

Mr. Somboon Yindeeyoungyuen

Director – Information and Communication Technology Center

Mr. Manuse Maneenuse

Chief – Statistics Group

Ms. Somnuck Jirattisakul

Printed By

Information and Communication Technology Center

Department of Primary Industries and Mines,

Rama VI Road, Ratchathewi,

Bangkok 10400, Thailand

Tel. 0-2202-3666-8 Fax. 0-2202-3668

First Edition

September, 2017

35 Copies

Bibliography Information

Mineral Statistics of Thailand 2012 - 2016 -- Bangkok : Information and Communication

Technology Center, Department of Primary Industries and Mines, 2017,

106 pages

Statistics Report No. ICTC 1/2560

CONTENTS

	PAGE
ANDESITE	1
ANHYDRITE	2
ANTHRACITE	4
ANTIMONY	5
BALL CLAY	6
BARITE	8
BASALT	11
BENTONITE	12
CALCITE	13
CEMENT CLAY	14
CERAMIC CLAY	15
COLUMBITE - TANTALITE	16
COPPER	17
DIATOMITE	18
DOLOMITE	19
FELDSPAR	21
FLUORITE	24
GARNET	25
GLASS SAND	26
GNEISS	27
GOLD	28
GRANITE	29
GRAVEL	31
GRAYWACKE	32
GYPSUM	33
ILMENITE	36
IRON	37
KAOLIN	38
LEAD	41
LEUCOXENE	42
LIGNITE	43
LIMESTONE	44

	PAGE
MANGANESE	49
MARBLE	50
MARL	52
MICA	53
MONAZITE	54
PERLITE	55
PHOSPHATE	56
PYROPHYLLITE	57
QUARTZ	58
RHYOLITE	59
ROCK SALT	60
RUTILE	61
SAND STONE	62
SERPENTINE.....	63
SHALE	64
SILVER	65
STRUVERITE	66
TALC	67
TANTALUM	68
TIN	69
TRAVERTINE	73
TUNGSTEN	74
XENOTIME	76
ZINC	77
ZIRCON	79
NUMBER OF ACTIVE MINES	80
NUMBER OF WORKERS EMPLOYED	82
MINERAL PRODUCTION OF THAILAND	84
MINERAL EXPORT OF THAILAND	89
MINERAL CONSUMPTION OF THAILAND	93
MINERAL IMPORT OF THAILAND	97
MINERAL ROYALTY OF THAILAND	103
TOTAL VALUES OF MINERAL OF THAILAND	106

CONTENTS

	PAGE
GRAPH :	
BALL CLAY	7
QUANTITY OF BALL CLAY	
VALUES OF BALL CLAY	
DOLOMITE	20
QUANTITY OF DOLOMITE	
VALUES OF DOLOMITE	
GRANITE	30
QUANTITY OF INDUSTRIAL GRANITE	
VALUES OF INDUSTRIAL GRANITE	
GYPSUM	35
QUANTITY OF GYPSUM	
VALUES OF GYPSUM	
KAOLIN	40
QUANTITY OF KAOLIN (CERAMIC)	
VALUES OF KAOLIN (CERAMIC)	
VALUES OF PRODUCTION OF KAOLIN	
LIMESTONE	48
VALUES OF LIMESTONE	
VALUES OF PRODUCTION OF LIMESTONE	
VALUES OF CONSUMPTION OF LIMESTONE	
TOTAL VALUES OF MINERAL OF THAILAND 2012 - 2016	106

A N D E S I T E

	Tonnes				
	2012	2013	2014	2015	2016
<u>Production</u>					
Northern Region					
Phetchabun	395,904	455,896	421,168	301,800	339,368
Uttaradit	464,435	449,038	388,810	370,648	295,983
Central Region					
Sara Buri	149,351	204,204	142,537	200,574	179,764
Total Production	1,009,690	1,530,306	1,254,315	1,212,390	815,115
Value (Million Baht)	136.3	149.7	128.6	126.7	163.0
<u>Consumption</u>					
Total Consumption	918,429	1,018,830	974,721	837,262	789,284
Value (Million Baht)	124.0	137.5	131.6	121.6	157.9

ANHYDRITE

Tonnes

	2012	2013	2014	2015	2016
<u>Production</u>					
Northern Region					
Nakhon Sawan	1,000	-	-	-	-
Southern Region					
Nakhon Si Thammarat	36,000	-	7,260	49,700	91,690
Surat Thani	820,172	1,264,077	969,558	826,324	1,248,523
Total Production	857,172	1,264,077	976,818	876,024	1,340,213
Value (Million Baht)	424.3	648.7	565.5	552.6	889.9
<u>Export</u>					
1. Ground					
Asia					
Japan	300	-	-	-	-
Total Export	300	-	-	-	-
Value (Million Baht)	1.1	-	-	-	-
2. Unground					
Asia					
India	33,950	159,200	35,000	50,000	100,000
Indonesia	-	-	-	2,000	33,900
Japan	437,785	504,282	547,940	426,710	511,550
Korea, South	231,116	369,550	391,111	316,450	365,200
Malaysia	72,055	128,625	135,100	168,550	170,400
Philippines	-	-	2,000	-	-
Vietnam	14,000	9,750	-	71,200	169,200
Australia / Oceania					
Australia	-	-	-	60	-
Total Export	788,906	1,171,407	1,111,151	1,034,970	1,350,250
Value (Million Baht)	401.3	611.4	630.0	674.3	880.2

	Tonnes				
	2012	2013	2014	2015	2016
<u>Consumption</u>					
Total Consumption	25,150	-	142	-	-
Value (Million Baht)	12.4	-	0.1	-	-
<u>Import</u>¹					
Total Import	0.1	19	-	-	0**
Value (Million Baht)	0.0*	0.5	-	-	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'

A N T H R A C I T E

Tonnes

	2012	2013	2014	2015	2016
<u>Import</u>¹					
Total Import	138,064	109,470	184,231	166,002	181,673
Value (Million Baht)	808.1	570.1	833.9	667.6	777.4

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

ANTIMONY

Tonnes

		2012	2013	2014	2015	2016
<u>Production</u>						
Northern Region						
Phrae	Ore	-	-	-	-	32
Southern Region						
Satun	Ore	-	-	-	-	-
	Low grade	43	-	-	-	-
Total Production	Ore	-	-	-	-	32
	Low grade	43	-	-	-	-
Value (Million Baht)	Ore	-	-	-	-	0.9
	Low grade	n.a.	-	-	-	-
<u>Export</u>						
Ore						
Asia						
China		5,130	5,523	2,023	648	752
Hong Kong		1,000	-	25	-	-
India		-	27	-	-	70
Japan		-	-	-	0**	-
Malaysia		50	-	-	-	-
Myanmar		-	3	0.2	-	40
Taiwan		23	-	38	42	43
Vietnam		65	592	1,425	2,825	3,001
Europe						
Belgium		-	-	25	-	-
Netherlands		-	-	-	195	-
Total Export		6,268	6,145	3,536	3,710	3,906
Value (Million Baht)		124.3	147.4	107.4	208.9	95.4
<u>Consumption</u>						
Total Consumption		-	-	-	-	2
Value (Million Baht)		-	-	-	-	0.1
<u>Import</u>¹						
Total Import		6,949	8,215	4,392	6,134	4,143
Value (Million Baht)		145.2	217.4	145.0	378.4	90.3

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

0** denoting the amount of less than 0.1 tonnes

BALL CLAY

Tonnes

	2012	2013	2014	2015	2016
<u>Production</u>					
Northern Region					
Chiang Rai	5,480	46,400	-	-	-
Lampang	364,055	-	-	-	81,356
Central Region					
Prachin Buri	2,703	2,500	112	-	-
Sara Buri	74,900	61,882	120,500	78,800	68,000
Southern Region					
Nakhon Si Thammarat	210	1,405	2,470	2,445	2,945
Total Production	447,348	112,187	123,082	81,245	152,301
Value (Million Baht)	246.0	61.7	67.7	44.7	83.8
<u>Export</u>					
Asia					
Bangladesh	300	1,060	2,354	154	-
China	745	2,255	2,660	3,510	1,490
India	1,593	2,093	2,520	3,973	1,344
Indonesia	-	-	-	1,486	-
Iran	-	-	-	60	-
Malaysia	5,234	7,255	7,060	9,318	6,904
Philippines	344	-	-	-	-
Vietnam	5,375	7,070	8,920	7,960	3,600
Total Export	13,591	19,733	23,514	26,461	13,338
Value (Million Baht)	67.0	87.7	100.5	120.6	64.0

Tonnes

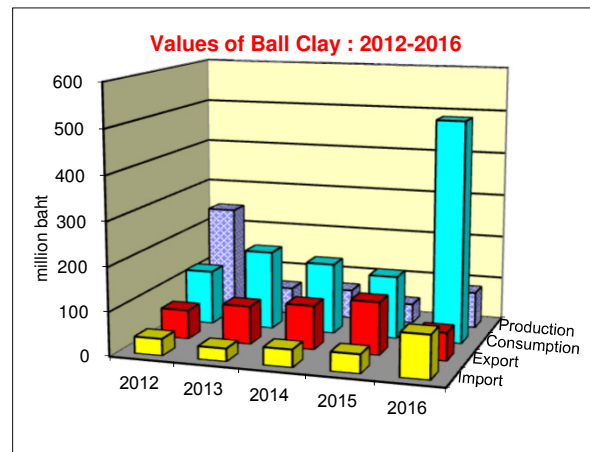
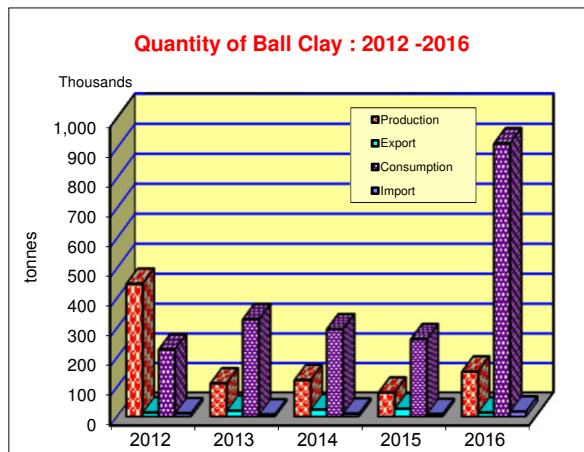
	2012	2013	2014	2015	2016
--	------	------	------	------	------

Consumption

Total Consumption	227,150	328,729	295,379	261,677	915,326
Value (Million Baht)	124.9	180.8	162.5	143.9	503.4

Import¹

Total Import	10,982	6,932	9,710	8,246	16,815
Value (Million Baht)	38.5	29.5	40.3	43.0	98.3



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

B A R I T E

Tonnes

	2012	2013	2014	2015	2016
<u>Production</u>					
1. Ground (Chemical grade)					
Northeastern Region					
Loei	3,301	3,889	4,425	4,075	2,232
Total Production	3,301	3,889	4,425	4,075	2,232
Value (Million Baht)	19.3	22.8	25.9	23.8	13.8
2. Ground (Drilling Mud grade)					
Northern Region					
Phrae	14,200	40,693	48,540	127,591	155,799
Total Production	14,200	40,693	48,540	127,591	155,799
Value (Million Baht)	55.3	158.5	189.1	497.0	606.8
3. Unground					
Southern Region					
Nakhon Si Thammarat	46,998	62,855	81,996	38,995	65,070
Total Production	46,998	62,855	81,996	38,995	65,070
Value (Million Baht)	69.8	93.3	121.8	57.8	96.6
<u>Export</u>					
1. Unground					
Asia					
Brunei	-	-	-	-	1,261
Indonesia	-	-	40	-	-
Malaysia	-	-	-	2,666	5,050
Vietnam	-	-	-	-	20
Total Export	-	-	40	2,666	6,331
Value (Million Baht)	-	-	0.2	4.0	31.8

	Tonnes				
	2012	2013	2014	2015	2016
2. Ground (Chemical grade)					
Africa					
Egypt	-	-	22	22	-
South Africa	84	11	-	10	-
Asia					
Brunei	-	-	-	510	3,519
China	-	-	4	-	-
Hong Kong	60	60	80	60	44
India	-	-	21	-	-
Indonesia	245	180	1,049	806	-
Japan	530	381	454	369	225
Jordan	-	70	88	22	22
Korea, South	272	168	147	168	93
Malaysia	670	2,359	2,404	2,023	11,404
Singapore	250	280	220	228	183
Taiwan	281	167	377	489	189
U.A.E.	87	154	176	-	288
Vietnam	557	148	832	910	323
Australia / Oceania					
Australia	1,032	1,440	768	1,104	216
New Zealand	-	117	48	24	-
Europe					
Netherlands	24	-	-	-	-
Total Export	4,092	5,535	6,690	6,745	16,506
Value (Million Baht)	39.9	43.3	52.5	84.9	94.2
3. Ground (Drilling Mud grade)					
Asia					
Brunei	-	-	-	2,000	-
Indonesia	-	-	-	-	2,091
Korea, South	-	-	-	282	-
Kuwait	-	-	-	-	2,000
Malaysia	-	-	756	11,658	-
Myanmar	-	-	-	1,000	-
Saudi Arabia	-	-	-	-	22,450
Singapore	-	-	756	904	-
Total Export	-	-	1,512	15,844	26,541
Value (Million Baht)	-	-	8.5	68.4	70.0

	Tonnes				
	2012	2013	2014	2015	2016
<u>Consumption</u>					
1. Ground (Drilling mud)	13,956	21,707	48,540	88,061	155,179
Value (Million Baht)	54.4	84.5	189.1	343.0	604.4
2. Unground	-	-	1,270	18,050	37,017
Value (Million Baht)	-	-	1.9	26.8	54.9
<u>Import</u>¹					
Total Import	104,668	67,537	65,089	98,358	86,651
Value (Million Baht)	509.9	285.9	201.4	183.6	163.0

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

B A S A L T

Tonnes

	2012	2013	2014	2015	2016
<u>Production</u>					
Northeastern Region					
Buri Ram	4,160,688	4,036,141	4,517,885	4,289,522	4,466,448
Nakhon Ratchasima	1,318,488	1,359,865	1,694,692	1,554,918	1,989,920
Si Sa Ket	-	-	-	83,320	316,580
Surin	3,289,275	2,867,249	5,919,373	4,415,255	3,986,076
Ubon Ratchathani	1,944,372	2,609,835	1,998,660	2,442,666	2,615,568
Central Region					
Lop Buri	-	-	-	84,640	168,358
Trat	-	500	2,000	6,728	4,492
Total Production	10,712,823	10,873,590	14,132,610	12,877,048	13,547,442
Value (Million Baht)	1,446.2	1,467.9	1,907.9	1,851.2	2,709.5
<u>Consumption</u>					
Total Consumption	10,450,773	10,223,704	13,980,299	12,055,712	12,927,838
Value (Million Baht)	1,410.9	1,380.2	1,887.3	1,734.7	2,585.6
<u>Import</u>¹					
Total Import	39,126	25,392	25,937	25,122	40,860
Value (Million Baht)	113.2	163.8	166.5	199.5	298.3

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

BENTONITE

Tonnes

	2012	2013	2014	2015	2016
<u>Production</u>					
Central Region					
Lop Buri	141,000	150	-	-	-
Total Production	141,000	150	-	-	-
Value (Million Baht)	84.6	0.1	-	-	-
<u>Consumption</u>					
Total Consumption	30,000	150	-	-	-
Value (Million Baht)	18.0	0.1	-	-	-
<u>Import</u>¹					
Total Import	83,364	103,195	101,283	104,547	107,644
Value (Million Baht)	554.9	639.0	665.3	717.4	758.0

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

CALCITE

Tonnes

	2012	2013	2014	2015	2016
<u>Production</u>					
Northern Region					
Lamphun	-	1,000	-	-	-
Northeastern Region					
Nakhon Ratchasima	-	-	21,417	-	-
Central Region					
Lop Buri	865,800	840,746	970,564	1,281,765	1,452,235
Total Production	865,800	841,746	991,981	1,281,765	1,452,235
Value (Million Baht)	170.6	165.8	195.4	610.8	1,089.2
<u>Consumption</u>					
Total Consumption	803,377	839,246	975,020	1,357,864	1,504,067
Value (Million Baht)	158.3	165.3	192.1	634.1	1,128.1
<u>Import</u>¹					
Total Import	12	60	41	-	30
Value (Million Baht)	0.1	0.2	0.2	-	0.1

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

CEMENT CLAY

Tonnes

	2012	2013	2014	2015	2016
<u>Production</u>					
Northern Region					
Lampang	-	-	81,258	230,591	280,276
Nakhon Sawan	-	-	20,000	20,000	40,000
Northeastern Region					
Nakhon Ratchasima	58,406	758,081	872,665	1,180,754	710,897
Central Region					
Lop Buri	-	128,036	280,510	857,160	1,086,932
Phetchaburi	-	-	-	-	150,734
Prachin Buri	-	-	9,000	43,000	125,540
Sara Buri	5,948,633	1,381,108	1,963,455	2,077,178	1,597,999
Southern Region					
Krabi	-	266,872	897,128	384,000	497,000
Total Production	6,007,039	2,534,097	4,124,016	4,792,683	4,489,378
Value (Million Baht)	540.6	228.1	371.2	431.3	404.0
<u>Consumption</u>					
Total Consumption	1,622,039	3,762,027	4,548,240	4,760,412	4,278,942
Value (Million Baht)	146.0	338.6	416.6	428.4	385.1

C E R A M I C C L A Y

Tonnes

	2012	2013	2014	2015	2016
<u>Production</u>					
 Northeastern Region					
Chaiyaphum	-	15,000	221,500	304,800	266,000
 Central Region					
Lop Buri	-	-	-	102,000	36,100
Sara Buri	60,327	62,358	91,463	107,244	69,586
Total Production	60,327	77,358	312,963	514,044	371,686
Value (Million Baht)	33.2	42.6	172.1	282.7	204.4
<u>Consumption</u>					
Total Consumption	67,847	138,723	220,093	373,642	361,182
Value (Million Baht)	37.3	76.3	121.1	205.5	198.7

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

Tonnes

	2012	2013	2014	2015	2016
<u>Export</u>					
Asia					
China	-	-	50	-	-
Total Export	-	-	50	-	-
Value (Million Baht)	-	-	7.1	-	-
<u>Import (Columbite)¹</u>					
Total Import	30	117	10	319	25
Value (Million Baht)	26.7	88.5	5.5	143.1	9.8

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

C O P P E R

Tonnes

	2012	2013	2014	2015	2016
<u>Production (Metal)</u>					
Northeastern Region					
Loei	721	0**	229	-	-
Total Production	721	0**	229	-	-
Value (Million Baht)	186.5	0.0*	52.3	-	-
<u>Export (Metal)</u>					
Asia					
Hong Kong	721	0**	229	-	-
Total Export	721	0**	229	-	-
Value (Million Baht)	186.5	0.0*	52.3	-	-
<u>Import (ore)¹</u>					
Total Import	1,735	6,666	9,502	18,818	19,868
Value (Million Baht)	7.4	37.3	56.8	815.4	619.9

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'

D I A T O M I T E

Tonnes

	2012	2013	2014	2015	2016
<u>Production</u>					
Northern Region					
Lampang	8,500	-	-	-	-
Total Production	8,500	-	-	-	-
Value (Million Baht)	7.7	-	-	-	-
<u>Consumption</u>					
Total Consumption	27,060	-	-	-	-
Value (Million Baht)	24.4	-	-	-	-

D O L O M I T E

	Tonnes				
	2012	2013	2014	2015	2016
<u>Production</u>					
Northern Region					
Phetchabun	12,680	13,510	14,190	14,000	6,600
Phrae	3,873	4,653	4,792	3,717	25,600
Central Region					
Kanchanaburi	150,400	95,400	59,368	266,091	184,572
Southern Region					
Krabi	120,000	120,000	153,514	603,667	1,045,086
Phangnga	123,898	141,341	150,615	179,577	202,579
Songkhla	25,724	114,699	285,800	259,137	501,922
Surat Thani	1,938,937	1,613,533	1,608,207	845,665	698,500
Trang	233,485	384,000	195,000	261,000	370,000
Total Production	2,608,997	2,487,135	2,471,486	2,432,853	3,034,860
Value (Million Baht)	913.1	870.5	865.0	1,090.0	1,669.2
<u>Export</u>					
1. Ground					
Asia					
Bangladesh	30	616	1,354	-	55
Cambodia	-	-	-	-	4,585
Malaysia	-	20	-	-	-
Myanmar	-	-	1,500	-	-
Philippines	135	2,493	1,580	-	-
Total Export	165	3,129	4,434	-	4,640
Value (Million Baht)	0.7	0.8	1.1	-	7.4
2. Unground					
Asia					
Bangladesh	-	-	-	2,120	-
India	167,110	347,480	588,415	497,134	438,870
Indonesia	-	-	8,300	-	35,000
Japan	836,050	519,150	553,750	537,900	565,850
Malaysia	-	-	7,385	40,250	-
Taiwan	-	-	90,000	135,650	222,165
Total Export	1,003,160	866,630	1,247,850	1,213,054	1,261,885
Value (Million Baht)	313.0	292.5	469.9	469.3	547.4

Tonnes

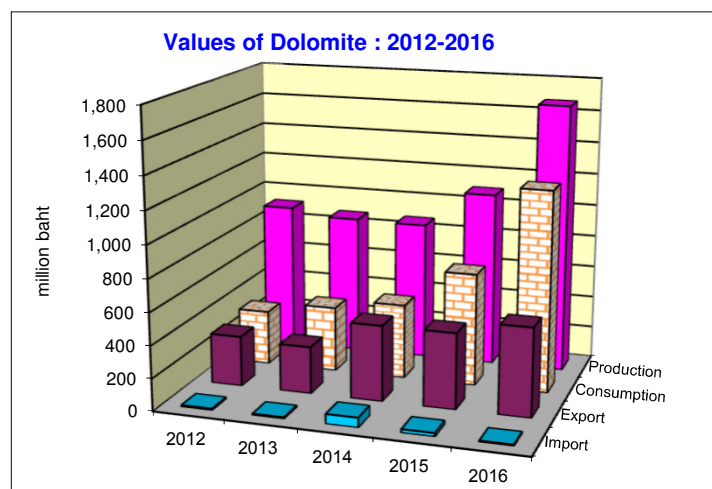
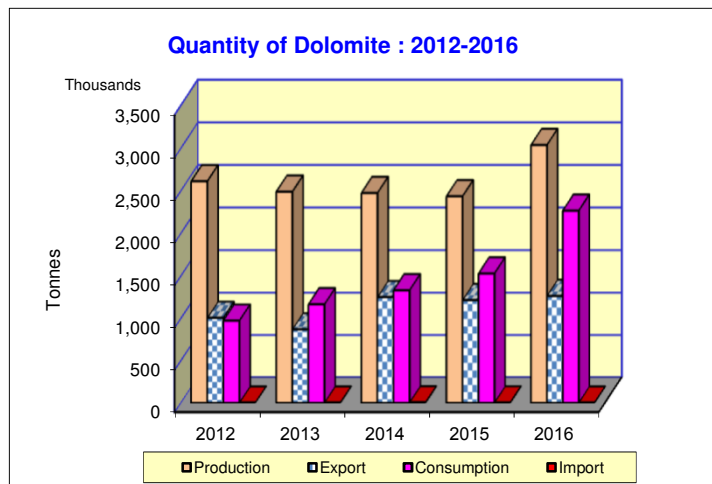
	2012	2013	2014	2015	2016
--	------	------	------	------	------

mpion

Consumption	970,750	1,163,580	1,328,785	1,525,810	2,263,982
(Million Baht)	339.8	407.3	465.1	699.4	1,245.2

ct¹

Import	940	853	3,137	1,495	785
(Million Baht)	10.5	9.5	59.9	21.6	7.9



F E L D S P A R

Tonnes

	2012	2013	2014	2015	2016
<u>Production</u>					
1. Potassium Feldspar (Unground)					
Central Region					
Kanchanaburi	2,000	3,000	11,000	400	-
Prachuap Khiri Khan	210	168	-	-	-
Southern Region					
Nakhon Si Thammarat	3,500	1,690	4,220	2,420	3,200
Total Production	5,710	4,858	15,220	2,820	3,200
Value (Million Baht)	9.7	8.3	25.9	4.8	5.4
2. Sodium Feldspar (Unground)					
Northern Region					
Tak	204,930	183,098	273,346	250,943	252,723
Central Region					
Kanchanaburi	630	500	900	5,096	5,260
Ratchaburi	71,253	108,700	92,402	126,017	158,864
Southern Region					
Nakhon Si Thammarat	818,200	775,500	1,031,560	947,040	747,100
Total Production	1,095,013	1,067,798	1,398,208	1,329,096	1,163,947
Value (Million Bath)	766.5	747.5	978.7	930.4	814.8
<u>Export</u>					
1. Potassium Feldspar (Ground)					
Asia					
Malaysia	-	-	30	-	-
Total Export	-	-	30	-	-
Value (Million Baht)	-	-	0.1	-	-

	Tonnes				
	2012	2013	2014	2015	2016
2. Sodium Feldspar (Ground)					
Asia					
Bangladesh	84,240	115,769	126,722	207,670	263,972
China	-	96	-	-	-
India	57,200	39,386	25,700	33,000	22,072
Indonesia	114,008	113,228	171,716	177,812	100,884
Malaysia	191,130	111,411	98,910	101,190	64,180
Myanmar	-	3,600	-	-	-
Saudi Arabia	-	-	15,000	-	-
Singapore	-	-	-	18,500	-
U.A.E.	212,770	321,230	369,500	198,900	153,480
Vietnam	37,217	30,973	46,574	33,045	33,909
Europe					
Belgium	-	-	28,950	-	-
North America					
Grenada	21,000	-	-	-	-
Total Export	717,565	735,693	883,072	770,117	638,497
Value (Million Baht)	603.0	596.0	770.5	707.9	569.4
<u>Consumption</u>					
1. Potassium Feldspar (Unground)					
Value (Million Baht)	2,618	1,856	9,950	14,200	1,185
	4.5	3.1	15.3	24.1	2.0
2. Sodium Feldspar (Ground)					
Value (Million Baht)	162,716	172,043	212,094	54,530	24,080
	227.8	240.8	296.9	76.3	33.7
3. Sodium Feldspar (Unground)					
Value (Million Baht)	175,272	100,401	155,867	159,779	229,618
	122.7	70.3	109.1	111.8	160.7

	Tonnes				
	2012	2013	2014	2015	2016
<u>Import</u>¹					
1. Potassium Feldspar	35,505	30,395	36,000	34,389	27,416
Value (Million Baht)	115.1	94.6	117.6	116.2	97.9
2. Sodium Feldspar	2,140	5,871	2,807	1,645	2,051
Value (Million Baht)	10.4	20.9	11.6	7.0	8.7
3. Other Feldspar	3,900	5,612	8,275	14,403	7,568
Value (Million Baht)	28.0	35.9	53.6	84.0	57.1

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

F L U O R I T E

Tonnes

	2012	2013	2014	2015	2016
<u>Production</u>					
Northern Region					
Lamphun	7,602	2,432	4,590	14,495	18,800
Phrae	2,000	-	-	600	1,100
Central Region					
Kanchanaburi	-	-	-	-	200
Total Production	9,602	2,432	4,590	15,095	20,100
Value (Million Baht)	50.8	14.1	30.7	112.4	120.2
<u>Export (Metallurgical Grade)</u>					
Asia					
China	-	-	-	550	5,124
Hong Kong	-	-	325	-	-
India	6	820	3,090	20,613	24,541
Indonesia	-	-	200	80	60
Japan	20	-	-	-	-
Korea, North	-	-	-	330	-
Korea, South	-	-	410	22	-
Singapore	-	-	-	25	-
Taiwan	-	1,600	850	-	150
Europe					
Turkey	-	150	-	850	1,819
Ukraine	-	-	-	-	480
Total Export	26	2,570	4,875	22,470	32,174
Value (Million Baht)	0.2	13.8	35.4	121.8	174.2
<u>Consumption</u>					
Total Consumption	1,423	48	60	-	204
Value (Million Baht)	5.9	0.3	0.4	-	1.2
<u>Import¹</u>					
Total Import	555	578	545	498	1517
Value (Million Baht)	12.1	12.1	12.1	8.7	10.3

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

G A R N E T

Tonnes

	2012	2013	2014	2015	2016
<u>Export</u>					
Europe					
Ukraine	23	162	216	-	-
Total Export	23	162	216	-	-
Value (Million Baht)	0.1	0.7	1.1	-	-

GLASS SAND

Tonnes

	2012	2013	2014	2015	2016
<u>Production</u>					
Northeastern Region					
Bueng Kan	-	-	1,887	23,289	43,000
Roi Et	-	-	5,950	45,900	122,850
Central Region					
Cha Choeng Sao	30,000	80,000	190,000	215,000	120,000
Chanthaburi	107,600	96,431	240,110	193,560	207,675
Rayong	295,294	464,850	559,843	600,632	518,345
Southern Region					
Chumphon	1,200	234,804	136,116	113,231	90,829
Total Production	434,094	876,085	1,133,906	1,191,612	1,102,699
Value (Million Baht)	151.9	306.6	396.9	838.3	1,091.7
<u>Consumption</u>					
Total Consumption	393,269	568,904	1,059,202	991,337	918,481
Value (Million Baht)	137.6	199.1	370.7	658.6	909.3
<u>Import</u>¹					
Total Import	51,698	110,329	165,366	144,273	143,315
Value (Million Baht)	192.5	234.9	299.3	250.3	277.3

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

G N E I S S

	Tonnes				
	2012	2013	2014	2015	2016
<u>Production</u>					
Central Region					
Prachuap Khiri Khan	140	30	-	-	-
Total Production	140	30	-	-	-
Value (Million Baht)	0.6	0.1	-	-	-
<u>Consumption</u>					
Total Consumption	40	125	-	70	5
Value (Million Baht)	0.2	0.5	-	0.3	0.0*

0.0* denoting the amount of less than 0.05 million baht

G O L D

Gram

	2012	2013	2014	2015	2016
<u>Production (Metal)</u>					
Northern Region					
Phetchabun	3,486,881	1,770,621	4,114,053	3,305,225	4,185,795
Phichit	821,347	2,625,470	311,815	-	107,151
Northeastern Region					
Loei	593,622	22,797	87,726	-	-
Total Production	4,901,850	4,418,889	4,513,594	3,305,225	4,292,946
Value (Million Baht)	8,131.3	6,105.7	5,946.4	4,210.4	6,039.9
<u>Export (Metal)</u>					
Asia					
Hong Kong	4,901,850	4,418,889	4,513,594	3,305,225	4,292,946
Total Export	4,901,850	4,418,889	4,513,594	3,305,225	4,292,946
Value (Million Baht)	8,131.3	6,105.7	5,946.4	4,210.4	6,039.9

G R A N I T E

Tonnes

	2012	2013	2014	2015	2016
<u>Production</u>					
1. Dimension Stone*					
Northern Region					
Kamphaeng Phet	-	-	-	707	115
Nakhon Sawan	27	-	82	-	-
Phichit	5	-	-	-	-
Tak	4,000	2,010	2,136	3,673	3,859
Central Region					
Cha Choeng Sao	459	220	58	179	47
Prachuap Khiri Khan	1,015	720	700	600	1,503
Total Production	5,506	2,950	2,976	5,159	5,524
Value (Million Baht)	28.1	17.4	17.6	29.9	32.0
2. Industrial Rock					
Northern Region					
Tak	97,100	138,900	199,571	190,764	179,478
Central Region					
Cha Chaeng Sao	108,600	137,950	222,200	291,500	422,700
Chon Buri	2,362,516	2,855,235	3,348,695	2,787,910	3,326,592
Kanchanaburi	6,000	-	-	161,000	477,440
Prachuap Khiri Khan	19,189	21,059	31,738	80,993	168,552
Rayong	1,909,800	1,896,900	997,000	1,539,286	1,507,400
Southern Region					
Narathiwat	679,464	853,306	1,130,395	1,222,374	1,179,675
Phangnga	508,958	544,954	609,607	639,619	667,966
Songkhla	655,129	619,930	1,051,406	1,161,055	1,528,942
Total Production	6,346,756	7,068,234	7,590,612	8,074,501	9,458,745
Value (Million Baht)	856.8	954.2	1,024.7	1,162.3	1,891.7

* unit : cubic meter

Tonnes

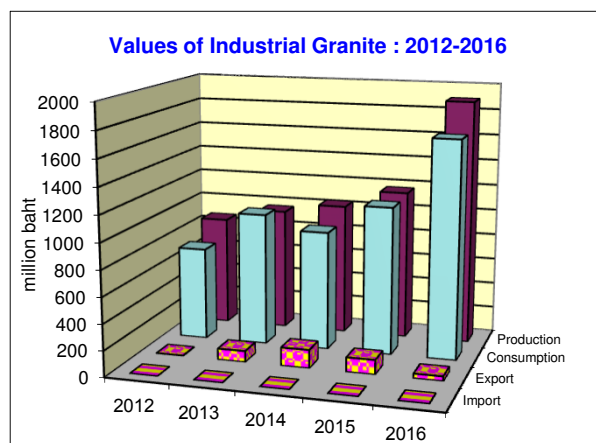
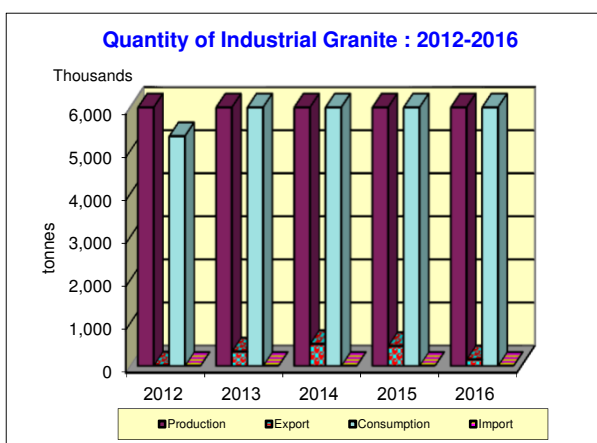
	2012	2013	2014	2015	2016
Export (Industrial Rock)					
Asia					
Myanmar	-	-	5	-	-
Singapore	8,500	331,474	505,710	458,800	149,995
Total Export	8,500	331,474	505,715	458,800	149,995
Value (Million Baht)	4.0	85.9	140.7	111.3	36.1

Consumption

1. Dimension Stone *	5,383	4,210	3,339	4,977	4,718
Value (Million Baht)	27.5	24.8	19.7	28.4	27.4
2. Industrial Rock	5,331,864	7,601,333	6,807,192	7,893,062	8,392,556
Value (Million Baht)	719.8	1,026.2	918.9	1,142.9	1,678.5

Import (Dimension Stone)¹

Total Import	136,741	132,200	128,227	112,695	114,134
Value (Million Baht)	491.3	491.9	525.1	492.4	465.4



* unit : cubic meter

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

G R A V E L

Tonnes

	2012	2013	2014	2015	2016
<u>Export (Industrial Rock)</u>					
Asia					
Malaysia	129	113	45	155	-
Qatar	-	81	-	-	-
Singapore	360	432	528	264	144
Total Export	489	626	573	419	144
Value (Million Baht)	1.9	2.4	2.8	2.4	0.8

G R A Y W A C K E

Tonnes

	2012	2013	2014	2015	2016
<u>Production</u> (Industrial Rock)					
Central Region					
Chanthaburi	269,637	328,737	338,634	340,461	374,223
Trat	467,984	532,713	716,187	642,570	681,126
Total Production	737,621	861,450	1,054,821	983,031	1,055,349
Value (Million Baht)	77.5	90.5	110.8	112.5	211.1
<u>Consumption</u> (Industrial Rock)					
Total Consumption	810,849	801,281	1,018,120	942,630	819,237
Value (Million Baht)	85.1	84.1	106.9	107.7	163.8

G Y P S U M

Tonnes

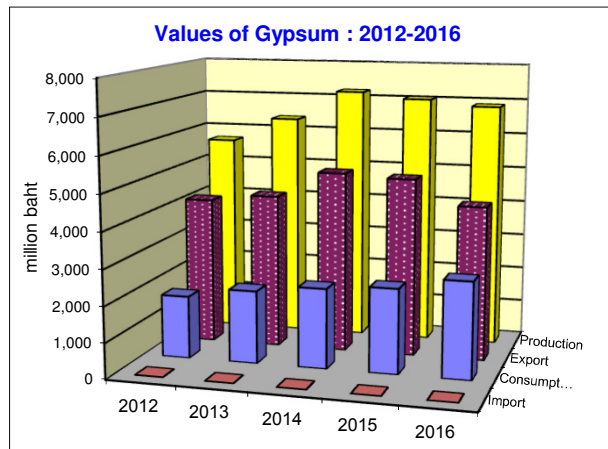
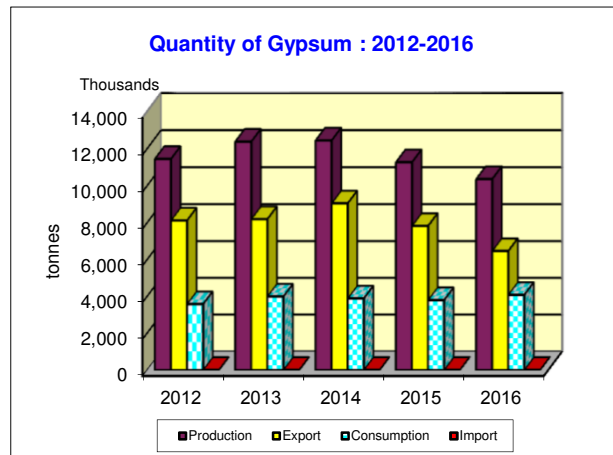
	2012	2013	2014	2015	2016
<u>Production</u>					
Northern Region					
Nakhon Sawan	3,272,585	3,392,836	3,688,369	3,704,056	3,838,830
Phichit	22,308	134,400	453,102	400,246	503,703
Southern Region					
Nakhon Si Thammarat	1,946,534	2,217,212	1,472,991	2,033,928	1,326,727
Surat Thani	6,205,772	6,638,200	6,830,638	5,128,914	4,687,838
Total Production	11,447,199	12,382,648	12,445,100	11,267,144	10,357,098
Value (Million Baht)	5,666.4	6,358.7	7,205.1	7,040.4	6,877.1
<u>Export</u>					
1. Ground					
Asia					
China	-	22	220	-	-
Japan	2,080	2,340	1,560	1,360	1,120
Myanmar	120	1,392	528	-	-
Taiwan	378	352	903	252	315
Total Export	2,578	4,106	3,211	1,612	1,435
Value (Million Baht)	10.3	15.8	11.2	6.4	6.1

	Tonnes				
	2012	2013	2014	2015	2016
2. Unground					
Africa					
Reunion (La Reunion)	10,000	10,000	11,000	-	22,000
Asia					
Bangladesh	642,955	594,375	567,268	191,094	175,800
Brunei	15,700	16,000	8,800	-	-
Cambodia	86,780	62,800	80,600	122,100	158,300
China	26,028	84,090	87,210	158,425	185,010
India	865,895	480,905	91,650	-	-
Indonesia	1,879,282	1,923,604	2,008,490	2,100,013	1,695,900
Japan	929,600	1,082,160	1,426,345	941,092	777,010
Korea,South	108,500	120,300	145,880	81,500	110,000
Malaysia	1,284,704	1,344,784	1,360,885	1,487,015	1,159,470
Myanmar	-	-	-	11,000	-
Nepal	-	8,000	-	-	-
Philippines	372,270	412,150	727,287	490,212	410,600
Singapore	5,000	4,500	-	4,600	-
Sri Lanka	137,020	134,700	101,000	195,600	156,750
Taiwan	-	-	186,550	106,600	-
Vietnam	1,602,887	1,614,534	2,003,190	1,848,766	1,599,290
Australia / Oceania					
Australia	150,500	293,960	221,600	83,600	9,900
Fiji	-	-	14,000	-	-
Total Export	8,117,121	8,186,862	9,041,755	7,821,617	6,460,030
Value(Million Baht)	4,151.4	4,342.0	5,092.7	5,011.3	4,329.6
<u>Consumption</u>					
Total Consumption	3,577,011	3,990,108	3,883,504	3,792,611	4,077,140
Value (Million Baht)	1,770.6	2,052.4	2,250.2	2,382.3	2,707.2
<u>Import</u>¹					
Total Import	659	482	456	258	227
Value (Million Baht)	11.4	8.2	7.3	5.5	3.8

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

Tonnes

2012 2013 2014 2015 2016



ILMENITE

Tonnes

	2012	2013	2014	2015	2016
<u>Export</u>					
Asia					
Bangladesh	-	-	60	200	100
China	970	-	-	-	-
Indonesia	10	-	-	-	-
Korea,South	-	-	-	20	22
Malaysia	422	620	21	100	-
Philippines	278	653	66	-	154
Total Export	1,680	1,273	147	320	276
Value (Million Baht)	6.5	5.0	1.3	2.0	2.4
<u>Import</u>¹					
Total Import	1,097	978	1,358	1,139	1,262
Value (Million Baht)	34.8	21.2	25.1	18.9	21.8

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

I R O N

Tonnes

	2012	2013	2014	2015	2016
<u>Production</u>					
Northern Region					
Nakhon Sawan	33,500	56,250	66,650	-	-
Phetchabun	20,900	35,500	-	-	-
Northeastern Region					
Loei	188,333	257,155	185,488	9,683	-
Central Region					
Cha Choeng Sao	3,000	5,000	12,000	-	-
Chon Buri	57,500	15,715	250	-	-
Southern Region					
Nakhon Si Thammarat	-	20,000	83,530	6,800	-
Total Production	303,233	389,620	347,918	16,483	-
Value (Million Baht)	751.7	907.3	739.7	30.4	-
<u>Export</u>					
Asia					
China	161,139	296,208	167,011	15,770	57,668
Hong Kong	-	40	-	-	-
India	-	50	-	-	-
Indonesia	-	20	-	-	-
Japan	-	80	80	-	-
Myanmar	-	264	264	-	-
Total Export	161,139	296,662	167,355	15,770	57,668
Value (Million Baht)	532.3	597.8	312.7	33.7	61.3
<u>Import</u>¹					
1.Iron Ore	16,217	5,774	4,422	1,567	2,768
Value (Million Baht)	69.8	41.6	35.3	11.0	13.0
2.Iron Pyrite	299	278	310	330	321
Value (Million Baht)	3.5	3.2	4.7	4.6	5.0

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

K A O L I N

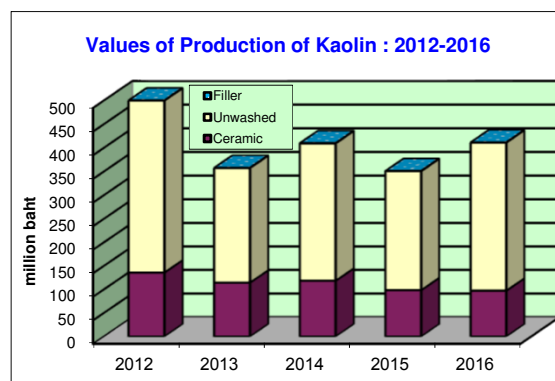
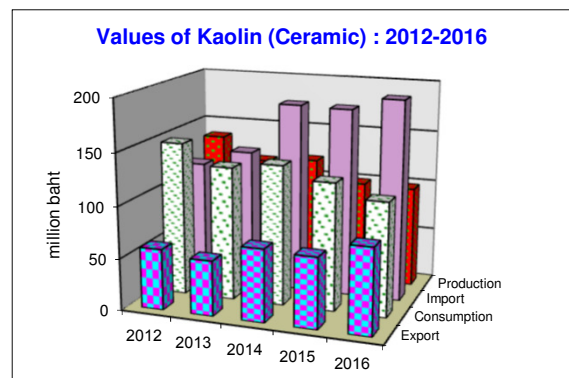
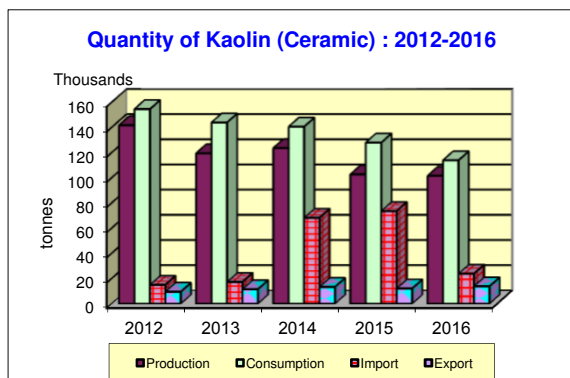
Tonnes

	2012	2013	2014	2015	2016
<u>Production</u>					
1. Kaolin (Washed)					
Northern Region					
Lampang	35,670	18,322	18,540	1,708	175
Central Region					
Chanthaburi	-	315	940	1,125	1,665
Southern Region					
Narathiwat	6,975	7,110	6,680	6,252	5,673
Ranong	99,119	93,765	97,461	93,678	94,105
Total Production	141,764	119,512	123,621	102,763	101,618
Value (Million Baht)	136.1	114.7	118.7	98.7	97.6
2. Kaolin (Unwashed)					
Northern Region					
Lampang	464,095	207,833	425,829	333,181	381,736
Uthai Thani	255,080	50,000	-	-	-
Uttaradit	21,000	-	13,000	2,400	32,940
Central Region					
Chanthaburi	-	3,100	11,800	25,565	13,444
Kanchanaburi	135,300	241,300	227,000	272,800	366,257
Lop Buri	80,500	82,000	48,000	-	-
Phetchaburi	26,700	29,500	17,200	-	-
Prachin Buri	18,300	16,600	13,084	21,250	20,593
Southern Region					
Surat Thani	-	800	-	-	-
Total Production	1,000,975	631,133	755,913	655,196	814,970
Value (Million Baht)	385.4	243.0	291.0	252.3	313.8

	Tonnes				
	2012	2013	2014	2015	2016
3. Kaolin (Filler)					
Northern Region					
Uttaradit	300	-	-	-	-
Total Production	300	-	-	-	-
Value (Million Baht)	0.6	-	-	-	-
<u>Export</u>					
1. Washed					
Asia					
Bangladesh	765	584	1,606	1,812	2,492
China	20	566	966	457	2,472
India	758	939	769	1,005	620
Indonesia	1,488	1,372	840	436	48
Iran	-	-	7	36	-
Korea, South	1	27	24	-	20
Malaysia	1,790	3,583	3,621	3,546	2,985
Pakistan	-	88	40	-	-
Philippines	506	552	648	744	676
Singapore	-	-	-	16	26
Taiwan	-	-	790	-	-
Vietnam	4,140	3,778	4,001	4,018	4,440
Europe					
Turkey	-	-	-	-	6
U.K	20	-	-	-	-
Total Export	9,488	11,489	13,312	12,070	13,785
Value (Million Baht)	58.7	53.1	69.8	67.7	82.1
2. Kaolin (Filler)					
Asia					
Singapore	-	-	-	-	48
Vietnam	-	400	-	-	-
Europe					
Turkey	-	-	-	-	18
Total Export	-	400	-	-	66
Value (Million Baht)	-	2.5	-	-	0.5

Tonnes

	2012	2013	2014	2015	2016
<u>Consumption</u>					
1. Washed	154,594	143,966	140,619	127,965	113,947
Value (Million Baht)	148.4	128.8	134.9	122.8	109.4
2. Unwashed	962,495	564,731	661,055	532,137	849,767
Value (Million Baht)	370.6	217.4	254.5	204.9	327.2
3. Filler	300	-	-	-	-
Value (Million Baht)	0.6	-	-	-	-
<u>Import¹</u>					
1. Ceramic	14,965	17,240	68,239	73,587	23,810
Value (Million Baht)	117.9	133.2	182.7	181.5	193.3
2. Paper	4,404	3,166	7,486	3,600	4,371
Value (Million Baht)	41.1	29.6	74.7	39.5	49.8
3. Others	68,868	69,052	66,833	65,872	73,499
Value (Million Baht)	663.2	639.8	697.6	675.7	729.1



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

L E A D

	Tonnes				
	2012	2013	2014	2015	2016
<u>Import (Lead Ore)</u> ¹					
Total Import	2	0**	20	1	42
Value (Million Baht)	0.0*	0.0*	0.3	0.0*	0.7

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'

L E U C O X E N E

Tonnes

	2012	2013	2014	2015	2016
<u>Export</u>					
Africa					
Tunisia	72	-	-	-	125
Asia					
China	-	-	-	21	-
India	-	-	200	932	1,600
Indonesia	1	240	278	300	-
Japan	21	-	42	84	-
Korea, South	556	462	359	102	450
Malaysia	84	315	484	75	425
Philippines	1,102	420	22	286	1,320
Russia	-	-	-	-	300
Singapore	-	24	-	-	-
Vietnam	-	-	-	-	201
Europe					
Italy	-	-	-	26	-
Turkey	561	205	62	389	1,342
Ukraine	-	63	-	54	150
North America					
Brazil	-	-	-	24	72
Total Export	2,397	1,729	1,447	2,293	5,985
Value (Million Baht)	60.3	46.3	35.9	54.4	148.8
<u>Import</u>¹					
Total Import	3,461	2,540	1,700	2,798	2,960
Value (Million Baht)	265.6	128.4	59.0	97.4	96.9

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

LIGNITE

Tonnes

	2012	2013	2014	2015	2016
<u>Production</u>					
Northern Region					
Lampang	17,778,246	17,884,763	17,828,910	15,150,549	17,491,597
Lamphun	145,433	3,000	9,640	-	-
Tak	145,749	223,000	152,812	-	-
Total Production	18,069,428	18,110,763	17,991,362	15,150,549	17,491,597
Value (Million Baht)	17,346.7	17,386.3	17,271.7	14,544.5	16,791.9
<u>Consumption</u>					
Total Consumption	18,198,546	18,926,159	18,457,189	15,369,157	16,869,269
Value (Million Baht)	17,470.6	18,169.1	17,718.9	14,754.4	16,194.5
<u>Import</u>¹					
Total Import	481	4,870	35,502	30,366	91,721
Value (Million Baht)	16.2	24.8	50.5	46.0	120.1

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

L I M E S T O N E

Tonnes

	2012	2013	2014	2015	2016
<u>Production</u>					
1. Cement Industry					
Northern Region					
Lampang	2,489,710	2,357,795	2,774,218	2,630,045	2,560,891
Nakhon Sawan	-	496,789	558,062	699,320	680,879
Northeastern Region					
Nakhon Ratchasima	14,950	14,831	51,053	95,923	69,051
Central Region					
Phetchaburi	399,205	533,075	621,775	653,209	746,733
Sara Buri	55,771,160	58,254,579	60,521,082	61,794,681	59,859,201
Southern Region					
Nakhon Si Thammarat	7,159,780	6,929,365	6,414,718	7,398,104	6,505,696
Total Production	65,834,805	68,586,434	70,940,908	73,271,282	70,422,450
Value (Million Baht)	7,900.2	8,230.4	8,512.9	9,968.8	17,605.6
2. Other Industries					
Northern Region					
Lampang	1,593,150	1,464,842	1,142,687	1,427,421	1,357,550
Northeastern Region					
Nakhon Ratchasima	94,636	176,243	92,907	-	-
Central Region					
Kanchanaburi	3,700	-	-	-	-
Sara Buri	3,357,937	4,462,533	4,646,038	5,296,271	5,095,627
Total Production	5,049,423	6,103,618	5,881,632	6,723,692	6,453,177
Value (Million Baht)	605.9	732.4	705.8	918.0	2,774.4
3. Dimension Stone					
Central Region					
Sara Buri	60	135	60	24	-
Total Production	60	135	60	24	-
Value (Million Baht)	0.1	0.3	0.1	0.0*	-

0.0* denoting the amount of less than 0.05 million baht

	Tonnes				
	2012	2013	2014	2015	2016
4. Construction					
Northern Region					
Chiang Mai	2,051,300	1,966,600	2,141,495	2,428,100	2,811,000
Chiang Rai	1,981,480	1,516,825	1,571,420	1,707,741	1,860,356
Kamphaeng Phet	543,321	655,817	768,098	742,597	311,196
Lampang	900,995	908,639	1,183,500	1,469,609	1,819,821
Lamphun	450,210	1,081,447	886,189	899,940	1,220,152
Nakhon Sawan	2,775,065	2,889,134	2,507,685	2,756,196	2,738,069
Nan	254,131	182,784	302,050	460,667	469,065
Phayao	872,735	933,897	904,497	965,134	631,456
Phetchabun	1,893,858	1,539,250	1,952,090	2,273,161	2,414,606
Phitsanulok	316,912	274,417	272,373	286,819	313,475
Phrae	244,191	274,646	327,854	449,846	578,550
Sukhothai	1,150,233	1,710,214	1,921,731	2,454,544	2,142,379
Tak	653,220	737,870	832,664	1,256,462	1,055,459
Uthai Thani	427,766	354,342	179,214	191,092	198,516
Northeastern Region					
Khon Kaen	3,063,236	3,355,908	2,826,484	2,492,399	2,418,741
Loei	2,898,620	2,990,422	3,971,675	4,795,833	5,042,611
Nakhon Ratchasima	2,309,724	2,189,684	2,207,586	2,020,135	2,403,586
Nong Bua Lamphu	1,218,982	1,290,209	900,365	984,872	1,166,225
Udon Thani	279,100	290,520	427,840	418,128	340,296
Central Region					
Cha Choeng Sao	-	516	-	-	-
Chai Nat	113,220	135,784	137,496	179,797	113,161
Chanthaburi	173,001	171,000	246,140	411,100	367,400
Chon Buri	9,079,492	9,927,498	11,339,203	12,414,194	12,875,789
Kanchanaburi	1,331,891	3,979,072	1,751,714	2,099,642	2,211,319
Lop Buri	695,500	539,787	541,000	734,000	1,963,512
Phetchaburi	1,442,057	1,304,775	1,284,264	1,690,830	1,555,925
Prachin Buri	327,710	259,910	454,170	662,684	676,000
Prachuap Khiri Khan	1,274,998	1,380,002	1,256,700	1,451,884	1,727,811
Ratchaburi	3,729,490	4,342,807	4,213,401	4,874,536	4,322,729
Rayong	546,496	520,309	538,254	529,469	583,974
Sa Kaeo	503,182	41,946	300,553	318,031	179,685
Sara Buri	11,624,816	14,244,290	14,449,942	15,189,241	15,980,362
Suphan Buri	12,444,394	13,386,874	14,381,758	13,720,231	14,487,887

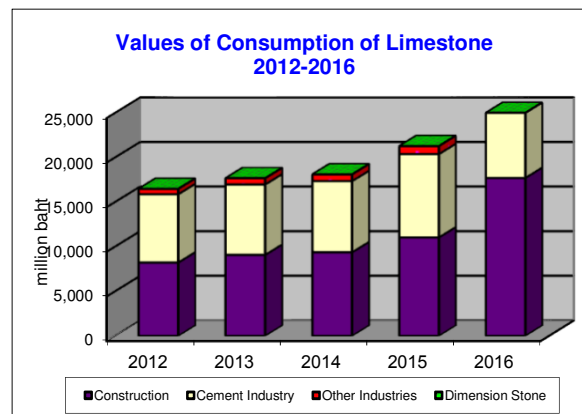
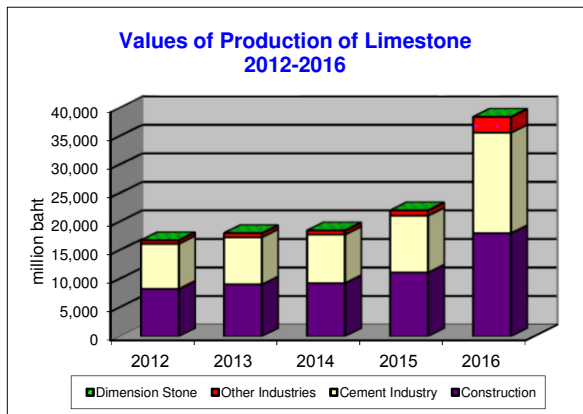
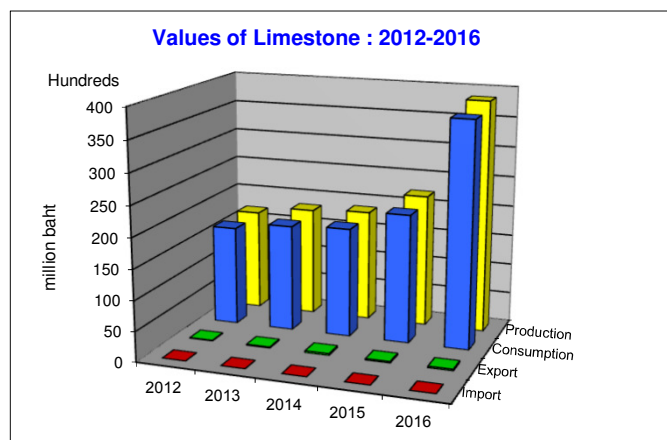
Tonnes

	2012	2013	2014	2015	2016
Southern Region					
Chumphon	828,599	978,837	1,287,708	1,451,184	1,765,925
Krabi	631,279	511,807	611,173	567,864	567,470
Nakhon Si Thammarat	4,590,647	4,414,295	3,657,949	4,094,317	4,269,814
Phangnga	529,880	528,998	610,848	567,233	623,558
Phatthalung	-	-	218,608	562,063	33,120
Satun	1,015,576	808,203	887,939	914,084	902,484
Songkhla	440,383	311,224	357,938	331,674	411,122
Surat Thani	2,333,327	2,747,333	2,706,632	3,256,902	3,303,451
Trang	407,544	503,250	689,818	552,648	611,700
Yala	886,714	683,638	819,856	1,037,609	986,249
Total Production	79,235,275	86,864,780	88,827,874	96,664,493	100,456,006
Value (Million Baht)	8,319.7	9,120.8	9,326.9	11,184.1	18,082.1
Export					
1. Construction					
Africa					
Mozambique	-	-	-	-	15,040
Asia					
Bangladesh	40,900	42,000	293,692	192,910	238,131
Cambodia	-	-	20	6,000	-
India	153,192	283,706	284,367	147,918	120,085
Indonesia	-	-	18,850	9,100	-
Malaysia	-	-	5,000	-	-
Singapore	87,164	-	-	-	-
Taiwan	38,500	84,000	80,800	134,300	125,147
Australia / Oceania					
New Caledonia	-	65,740	140,350	116,125	112,867
Europe					
Germany	9	-	-	-	-
Italy	-	-	7	-	-
Total Export	319,765	475,446	823,086	606,353	611,270
Value (Million Baht)	110.6	185.9	296.6	251.1	271.0

	Tonnes				
	2012	2013	2014	2015	2016
2. Other Industries					
Asia					
Cambodia	834	126	-	20	40
China	22	-	-	-	-
India	-	-	-	150	-
Indonesia	3,123	-	-	-	-
Jordan	21	21	-	-	-
Korea, South	-	-	-	270	-
Laos	440	1,518	309	45	241
Myanmar	33	-	945	74	106
Vietnam	-	42	-	-	-
Australia / Oceania					
Australia	384	309	480	266	-
Europe					
Germany	1	-	-	-	-
Total Export	4,859	2,016	1,734	825	387
Value (Million Baht)	15.0	7.0	3.6	1.8	1.6
<u>Consumption</u>					
1. Cement Industry	63,783,890	65,731,000	66,468,509	68,188,880	70,790,395
Value (Million Baht)	7,654.1	7,887.7	7,976.2	9,343.5	17,697.6
2. Construction	78,318,628	86,494,047	89,267,612	95,625,701	98,357,862
Value (Million Baht)	8,223.5	9,081.9	9,373.1	11,034.3	17,704.4
3. Dimension Stone	60	135	60	24	-
Value (Million Baht)	0.1	0.3	0.1	0.1	-
4. Other Industries	4,987,854	5,816,898	6,262,694	6,568,305	6,970,446
Value (Million Baht)	598.5	698.0	751.5	900.4	1,742.6

Tonnes

	2012	2013	2014	2015	2016
Import¹					
Total Import	3,421	3,057	3,046	2,844	76,654
Value (Million Baht)	1.9	3.3	3.9	7.6	27.5



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

M A N G A N E S E

	Tonnes				
	2012	2013	2014	2015	2016
<u>Production</u> (Metallurgical grade)					
Northern Region					
Chiang Mai	-	-	500	4,000	400
Chiang Rai	8,151	14,320	13,830	-	-
Central Region					
Sa Kaeo	-	-	-	5,000	8,750
Total Production	8,151	14,320	14,330	9,000	9,150
Value (Million Baht)	30.4	73.3	70.5	39.6	24.1
<u>Export</u> (Metallurgical grade)					
Asia					
Bangladesh	-	-	-	132,277	-
China	12,375	10,640	30,368	12,714	31,954
India	100	-	-	-	-
Indonesia	300	-	-	-	-
Jordan	50	-	-	-	-
Total Export	12,825	10,640	30,368	144,991	31,954
Value (Million Baht)	51.4	31.6	96.1	199.0	79.5
<u>Consumption</u>					
Total Consumption	1,118	3,575	5,760	684	2,566
Value (Million Baht)	4.3	18.2	28.5	2.8	10.6
<u>Import</u> (Manganese Ore)¹					
Total Import	24,282	18,017	18,518	18,562	21,027
Value (Million Baht)	52.8	38.3	37.3	41.1	37.5

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

MARBLE

Cubic metre

	2012	2013	2014	2015	2016
<u>Production</u>					
1. Dimension Stone					
Northern Region					
Kamphaeng Phet	-	-	-	945	1,675
Nakhon Sawan	10	-	-	-	-
Sukhothai	769	450	38	-	-
Uthai Thani	-	1,197	1,437	175	-
Northeastern Region					
Nakhon Ratchasima	668	600	600	700	550
Central Region					
Lop Buri	500	-	-	-	-
Sara Buri	5,275	5,920	9,048	10,531	9,879
Total Production	7,222	8,167	11,123	12,351	12,104
Value (Million Baht)	26.7	31.9	43.4	98.1	49.6
2. Fragment					
Northern Region					
Kamphaeng Phet	-	-	18,849	203,678	334,882
Lamphun	38,503	88,787	-	-	-
Nakhon Sawan	-	-	126,848	205,848	-
Sukhothai	14,000	-	-	-	-
Uttaradit	252,144	364,915	493,562	617,657	668,590
Northeastern Region					
Nakhon Ratchasima	-	29,500	-	-	-
Central Region					
Lop Buri	-	1,000	-	-	-
Total Production	304,647	484,202	639,259	1,027,183	1,003,472
Value (Million Baht)	99.0	157.4	207.8	333.8	469.6

	Cubic metre				
	2012	2013	2014	2015	2016
<u>Consumption</u>					
1. Dimension Stone	7,147	7,420	7,338	12,752	11,400
Value (Million Baht)	26.4	28.9	28.6	101.3	46.7
2. Fragment	241,076	509,688	621,327	1,016,419	1,003,471
Value (Million Baht)	78.3	165.6	201.9	330.3	469.6
<u>Import</u>¹					
Total Import	44,094	37,128	38,279	55,610	60,462
Value (Million Baht)	386.5	348.0	387.6	565.7	588.8

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

M A R L

Tonnes

	2012	2013	2014	2015	2016
<u>Production</u>					
Central Region					
Sara Buri	100,000	75,500	1,200	-	-
Total Production	100,000	75,500	1,200	-	-
Value (Million Baht)	8.5	6.4	0.1	-	-
<u>Consumption</u>					
Total Consumption	113,100	13,300	3,000	4,900	5,000
Value (Million Baht)	9.6	1.1	0.3	0.4	0.4

M I C A

	Tonnes				
	2012	2013	2014	2015	2016
<u>Import</u>¹					
Total Import	4,577	4,504	4,392	5,501	5,979
Value (Million Baht)	140.7	119.6	122.2	167.2	176.2

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

M O N A Z I T E

Tonnes

	2012	2013	2014	2015	2016
<u>Export</u>					
Asia					
China	-	210	3,150	1,260	2,620
Malaysia	200	-	-	-	-
Total Export	200	210	3,150	1,260	2,620
Value (Million Baht)	10.4	9.3	147.1	61.0	111.0

P E R L I T E

	2012	2013	2014	2015	2016
Tonnes					
<hr/>					
<u>Production</u>					
Central Region					
Lop Buri	41,400	14,293	54,100	17,200	15,690
Total Production	41,400	14,293	54,100	17,200	15,690
Value (Million Baht)	29.2	10.1	38.2	14.7	23.5
 <u>Consumption</u>					
Total Consumption	10,687	14,293	12,200	12,200	12,190
Value (Million Baht)	6.3	10.1	8.6	10.6	18.3

P H O S P H A T E

Tonnes

	2012	2013	2014	2015	2016
<u>Production</u>					
Northern Region					
Central Region					
Kanchanaburi	1,740	-	500	-	-
Phetchaburi	250	350	-	-	-
Total Production	1,990	350	500	-	-
Value (Million Baht)	0.8	0.1	0.2	-	-
<u>Consumption</u>					
Total Consumption	1,799	264	500	-	120
Value (Million Baht)	0.7	0.1	0.2	-	0.0*
<u>Import</u>¹					
1. Ground	-	0**	1	0.1	0**
Value (Million Baht)	-	0.0*	0.0*	0.0*	0.0*
2. Unground	-	-	-	0**	250
Value (Million Baht)	-	-	-	0.0*	1.2

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

	2012	2013	2014	2015	2016
<u>Production</u>					
Central Region					
Sara Buri	35,000	26,820	49,100	45,500	96,800
Total Production	35,000	26,820	49,100	45,500	96,800
Value (Million Baht)	12.3	9.4	19.9	27.3	58.1
<u>Export</u>					
Asia					
China	-	200	100	-	-
Indonesia	3,856	1,936	480	800	352
Japan	-	40	-	-	-
Malaysia	20	40	-	20	20
Vietnam	2,100	3,680	2,180	440	480
Total Export	5,976	5,896	2,760	1,260	852
Value (Million Baht)	16.3	17.5	9.3	4.4	3.2
<u>Consumption</u>					
Total Consumption	35,000	26,000	34,900	45,488	71,220
Value (Million Baht)	12.3	9.1	13.6	27.3	42.7
<u>Import</u>¹					
Total Import	56	42	1	0.1	-
Value (Million Baht)	1.0	0.7	0.5	0.0*	-

0.0* denoting the amount of less than 0.05 million baht

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

Q U A R T Z

Tonnes

	2012	2013	2014	2015	2016
<u>Production</u>					
1. Ground					
Northern Region					
Tak	3,040	2,938	3,250	3,006	-
Total Production	3,040	2,938	3,250	3,006	-
Value (Million Baht)	2.3	2.2	2.4	2.3	-
2. Underground					
Central Region					
Kanchanaburi	107,700	126,700	88,940	84,980	20,340
Prachuap Khiri Khan	4,500	800	9,400	9,500	13,500
Southern Region					
Total Production	112,200	127,500	98,340	94,480	33,840
Value (Million Baht)	84.2	95.6	73.8	70.9	25.4
3. Quartzite (Industrial Rock)					
Southern Region					
Songkhla	289,560	263,353	93,241	91,164	16,320
Total Production	289,560	263,353	93,241	91,164	16,320
Value (Million Baht)	30.4	27.7	9.8	10.0	3.3
<u>Consumption</u>					
1. Ground					
Value (Million Baht)	2.4	2.1	2.3	2.5	-
2. Underground					
Value (Million Baht)	35.4	49.9	120.1	52.8	15.2
3. Quartzite (Industrial Rock)					
Value (Million Baht)	23.3	26.2	10.0	11.0	4.1
<u>Import</u>¹					
Total Import	3,082	3,248	5,920	9,978	15,578
Value (Million Baht)	15.6	17.8	39.4	95.2	137.4

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

RHYOLITE

Tonnes

	2012	2013	2014	2015	2016
<u>Production</u>					
Central Region					
Sara Buri	794,226	1,244,388	837,314	893,249	833,793
Total Production	794,226	1,244,388	837,314	893,249	833,793
Value (Million Baht)	83.4	130.7	87.9	98.3	125.1
<u>Consumption</u>					
Total Consumption	609,717	861,707	818,859	869,788	797,212
Value (Million Baht)	64.0	90.5	86.0	96.5	119.6

R O C K S A L T

Tonnes

	2012	2013	2014	2015	2016
<u>Production</u>					
Northeastern Region					
Nakhon Ratchasima	1,363,539	1,300,156	1,381,067	1,385,911	1,390,548
Total Production	1,363,539	1,300,156	1,381,067	1,385,911	1,390,548
Value (Million Baht)	1,499.9	1,430.2	1,519.2	2,148.6	2,711.6
<u>Consumption</u>					
Total Consumption	1,344,162	1,312,516	1,372,904	1,397,168	1,339,851
Value (Million Baht)	1,478.6	1,443.8	1,510.2	2,124.5	2,612.7

R U T I L E

Tonnes

	2012	2013	2014	2015	2016
<u>Export</u>					
Asia					
China	10	-	-	-	-
India	-	-	-	-	78
Iran	93	410	-	-	-
Europe					
Belgium	-	-	-	24	-
Russia	-	-	-	408	-
Ukraine	514	-	194	-	-
North America					
Mexico	-	-	-	-	48
South America					
Brazil	-	-	-	-	52
Colombia	-	-	-	-	48
Total Export	617	410	194	432	226
Value (Million Baht)	21.2	14.4	5.6	15.3	7.7
<u>Import</u>¹					
Total Import	5,492	3,991	6,799	5,220	4,108
Value (Million Baht)	460.1	220.3	241.1	169.5	129.8

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

S A N D S T O N E

Tonnes

	2012	2013	2014	2015	2016
<u>Production</u>					
1. Dimension Stone					
Northeastern Region					
Nakhon Ratchasima	1,498	2,445	357	4,540	560
Total Production	1,498	2,445	357	4,540	560
Value (Million Baht)	1.0	1.7	0.2	3.1	0.4
2. Industrial Rock					
Northern Region					
Uttaradit	-	-	61,835	168,555	155,356
Northeastern Region					
Nakhon Phanom	-	-	-	-	446,882
Southern Region					
Phangnga	228,131	189,182	147,516	160,507	234,336
Satun	167,549	191,906	39,727	6,198	-
Total Production	395,680	381,089	249,078	335,260	836,574
Value (Million Baht)	39.6	38.1	24.9	35.8	125.5
<u>Consumption</u>					
1. Dimension Stone					
Value (Million Baht)	1.0	1.7	0.2	3.1	0.4
2. Industrial Rock					
Value (Million Baht)	32.3	31.7	26.0	35.2	122.1
<u>Import</u>¹					
Dimension Stone					
Value (Million Baht)	10.9	2.6	11.6	12.1	11.2

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

S E R P E N T I N E

Tonnes

	2012	2013	2014	2015	2016
<u>Production (Industrial Rock)</u>					
Southern Region					
Narathiwat	-	-	-	400	-
Total Production	-	-	-	400	-
Value (Million Baht)	-	-	-	0.0*	-
<u>Consumption (Industrial Rock)</u>					
Total Consumption	-	-	-	400	-
Value (Million Baht)	-	-	-	0.0*	-

0.0* denoting the amount of less than 0.05 million baht

S H A L E

Tonnes

	2012	2013	2014	2015	2016
<u>Production</u>					
Northern Region					
Lampang	1,147	3,031	-	2,000	18,750
Central Region					
Sara Buri	4,754,237	4,304,409	5,408,521	6,275,143	7,571,322
Total Production	4,755,384	4,307,440	5,408,521	6,277,143	7,590,072
Value (Million Baht)	594.4	538.4	676.1	893.4	1,897.5
<u>Consumption</u>					
Total Consumption	4,698,855	4,028,571	5,313,821	5,996,646	7,615,048
Value (Million Baht)	587.4	503.6	664.2	850.5	1,903.8

S I L V E R

Gram

	2012	2013	2014	2015	2016
<u>Production</u>					
Northern Region					
Phetchabun	26,193,636	12,703,941	28,495,328	21,047,075	34,350,652
Phichit	5,631,776	19,675,044	2,457,823	-	1,602,983
Northeastern Region					
Loei	222,022	2,280	92,765	-	-
Total Production	32,047,434	32,381,264	31,045,916	21,047,075	35,953,635
Value (Million Baht)	988.5	747.5	618.4	366.0	712.5
<u>Export</u>					
Asia					
Hong Kong	32,047,434	32,381,264	31,045,916	21,047,075	35,953,635
Total Export	32,047,434	32,381,264	31,045,916	21,047,075	35,953,635
Value (Million Baht)	988.5	747.5	618.4	366.0	712.5
<u>Import</u>¹					
Total Import	-	12	12	12	11
Value (Million Baht)	-	1.2	1.2	1.3	0.7

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

S T R U V E R I T E

Tonnes

	2012	2013	2014	2015	2016
<u>Export</u>					
Asia					
China	410	147	87	64	100
Total Export	410	147	87	64	100
Value (Million Baht)	39.0	27.1	16.7	12.6	20.7

T A L C

Tonnes

	2012	2013	2014	2015	2016
<u>Production</u>					
Northern Region					
Uttaradit	5,856	7,880	8,208	6,768	7,126
Total Production	5,856	7,880	8,208	6,768	7,126
Value (Million Baht)	3.5	4.7	4.9	4.1	4.3
<u>Consumption</u>					
Total Consumption	5,732	7,465	8,123	6,765	8,382
Value (Million Baht)	3.4	4.5	4.9	4.1	5.0
<u>Import</u>¹					
Total Import	138,694	143,049	137,228	134,349	137,350
Value (Million Baht)	1,786.2	1,751.1	1,662.8	1,625.0	1,646.5

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

T A N T A L U M

Tonnes

	2012	2013	2014	2015	2016
<u>Import (Tantalite)¹</u>					
Total Import	652	42	182	387	208
Value (Million Baht)	675.3	77.0	356.2	693.0	360.8

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

TIN

Tonnes

	2012	2013	2014	2015	2016
<u>Production</u>					
1. Production of Tin Concentrates by changwat					
Northern Region					
Chiang Mai	154	75	100	39	41
Central Region					
Kanchanaburi	13	18	31	11	13
Southern Region					
Nakhon Si Thammarat	-	-	-	-	21
Ranong	32	39	25	22	17
Total Production	199	132	156	72	92
Value (Million Baht)	94.0	65.7	80.0	28.4	43.7
2. Production of Tin Concentrates by Mining Methods.					
Open Pitting	167	93	131	50	75
Dulang Washing	32	39	25	22	17
Total Production	199	132	156	72	92
Value (Million Baht)	94.0	65.7	80.0	28.4	43.7
3. Percentage of Tin Production by Mining Methods.					
Open Pitting	83.9	70.4	84.0	69.3	81.7
Dulang Washing	16.1	29.6	16.0	30.7	18.3
4. Production of Primary Tin Metal					
Total Production	22,797	22,923	16,494	10,616	10,807
Value (Million Baht)	15,012.7	15,574.7	11,831.1	5,784.9	6,847.1

	Tonnes				
	2012	2013	2014	2015	2016
<u>Export</u>					
1. Tin Metal					
Africa					
Egypt	-	-	4	-	-
South Africa	125	-	-	-	-
Asia					
Bangladesh	-	20	35	10	-
China	519	715	170	280	304
Hong Kong	51.3	84	61	12	43
India	585	175	45	1	30
Israel	-	10	-	-	-
Japan	9,524	9,209	5,774	3,609	2,965
Korea, South	2,673	3,318	3,835	1,854	2,073
Malaysia	140	180	89	1	28
Pakistan	-	6	5	5	6
Philippines	10	117	9	6	7
Singapore	134	-	62	23	42
Taiwan	361	607	191	193	486
U.A.E.	-	-	-	-	1
Vietnam	-	44	172	-	2
Australia / Oceania					
Australia	213	92	138	88	76
New Zealand	-	7	5	-	-
Europe					
Belgium	158	168	272	252	146
Bosnia & Herzegovina	-	-	-	1	-
France	120	-	25	-	5
Germany	484	158	74	385	443
Iceland	-	-	50	-	-
Italy	50	1,000	125	26	150
Netherlands	1,975	2,400	2,037	346	205
Russia	-	10	-	-	-
Spain	-	-	-	25	75
Turkey	25	-	-	-	25
U.K.	301	227	596	320	316
North America					
U.S.A.	2,180	1,175	115	62	396
Total Export	19,628	19,721	13,890	7,499	7,824
Value (Million Baht)	13,248.0	13,483.4	9,150.3	4,271.2	4,989.2

	Tonnes				
	2012	2013	2014	2015	2016
2. Tin-Lead Alloy					
Asia					
India	-	-	-	0.3	1
Malaysia	-	-	2	4	1
Philippines	-	-	-	-	2
Europe					
Belgium	55	25	-	-	-
Total Export	55	25	2	4	4
Value (Million Baht)	30.5	9.8	1.0	2.0	2.0
3. Final Slag					
Asia					
China	57	37	113	-	705
Europe					
Germany	-	3	-	-	313
Total Export	57	40	113	-	1,018
Value (Million Baht)	6.4	8.0	18.5	-	36.4
4. Metallic Residue					
Asia					
Japan	20	-	-	-	-
Total Export	20	-	-	-	-
Value (Million Baht)	12.5	-	-	-	-
5. Tin Slime					
Asia					
Malaysia	-	-	-	0.5	-
Total Export	-	-	-	0.5	-
Value (Million Baht)	-	-	-	0.7	-
6. Copper Dross					
Europe					
Belgium	-	-	8	-	59
Total Export	-	-	8	-	59
Value (Million Baht)	-	-	3.4	-	23.2

	Tonnes				
	2012	2013	2014	2015	2016
7. Hard Head					
Africa					
U.A.E	86	-	-	-	-
Asia					
Singapore	-	-	13	-	-
Europe					
Belgium	280	45	145	-	421
Total Export	366	45	158	-	421
Value (Million Baht)	164.5	16.1	53.3	-	137.0
8. Tin Dross					
Europe					
Belgium	39	-	-	-	-
Germany	-	-	-	2	-
Total Export	39	-	-	2	-
Value (Million Baht)	13.9	-	-	0.8	-
<u>Consumption</u>					
1. Primary Tin Metal	3,321	3,012	3,257	2,930	3,132
Value (Million Baht)	2,176.1	2,044.3	2,313.0	1,613.0	1,976.2
2. Tin-lead Alloy	833	-	-	-	-
Value (Million Baht)	n.a.	-	-	-	-
<u>Import</u>¹					
Tin ore	2,842	648	5,851	5,742	7,870
Value (Million Baht)	397.0	280.3	2,385.5	1,731.6	2,738.3

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

T R A V E R T I N E

	Tonnes				
	2012	2013	2014	2015	2016
<u>Production</u>					
Central Region					
Sara Buri	900	-	5,103	1,350	2,600
Total Production	900	-	5,103	1,350	2,600
Value (Million Baht)	1.8	-	10.2	2.7	5.2
<u>Consumption</u>					
Total Consumption	900	-	1,103	2,200	3,600
Value (Million Baht)	1.8	-	2.2	4.4	7.2
<u>Import</u>¹					
Total Import	0**	0**	17.0	-	-
Value (Million Baht)	0.0*	0.0*	0.2	-	-

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'

TUNGSTEN

Tonnes

	2012	2013	2014	2015	2016
<u>1. Wolfram</u>					
<u>Production</u>					
Northern Region					
Phrae	-	108	36	-	-
Central Region					
Kanchanaburi	3	5	10	19	15
Total Production	3	113	46	19	15
Value (Million Baht)	0.2	11.2	4.6	3.5	4.9
<u>Export</u>					
Asia					
China	-	60	-	-	-
Europe					
Virgin Islands	-	-	16	-	-
Total Export	-	60	16	-	-
Value (Million Baht)	-	1.7	1.1	-	-
<u>Import¹</u>					
Total Import	21	5	3	-	-
Value (Million Baht)	1.8	1.3	0.8	-	-

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

	Tonnes				
	2012	2013	2014	2015	2016
<u>2. Scheelite</u>					
<u>Production</u>					
Northern Region					
Chiang Mai	130	139	127	42	42
Total Production	130	139	127	42	42
Value (Million Baht)	12.9	13.8	12.6	5.9	11.8
<u>Export</u>					
Asia					
Hong Kong	17	-	-	-	-
Vietnam	21	-	-	-	-
Europe					
Austria	43	71	21	-	-
North America					
U.S.A.	135	102	97	18	18
Total Export	216	173	118	18	18
Value (Million Baht)	22.0	17.2	11.8	10.5	6.6
<u>3. Other Tungsten</u>					
<u>Import</u>¹					
Total Import	-	-	-	0.4	-
Value (Million Baht)	-	-	-	0.8	-

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

X E N O T I M E

Tonnes

	2012	2013	2014	2015	2016
<u>Import</u>¹					
Total Import	60	-	-	40	-
Value (Million Baht)	0.7	-	-	0.5	-

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

Z I N C

Tonnes

	2012	2013	2014	2015	2016
<u>Production</u>					
Northern Region					
Tak	166,642	172,578	226,893	181,025	175,632
Total Production	166,642	172,578	226,893	181,025	175,632
Value (Million Baht)	2,102.8	2,080.2	3,312.5	2,440.8	2,388.2
<u>Export</u>					
1. Zinc Metal					
Africa					
Niger	-	-	76	-	-
Nigeria	35	-	152	149	-
Asia					
Bangladesh	-	-	-	202	102
Cambodia	20	45	25	-	0**
China	-	-	-	0.1	-
India	250	133	627	83	2,575
Indonesia	8	1	28	102	205
Japan	41	-	-	-	-
Korea, South	80	-	-	-	-
Laos	-	-	3	14	91
Malaysia	1,271	3	504	280	2
Myanmar	1,342	-	144	72	96
Saudi Arabia	-	-	-	126	-
Singapore	331	212	1,010	0.2	-
Sri Lanka	-	-	-	-	0.2
Taiwan	2	389	-	-	182
Vietnam	3,758	303	0.2	2	31
Total Export	7,138	1,086	2,569	1,030	3,284
Value (Million Baht)	441.1	87.7	199.4	69.8	220.6

0** denoting the amount of less than 0.1 tonnes

	Tonnes				
	2012	2013	2014	2015	2016
2. Zinc Alloy					
Asia					
Cambodia	-	-	-	0**	-
India	-	-	-	-	177
Indonesia	-	-	-	193	145
Japan	-	-	-	-	0.1
Malaysia	41	39	-	-	26
Australia / Oceania					
Australia	55	3	-	-	-
Europe					
Belgium	-	-	-	-	34
Total Export	96	42	-	193	382
Value (Million Baht)	5.2	2.2	-	12.3	26.1
<u>Consumption</u>					
1. Zinc Alloy	34,735	32,493	29,833	26,791	23,697
Value (Million Baht)	2,324.3	2,134.8	2,379.2	2,084.6	1,908.9
2. Zinc Metal	51,960	33,168	28,638	27,662	33,063
Value (Million Baht)	3,266.0	2,039.5	2,079.0	1,947.5	2,390.7
<u>Import (Zinc Ore)¹</u>					
Total Import	139,625	119,896	41,747	82,710	32,306
Value (Million Baht)	3,090.1	2,451.5	999.0	1,902.7	757.3

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

0** denoting the amount of less than 0.1 tonnes

Z I R C O N

	Tonnes				
	2012	2013	2014	2015	2016
<u>Export</u>					
Asia					
China	4,882	8,681	9,175	6,235	6,500
India	-	-	1,479	1,596	2,106
Japan	-	-	-	2	-
Malaysia	-	-	84	-	-
Taiwan	240	-	-	-	-
U.A.E.	-	-	-	-	104
Vietnam	-	-	-	24	120
Europe					
Spain	-	-	-	-	176
South America					
Brazil	-	-	-	-	24
Total Export	5,122	8,681	10,738	7,857	9,030
Value(Million Baht)	176.9	277.8	273.7	197.8	250.4
<u>Import (Zirconium Ore)¹</u>					
Total Import	12,334	35,696	51,545	81,932	40,659
Value (Million Baht)	615.0	506.8	629.1	958.0	521.1

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

NUMBER OF ACTIVE MINES BY KIND OF MINERALS

	2012	2013	2014	2015	2016
Andesite	3	3	3	3	3
Antimony	2	-	-	-	-
Ball clay	6	6	5	4	4
Barite	4	4	6	6	7
Basalt (industrial rock)	26	26	32	36	39
Bentonite	1	1	-	-	-
Calcite	6	7	7	7	6
Cement clay	4	9	16	20	23
Ceramic clay	2	2	4	6	6
Diatomite	1	-	-	-	-
Dolomite	22	19	20	21	17
Feldspar	23	22	20	20	18
Fluorite	3	2	2	2	3
Glass sand	9	11	11	11	14
Gneiss	1	1	1	1	1
Gold	4	4	4	4	4
Granite (dimension stone)	23	22	22	22	19
Granite (industrial rock)	17	18	18	20	19
Graywacke	1	1	1	1	1
Gypsum	47	46	44	47	50
Iron	13	14	15	12	5
Kaolin	31	29	27	29	25
Lignite	8	7	6	5	3
Limestone (cement)	15	14	17	17	14
Limestone (construction)	190	193	196	201	198
Limestone (dimension)	4	5	3	3	3
Limestone (others)	19	13	15	16	15
Manganese	3	2	4	3	3
Marble	19	17	17	19	17
Marl	3	3	3	4	4

NUMBER OF ACTIVE MINES BY KIND OF MINERALS

	2012	2013	2014	2015	2016
Perlite	2	3	3	3	4
Phosphate	1	1	1	1	1
Pyrophyllite	3	3	3	3	2
Quartz	7	7	7	7	8
Rhyolite (industrial rock)	1	1	1	1	1
Rock salt	4	4	3	3	3
Sand stone (dimension)	7	8	9	10	10
Sand stone (industrial rock)	3	4	3	3	4
Shale	7	6	6	6	6
Talc	1	2	2	1	1
Tin*	3	3	3	3	4
Travertine	3	3	2	2	2
Wolfram	1	1	1	1	1
Zinc	1	1	1	1	1
Total	554	548	564	585	569

* Including tin-tungsten mines

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

	2012	2013	2014	2015	2016
Andesite	30	30	30	30	30
Antimony	21	-	-	-	-
Ball clay	283	354	351	344	120
Barite	55	85	131	130	137
Basalt (industrial rock)	554	544	686	704	674
Bentonite	12	12	-	-	-
Calcite	93	109	76	74	52
Cement clay	35	123	340	410	426
Ceramic clay	17	19	47	68	67
Diatomite	4	-	-	-	-
Dolomite	284	259	262	302	304
Feldspar	324	330	288	263	254
Fluorite	95	67	74	35	71
Glass sand	30	37	73	98	123
Gneiss	7	7	7	7	7
Gold	213	383	427	329	333
Granite (dimension)	251	221	224	251	220
Granite (industrial rock)	340	354	500	600	720
Graywacke	29	27	28	28	28
Gypsum	1,017	933	865	902	972
Iron	353	407	380	213	50
Kaolin	361	344	326	322	263
Lignite	1,954	1,921	1,884	1,560	1,649
Limestone (cement)	1,170	1,114	874	873	868
Limestone (construction)	3,399	3,611	3,947	4,101	3,986
Limestone (dimension)	30	24	15	6	6
Limestone (others)	361	308	351	432	501
Manganese	12	9	41	26	32
Marble	298	295	312	317	238
Marl	16	18	22	27	33

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

	2012	2013	2014	2015	2016
Perlite	31	69	69	73	65
Phosphate	59	60	60	60	67
Pyrophyllite	35	37	31	29	25
Quartz	103	108	110	107	98
Rhyolite (industrial rock)	43	43	43	43	43
Rock salt	128	126	128	124	128
Sand stone (dimension)	42	55	51	53	54
Sand stone (industrial rock)	39	59	56	56	60
Shale	85	84	113	153	149
Talc	8	19	26	9	6
Tin*	269	256	256	234	213
Travertine	19	19	10	8	5
Wolfram	125	76	57	9	14
Zinc	298	256	231	225	148
Dulang Washer	266	246	148	131	120
Total	13,198	13,458	13,950	13,766	13,359

* Including workers employed in tin-tungsten mines

Mineral Production of Thailand 2012 - 2016

Quantity : Tonnes
Value : Million Baht

Mineral	2012		2013		2014		2015		2016	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
Mineral Fuels and Energy										
Lignite	18,069,428	17,346.7	18,110,763	17,386.3	17,991,362	17,271.7	15,150,549	14,544.5	17,491,597	16,791.9
Total		17,346.7		17,386.3		17,271.7		14,544.5		16,791.9
%		28.32		28.63		26.91		22.86		18.78
Iron and Ferro Alloy										
Iron ore	303,233	751.7	389,620	907.3	347,918	739.7	16,483	30.4	-	-
Manganese (metallurgical grade)	8,151	30.4	14,320	73.3	14,330	70.5	9,000	39.6	9,150	24.1
Tungsten										
- Scheelite	130	12.9	139	13.8	127	12.6	42	5.9	42	11.8
- Wolfram	3	0.2	113	11.2	46	4.6	19	3.5	15	4.9
Total		795.2		1,005.6		827.4		79.4		40.8
%		1.30		1.66		1.29		0.13		0.05
Base Metals										
Antimony										
- Low grade	43	n.a.	-	-	-	-	-	-	-	-
- Ore	-	-	-	-	-	-	-	-	32	0.9
Copper metal	721	186.5	-	-	229	52.3	-	-	-	-
Tin concentrates	199	94.0	132	65.7	156	80.0	72	28.3	92	43.9
Zinc ore	166,642	2,102.8	172,578	2,080.2	226,893	3,312.5	181,025	2,440.8	175,632	2,388.2
Total		2,383.3		2,145.9		3,444.8		2,469.1		2,433.0
%		3.89		3.53		5.37		3.88		2.72

Mineral Production of Thailand 2012 - 2016

Quantity : Tonnes
Value : Million Baht

Mineral	2012		2013		2014		2015		2016	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
Precious Metals and Precious Stone										
Gold metal (unit : gram)	4,901,850	8,131.2	4,418,889	6,105.7	4,513,594	5,946.4	3,305,225	4,210.4	4,292,946	6,039.9
Silver metal (unit : gram)	32,046,801	988.4	32,381,264	747.5	31,045,916	618.4	21,047,075	366.0	35,953,635	712.5
Total		9,119.7		6,853.2		6,564.8		4,576.4		6,752.4
%		14.87		11.29		10.23		7.19		7.55
Cement Industrial Minerals										
Anhydrite	857,172	424.3	1,264,077	648.7	976,818	565.5	876,024	552.6	1,340,213	889.9
Cement Clay	6,007,039	540.6	2,534,097	228.1	4,124,016	371.2	4,792,683	431.3	4,489,378	404.0
Gypsum (unground)	11,447,199	5,666.4	12,382,648	6,358.7	12,445,100	7,205.1	11,267,144	7,040.4	10,460,598	6,910.0
Limestone	65,834,804	7,900.2	68,586,434	8,230.4	70,940,908	8,512.9	73,271,282	9,968.8	70,422,450	17,605.6
Marl	100,000	8.5	75,500	6.4	1,200	0.1	-	-	-	-
Shale	4,755,384	594.4	4,307,440	538.4	5,408,521	676.1	6,277,143	893.4	7,590,072	1,897.5
Total		15,134.4		16,010.7		17,330.9		18,886.5		27,707.0
%		24.71		26.37		27.00		29.68		30.99
Ceramic Industrial Minerals										
Ball clay	447,348	246.0	112,187	61.7	123,082	67.7	81,245	44.7	152,301	83.8
Ceramic Clay	60,327	33.2	77,358	42.6	312,963	172.1	514,044	282.7	371,686	204.4
Dolomite	2,608,997	913.1	2,487,135	870.5	2,471,486	865.0	2,432,853	1,089.9	3,034,860	1,669.2
Feldspar										
- Potassium (unground)	5,710	9.7	4,858	8.3	14,220	24.2	2,820	4.8	3,200	5.4
- Sodium (unground)	1,095,013	766.5	1,067,798	747.5	1,399,208	979.4	1,329,096	930.4	1,163,947	814.8

Mineral Production of Thailand 2012 - 2016

Quantity : Tonnes
Value : Million Baht

Mineral	2012		2013		2014		2015		2016	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
Ceramic Industrial Minerals										
Glass sand	434,094	151.9	876,085	306.6	1,133,906	396.9	1,191,612	838.3	1,102,699	1,091.7
Kaolin										
- Filler	300	0.6	-	-	-	-	-	-	-	-
- Unwashed	1,000,975	385.4	631,133	243.0	755,913	291.0	655,196	252.3	814,970	313.8
- Washed	141,764	136.1	119,512	114.7	123,621	118.7	102,763	98.7	101,618	97.6
Quartz										
- Ground	3,040	2.3	2,938	2.2	3,250	2.4	3,006	2.3	-	-
- Unground	112,200	84.2	127,500	95.6	98,340	73.8	94,480	70.9	33,840	25.4
Total		2,729.0		2,492.7		2,991.2		3,615.0		4,306.1
%		4.46		4.11		4.66		5.68		4.82
Dimension Stone										
Gneiss	140	0.6	30	0.1	-	-	-	-	-	-
Granite	5,505*	28.1	2,950*	17.4	2,976*	17.6	5,159*	29.8	5,524*	32.0
Limestone	60	0.1	135	0.3	60	0.1	24	0.1	-	-
Marble	7,222*	26.7	8,167*	31.9	11,123*	43.4	12,351*	98.1	12,104*	49.6
Sandstone	1,498	1.0	2,445	1.7	357	0.2	4,540	3.1	560	0.4
Serpentine	-	-	-	-	-	-	400	0.0**	-	-
Travertine	900	1.8	-	-	5,103	10.2	1,350	2.7	2,600	5.2
Total		58.3		51.4		71.5		133.8		87.2
%		0.09		0.08		0.11		0.21		0.10

Mineral Production of Thailand 2012 - 2016

Quantity : Tonnes
Value : Million Baht

Mineral	2012		2013		2014		2015		2016	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
Other Industrial Minerals										
Fluorite (metallurgical grade)	9,602	50.8	2,432	14.1	4,590	30.7	15,095	112.4	20,100	120.2
Limestone	5,049,423	605.9	6,103,618	732.4	5,881,632	705.8	6,723,692	917.9	6,453,177	2,774.4
Phosphate	1,990	0.8	350	0.1	500	0.2	-	-	-	-
Pyrophyllite	35,000	12.3	26,820	9.4	49,100	19.9	45,500	27.3	96,800	58.1
Rock salt	1,363,539	1,499.9	1,300,156	1,430.2	1,381,067	1,519.2	1,385,911	2,148.6	1,390,548	2,711.6
Talc (unground)	5,856	3.5	7,880	4.7	8,208	4.9	6,768	4.1	7,126	4.3
Total		2,580.5		2,631.4		2,812.9		4,399.6		7,475.0
%		4.21		4.33		4.38		6.91		8.36
Grand Total		61,265.1		60,724.3		64,182.7		63,630.2		89,397.9

:- n.a. = not available :- * = Cubic Meter :- 0.0** = denoting the amount of less than 0.05 million baht

Mineral Export of Thailand 2012 - 2016

Quantity : Tonnes
Value : Million Baht

Mineral	2012		2013		2014		2015		2016	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
<u>Iron and Ferro Alloy</u>										
Iron ore	161,139	532.3	296,662	597.8	167,355	312.7	15,770	33.7	57,668	61.3
Manganese (metallurgical grade)	12,825	51.4	10,640	31.6	30,368	96.1	144,991	199.0	31,954	79.5
Tungsten										
- Scheelite	216	22.0	173	17.2	119	11.8	18	10.5	18	6.6
- Wolfram	-	-	60	1.7	16	1.1	-	-	-	-
Total		605.7		648.3		421.7		243.2		147.4
%		2.01		2.32		1.71		1.40		0.73
<u>Base Metals</u>										
Antimony ore	6,268	124.3	6,145	147.4	3,536	107.4	3,710	208.9	3,906	95.4
Copper metal	721	186.5	-	-	229	52.4	-	-	-	-
Tin										
- Final slag	57	6.4	40	8.0	113	18.5	-	-	1,018	36.4
- Hard head	366	164.5	45	16.1	158	53.3	-	-	421	137.0
- Metallic residue	20	12.5	-	-	-	-	-	-	-	-
- Tin-lead alloy	55	30.5	25	9.8	2	1.0	5	2.0	4	2.0
- Tin metal	19,628	13,248.0	19,721	13,483.4	13,890	9,150.4	7,499	4,271.2	7,824	4,989.2
- Tin slime	-	-	-	-	-	-	1	0.7	-	-
- Tin dross	39	13.9	-	-	-	-	2	0.8	-	-
- Copper dross	-	-	-	-	8	3.4	-	-	59	23.2

Mineral Export of Thailand 2012 - 2016

Quantity : Tonnes
Value : Million Baht

Mineral	2012		2013		2014		2015		2016	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
<u>Base Metals</u>										
Zinc										
- Zinc alloy	96	5.2	42	2.2	-	-	193	12.3	382	26.1
- Zinc metal	7,137	441.1	1,086	87.7	2,569	199.4	1,030	69.8	3,284	220.6
Total		14,232.9		13,754.6		9,585.8		4,565.7		5,529.9
%		47.34		49.13		38.72		26.18		27.46
<u>Precious Metals and Precious Stone</u>										
Garnet	23	0.1	162	0.7	216	1.1	-	-	-	-
Gold metal (unit : gram)	4,901,850	8,131.2	4,418,889	6,105.7	4,513,594	5,946.4	3,305,225	4,210.4	4,292,946	6,039.9
Silver metal (unit : gram)	32,047,434	988.5	32,381,264	747.5	31,045,916	618.4	21,047,075	366.0	35,953,635	712.5
Total		9,119.8		6,853.9		6,565.9		4,576.4		6,752.4
%		30.33		24.48		26.52		26.25		33.53
<u>Light Metals and Rare Earth</u>										
Columbite-tantalite	-	-	-	-	50	7.1	-	-	-	-
Ilmenite	1,680	6.5	1,273	5.1	147	1.3	320	2.0	276	2.4
Leucosene	2,397	60.3	1,729	46.3	1,447	35.9	2,293	54.4	5,985	148.8
Monazite	200	10.4	210	9.3	3,150	147.2	1,260	61.0	2,620	110.9
Rutile	617	21.2	410	14.4	194	5.6	432	15.3	226	7.7
Struverite	410	39.0	147	27.1	87	16.7	64	12.6	100	20.7
Zircon	5,122	176.9	8,681	277.8	10,738	273.7	7,857	197.8	9,030	250.4
Total		314.3		380.0		487.5		343.1		540.9
%		1.04		1.36		1.97		1.97		2.68

Mineral Export of Thailand 2012 - 2016

Quantity : Tonnes
Value : Million Baht

Mineral	2012		2013		2014		2015		2016	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
<u>Cement Industrial Minerals</u>										
Anhydrite										
- Unground	788,906	401.3	1,171,407	611.4	1,111,151	630.0	1,034,970	674.3	1,350,250	880.2
- Ground	300	1.1	-	-	-	-	-	-	-	-
Gypsum										
- Ground	2,578	10.3	4,106	15.8	3,211	11.2	1,612	6.4	1,435	6.1
- Unground	8,117,121	4,151.4	8,186,862	4,342.0	9,041,755	5,092.7	7,821,617	5,011.3	6,460,030	4,329.6
Total		4,564.1		4,969.2		5,733.9		5,692.0		5,215.9
%		15.18		17.75		23.16		32.64		25.90
<u>Ceramic Industrial Minerals</u>										
Ball clay	13,591	66.9	19,733	87.7	23,514	100.6	26,461	120.6	13,338	63.9
Dolomite										
- Ground	165	0.7	3,129	0.9	4,434	1.1	-	-	4,640	7.4
- Unground	1,003,160	312.9	866,630	292.5	1,247,850	469.9	1,213,054	469.3	1,261,885	547.4
Feldspar										
- Potassium (ground)	-	-	-	-	30	0.1	-	-	-	-
- Sodium (ground)	717,565	603.0	735,693	596.0	883,072	770.5	770,117	707.9	638,497	569.4
Kaolin										
- Filler	-	-	400	2.5	-	-	-	-	66	0.5
- Washed	9,488	58.7	11,489	53.1	13,312	69.8	12,070	67.7	13,785	82.1
Total		1,042.2		1,032.7		1,412.0		1,365.5		1,270.7
%		3.47		3.69		5.70		7.83		6.31

Mineral Export of Thailand 2012 - 2016

Quantity : Tonnes
Value : Million Baht

Mineral	2012		2013		2014		2015		2016	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
<u>Industrial Rock</u>										
Granite (industrial rock)	8,500	4.0	331,474	85.9	505,714	140.8	458,800	111.3	149,995	36.1
Gravel (industrial rock)	489	1.9	626	2.4	573	2.8	419	2.4	144	0.8
Limestone (industrial rock-construction)	319,765	110.6	475,446	185.9	823,086	296.6	606,353	251.1	611,270	271.0
Total		116.5		274.2		440.2		364.8		307.9
%		0.39		0.98		1.78		2.09		1.53
<u>Other Industrial Minerals</u>										
Barite										
- Chemical grade (ground)	4,091	39.9	5,535	43.3	6,690	52.5	6,745	84.9	16,506	94.2
- Drilling mud (ground)	-	-	-	-	1,512	8.5	15,844	68.4	26,541	69.9
- Underground	-	-	-	-	40	0.2	2,666	4.0	6,331	31.8
Fluorite (metallurgical grade)	26	0.2	2,570	13.8	4,875	35.4	22,470	121.8	32,174	174.2
Limestone (industrial rock-others)	4,859	15.0	2,016	7.0	1,734	3.6	825	1.8	387	1.6
Pyrophyllite	5,976	16.3	5,896	17.5	2,760	9.3	1,260	4.4	852	3.2
Total		71.4		81.6		109.5		285.3		374.9
%		0.24		0.29		0.44		1.64		1.86
Grand Total		30,066.9		27,994.5		24,756.5		17,436.0		20,140.0

Mineral Consumption of Thailand 2012 - 2016

Quantity : Tonnes
Value : Million Baht

Mineral	2012		2013		2014		2015		2016	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
Mineral Fuels and Energy										
Lignite	18,198,546	17,470.6	18,926,159	18,169.1	18,457,189	17,718.9	15,369,157	14,754.4	16,869,269	16,194.5
Total		17,470.6		18,169.1		17,718.9		14,754.4		16,194.5
%		34.83		35.44		33.22		27.06		20.75
Iron and Ferro Alloy										
Manganese (metallurgical grade)	1,118	4.3	3,575	18.2	5,760	28.5	684	2.8	2,566	10.6
Total		4.3		18.2		13.5		2.8		10.6
%		0.01		0.04		0.03		0.01		0.01
Base Metals										
Antimony ore	-	-	-	-	-	-	-	-	2	0.1
Tin										
- Tin metal	3,321	2,176.1	3,012	2,044.3	3,257	2,313.0	2,930	1,613.0	3,132	1,976.2
- Tin-lead alloy	833	n.a.	-	-	-	-	-	-	-	-
Zinc										
- Zinc alloy	34,735	2,324.3	32,493	2,134.8	29,833	2,379.2	26,791	2,084.6	23,697	1,908.9
- Zinc metal	51,960	3,266.0	33,168	2,039.5	28,638	2,079.0	27,662	1,947.5	33,063	2,390.7
Total		7,766.4		6,218.6		6,771.2		5,645.1		6,275.9
%		15.49		12.13		12.70		10.35		8.04
Cement Industrial Minerals										
Anhydrite	25,150	12.4	-	-	142	0.1	-	-	-	-
Cement clay	1,622,039	146.0	3,762,027	338.6	4,548,240	416.6	4,760,412	428.4	4,278,942	385.1
Gypsum (unground)	3,577,011	1,770.6	3,990,108	2,052.4	3,883,504	2,250.2	3,792,611	2,382.3	4,077,140	2,707.2

Mineral Consumption of Thailand 2012 - 2016

Quantity : Tonnes
Value : Million Baht

Mineral	2012		2013		2014		2015		2016	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
Cement Industrial Minerals										
Limestone	63,783,890	7,654.1	65,731,000	7,887.7	66,468,509	7,976.2	68,188,880	9,343.5	70,790,395	17,697.6
Marl	113,100	9.6	13,300	1.1	3,000	0.3	4,900	0.4	5,000	0.4
Shale	4,698,855	587.4	4,028,571	503.6	5,313,821	664.2	5,996,646	850.5	7,615,048	1,903.8
Total		10,180.1		10,783.4		11,307.6		13,005.1		22,694.1
%		20.30		21.04		21.20		23.85		29.08
Ceramic Industrial Minerals										
Ball clay	227,150	124.9	328,729	180.8	295,379	162.5	261,677	143.9	915,326	503.4
Ceramic clay	67,847	37.3	138,723	76.3	220,093	121.1	373,642	205.5	361,182	198.7
Dolomite	970,750	339.8	1,163,580	407.3	1,328,785	465.1	1,525,810	699.4	2,263,982	1,245.2
Feldspar										
- Potassium (unground)	2,618	4.5	1,856	3.1	9,950	15.3	14,200	24.1	1,185	2.0
- Sodium (ground)	162,716	227.8	172,043	240.8	212,094	296.9	54,530	76.3	24,080	33.7
- Sodium (unground)	175,272	122.7	100,401	70.3	155,867	109.1	159,779	111.8	229,618	160.7
Glass sand	393,269	137.6	568,904	199.1	1,059,202	370.7	991,337	658.6	918,481	909.3
Kaolin										
- Filler	300	0.6	-	-	-	-	-	-	-	-
- Unwashed	962,495	370.6	564,731	217.4	661,055	254.5	532,137	204.9	849,767	327.2
- Washed	154,594	148.4	143,966	128.8	140,619	134.9	127,965	122.8	113,947	109.4
Quartz										
- Ground	3,237	2.4	2,737	2.1	3,093	2.3	3,366	2.5	-	-
- Unground	47,190	35.4	66,560	49.9	160,147	120.1	70,350	52.8	20,320	15.2
Total		1,552.0		1,575.9		2,052.5		2,302.6		3,504.8
%		3.09		3.07		3.85		4.22		4.49

Mineral Consumption of Thailand 2012 - 2016

Quantity : Tonnes
Value : Million Baht

Mineral	2012		2013		2014		2015		2016	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
<u>Dimension Stone</u>										
Gneiss	40	0.2	125	0.5	-	-	70	0.3	5	0.0**
Granite	5,383*	27.5	4,210*	24.8	3,339*	19.7	4,977*	28.4	4,718*	27.4
Limestone	60	0.1	135	0.3	60	0.1	24	0.1	-	-
Marble	7,147*	26.4	7,420*	28.9	7,338*	28.6	12,752*	101.3	11,400*	46.7
Sand stone	1,498	1.0	2,415	1.7	357	0.2	4,510	3.1	560	0.4
Serpentine	-	-	-	-	-	-	400	0.0*	-	-
Travertine	900	1.8	-	-	1,103	2.2	2,200	4.4	3,600	7.2
Total		57.0		56.2		50.8		137.6		81.7
%		0.11		0.11		0.10		0.25		0.11
<u>Industrial Rock</u>										
Andesite	918,429	123.9	1,018,830	137.5	974,721	131.6	837,262	121.6	789,284	157.9
Basalt	10,450,773	1,410.9	10,223,704	1,380.2	13,980,299	1,887.3	12,055,712	1,734.7	12,927,838	2,585.6
Granite	5,331,864	719.8	7,601,333	1,026.2	6,807,192	918.9	7,893,062	1,142.9	8,392,556	1,678.5
Grawacke	810,849	85.1	801,281	84.1	1,018,120	106.9	942,630	107.7	819,237	163.8
Limestone	78,318,628	8,223.5	86,494,047	9,081.9	89,267,612	9,373.1	95,625,701	11,034.3	98,770,644	17,778.7
Marble (fragment)	241,076*	78.3	509,688*	165.6	621,327*	201.9	1,016,419*	330.3	1,003,471*	469.6
Perlite	10,687	6.3	14,293	10.1	12,200	8.6	12,200	10.6	12,190	18.3
<u>Industrial Rock</u>										
Quartzite	221,808	23.3	249,985	26.2	95,665	10.0	98,208	11.0	20,424	4.1
Rhyolite	609,717	64.0	861,707	90.5	818,859	86.0	869,788	96.5	797,212	119.6
Sand stone	322,860	32.3	316,637	31.7	259,635	26.0	331,271	35.2	814,095	122.1
Total		10,767.4		12,034.0		12,750.3		14,624.8		23,098.2
%		21.47		23.48		23.91		26.82		29.59

Mineral Consumption of Thailand 2012 - 2016

Quantity : Tonnes
Value : Million Baht

Mineral	2012		2013		2014		2015		2016	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
Other Industrial Minerals										
Barite										
- Drilling mud (ground)	13,956	54.4	21,707	84.5	48,540	189.1	88,061	343.0	155,179	604.4
- Unground	-	-	-	-	1,270	1.9	18,050	26.8	37,017	54.9
Bentonite	30,000	18.0	150	0.1	-	-	-	-	-	-
Calcite	803,377	158.3	839,246	165.3	975,020	192.1	1,357,864	634.1	1,504,067	1,128.1
Diatomite	27,060	24.4	-	-	-	-	-	-	-	-
Fluorite (metallurgical grade)	1,423	5.9	48	0.3	60	0.4	-	-	204	1.2
Limestone	4,987,854	598.5	5,816,898	698.0	6,262,694	751.5	6,568,305	900.4	6,970,446	1,742.6
Phosphate	1,799	0.7	264	0.1	500	0.2	-	-	120	0.1
Pyrophyllite	35,000	12.3	26,000	9.1	34,900	13.6	45,488	27.3	71,220	42.7
Rock salt	1,344,162	1,478.6	1,312,516	1,443.8	1,372,904	1,510.2	1,397,168	2,124.5	1,339,851	2,612.7
Talc (unground)	5,732	3.4	7,465	4.5	8,123	4.9	6,765	4.1	8,382	5.0
Total		2,354.5		2,405.7		2,663.9		4,058.5		6,191.7
%		4.70		4.69		4.99		7.44		7.93
Grand Total		50,152.3		51,261.1		53,334.0		54,532.6		78,051.4

*:- n.a. = not available :- * = Cubic Meter :- 0.0** = denoting the amount of less than 0.05 million baht*

Mineral Import of Thailand 2012 - 2016

*Quantity : Tonnes
Value : Million Baht*

Mineral	2012		2013		2014		2015		2016	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
<u>Mineral Fuels and Energy</u>										
Anthracite	138,064	808.1	101,683	570.0	184,231	833.9	166,002	667.6	181,673	777.4
Bituminous coal	7,326,828	19,864.9	8,308,880	21,464.0	10,731,867	28,802.4	10,617,077	25,968.2	10,172,204	23,061.7
Coke	36,019	647.6	39,090	515.7	39,102	504.5	23,462	286.3	30,079	338.5
Lignite	481	16.2	4,870	24.8	35,502	50.5	30,366	46.0	91,721	120.1
Peat	8,239	69.9	9,182	79.7	10,662	96.7	12,441	105.4	15,975	133.6
Coal Solid Fuels from Coal	11,104,617	25,297.6	9,559,821	19,086.6	9,931,740	17,664.0	11,083,001	18,241.0	11,335,865	17,816.0
Total		46,704.3		41,740.8		47,952.0		45,314.5		42,247.3
%		74.25		75.19		75.59		73.11		73.00
<u>Iron and Ferro Alloy</u>										
Chromite ore	3,053	56.4	2,739	40.1	2,473	35.0	2,177	27.9	2,268	28.7
Cobalt ore	-	-	-	-	-	-	0*	0.0*	-	-
Columbite	30	26.7	117	88.5	10	5.5	319	143.1	25	9.8
Iron ore	16,217	69.8	5,774	41.6	4,422	35.3	1,567	11.0	2,768	13.0
Iron Pyrites	299	3.5	278	3.2	310	4.7	330	4.6	321	5.0
Manganese ore	24,282	52.8	18,017	38.3	18,518	37.3	18,562	41.1	21,027	37.5
Molybdenite ore	8,611	922.2	7,144	426.1	13,594	1,660.1	11,007	755.5	11,293	967.0
Nickel ore	0.1	0.1	-	-	5	3.4	0.1	0.1	7.1	2.6
Tungsten										
- Scheelite	-	-	0*	0.0*	-	-	-	-	-	-
- Wolfram	21	1.8	5	1.3	3	0.8	-	-	-	-
- Other tungsten	-	-	-	-	-	-	0.4	0.8	0*	0.0*
Total		1,133.3		639.1		1,782.1		984.1		1,063.6
%		1.80		1.15		2.81		1.59		1.84

Mineral Import of Thailand 2012 - 2016

*Quantity : Tonnes
Value : Million Baht*

Mineral	2012		2013		2014		2015		2016	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
<u>Base Metals</u>										
Aluminium ore	29,077	289.4	42,327	317.9	40,667	305.7	24,157	251.4	33,712	264.5
Antimony ore	6,949	145.2	8,215	217.4	4,392	145.0	6,134	378.4	4,143	90.3
Copper	1,735	7.4	6,666	37.3	9,502	56.8	18,818	815.4	19,868	619.9
Lead ore	2	0.0*	0*	0.0*	20	0.3	1	0.0*	42	0.7
Tin ore	2,842	397.0	648	280.3	5,851	2,385.5	5,742	1,731.6	7,870	2,738.3
Zinc ore	139,625	3,090.1	119,896	2,451.5	41,747	999.0	82,710	1,902.7	32,306	757.3
Total		3,929.1		3,304.4		3,892.3		5,079.5		4,471.0
%		6.25		5.95		6.14		8.20		7.73
<u>Precious Metals and Precious Stone</u>										
Emery	32,712	115.7	7,093	74.4	17,953	173.3	20,363	185.0	7,725	76.5
Silver ore	-	-	12	1.2	12	1.2	12	1.3	11	0.7
Total		115.7		75.6		174.5		186.3		77.2
%		0.19		0.14		0.27		0.30		0.13
<u>Light Metals and Rare Earth</u>										
Ilmenite ore	197	13.6	78	4.0	198	7.0	99	3.2	222	6.8
Niobium and Vanadium ore	13,165	1,602.7	12,810	1,656.3	14,050	1,084.7	13,605	1,100.0	16,278	1,657.7
Titanium ore										
- Rutile	5,492	460.1	3,991	220.3	6,799	241.1	5,220	169.5	4,108	129.8
- Leucoxene	3,461	265.6	2,540	128.4	1,700	59.0	2,798	97.4	2,960	96.9
- Ilmenite	900	21.2	900	17.2	1,160	18.1	1,040	15.7	1,040	15.0
- Other Titanium ore	1,044	22.1	1,161	15.0	2,064	25.5	1,704	22.8	26	0.7

Mineral Import of Thailand 2012 - 2016

*Quantity : Tonnes
Value : Million Baht*

Mineral	2012		2013		2014		2015		2016	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
<u>Light Metals and Rare Earth</u>										
Thorium ore	1	0.1	-	-	-	-	-	-	-	-
Tantalite	652	675.3	42	77.0	182	356.2	387	693.0	208	360.8
Xenotime	60	0.7	-	-	-	-	40	0.5	-	-
Zirconium ore	12,334	615.0	35,696	506.8	51,545	629.1	81,932	958.0	40,659	521.1
Total		3,676.4		2,625.0		2,420.7		3,060.1		2,788.8
%		5.85		4.73		3.82		4.94		4.82
<u>Cement Industrial Minerals</u>										
Anhydrite	0*	0.0*	19	0.5	-	-	-	-	0*	0.0*
Gypsum	659	11.4	488	8.3	456	7.3	258	5.5	227	3.8
Limestone	3,421	1.9	3,057	3.3	3,046	3.9	2,844	7.6	76,654	27.5
Total		13.3		12.1		11.2		13.1		31.3
%		0.02		0.02		0.02		0.02		0.05
<u>Ceramic Industrial Minerals</u>										
Andalusite, Kyannite and Sillimanite	2,227	29.8	4,744	53.9	2,726	34.3	2,926	32.6	5,849	64.5
Attapulgit	250	4.6	20	0.8	276	7.5	186	7.3	152	6.4
Ball Clay	10,982	38.5	6,932	29.5	9,710	40.3	8,246	43.0	16,815	98.3
Dolomite	940	10.5	853	9.5	3,137	59.9	1,495	21.6	785	7.9
Feldspar										
- Potassium	35,505	115.1	30,395	94.6	36,000	117.6	34,389	116.2	27,416	97.9
- Sodium	2,140	10.4	5,871	20.9	2,807	11.6	1,645	7.0	2,051	8.7
- Other Feldspar	3,900	28.0	5,612	35.9	8,275	53.6	14,403	84.0	7,658	57.1

Mineral Import of Thailand 2012 - 2016

Quantity : Tonnes
Value : Million Baht

Mineral	2012		2013		2014		2015		2016	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
<u>Ceramic Industrial Minerals</u>										
Kaolin										
- Ceramic	14,965	117.9	17,240	133.2	68,240	182.7	73,587	181.5	23,810	193.3
- Paper	4,404	41.1	3,166	29.6	7,486	74.7	3,600	39.5	4,371	49.8
- Others	68,868	663.2	69,061	639.9	66,833	697.6	65,872	675.7	73,499	729.1
Lucite, Nepheline and Nepheline Syer	1,347	13.3	1,464	13.7	1,338	13.7	414	5.9	409	12.4
Mullite	1,661	23.6	2,115	29.2	1,898	28.9	1,961	30.1	1,959	34.0
Quartz	3,082	15.6	3,248	17.7	5,920	39.4	9,978	95.2	15,578	137.4
Silica sand	51,698	192.5	110,329	234.9	165,366	299.3	144,273	250.3	143,315	277.3
Total		1,304.1		1,343.3		1,661.1		1,589.9		1,774.1
%		2.07		2.42		2.62		2.57		3.06
<u>Dimension Stone</u>										
Ecaussine	1	0.2	2,858	36.6	1,023	9.9	-	-	-	-
Marble	44,094	386.5	37,128	348.0	38,279	387.6	55,610	565.7	60,462	588.8
Granite	136,741	491.3	132,200	491.9	128,227	525.1	112,695	492.4	114,134	465.4
Travertine	0*	0.0*	0*	0.0*	17	0.2	-	-	0*	0.0*
Sandstone	768	10.9	220	2.6	823	11.6	6,847	12.1	14,182	11.2
Slate	93	0.6	117	0.8	150	1.0	94	1.3	188	2.2
Total		889.5		879.9		935.4		1,071.5		1,067.6
%		1.41		1.58		1.47		1.73		1.84

Mineral Import of Thailand 2012 - 2016

Quantity : Tonnes
Value : Million Baht

Mineral	2012		2013		2014		2015		2016	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
<u>Industrial Rock</u>										
Basalt	39,126	113.2	25,392	163.8	25,937	166.5	25,122	199.5	40,860	298.3
Flint	1,766	12.7	1,345	10.9	30,663	18.9	31,214	13.3	19,705	14.1
Pumice stone	5,275	65.9	5,475	58.4	5,035	51.6	5,005	49.7	4,727	53.2
Vermiculite, Perlite and Chlorites	4,901	39.9	3,859	34.5	4,617	48.3	4,831	43.9	5,239	55.0
Total		231.7		267.6		285.3		306.4		420.6
%		0.37		0.48		0.45		0.49		0.73
<u>Other Industrial Minerals</u>										
Apatite										
- Ground	1,763	7.1	1,292	6.5	1,427	6.2	448	2.7	1,110	4.4
- Unground	0*	0.0*	-	-	-	-	-	-	-	-
Asbestos	58,037	839.5	53,130	826.9	42,625	684.0	36,513	659.2	33,898	527.3
Barite	104,668	509.9	67,537	285.9	65,089	201.4	98,358	183.6	86,651	163.0
Bentonite	83,364	554.9	103,195	639.0	101,284	665.3	104,547	717.4	107,644	758.0
Calcite	12	0.1	60	0.2	41	0.2	-	-	30	0.1
Chalk	53	1.8	67	1.4	81	2.5	96	5.4	76	1.3
Fireclay	729	9.8	618	10.6	553	6.6	484	8.2	1,756	19.1
Fluorite	555	12.1	578	12.1	545	12.1	498	8.7	1,517	10.3
Kieserite	11,172	68.0	10,444	59.0	4,848	27.8	10,496	63.0	5,853	30.4
Mica	4,577	140.7	4,504	119.6	4,392	122.2	5,501	167.2	5,979	176.2
Orpiment	20	1.0	163	1.0	0.1	0.0*	166.0	1.2	14.4	0.7

Mineral Import of Thailand 2012 - 2016

Quantity : Tonnes
Value : Million Baht

Mineral	2012		2013		2014		2015		2016		
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	
Other Industrial Minerals (Continue)											
Phosphate											
- Ground	0*	0.0*	0*	0.0*	1	0.0*	0.1	0.0*	0*	0.0*	
- Unground	-	-	-	-	-	-	0*	0.0*	250	1.2	
Graphite	1,398	113.2	2,121	118.1	3,300	119.7	4,435	113.9	5,359	132.9	
Magnesite	4,867	52.6	7,073	92.5	7,146	81.0	3,456	42.5	3,232	37.5	
Steatite	2,014	22.4	927	12.0	805	15.2	491	12.2	495	14.8	
Pyrophyllite	56	1.0	42	0.7	1	0.5	0.1	0.0*	-	-	
Rock salt	-	-	-	-	-	-	-	-	-	-	
Sulphur	102,175	760.4	137,587	685.0	115,426	715.5	122,771	759.3	96,241	405.3	
Talc	138,694	1,786.2	143,049	1,751.1	137,228	1,662.8	134,349	1,625.0	137,350	1,646.5	
Witherite	1,500	21.6	325	4.3	191	2.6	193	2.7	253	3.8	
Total		4,902.3		4,625.9		4,325.6		4,372.2		3,932.8	
%		7.79		8.33		6.82		7.05		6.80	
Grand Total			62,899.7		55,513.7		63,440.2		61,977.6		57,874.3

:- 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'

Mineral Royalty of Thailand 2012-2016

unit: Thousand Baht

Mineral	2012	2013	2014	2015	2016
Andesite (Industrial rock)	5,903.14	5,178.40	6,013.60	6,864.31	11,329.83
Anhydrite	18,175.13	20,339.39	24,734.44	26,341.59	36,694.07
Antimony	257.21	265.88	96.82	-	4.62
Ball clay	5,518.41	7,493.89	7,830.38	6,631.75	22,556.50
Barite					
- Chemical grade (ground)	389.95	629.90	505.73	479.07	473.23
- Drilling mud (ground)	1,090.60	1,939.09	4,221.71	10,326.50	12,988.19
- Unground	4,471.83	6,062.26	6,068.60	4,971.62	6,462.05
Basalt (Industrial rock)	69,492.32	62,089.98	75,277.86	72,376.31	111,903.52
Bentonite	3,120.00	3.60	-	260.40	-
Calcite	6,874.60	7,102.49	7,920.97	23,180.86	46,154.47
Cement clay	19,520.73	10,609.27	16,138.34	18,613.16	21,009.58
Ceramic clay	9,513.17	2,676.63	5,806.53	8,686.48	7,863.02
Conglomerate (Industrial rock)	16.80	-	-	-	-
Copper Metal	4,426.90	0.04	1,315.19	-	-
Diatomite	730.62	-	-	-	-
Dolomite	33,152.83	32,503.50	42,889.31	55,665.70	65,082.80
Dolomitic Marl	-	-	-	6.37	5.73
Feldspar					
- Potassium (ground)	96.00	145.92	192.96	133.44	110.88
- Potassium (unground)	189.18	784.49	676.60	967.37	21.15
- Sodium (ground)	10,591.08	10,936.02	13,184.47	6,857.79	8,142.04
- Sodium (unground)	22,526.08	20,932.59	26,398.65	32,808.32	20,935.57
Final Slag	-	-	423.37	-	61.04
Fluorite	6,063.72	8,364.24	18,424.02	16,346.67	19,421.87
Garnet	-	12.00	-	-	-
Glass sand	6,630.97	8,866.81	14,539.25	30,455.43	46,758.85

Mineral Royalty of Thailand 2012-2016

unit: Thousand Baht

Mineral	2012	2013	2014	2015	2016
Gneiss (Dimension stone)	24.00	25.60	224.80	17.60	5.92
Gold Metal	817,107.08	521,187.64	485,845.66	333,447.48	519,865.28
Granite					
- Dimension stone	807.59	777.48	970.58	1,083.11	1,605.07
- Industrial rock-construction	30,699.07	45,681.69	41,886.29	49,055.74	74,615.55
- Industrial rock-ceramic	-	-	-	-	448.00
Graywacke	3,150.29	3,119.61	3,782.60	4,173.10	7,891.04
Gypsum	231,672.08	255,417.03	302,309.40	297,944.55	274,757.14
Ilmenite	69.20	63.61	18.28	-	-
Iron Ore	16,663.98	24,369.89	24,901.21	789.81	327.60
Kaolin					
- Filler	1,164.07	1,269.98	874.76	1,055.49	2,091.85
- Unwashed	15,161.50	9,458.11	10,503.75	8,130.59	11,976.61
- Washed	5,227.77	5,752.76	4,873.44	5,427.58	4,944.95
Lignite	698,853.48	726,748.80	708,759.88	588,546.59	647,780.02
Limestone					
- Dimension stone	0.96	1.20	-	-	-
- Industrial rock-construction	370,674.27	387,773.22	403,815.00	462,674.05	761,127.29
- Industrial rock-cement	532,792.66	520,648.24	600,813.37	662,104.02	1,240,760.86
- Industrial rock-others	25,379.21	30,120.18	36,234.68	40,472.13	65,755.48
Manganese (Metallurgical grade)	162.01	1,208.95	720.25	78.77	867.18
Marble					
- Dimension stone	1,505.06	1,174.48	1,867.52	2,173.48	1,720.28
- Fragment	4,064.86	6,891.69	7,126.04	10,939.57	18,598.38
Marl	452.20	348.16	564.16	288.66	142.80
Monazite	50.47	156.49	-	-	359.17
Other Stone	-	-	321.42	635.64	70.20

Mineral Royalty of Thailand 2012-2016

unit: Thousand Baht

Mineral	2012	2013	2014	2015	2016
Perlite (Industrial rock)	520.86	403.63	390.05	419.70	986.40
Phosphate	36.61	101.62	6.32	4.49	9.65
Pyrophyllite	490.00	424.54	610.61	1,091.71	1,800.48
Quartz	1,913.18	2,352.32	4,862.61	2,221.05	830.76
Quartzite	1,171.30	828.81	401.79	435.41	163.39
Rhyolite (Industrial rock)	2,560.81	3,619.17	595.44	1,238.46	4,747.28
Rock salt	59,356.00	58,124.00	61,160.00	85,000.60	104,910.00
Sand Stone					
- Dimension stone	49.71	59.10	7.96	191.45	112.22
- Industrial rock	1,438.04	1,573.68	1,455.69	3,127.68	7,295.24
Serpentine (Industrial rock)	-	-	-	1.68	-
Scheelite	1,170.87	1,057.83	777.93	994.40	1,331.81
Shale (Industrial rock-cement)	41,908.04	35,305.14	50,276.73	65,474.54	156,182.64
Silver Metal	98,876.24	74,529.53	61,863.29	36,533.86	71,630.57
Struverite	109.33	1,530.00	542.21	-	987.90
Talc	142.85	186.62	196.99	165.89	171.02
Tin	10,389.14	7,679.80	7,746.66	3,162.83	5,330.61
Tin Slag (Ta ₂ O ₅ <13%)	1.74	-	-	-	-
Travertine (Dimension)	106.40	-	182.32	208.83	304.68
Wolfram	3.47	203.75	139.31	60.98	791.40
Xenotime	-	72.72	45.45	-	-
Zinc Metal	42,703.11	32,314.07	54,954.52	48,694.39	70,710.64
Zircon	-	-	20.49	-	265.67
Total	3,247,380.79	2,969,497.56	3,155,308.29	3,040,039.00	4,502,252.04

Total Values of Mineral of Thailand 2012-2016

Million Baht

	2012	2013	2014	2015	2016
PRODUCTION	61,265.1	60,724.3	64,182.7	63,630.3	89,397.9
CONSUMPTION	50,152.3	51,261.1	53,334.0	54,532.6	78,051.4
IMPORT	62,899.7	55,513.7	63,440.2	61,977.6	57,874.3
EXPORT	30,066.9	27,994.5	24,756.4	17,436.0	20,140.0

