

**Statistics Report**

**No. ICTC 1/2021**

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# **Mineral Statistics of Thailand**

**2016 – 2020**

**Statistics Group**

**Information and Communication Technology Center**

**Department of Primary Industries and Mines**

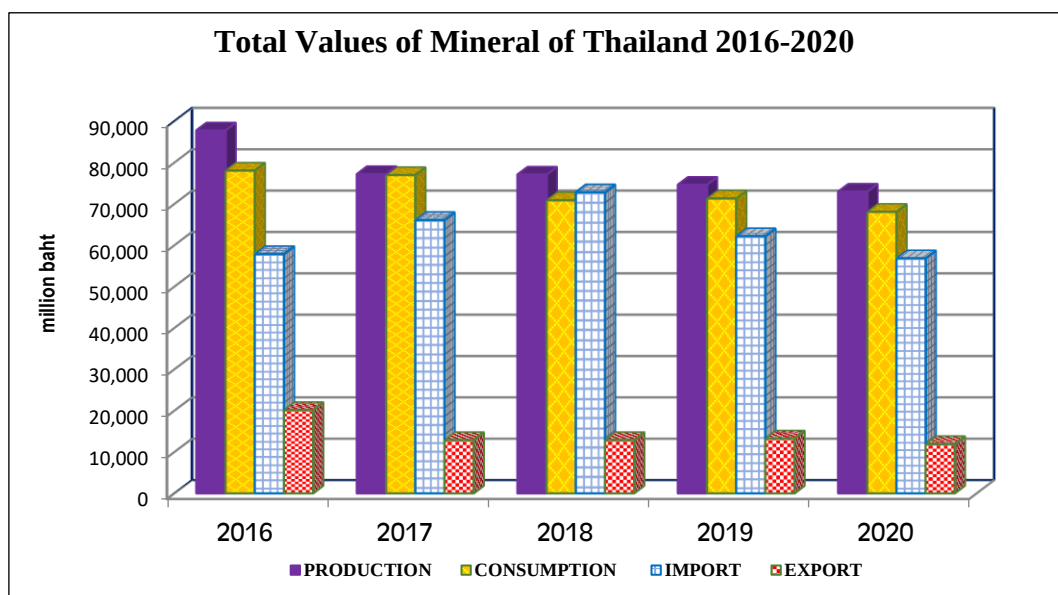
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## **2016 – 2020**



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**Information and Communication Technology Center**

**Department of Primary Industries and Mines**

**Director General – Department of Primary Industries and Mines**

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# ANDESITE

Tonnes

|                             | 2016           | 2017             | 2018             | 2019             | 2020             |
|-----------------------------|----------------|------------------|------------------|------------------|------------------|
| <b><u>Production</u></b>    |                |                  |                  |                  |                  |
| <b>Northern Region</b>      |                |                  |                  |                  |                  |
| Chiang Mai                  | -              | 217,466          | 484,820          | 52,626           | 562,221          |
| Phetchabun                  | 339,368        | 398,200          | 459,584          | 296,016          | 445,557          |
| Nakhon Sawan                | -              | -                | -                | -                | 286,451          |
| Uttaradit                   | 295,983        | 257,653          | 320,559          | 268,964          | 656,960          |
| <b>Central Region</b>       |                |                  |                  |                  |                  |
| Sara Buri                   | 179,764        | 293,595          | -                | 368,145          | 477,417          |
| <b>Total Production</b>     | <b>815,115</b> | <b>1,166,914</b> | <b>1,264,963</b> | <b>985,751</b>   | <b>2,428,606</b> |
| <b>Value (Million Baht)</b> | <b>163.0</b>   | <b>233.4</b>     | <b>253.0</b>     | <b>197.2</b>     | <b>485.7</b>     |
| <b><u>Consumption</u></b>   |                |                  |                  |                  |                  |
| <b>Total Consumption</b>    | <b>789,284</b> | <b>890,965</b>   | <b>1,040,277</b> | <b>1,349,235</b> | <b>2,177,153</b> |
| <b>Value (Million Baht)</b> | <b>157.9</b>   | <b>178.2</b>     | <b>208.1</b>     | <b>269.8</b>     | <b>435.4</b>     |

# ANHYDRITE

Tonnes

|  | 2016 | 2017 | 2018 | 2019 | 2020 |
|--|------|------|------|------|------|
|--|------|------|------|------|------|

## Production

### Northern Region

|              |   |        |   |   |       |
|--------------|---|--------|---|---|-------|
| Nakhon Sawan | - | 18,000 | - | - | 8,000 |
|--------------|---|--------|---|---|-------|

### Southern Region

|                     |           |           |           |           |           |
|---------------------|-----------|-----------|-----------|-----------|-----------|
| Nakhon Si Thammarat | 91,690    | 93,050    | 142,150   | 91,585    | 117,600   |
| Surat Thani         | 1,248,523 | 1,281,643 | 1,375,078 | 1,328,002 | 1,141,226 |

|                             |                  |                  |                  |                  |                  |
|-----------------------------|------------------|------------------|------------------|------------------|------------------|
| <b>Total Production</b>     | <b>1,340,213</b> | <b>1,392,693</b> | <b>1,517,228</b> | <b>1,419,587</b> | <b>1,266,826</b> |
| <b>Value (Million Baht)</b> | <b>889.9</b>     | <b>896.1</b>     | <b>904.2</b>     | <b>838.8</b>     | <b>740.7</b>     |

## Export

### Unground

#### Asia

|              |         |         |         |         |         |
|--------------|---------|---------|---------|---------|---------|
| Cambodia     | -       | -       | 1,100   | 74,550  | 112,227 |
| India        | 100,000 | 139,500 | 164,757 | 236,250 | 172,000 |
| Indonesia    | 33,900  | 28,750  | 29,000  | 22,350  | 30,800  |
| Japan        | 511,550 | 544,860 | 641,900 | 457,050 | 526,880 |
| Korea, South | 365,200 | 349,550 | 257,950 | 214,800 | 235,400 |
| Malaysia     | 170,400 | 182,300 | 241,000 | 140,100 | 56,700  |
| Myanmar      |         |         |         | 11,500  | -       |
| Philippines  | -       | -       | -       | -       | -       |
| Vietnam      | 169,200 | 204,200 | 192,500 | 209,480 | 232,870 |

#### Australia / Oceania

|           |   |   |   |   |   |
|-----------|---|---|---|---|---|
| Australia | - | - | - | - | - |
|-----------|---|---|---|---|---|

|                             |                  |                  |                  |                  |                  |
|-----------------------------|------------------|------------------|------------------|------------------|------------------|
| <b>Total Export</b>         | <b>1,350,250</b> | <b>1,449,160</b> | <b>1,528,207</b> | <b>1,366,080</b> | <b>1,366,877</b> |
| <b>Value (Million Baht)</b> | <b>880.2</b>     | <b>896.2</b>     | <b>913.3</b>     | <b>797.8</b>     | <b>813.1</b>     |

## Consumption

|                             |   |            |   |              |               |
|-----------------------------|---|------------|---|--------------|---------------|
| <b>Total Consumption</b>    | - | <b>102</b> | - | <b>4,546</b> | <b>10,871</b> |
| <b>Value (Million Baht)</b> | - | <b>0.1</b> | - | <b>2.6</b>   | <b>6.4</b>    |

## Import<sup>1</sup>

|                             |             |   |             |             |             |
|-----------------------------|-------------|---|-------------|-------------|-------------|
| <b>Total Import</b>         | <b>0**</b>  | - | <b>0**</b>  | <b>0**</b>  | <b>1</b>    |
| <b>Value (Million Baht)</b> | <b>0.0*</b> | - | <b>0.0*</b> | <b>0.0*</b> | <b>0.0*</b> |

0\*\* denoting the amount of less than 0.1 tonnes

0.0\* denoting the amount of less than 0.05 million baht

<sup>1</sup> data from 'www.customs.go.th'



# ANTHRACITE

|                                  | Tonnes         |                |                |                |                |
|----------------------------------|----------------|----------------|----------------|----------------|----------------|
|                                  | 2016           | 2017           | 2018           | 2019           | 2020           |
| <b><u>Import</u><sup>1</sup></b> |                |                |                |                |                |
| <b>Total Import</b>              | <b>181,673</b> | <b>138,649</b> | <b>173,288</b> | <b>125,723</b> | <b>153,844</b> |
| <b>Value (Million Baht)</b>      | <b>777.4</b>   | <b>573.2</b>   | <b>760.8</b>   | <b>566.5</b>   | <b>578.6</b>   |

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

# A N T I M O N Y

Tonnes

|                                  |            | 2016         | 2017         | 2018         | 2019         | 2020         |
|----------------------------------|------------|--------------|--------------|--------------|--------------|--------------|
| <b><u>Production</u></b>         |            |              |              |              |              |              |
| <b>Northern Region</b>           |            |              |              |              |              |              |
| Phrae                            | Ore        | 32           | -            | -            | -            | -            |
| <b>Total Production</b>          | <b>Ore</b> | <b>32</b>    | <b>-</b>     | <b>-</b>     | <b>-</b>     | <b>-</b>     |
| <b>Value (Million Baht)</b>      | <b>Ore</b> | <b>0.9</b>   | <b>-</b>     | <b>-</b>     | <b>-</b>     | <b>-</b>     |
| <b><u>Export</u></b>             |            |              |              |              |              |              |
| <b>Ore</b>                       |            |              |              |              |              |              |
| <b>Asia</b>                      |            |              |              |              |              |              |
| China                            |            | 752          | 1,386        | 888          | 3,147        | 266          |
| Hong Kong                        |            | -            | -            | -            | -            | -            |
| India                            |            | 70           | 13           | -            | -            | -            |
| Japan                            |            | -            | 0.2          | 0.1          | -            | -            |
| Malaysia                         |            | -            | -            | -            | -            | -            |
| Myanmar                          |            | 40           | -            | -            | -            | -            |
| Taiwan                           |            | 43           | -            | 0**          | -            | -            |
| Vietnam                          |            | 3,001        | 0**          | 1,108        | 477          | 461          |
| <b>Australia / Oceania</b>       |            |              |              |              |              |              |
| Australia                        |            | -            | 0**          | -            | -            | -            |
| <b>Europe</b>                    |            |              |              |              |              |              |
| Belgium                          |            | -            | -            | -            | -            | -            |
| Netherlands                      |            | -            | -            | 26           | -            | -            |
| U.K.                             |            | -            | -            | 0**          | -            | -            |
| <b>Total Export</b>              |            | <b>3,906</b> | <b>1,399</b> | <b>2,022</b> | <b>3,624</b> | <b>727</b>   |
| <b>Value (Million Baht)</b>      |            | <b>95.4</b>  | <b>21.6</b>  | <b>86.8</b>  | <b>64.9</b>  | <b>20.4</b>  |
| <b><u>Consumption</u></b>        |            |              |              |              |              |              |
| <b>Total Consumption</b>         |            | <b>2</b>     | <b>-</b>     | <b>-</b>     | <b>-</b>     | <b>-</b>     |
| <b>Value (Million Baht)</b>      |            | <b>0.1</b>   | <b>-</b>     | <b>-</b>     | <b>-</b>     | <b>-</b>     |
| <b><u>Import</u><sup>1</sup></b> |            |              |              |              |              |              |
| <b>Total Import</b>              |            | <b>4,143</b> | <b>2,184</b> | <b>1,914</b> | <b>3,989</b> | <b>1,361</b> |
| <b>Value (Million Baht)</b>      |            | <b>90.3</b>  | <b>63.2</b>  | <b>54.5</b>  | <b>60.5</b>  | <b>52.8</b>  |

0\*\* denoting the amount of less than 0.1 tonnes

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

# BALL CLAY

Tonnes

|                             | 2016           | 2017           | 2018           | 2019           | 2020          |
|-----------------------------|----------------|----------------|----------------|----------------|---------------|
| <b><u>Production</u></b>    |                |                |                |                |               |
| <b>Northern Region</b>      |                |                |                |                |               |
| Lampang                     | 65,701         | 86,254         | 490,837        | 241,244        | 1,687         |
| <b>Central Region</b>       |                |                |                |                |               |
| Prachin Buri                | -              | -              | -              | -              | 1,500         |
| Sara Buri                   | 68,000         | 66,000         | 84,948         | 89,097         | 10,000        |
| <b>Southern Region</b>      |                |                |                |                |               |
| Nakhon Si Thammarat         | 2,945          | 3,415          | 3,780          | 2,445          | 12,590        |
| <b>Total Production</b>     | <b>136,646</b> | <b>155,669</b> | <b>579,565</b> | <b>332,786</b> | <b>25,777</b> |
| <b>Value (Million Baht)</b> | <b>75.2</b>    | <b>85.6</b>    | <b>318.8</b>   | <b>183.0</b>   | <b>14.2</b>   |
| <b><u>Export</u></b>        |                |                |                |                |               |
| <b>Asia</b>                 |                |                |                |                |               |
| Bangladesh                  | -              | 1,330          | 2,908          | 596            | 140           |
| China                       | 1,490          | 1,552          | 2,680          | 1,155          | 644           |
| India                       | 1,344          | 3              | 24             | -              | -             |
| Indonesia                   | -              | 1,782          | 4,112          | 2,145          | 1,438         |
| Iran                        | -              | -              | -              | -              | -             |
| Japan                       | -              | 20             | 200            | 260            | 200           |
| Malaysia                    | 6,904          | 6,020          | 7,845          | 5,832          | 4,978         |
| Vietnam                     | 3,600          | 3,143          | 4,084          | 2,870          | 1,633         |
| <b>Total Export</b>         | <b>13,338</b>  | <b>13,850</b>  | <b>21,853</b>  | <b>12,858</b>  | <b>9,033</b>  |
| <b>Value (Million Baht)</b> | <b>64.0</b>    | <b>61.1</b>    | <b>97.9</b>    | <b>56.3</b>    | <b>34.2</b>   |

Tonnes

|  | 2016 | 2017 | 2018 | 2019 | 2020 |
|--|------|------|------|------|------|
|--|------|------|------|------|------|

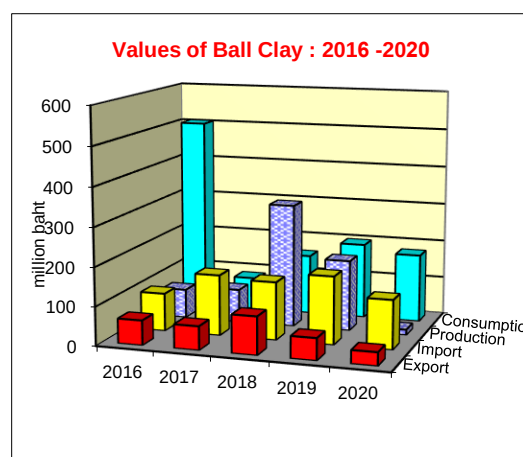
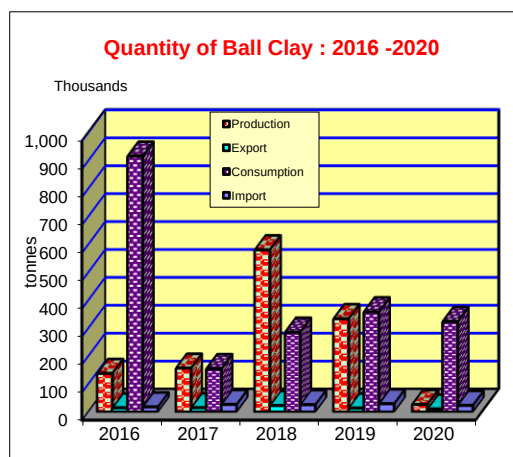
**Consumption**

|                             |                |                |                |                |                |
|-----------------------------|----------------|----------------|----------------|----------------|----------------|
| <b>Total Consumption</b>    | <b>915,326</b> | <b>153,677</b> | <b>284,563</b> | <b>357,420</b> | <b>322,490</b> |
| <b>Value (Million Baht)</b> | <b>503.4</b>   | <b>84.5</b>    | <b>156.5</b>   | <b>196.6</b>   | <b>177.4</b>   |

**Import**<sup>1</sup>

|                             |               |               |               |               |               |
|-----------------------------|---------------|---------------|---------------|---------------|---------------|
| <b>Total Import</b>         | <b>16,815</b> | <b>25,594</b> | <b>24,895</b> | <b>27,961</b> | <b>22,273</b> |
| <b>Value (Million Baht)</b> | <b>98.3</b>   | <b>156.9</b>  | <b>149.5</b>  | <b>175.0</b>  | <b>126.6</b>  |

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



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

# B A R I T E

Tonnes

|  | 2016 | 2017 | 2018 | 2019 | 2020 |
|--|------|------|------|------|------|
|--|------|------|------|------|------|

## Production

### 1. Ground (Chemical grade)

#### Northeastern Region

|      |       |       |       |       |       |
|------|-------|-------|-------|-------|-------|
| Loei | 2,232 | 1,563 | 1,647 | 1,757 | 1,260 |
|------|-------|-------|-------|-------|-------|

|                         |              |              |              |              |              |
|-------------------------|--------------|--------------|--------------|--------------|--------------|
| <b>Total Production</b> | <b>2,232</b> | <b>1,563</b> | <b>1,647</b> | <b>1,757</b> | <b>1,260</b> |
|-------------------------|--------------|--------------|--------------|--------------|--------------|

|                             |             |             |             |             |             |
|-----------------------------|-------------|-------------|-------------|-------------|-------------|
| <b>Value (Million Baht)</b> | <b>13.8</b> | <b>14.8</b> | <b>16.0</b> | <b>17.0</b> | <b>12.2</b> |
|-----------------------------|-------------|-------------|-------------|-------------|-------------|

### 2. Ground (Drilling Mud grade)

#### Northern Region

|       |         |         |        |        |   |
|-------|---------|---------|--------|--------|---|
| Phrae | 155,799 | 105,000 | 52,694 | 31,557 | - |
|-------|---------|---------|--------|--------|---|

|                         |                |                |               |               |          |
|-------------------------|----------------|----------------|---------------|---------------|----------|
| <b>Total Production</b> | <b>155,799</b> | <b>105,000</b> | <b>52,694</b> | <b>31,557</b> | <b>-</b> |
|-------------------------|----------------|----------------|---------------|---------------|----------|

|                             |              |              |              |              |          |
|-----------------------------|--------------|--------------|--------------|--------------|----------|
| <b>Value (Million Baht)</b> | <b>606.8</b> | <b>489.3</b> | <b>246.1</b> | <b>147.4</b> | <b>-</b> |
|-----------------------------|--------------|--------------|--------------|--------------|----------|

### 3. Unground

#### Northeastern Region

|      |   |   |   |   |       |
|------|---|---|---|---|-------|
| Loei | - | - | - | - | 3,404 |
|------|---|---|---|---|-------|

#### Southern Region

|                     |        |        |        |     |        |
|---------------------|--------|--------|--------|-----|--------|
| Nakhon Si Thammarat | 65,070 | 41,391 | 13,149 | 330 | 17,730 |
|---------------------|--------|--------|--------|-----|--------|

|                         |               |               |               |            |               |
|-------------------------|---------------|---------------|---------------|------------|---------------|
| <b>Total Production</b> | <b>65,070</b> | <b>41,391</b> | <b>13,149</b> | <b>330</b> | <b>21,134</b> |
|-------------------------|---------------|---------------|---------------|------------|---------------|

|                             |             |             |             |            |             |
|-----------------------------|-------------|-------------|-------------|------------|-------------|
| <b>Value (Million Baht)</b> | <b>96.6</b> | <b>61.5</b> | <b>19.5</b> | <b>0.5</b> | <b>31.4</b> |
|-----------------------------|-------------|-------------|-------------|------------|-------------|

## Export

### 1. Unground

#### Asia

|        |       |   |   |   |   |
|--------|-------|---|---|---|---|
| Brunei | 1,261 | - | - | - | - |
|--------|-------|---|---|---|---|

|           |   |    |   |   |   |
|-----------|---|----|---|---|---|
| Indonesia | - | 66 | - | - | - |
|-----------|---|----|---|---|---|

|              |   |    |   |   |   |
|--------------|---|----|---|---|---|
| Korea, South | - | 38 | - | - | - |
|--------------|---|----|---|---|---|

|          |       |       |   |   |   |
|----------|-------|-------|---|---|---|
| Malaysia | 5,050 | 3,570 | - | - | - |
|----------|-------|-------|---|---|---|

|         |    |   |   |   |   |
|---------|----|---|---|---|---|
| Vietnam | 20 | - | - | - | - |
|---------|----|---|---|---|---|

|                     |              |              |          |          |          |
|---------------------|--------------|--------------|----------|----------|----------|
| <b>Total Export</b> | <b>6,331</b> | <b>3,674</b> | <b>-</b> | <b>-</b> | <b>-</b> |
|---------------------|--------------|--------------|----------|----------|----------|

|                             |             |             |          |          |          |
|-----------------------------|-------------|-------------|----------|----------|----------|
| <b>Value (Million Baht)</b> | <b>31.8</b> | <b>18.8</b> | <b>-</b> | <b>-</b> | <b>-</b> |
|-----------------------------|-------------|-------------|----------|----------|----------|

Tonnes

|                                   | 2016          | 2017         | 2018         | 2019         | 2020         |
|-----------------------------------|---------------|--------------|--------------|--------------|--------------|
| <b>2. Ground (Chemical grade)</b> |               |              |              |              |              |
| <b>Asia</b>                       |               |              |              |              |              |
| Brunei                            | 3,519         | -            | -            | -            | -            |
| China                             | -             | -            | -            | 5            | -            |
| Hong Kong                         | 44            | 40           | -            | -            | -            |
| Japan                             | 225           | 177          | 80           | 64           | 64           |
| Jordan                            | 22            | 22           | 40           | -            | -            |
| Korea, South                      | 93            | 105          | 252          | 252          | 252          |
| Malaysia                          | 11,404        | 2,202        | 803          | 503          | 560          |
| Singapore                         | 183           | 120          | 140          | 120          | 100          |
| Taiwan                            | 189           | 308          | 391          | 286          | 284          |
| U.A.E.                            | 288           | -            | -            | -            | -            |
| Vietnam                           | 323           | 72           | -            | -            | -            |
| <b>Australia / Oceania</b>        |               |              |              |              |              |
| Australia                         | 216           | 48           | 24           | -            | -            |
| <b>Total Export</b>               | <b>16,506</b> | <b>3,094</b> | <b>1,730</b> | <b>1,230</b> | <b>1,260</b> |
| <b>Value (Million Baht)</b>       | <b>94.2</b>   | <b>22.9</b>  | <b>18.4</b>  | <b>12.3</b>  | <b>14.2</b>  |

|                                       |               |              |              |          |          |
|---------------------------------------|---------------|--------------|--------------|----------|----------|
| <b>3. Ground (Drilling Mud grade)</b> |               |              |              |          |          |
| <b>Asia</b>                           |               |              |              |          |          |
| Brunei                                | -             | 4,002        | 4,002        | -        | -        |
| Indonesia                             | 2,091         | -            | 1,000        | -        | -        |
| Korea, South                          | -             | 2            | -            | -        | -        |
| Kuwait                                | 2,000         | -            | -            | -        | -        |
| Malaysia                              | -             | 2,884        | 450          | -        | -        |
| Myanmar                               | -             | -            | -            | -        | -        |
| Saudi Arabia                          | 22,450        | -            | -            | -        | -        |
| Singapore                             | -             | 3,051        | -            | -        | -        |
| Taiwan                                |               |              |              |          |          |
| <b>Total Export</b>                   | <b>26,541</b> | <b>9,939</b> | <b>5,452</b> | <b>-</b> | <b>-</b> |
| <b>Value (Million Baht)</b>           | <b>70.0</b>   | <b>53.8</b>  | <b>32.8</b>  | <b>-</b> | <b>-</b> |

Tonnes

|  | 2016 | 2017 | 2018 | 2019 | 2020 |
|--|------|------|------|------|------|
|--|------|------|------|------|------|

**Consumption**

|                                  |                |               |               |               |               |
|----------------------------------|----------------|---------------|---------------|---------------|---------------|
| <b>1. Ground (Chemical grade</b> | -              | -             | -             | <b>1,091</b>  | <b>676</b>    |
| <b>Value (Million Baht)</b>      | -              | -             | -             | <b>10.6</b>   | <b>6.6</b>    |
| <b>2. Ground (Drilling mud)</b>  | <b>155,179</b> | <b>10,500</b> | <b>54,221</b> | <b>30,745</b> | -             |
| <b>Value (Million Baht)</b>      | <b>604.4</b>   | <b>489.3</b>  | <b>253.2</b>  | <b>143.6</b>  | -             |
| <b>3. Unground</b>               | <b>37,017</b>  | <b>22,320</b> | <b>4,522</b>  | <b>2,199</b>  | <b>17,456</b> |
| <b>Value (Million Baht)</b>      | <b>54.9</b>    | <b>33.1</b>   | <b>6.7</b>    | <b>3.3</b>    | <b>25.9</b>   |

**Import<sup>1</sup>**

|                             |               |               |               |                |                |
|-----------------------------|---------------|---------------|---------------|----------------|----------------|
| <b>Total Import</b>         | <b>86,651</b> | <b>81,133</b> | <b>90,092</b> | <b>161,560</b> | <b>128,380</b> |
| <b>Value (Million Baht)</b> | <b>163.0</b>  | <b>177.1</b>  | <b>197.0</b>  | <b>274.1</b>   | <b>221.7</b>   |

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

# B A S A L T

Tonnes

|                                  | 2016              | 2017              | 2018              | 2019              | 2020              |
|----------------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| <b><u>Production</u></b>         |                   |                   |                   |                   |                   |
| <b>Northeastern Region</b>       |                   |                   |                   |                   |                   |
| Buri Ram                         | 4,466,448         | 4,057,082         | 4,849,318         | 3,673,749         | 3,756,134         |
| Nakhon Ratchasima                | 1,989,920         | 2,035,267         | 1,868,623         | 2,419,020         | 1,996,172         |
| Si Sa Ket                        | 316,580           | 539,300           | 919,286           | 664,489           | 391,258           |
| Surin                            | 3,986,076         | 2,733,650         | 2,169,304         | 2,237,881         | 3,139,350         |
| Ubon Ratchathani                 | 2,615,568         | 3,140,813         | 4,226,687         | 3,623,530         | 4,037,957         |
| <b>Central Region</b>            |                   |                   |                   |                   |                   |
| Lop Buri                         | 168,358           | 227,973           | 268,362           | 67,687            | 305,207           |
| Trat                             | 4,492             | -                 | -                 | -                 | 48,250            |
| <b>Total Production</b>          | <b>13,547,442</b> | <b>12,734,085</b> | <b>14,301,580</b> | <b>12,686,356</b> | <b>13,674,328</b> |
| <b>Value (Million Baht)</b>      | <b>2,709.5</b>    | <b>2,546.8</b>    | <b>2,860.3</b>    | <b>2,537.3</b>    | <b>2,735</b>      |
| <b><u>Consumption</u></b>        |                   |                   |                   |                   |                   |
| <b>Total Consumption</b>         | <b>12,927,838</b> | <b>12,822,093</b> | <b>12,486,969</b> | <b>12,165,737</b> | <b>14,390,606</b> |
| <b>Value (Million Baht)</b>      | <b>2,585.6</b>    | <b>2,564.4</b>    | <b>2,497.4</b>    | <b>2,433.1</b>    | <b>2,878.1</b>    |
| <b><u>Import</u><sup>1</sup></b> |                   |                   |                   |                   |                   |
| <b>Total Import</b>              | <b>40,860</b>     | <b>90,726</b>     | <b>201,574</b>    | <b>131,889</b>    | <b>28,604</b>     |
| <b>Value (Million Baht)</b>      | <b>298.3</b>      | <b>235.0</b>      | <b>177.7</b>      | <b>131.9</b>      | <b>119.0</b>      |

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



# BENTONITE

|                                  | Tonnes         |                |                |                |                |
|----------------------------------|----------------|----------------|----------------|----------------|----------------|
|                                  | 2016           | 2017           | 2018           | 2019           | 2020           |
| <b><u>Import</u><sup>1</sup></b> |                |                |                |                |                |
| <b>Total Import</b>              | <b>107,644</b> | <b>120,287</b> | <b>127,807</b> | <b>137,667</b> | <b>122,247</b> |
| <b>Value (Million Baht)</b>      | <b>758.0</b>   | <b>776.6</b>   | <b>776.4</b>   | <b>763.2</b>   | <b>683.7</b>   |

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

# C A L C I T E

Tonnes

|                                  | 2016             | 2017             | 2018             | 2019             | 2020             |
|----------------------------------|------------------|------------------|------------------|------------------|------------------|
| <b><u>Production</u></b>         |                  |                  |                  |                  |                  |
| <b>Central Region</b>            |                  |                  |                  |                  |                  |
| Lop Buri                         | 1,452,235        | 1,456,747        | 1,467,822        | 1,440,030        | 1,430,044        |
| <b>Total Production</b>          | <b>1,452,235</b> | <b>1,456,747</b> | <b>1,467,822</b> | <b>1,440,030</b> | <b>1,430,044</b> |
| <b>Value (Million Baht)</b>      | <b>1,089.2</b>   | <b>1,092.6</b>   | <b>1,100.9</b>   | <b>1,080.0</b>   | <b>1,072.5</b>   |
| <b><u>Consumption</u></b>        |                  |                  |                  |                  |                  |
| <b>Total Consumption</b>         | <b>1,504,067</b> | <b>1,443,368</b> | <b>1,408,695</b> | <b>1,448,141</b> | <b>1,398,348</b> |
| <b>Value (Million Baht)</b>      | <b>1,128.1</b>   | <b>1,082.5</b>   | <b>1,056.5</b>   | <b>1,086.1</b>   | <b>1,048.8</b>   |
| <b><u>Import</u><sup>1</sup></b> |                  |                  |                  |                  |                  |
| <b>Total Import</b>              | <b>30</b>        | <b>216</b>       | <b>304</b>       | <b>1</b>         | <b>47</b>        |
| <b>Value (Million Baht)</b>      | <b>0.1</b>       | <b>0.5</b>       | <b>0.6</b>       | <b>0.0*</b>      | <b>0.0*</b>      |

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

0.0\* denoting the amount of less than 0.05 million baht

# C E M E N T   C L A Y

Tonnes

|                             | 2016             | 2017             | 2018             | 2019             | 2020             |
|-----------------------------|------------------|------------------|------------------|------------------|------------------|
| <b><u>Production</u></b>    |                  |                  |                  |                  |                  |
| <b>Northern Region</b>      |                  |                  |                  |                  |                  |
| Lampang                     | 297,776          | 255,544          | 220,406          | 293,221          | 246,859          |
| Nakhon Sawan                | 40,000           | 38,550           | -                | -                | -                |
| <b>Northeastern Region</b>  |                  |                  |                  |                  |                  |
| Nakhon Ratchasima           | 710,897          | 533,673          | 866,383          | 828,315          | 665,465          |
| <b>Central Region</b>       |                  |                  |                  |                  |                  |
| Lop Buri                    | 1,086,932        | 1,053,093        | 982,712          | 1,514,921        | 1,331,062        |
| Phetchaburi                 | 150,734          | 5,000            | 27,980           | 71,408           | 35,560           |
| Prachin Buri                | 125,540          | 110,072          | 38,893           | 83,445           | 33,228           |
| Sara Buri                   | 1,597,999        | 1,833,851        | 3,363,467        | 4,193,131        | 4,377,696        |
| <b>Southern Region</b>      |                  |                  |                  |                  |                  |
| Krabi                       | 497,000          | 330,000          | 301,642          | 425,000          | 425,000          |
| Nakhon Si Thammarat         | -                | 95,000           | 36,325           | 46,000           | 91,000           |
| <b>Total Production</b>     | <b>4,506,878</b> | <b>4,254,783</b> | <b>5,837,808</b> | <b>7,455,441</b> | <b>7,205,870</b> |
| <b>Value (Million Baht)</b> | <b>405.6</b>     | <b>382.9</b>     | <b>525.4</b>     | <b>670.9</b>     | <b>648.5</b>     |
| <b><u>Consumption</u></b>   |                  |                  |                  |                  |                  |
| <b>Total Consumption</b>    | <b>4,278,942</b> | <b>3,142,781</b> | <b>5,770,321</b> | <b>8,630,270</b> | <b>6,696,958</b> |
| <b>Value (Million Baht)</b> | <b>385.1</b>     | <b>282.9</b>     | <b>519.3</b>     | <b>776.7</b>     | <b>602.7</b>     |

# C E R A M I C   C L A Y

Tonnes

|                             | 2016           | 2017           | 2018           | 2019           | 2020           |
|-----------------------------|----------------|----------------|----------------|----------------|----------------|
| <b><u>Production</u></b>    |                |                |                |                |                |
| <b>Northeastern Region</b>  |                |                |                |                |                |
| Chaiyaphum                  | 266,000        | 252,850        | 309,000        | 262,000        | 181,000        |
| <b>Central Region</b>       |                |                |                |                |                |
| Ang Thong                   | -              | -              | -              | -              | 71,627         |
| Lop Buri                    | 36,100         | 45,800         | 121,000        | 41,000         | 86,000         |
| Sara Buri                   | 69,586         | 49,332         | 31,653         | 31,686         | 37,550         |
| Sing Buri                   | -              | 10,000         | 24,200         | 43,400         | 27,500         |
| <b>Total Production</b>     | <b>371,686</b> | <b>357,982</b> | <b>485,853</b> | <b>378,086</b> | <b>403,677</b> |
| <b>Value (Million Baht)</b> | <b>204.4</b>   | <b>196.9</b>   | <b>267.2</b>   | <b>207.9</b>   | <b>222.0</b>   |
| <b><u>Consumption</u></b>   |                |                |                |                |                |
| <b>Total Consumption</b>    | <b>361,182</b> | <b>341,762</b> | <b>337,964</b> | <b>478,769</b> | <b>516,770</b> |
| <b>Value (Million Baht)</b> | <b>198.7</b>   | <b>187.9</b>   | <b>185.9</b>   | <b>263.3</b>   | <b>284.2</b>   |

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

Tonnes

|                                              | 2016       | 2017         | 2018         | 2019         | 2020        |
|----------------------------------------------|------------|--------------|--------------|--------------|-------------|
| <b><u>Import (Columbite)</u><sup>1</sup></b> |            |              |              |              |             |
| <b>Total Import</b>                          | <b>25</b>  | <b>291</b>   | <b>377</b>   | <b>357</b>   | <b>216</b>  |
| <b>Value (Million Baht)</b>                  | <b>9.8</b> | <b>107.4</b> | <b>209.0</b> | <b>167.4</b> | <b>70.7</b> |

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

# C O P P E R

Tonnes

|                                        | 2016          | 2017       | 2018       | 2019       | 2020         |
|----------------------------------------|---------------|------------|------------|------------|--------------|
| <b><u>Import (ore)</u><sup>1</sup></b> |               |            |            |            |              |
| <b>Total Import</b>                    | <b>19,868</b> | <b>299</b> | <b>384</b> | <b>142</b> | <b>3,403</b> |
| <b>Value (Million Baht)</b>            | <b>619.9</b>  | <b>3.9</b> | <b>3.9</b> | <b>1.2</b> | <b>11.4</b>  |

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'

# DICKITE

Tonnes

|                             | 2016 | 2017 | 2018 | 2019         | 2020         |
|-----------------------------|------|------|------|--------------|--------------|
| <b><u>Production</u></b>    |      |      |      |              |              |
| <b>Central Region</b>       |      |      |      |              |              |
| Sara Buri                   | -    | -    | -    | 5,000        | -            |
| <b>Total Production</b>     | -    | -    | -    | <b>5,000</b> | -            |
| <b>Value (Million Baht)</b> | -    | -    | -    | <b>3.0</b>   | -            |
| <b><u>Consumption</u></b>   |      |      |      |              |              |
| <b>Total Consumption</b>    | -    | -    | -    | <b>3,969</b> | <b>6,479</b> |
| <b>Value (Million Baht)</b> | -    | -    | -    | <b>2.4</b>   | <b>4</b>     |

# D O L O M I T E

Tonnes

|                             | 2016             | 2017             | 2018             | 2019             | 2020             |
|-----------------------------|------------------|------------------|------------------|------------------|------------------|
| <b><u>Production</u></b>    |                  |                  |                  |                  |                  |
| <b>Northern Region</b>      |                  |                  |                  |                  |                  |
| Phetchabun                  | 6,600            | 2,640            | 23,431           | 2,270            | 39,879           |
| Phrae                       | 25,600           | -                | -                | -                | -                |
| <b>Central Region</b>       |                  |                  |                  |                  |                  |
| Kanchanaburi                | 184,572          | 402,606          | 269,465          | 505,262          | 639,370          |
| <b>Southern Region</b>      |                  |                  |                  |                  |                  |
| Krabi                       | 1,045,086        | 631,691          | 984,506          | 177,666          | -                |
| Phangnga                    | 202,579          | 237,288          | 206,621          | 235,318          | 117,341          |
| Songkhla                    | 501,922          | 341,500          | 326,590          | 316,600          | 677,855          |
| Surat Thani                 | 698,500          | 912,011          | 1,310,172        | 1,316,103        | 2,005,662        |
| Trang                       | 370,000          | 367,000          | 319,408          | 297,625          | 251,400          |
| <b>Total Production</b>     | <b>3,034,860</b> | <b>2,894,736</b> | <b>3,440,193</b> | <b>2,850,844</b> | <b>3,731,507</b> |
| <b>Value (Million Baht)</b> | <b>1,669.2</b>   | <b>1,592.1</b>   | <b>1,892.1</b>   | <b>1,568.0</b>   | <b>2,052.3</b>   |

## **Export**

### **1. Ground**

|                             |              |            |            |            |            |
|-----------------------------|--------------|------------|------------|------------|------------|
| <b>Asia</b>                 |              |            |            |            |            |
| Bangladesh                  | 55           | -          | 40         | -          | 20         |
| Cambodia                    | 4,585        | -          | -          | -          | -          |
| Laos                        | -            | -          | -          | 734        | -          |
| Malaysia                    | -            | -          | -          | -          | -          |
| Philippines                 | -            | 820        | -          | 80         | 118        |
| Singapore                   | -            | -          | -          | -          | 4          |
| <b>Total Export</b>         | <b>4,640</b> | <b>820</b> | <b>40</b>  | <b>814</b> | <b>142</b> |
| <b>Value (Million Baht)</b> | <b>7.4</b>   | <b>0.2</b> | <b>0.3</b> | <b>0.8</b> | <b>0.8</b> |

### **2. Unground**

|                             |                  |                  |                  |                  |                  |
|-----------------------------|------------------|------------------|------------------|------------------|------------------|
| <b>Asia</b>                 |                  |                  |                  |                  |                  |
| Bangladesh                  | -                | -                | -                | 75               | 13,350           |
| China                       |                  |                  |                  |                  | 49,500           |
| India                       | 438,870          | 458,461          | 425,500          | 320,000          | 236,675          |
| Indonesia                   | 35,000           | 7,500            | -                | -                | -                |
| Japan                       | 565,850          | 458,150          | 360,500          | 319,460          | 371,050          |
| Jordan                      | -                | -                | 33,200           | -                | -                |
| Malaysia                    | -                | -                | 222,200          | 342,050          | 515,785          |
| Taiwan                      | 222,165          | 156,305          | 182,000          | 141,000          | 205,670          |
| <b>South America</b>        |                  |                  |                  |                  |                  |
| Chile                       | -                | -                | 46,200           | 46,200           | -                |
| <b>Total Export</b>         | <b>1,261,885</b> | <b>1,080,416</b> | <b>1,269,600</b> | <b>1,168,785</b> | <b>1,392,030</b> |
| <b>Value (Million Baht)</b> | <b>547.4</b>     | <b>487.2</b>     | <b>508.7</b>     | <b>394.4</b>     | <b>479.7</b>     |



Tonnes

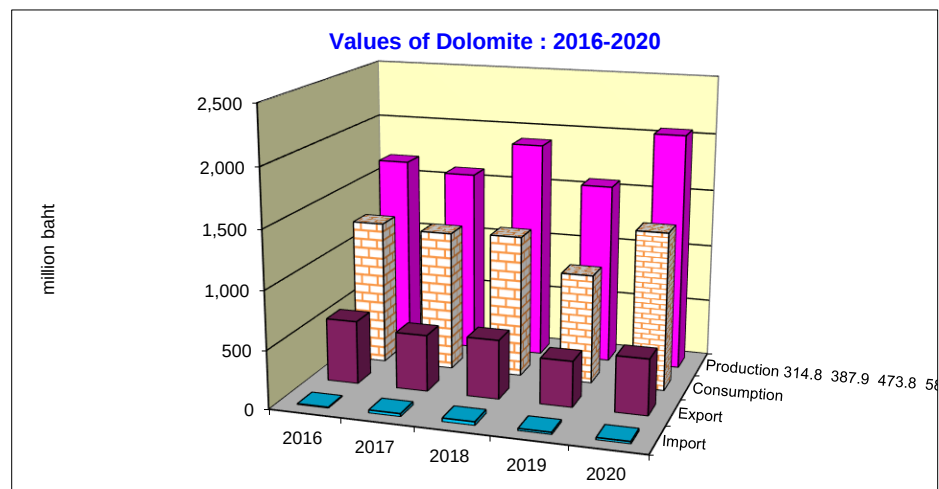
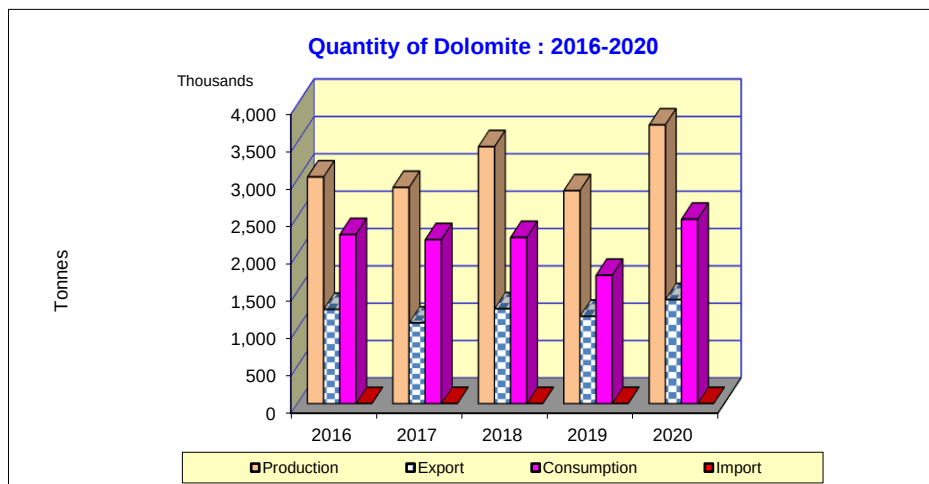
|  | 2016 | 2017 | 2018 | 2019 | 2020 |
|--|------|------|------|------|------|
|--|------|------|------|------|------|

**Consumption**

|                             |                  |                  |                  |                  |                  |
|-----------------------------|------------------|------------------|------------------|------------------|------------------|
| <b>Total Consumption</b>    | <b>2,263,982</b> | <b>2,195,261</b> | <b>2,225,240</b> | <b>1,718,019</b> | <b>2,469,086</b> |
| <b>Value (Million Baht)</b> | <b>1,245.2</b>   | <b>1,207.4</b>   | <b>1,223.9</b>   | <b>944.9</b>     | <b>1,358.0</b>   |

**Import<sup>1</sup>**

|                             |            |              |              |              |              |
|-----------------------------|------------|--------------|--------------|--------------|--------------|
| <b>Total Import</b>         | <b>785</b> | <b>1,078</b> | <b>1,549</b> | <b>1,349</b> | <b>1,232</b> |
| <b>Value (Million Baht)</b> | <b>7.9</b> | <b>25.6</b>  | <b>30.5</b>  | <b>18.4</b>  | <b>19.5</b>  |



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

## DOLOMITIC MARL

Tonnes

|                             | 2016 | 2017 | 2018          | 2019          | 2020          |
|-----------------------------|------|------|---------------|---------------|---------------|
| <b><u>Production</u></b>    |      |      |               |               |               |
| <b>Northern Region</b>      |      |      |               |               |               |
| Phetchabun                  | -    | -    | -             | 1,585         | -             |
| Phrae                       | -    | -    | 6,920         | -             | -             |
| <b>Total Production</b>     | -    | -    | <b>6,920</b>  | <b>1,585</b>  | -             |
| <b>Value (Million Baht)</b> | -    | -    | <b>2.4</b>    | <b>0.6</b>    | -             |
| <b><u>Consumption</u></b>   |      |      |               |               |               |
| <b>Total Consumption</b>    | -    | -    | <b>10,634</b> | <b>11,495</b> | <b>10,130</b> |
| <b>Value (Million Baht)</b> | -    | -    | <b>3.7</b>    | <b>4.0</b>    | <b>4</b>      |

# F E L D S P A R

Tonnes

|  | 2016 | 2017 | 2018 | 2019 | 2020 |
|--|------|------|------|------|------|
|--|------|------|------|------|------|

## Production

### 1. Sodium Feldspar (Ground)

#### Northern Region

|     |   |   |   |   |       |
|-----|---|---|---|---|-------|
| Tak | - | - | - | - | 6,204 |
|-----|---|---|---|---|-------|

|                         |   |   |   |   |              |
|-------------------------|---|---|---|---|--------------|
| <b>Total Production</b> | - | - | - | - | <b>6,204</b> |
|-------------------------|---|---|---|---|--------------|

|                             |   |   |   |   |            |
|-----------------------------|---|---|---|---|------------|
| <b>Value (Million Baht)</b> | - | - | - | - | <b>8.7</b> |
|-----------------------------|---|---|---|---|------------|

### 2. Sodium Feldspar (Unground)

#### Northern Region

|     |         |         |         |         |         |
|-----|---------|---------|---------|---------|---------|
| Tak | 252,723 | 269,849 | 204,340 | 254,172 | 237,638 |
|-----|---------|---------|---------|---------|---------|

#### Central Region

|              |       |        |       |       |     |
|--------------|-------|--------|-------|-------|-----|
| Kanchanaburi | 5,260 | 11,550 | 2,900 | 2,000 | 800 |
|--------------|-------|--------|-------|-------|-----|

|            |         |         |         |         |         |
|------------|---------|---------|---------|---------|---------|
| Ratchaburi | 158,864 | 188,596 | 118,200 | 142,030 | 266,318 |
|------------|---------|---------|---------|---------|---------|

#### Southern Region

|                     |         |         |         |         |         |
|---------------------|---------|---------|---------|---------|---------|
| Nakhon Si Thammarat | 747,100 | 915,930 | 792,363 | 854,941 | 594,384 |
|---------------------|---------|---------|---------|---------|---------|

|                         |                  |                  |                  |                  |                  |
|-------------------------|------------------|------------------|------------------|------------------|------------------|
| <b>Total Production</b> | <b>1,163,947</b> | <b>1,385,925</b> | <b>1,117,803</b> | <b>1,253,143</b> | <b>1,099,140</b> |
|-------------------------|------------------|------------------|------------------|------------------|------------------|

|                             |              |              |              |              |              |
|-----------------------------|--------------|--------------|--------------|--------------|--------------|
| <b>Value (Million Bath)</b> | <b>814.8</b> | <b>970.1</b> | <b>782.5</b> | <b>877.2</b> | <b>769.4</b> |
|-----------------------------|--------------|--------------|--------------|--------------|--------------|

## Export

### Potassium Feldspar (Unground)

#### Asia

|            |   |        |   |   |   |
|------------|---|--------|---|---|---|
| Bangladesh | - | 13,100 | - | - | - |
|------------|---|--------|---|---|---|

|           |   |        |   |   |   |
|-----------|---|--------|---|---|---|
| Indonesia | - | 17,250 | - | - | - |
|-----------|---|--------|---|---|---|

|         |   |       |   |   |   |
|---------|---|-------|---|---|---|
| Vietnam | - | 7,000 | - | - | - |
|---------|---|-------|---|---|---|

|                     |   |               |   |   |   |
|---------------------|---|---------------|---|---|---|
| <b>Total Export</b> | - | <b>37,350</b> | - | - | - |
|---------------------|---|---------------|---|---|---|

|                             |   |             |   |   |   |
|-----------------------------|---|-------------|---|---|---|
| <b>Value (Million Baht)</b> | - | <b>30.7</b> | - | - | - |
|-----------------------------|---|-------------|---|---|---|

Tonnes

|                                         | 2016           | 2017           | 2018           | 2019             | 2020           |
|-----------------------------------------|----------------|----------------|----------------|------------------|----------------|
| <b>3. Sodium Feldspar (Ground)</b>      |                |                |                |                  |                |
| <b>Asia</b>                             |                |                |                |                  |                |
| Bangladesh                              | 263,972        | 375,940        | 404,286        | 484,944          | 589,860        |
| India                                   | 22,072         | -              | -              | -                | 11,550         |
| Indonesia                               | 100,884        | 72,292         | 94,672         | 119,166          | 76,845         |
| Malaysia                                | 64,180         | 70,730         | 66,970         | 7,150            | 8,770          |
| Philippines                             | -              | -              | -              | 240,240          | 1,764          |
| Sri Lanka                               | -              | 1              | -              | -                | -              |
| U.A.E.                                  | 153,480        | 116,288        | 104,400        | 270,570          | 121,100        |
| Vietnam                                 | 33,909         | 25,625         | 29,585         | 12,911           | 13,405         |
| <b>Australia / Oceania</b>              |                |                |                |                  |                |
| New Zealand                             | -              | -              | -              | 50               | -              |
| <b>Total Export</b>                     | <b>638,497</b> | <b>660,876</b> | <b>699,913</b> | <b>1,135,031</b> | <b>823,294</b> |
| <b>Value (Million Baht)</b>             | <b>569.4</b>   | <b>579.5</b>   | <b>593.4</b>   | <b>1,396.7</b>   | <b>637.1</b>   |
| <b><u>Consumption</u></b>               |                |                |                |                  |                |
| <b>1. Potassium Feldspar (Unground)</b> | <b>1,185</b>   | <b>-</b>       | <b>-</b>       | <b>-</b>         | <b>-</b>       |
| <b>Value (Million Baht)</b>             | <b>2.0</b>     | <b>-</b>       | <b>-</b>       | <b>-</b>         | <b>-</b>       |
| <b>2. Sodium Feldspar (Ground)</b>      | <b>24,080</b>  | <b>16,254</b>  | <b>32,598</b>  | <b>32,762</b>    | <b>12,541</b>  |
| <b>Value (Million Baht)</b>             | <b>33.7</b>    | <b>22.8</b>    | <b>45.6</b>    | <b>45.9</b>      | <b>17.6</b>    |
| <b>3. Sodium Feldspar (Unground)</b>    | <b>229,618</b> | <b>496,357</b> | <b>441,345</b> | <b>857,771</b>   | <b>634,231</b> |
| <b>Value (Million Baht)</b>             | <b>160.7</b>   | <b>347.4</b>   | <b>308.9</b>   | <b>600.4</b>     | <b>444.0</b>   |

Tonnes

|                                      | 2016          | 2017          | 2018          | 2019          | 2020          |
|--------------------------------------|---------------|---------------|---------------|---------------|---------------|
| <b><u>Import</u><sup>1</sup></b>     |               |               |               |               |               |
| <b>1. Potassium, Sodium Feldspar</b> | <b>29,467</b> | <b>34,325</b> | <b>30,929</b> | <b>21,377</b> | <b>22,946</b> |
| <b>Value (Million Baht)</b>          | <b>106.6</b>  | <b>123.9</b>  | <b>103.4</b>  | <b>77.7</b>   | <b>86.4</b>   |
| <b>2. Other Feldspar</b>             | <b>7,568</b>  | <b>12,141</b> | <b>13,085</b> | <b>19,091</b> | <b>13,330</b> |
| <b>Value (Million Baht)</b>          | <b>57.1</b>   | <b>66.5</b>   | <b>72.3</b>   | <b>90.0</b>   | <b>58.8</b>   |

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

# FLUORITE

Tonnes

|                                                | 2016          | 2017          | 2018          | 2019          | 2020          |
|------------------------------------------------|---------------|---------------|---------------|---------------|---------------|
| <b><u>Production (Metallurgical grade)</u></b> |               |               |               |               |               |
| <b>Northern Region</b>                         |               |               |               |               |               |
| Lamphun                                        | 18,800        | -             | 10,500        | 17,000        | 6,240         |
| Phrae                                          | 1,100         | 2,500         | 6,200         | 747           | 3,567         |
| <b>Central Region</b>                          |               |               |               |               |               |
| Kanchanaburi                                   | 200           | 3,000         | -             | -             | -             |
| <b>Total Production</b>                        | <b>20,100</b> | <b>5,500</b>  | <b>16,700</b> | <b>17,747</b> | <b>9,807</b>  |
| <b>Value (Million Baht)</b>                    | <b>120.2</b>  | <b>26.8</b>   | <b>80.9</b>   | <b>85.6</b>   | <b>50.0</b>   |
| <b><u>Export (Metallurgical Grade)</u></b>     |               |               |               |               |               |
| <b>Asia</b>                                    |               |               |               |               |               |
| China                                          | 5,124         | 520           | 1,080         | 3,050         | 234           |
| India                                          | 24,541        | 19,163        | 36,968        | 41,323        | 37,829        |
| Indonesia                                      | 60            | -             | -             | -             | -             |
| Korea, South                                   | -             | -             | 154           | 352           | -             |
| Malaysia                                       | -             | -             | 95            | -             | -             |
| Taiwan                                         | 150           | -             | -             | -             | -             |
| Vietnam                                        | -             | -             | -             | -             | 75            |
| <b>Europe</b>                                  |               |               |               |               |               |
| Turkey                                         | 1,819         | 1,040         | 182           | 958           | 234           |
| Ukraine                                        | 480           | -             | -             | -             | -             |
| <b>Total Export</b>                            | <b>32,174</b> | <b>20,723</b> | <b>38,479</b> | <b>45,683</b> | <b>38,372</b> |
| <b>Value (Million Baht)</b>                    | <b>174.2</b>  | <b>111.5</b>  | <b>186.2</b>  | <b>256.3</b>  | <b>226.7</b>  |
| <b><u>Consumption</u></b>                      |               |               |               |               |               |
| <b>Total Consumption</b>                       | <b>204</b>    | <b>1,640</b>  | <b>500</b>    | <b>200</b>    | <b>-</b>      |
| <b>Value (Million Baht)</b>                    | <b>1.2</b>    | <b>7.9</b>    | <b>2.4</b>    | <b>1.0</b>    | <b>-</b>      |
| <b><u>Import<sup>1</sup></u></b>               |               |               |               |               |               |
| <b>Total Import</b>                            | <b>1,517</b>  | <b>2,962</b>  | <b>1,994</b>  | <b>11,658</b> | <b>9,325</b>  |
| <b>Value (Million Baht)</b>                    | <b>10.3</b>   | <b>22.3</b>   | <b>16.2</b>   | <b>45.5</b>   | <b>34.5</b>   |

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

# G A R N E T

Tonnes

|                             | 2016 | 2017         | 2018         | 2019       | 2020 |
|-----------------------------|------|--------------|--------------|------------|------|
| <b><u>Export</u></b>        |      |              |              |            |      |
| <b>Asia</b>                 |      |              |              |            |      |
| China                       | -    | -            | 900          | -          | -    |
| Hong Kong                   | -    | -            | 2,380        | -          | -    |
| Malaysia                    | -    | -            | -            | 164        | -    |
| Singapore                   | -    | -            | -            | 350        | -    |
| U.A.E.                      | -    | -            | -            | 25         | -    |
| <b>Europe</b>               |      |              |              |            |      |
| Ukraine                     | -    | 378          | -            | -          | -    |
| <b>North America</b>        |      |              |              |            |      |
| U.S.A.                      | -    | 6,490        | 1,320        | -          | -    |
| <b>Total Export</b>         | -    | <b>6,868</b> | <b>4,600</b> | <b>539</b> | -    |
| <b>Value (Million Baht)</b> | -    | <b>43.5</b>  | <b>46.5</b>  | <b>2.7</b> | -    |

# GLASS SAND

Tonnes

|                                  | 2016             | 2017             | 2018             | 2019             | 2020             |
|----------------------------------|------------------|------------------|------------------|------------------|------------------|
| <b><u>Production</u></b>         |                  |                  |                  |                  |                  |
| <b>Northeastern Region</b>       |                  |                  |                  |                  |                  |
| Bueng Kan                        | 43,000           | 60,000           | 44,101           | 36,100           | 14,170           |
| Roi Et                           | 122,850          | 140,850          | 126,000          | 142,212          | 208,000          |
| <b>Central Region</b>            |                  |                  |                  |                  |                  |
| Cha Choeng Sao                   | 120,000          | 132,990          | 186,531          | 155,000          | 145,000          |
| Chanthaburi                      | 207,675          | 102,995          | 92,305           | 82,850           | 150,385          |
| Rayong                           | 518,345          | 953,340          | 1,003,579        | 698,208          | 540,704          |
| <b>Southern Region</b>           |                  |                  |                  |                  |                  |
| Chumphon                         | 90,829           | 386,013          | 104,702          | 133,662          | 160,400          |
| Surat Thani                      | -                | -                | -                | -                | 9,000            |
| <b>Total Production</b>          | <b>1,102,699</b> | <b>1,776,188</b> | <b>1,557,218</b> | <b>1,248,032</b> | <b>1,227,659</b> |
| <b>Value (Million Baht)</b>      | <b>1,091.7</b>   | <b>1,758.4</b>   | <b>1,541.6</b>   | <b>1,235.6</b>   | <b>1,215.4</b>   |
| <b><u>Consumption</u></b>        |                  |                  |                  |                  |                  |
| <b>Total Consumption</b>         | <b>918,481</b>   | <b>1,383,058</b> | <b>1,529,709</b> | <b>1,206,501</b> | <b>1,278,387</b> |
| <b>Value (Million Baht)</b>      | <b>909.3</b>     | <b>1,369.2</b>   | <b>1,514.4</b>   | <b>1,194.4</b>   | <b>1,265.6</b>   |
| <b><u>Import</u><sup>1</sup></b> |                  |                  |                  |                  |                  |
| <b>Total Import</b>              | <b>143,315</b>   | <b>190,852</b>   | <b>156,550</b>   | <b>150,830</b>   | -                |
| <b>Value (Million Baht)</b>      | <b>277.3</b>     | <b>380.1</b>     | <b>477.9</b>     | <b>446.1</b>     | -                |

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



# G N E I S S

|                             | Tonnes      |            |              |      |      |
|-----------------------------|-------------|------------|--------------|------|------|
|                             | 2016        | 2017       | 2018         | 2019 | 2020 |
| <b><u>Production</u></b>    |             |            |              |      |      |
| <b>Central Region</b>       |             |            |              |      |      |
| Prachuap Khiri Khan         | -           | 485        | 1,180        | -    | -    |
| <b>Total Production</b>     | -           | <b>485</b> | <b>1,180</b> | -    | -    |
| <b>Value (Million Baht)</b> | -           | <b>1.9</b> | <b>4.7</b>   | -    | -    |
| <b><u>Consumption</u></b>   |             |            |              |      |      |
| <b>Total Consumption</b>    | <b>5</b>    | -          | -            | -    | -    |
| <b>Value (Million Baht)</b> | <b>0.0*</b> | -          | -            | -    | -    |

0.0\* denoting the amount of less than 0.05 million baht

# G O L D

Gram

|                                  | 2016             | 2017 | 2018 | 2019 | 2020 |
|----------------------------------|------------------|------|------|------|------|
| <b><u>Production (Metal)</u></b> |                  |      |      |      |      |
| <b>Northern Region</b>           |                  |      |      |      |      |
| Phetchabun                       | 4,185,795        | -    | -    | -    | -    |
| Phichit                          | 107,151          | -    | -    | -    | -    |
| <b>Total Production</b>          | <b>4,292,946</b> | -    | -    | -    | -    |
| <b>Value (Million Baht)</b>      | <b>6,039.9</b>   | -    | -    | -    | -    |
| <b><u>Export (Metal)</u></b>     |                  |      |      |      |      |
| <b>Asia</b>                      |                  |      |      |      |      |
| Hong Kong                        | 4,292,946        | -    | -    | -    | -    |
| <b>Total Export</b>              | <b>4,292,946</b> | -    | -    | -    | -    |
| <b>Value (Million Baht)</b>      | <b>6,039.9</b>   | -    | -    | -    | -    |

# GRANITE

Tonnes

|                             | 2016             | 2017             | 2018              | 2019              | 2020              |
|-----------------------------|------------------|------------------|-------------------|-------------------|-------------------|
| <b><u>Production</u></b>    |                  |                  |                   |                   |                   |
| <b>1. Dimension Stone*</b>  |                  |                  |                   |                   |                   |
| <b>Northern Region</b>      |                  |                  |                   |                   |                   |
| Kamphaeng Phet              | 115              | -                | -                 | 15,099            | 620               |
| Tak                         | 3,859            | 2,802            | 1,263             | 2,397             | 1,766             |
| <b>Northeastern Region</b>  |                  |                  |                   |                   |                   |
| Nakhon Ratchasima           | -                | -                | -                 | 17                | -                 |
| <b>Central Region</b>       |                  |                  |                   |                   |                   |
| Cha Choeng Sao              | 47               | 20               | 51                | 18                | -                 |
| Prachuap Khiri Khan         | 1,503            | 2,545            | 3,800             | 1,137             | -                 |
| <b>Total Production</b>     | <b>5,524</b>     | <b>5,367</b>     | <b>5,114</b>      | <b>18,668</b>     | <b>2,386</b>      |
| <b>Value (Million Baht)</b> | <b>32.0</b>      | <b>34.9</b>      | <b>32.2</b>       | <b>117.3</b>      | <b>12.4</b>       |
| <b>2. Industrial Rock</b>   |                  |                  |                   |                   |                   |
| <b>Northern Region</b>      |                  |                  |                   |                   |                   |
| Phrae                       | -                | -                | -                 | -                 | 558               |
| Tak                         | 179,478          | 52,316           | -                 | -                 | 2,000             |
| Cha Chaeng Sao              | 422,700          | 315,525          | 469,001           | 470,011           | 406,516           |
| Chon Buri                   | 3,326,592        | 4,402,015        | 4,803,684         | 5,940,980         | 5,149,242         |
| Kanchanaburi                | 477,440          | 40,000           | -                 | -                 | 140,660           |
| Prachuap Khiri Khan         | 168,552          | 151,964          | 153,532           | 124,627           | 316,096           |
| Rayong                      | 1,507,400        | 1,114,888        | 1,263,752         | 1,685,424         | 2,064,000         |
| Ratchaburi                  | -                | -                | -                 | 196,076           | 44,424            |
| <b>Southern Region</b>      |                  |                  |                   |                   |                   |
| Nakhon Si Thammarat         | -                | -                | -                 | 40,380            | 97,563            |
| Narathiwat                  | 1,179,675        | 1,234,682        | 1,509,184         | 1,508,717         | 1,855,050         |
| Phangnga                    | 667,966          | 652,946          | 777,316           | 1,023,188         | 1,140,372         |
| Songkhla                    | 1,528,942        | 1,065,354        | 2,304,526         | 2,874,832         | 3,543,728         |
| <b>Total Production</b>     | <b>9,458,745</b> | <b>9,029,690</b> | <b>11,280,995</b> | <b>13,864,234</b> | <b>14,760,209</b> |
| <b>Value (Million Baht)</b> | <b>1,891.7</b>   | <b>1,805.9</b>   | <b>2,256.2</b>    | <b>2,772.8</b>    | <b>2,952.0</b>    |

\* unit : cubic meter

Tonnes

|  | 2016 | 2017 | 2018 | 2019 | 2020 |
|--|------|------|------|------|------|
|--|------|------|------|------|------|

**Export (Industrial Rock)****Asia**

|           |         |         |         |         |         |
|-----------|---------|---------|---------|---------|---------|
| Singapore | 149,995 | 419,320 | 212,100 | 444,261 | 128,400 |
|-----------|---------|---------|---------|---------|---------|

|                     |                |                |                |                |                |
|---------------------|----------------|----------------|----------------|----------------|----------------|
| <b>Total Export</b> | <b>149,995</b> | <b>419,320</b> | <b>212,100</b> | <b>444,261</b> | <b>128,400</b> |
|---------------------|----------------|----------------|----------------|----------------|----------------|

|                             |             |             |             |             |             |
|-----------------------------|-------------|-------------|-------------|-------------|-------------|
| <b>Value (Million Baht)</b> | <b>36.1</b> | <b>93.3</b> | <b>35.9</b> | <b>90.0</b> | <b>35.4</b> |
|-----------------------------|-------------|-------------|-------------|-------------|-------------|

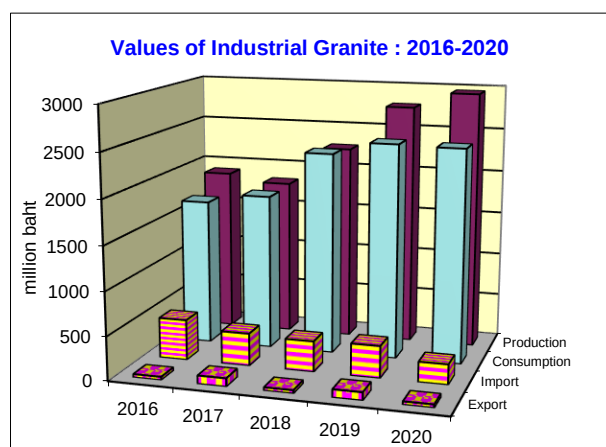
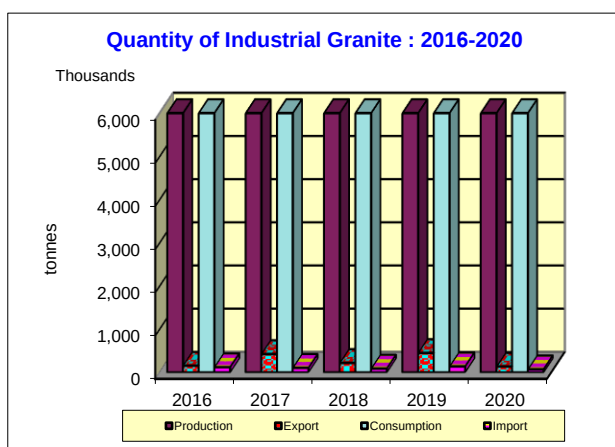
**Consumption**

|                             |              |              |              |              |              |
|-----------------------------|--------------|--------------|--------------|--------------|--------------|
| <b>1. Dimension Stone *</b> | <b>4,718</b> | <b>3,873</b> | <b>1,352</b> | <b>2,059</b> | <b>2,104</b> |
| <b>Value (Million Baht)</b> | <b>27.4</b>  | <b>25.2</b>  | <b>8.5</b>   | <b>12.6</b>  | <b>10.9</b>  |

|                             |                  |                  |                   |                   |                   |
|-----------------------------|------------------|------------------|-------------------|-------------------|-------------------|
| <b>2. Industrial Rock</b>   | <b>8,392,556</b> | <b>8,926,182</b> | <b>11,570,394</b> | <b>12,287,216</b> | <b>12,217,021</b> |
| <b>Value (Million Baht)</b> | <b>1,678.5</b>   | <b>1,785.2</b>   | <b>2,314.1</b>    | <b>2,457.4</b>    | <b>2,443.4</b>    |

**Import (Dimension Stone)<sup>1</sup>**

|                             |                |               |               |                |               |
|-----------------------------|----------------|---------------|---------------|----------------|---------------|
| <b>Total Import</b>         | <b>114,134</b> | <b>98,569</b> | <b>82,568</b> | <b>133,251</b> | <b>64,418</b> |
| <b>Value (Million Baht)</b> | <b>465.4</b>   | <b>373.4</b>  | <b>351.3</b>  | <b>366.4</b>   | <b>229.9</b>  |



# GRAVEL

Tonnes

|                                        | 2016       | 2017       | 2018       | 2019       | 2020       |
|----------------------------------------|------------|------------|------------|------------|------------|
| <b><u>Export</u> (Industrial Rock)</b> |            |            |            |            |            |
| <b>Asia</b>                            |            |            |            |            |            |
| Malaysia                               | -          | -          | 34         | 6          | -          |
| Qatar                                  | -          | -          | -          | -          | -          |
| Singapore                              | 144        | 528        | 216        | 264        | 48         |
| <b>Total Export</b>                    | <b>144</b> | <b>528</b> | <b>250</b> | <b>270</b> | <b>48</b>  |
| <b>Value (Million Baht)</b>            | <b>0.8</b> | <b>2.4</b> | <b>0.9</b> | <b>1.2</b> | <b>0.2</b> |

# GRAYWACKE

Tonnes

|                                             | 2016             | 2017             | 2018             | 2019             | 2020             |
|---------------------------------------------|------------------|------------------|------------------|------------------|------------------|
| <b><u>Production</u> (Industrial Rock)</b>  |                  |                  |                  |                  |                  |
| <b>Central Region</b>                       |                  |                  |                  |                  |                  |
| Chanthaburi                                 | 374,223          | 606,930          | 543,335          | 515,176          | 431,724          |
| Trat                                        | 681,126          | 1,000,766        | 733,031          | 917,112          | 943,531          |
| <b>Total Production</b>                     | <b>1,055,349</b> | <b>1,607,696</b> | <b>1,276,366</b> | <b>1,432,288</b> | <b>1,375,255</b> |
| <b>Value (Million Baht)</b>                 | <b>211.1</b>     | <b>321.5</b>     | <b>255.3</b>     | <b>286.5</b>     | <b>275.1</b>     |
| <b><u>Consumption</u> (Industrial Rock)</b> |                  |                  |                  |                  |                  |
| <b>Total Consumption</b>                    | <b>819,237</b>   | <b>1,546,315</b> | <b>1,343,459</b> | <b>1,414,867</b> | <b>1,402,537</b> |
| <b>Value (Million Baht)</b>                 | <b>163.8</b>     | <b>309.3</b>     | <b>268.7</b>     | <b>283.0</b>     | <b>280.5</b>     |

# G Y P S U M

Tonnes

|  | 2016 | 2017 | 2018 | 2019 | 2020 |
|--|------|------|------|------|------|
|--|------|------|------|------|------|

## Production

### Northern Region

|              |           |           |           |           |           |
|--------------|-----------|-----------|-----------|-----------|-----------|
| Nakhon Sawan | 3,838,830 | 3,939,135 | 3,868,573 | 4,004,497 | 4,045,482 |
| Phichit      | 503,703   | 529,482   | 560,545   | 381,634   | 379,480   |

### Southern Region

|                     |           |           |           |           |           |
|---------------------|-----------|-----------|-----------|-----------|-----------|
| Nakhon Si Thammarat | 1,326,727 | 1,360,870 | 1,992,072 | 1,645,184 | 1,077,370 |
| Surat Thani         | 4,737,338 | 3,424,464 | 3,259,239 | 2,336,385 | 2,522,001 |

|                             |                   |                  |                  |                  |                  |
|-----------------------------|-------------------|------------------|------------------|------------------|------------------|
| <b>Total Production</b>     | <b>10,406,598</b> | <b>9,253,951</b> | <b>9,680,429</b> | <b>8,367,700</b> | <b>8,024,333</b> |
| <b>Value (Million Baht)</b> | <b>6,910.0</b>    | <b>5,960.7</b>   | <b>5,767.1</b>   | <b>4,903.7</b>   | <b>4,684.3</b>   |

## Export

### 1. Ground

#### Asia

|          |       |       |        |        |        |
|----------|-------|-------|--------|--------|--------|
| Cambodia | -     | -     | 60,630 | 87,440 | 70,440 |
| China    | -     | 110   | 220    | -      | 220    |
| India    | -     | -     | 60     | -      | -      |
| Japan    | 1,120 | 1,340 | 1,280  | 1,640  | 1,280  |
| Malaysia | -     | 5,000 | -      | 8,000  | -      |
| Myanmar  | -     | -     | -      | -      | -      |
| Taiwan   | 315   | 430   | 430    | 210    | 420    |

|                             |              |              |               |               |               |
|-----------------------------|--------------|--------------|---------------|---------------|---------------|
| <b>Total Export</b>         | <b>1,435</b> | <b>6,880</b> | <b>62,620</b> | <b>97,290</b> | <b>72,360</b> |
| <b>Value (Million Baht)</b> | <b>6.1</b>   | <b>11.1</b>  | <b>45.1</b>   | <b>63.6</b>   | <b>48.6</b>   |

### 2. Unground

#### Africa

|                      |        |        |        |   |   |
|----------------------|--------|--------|--------|---|---|
| Reunion (La Reunion) | 22,000 | 11,000 | 22,000 | - | - |
| Mozambique           | -      | 5,000  | -      | - | - |

#### Australia / Oceania

|             |       |       |       |       |        |
|-------------|-------|-------|-------|-------|--------|
| Australia   | 9,900 | -     | 8,800 | 8,800 | 8,800  |
| Fiji        | -     | -     | -     | -     | 5,500  |
| New Zealand | -     | 5,500 | 7,000 | 6,600 | 13,200 |

#### Europe

|        |   |        |   |   |   |
|--------|---|--------|---|---|---|
| Turkey | - | 19,000 | - | - | - |
|--------|---|--------|---|---|---|

Tonnes

|                                  | 2016             | 2017             | 2018             | 2019             | 2020             |
|----------------------------------|------------------|------------------|------------------|------------------|------------------|
| <b>2. Unground (cont.)</b>       |                  |                  |                  |                  |                  |
| <b>Asia</b>                      |                  |                  |                  |                  |                  |
| Bangladesh                       | 175,800          | 55,450           | 34,650           | 93,950           | 8,250            |
| Brunei                           | -                | 17,600           | 17,600           | -                | 8,800            |
| Cambodia                         | 158,300          | 183,100          | 264,600          | 233,000          | 177,000          |
| China                            | 185,010          | 396,960          | 417,490          | 349,950          | 450,600          |
| Indonesia                        | 1,695,900        | 1,377,910        | 1,487,025        | 1,196,838        | 1,124,925        |
| Japan                            | 777,010          | 842,920          | 885,310          | 1,069,520        | 969,390          |
| Korea,South                      | 110,000          | 54,000           | 15,000           | 45,500           | 30,000           |
| Malaysia                         | 1,159,470        | 1,010,740        | 959,410          | 1,027,330        | 965,030          |
| Myanmar                          | -                | 11,000           | -                | 120              | -                |
| Philippines                      | 410,600          | 411,450          | 436,450          | 271,380          | 86,564           |
| Singapore                        | -                | 11,000           | 11,000           | -                | -                |
| Sri Lanka                        | 156,750          | 91,250           | 89,100           | 85,800           | -                |
| Taiwan                           | -                | 27,500           | 83,600           | 86,050           | 96,600           |
| Vietnam                          | 1,599,290        | 1,200,570        | 894,810          | 719,550          | 563,858          |
| <b>Total Export</b>              | <b>6,460,030</b> | <b>5,731,950</b> | <b>5,633,845</b> | <b>5,194,388</b> | <b>4,508,517</b> |
| <b>Value(Million Baht)</b>       | <b>4,329.6</b>   | <b>3,663.7</b>   | <b>3,622.9</b>   | <b>3,141.1</b>   | <b>2,878.6</b>   |
| <b><u>Consumption</u></b>        |                  |                  |                  |                  |                  |
| <b>Total Consumption</b>         | <b>4,077,140</b> | <b>3,798,078</b> | <b>4,207,417</b> | <b>4,051,629</b> | <b>3,537,593</b> |
| <b>Value (Million Baht)</b>      | <b>2,707.2</b>   | <b>2,449.5</b>   | <b>2,506.2</b>   | <b>2,370.7</b>   | <b>2,066.0</b>   |
| <b><u>Import</u><sup>1</sup></b> |                  |                  |                  |                  |                  |
| <b>Total Import</b>              | <b>227</b>       | <b>214</b>       | <b>267</b>       | <b>340</b>       | <b>288</b>       |
| <b>Value (Million Baht)</b>      | <b>3.8</b>       | <b>4.4</b>       | <b>5.4</b>       | <b>6.6</b>       | <b>5.9</b>       |

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

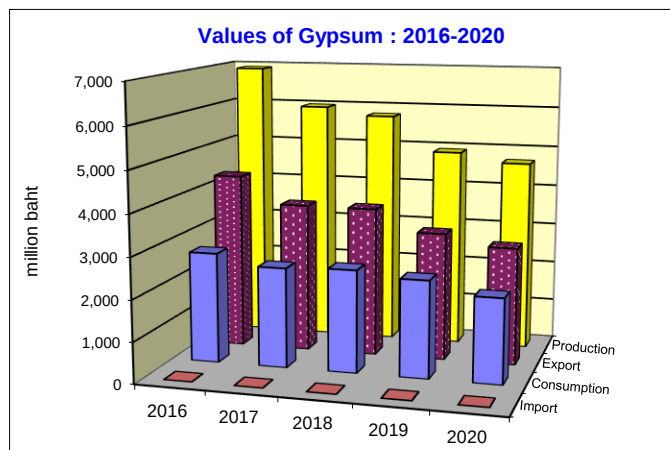
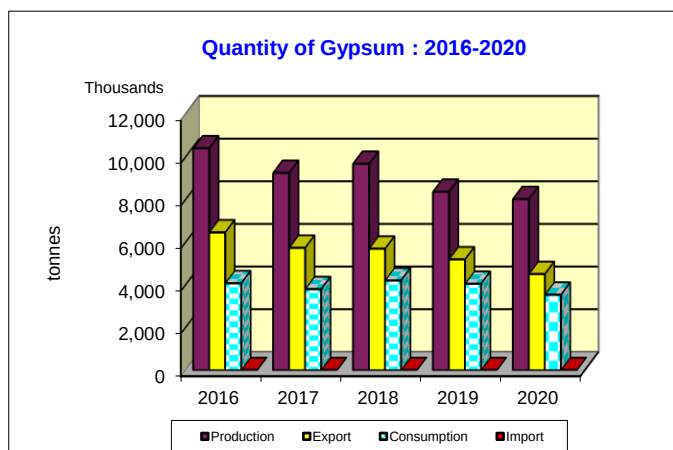


Tonnes

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| 2016 | 2017 | 2018 | 2019 | 2020 |
|------|------|------|------|------|
|------|------|------|------|------|

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# ILMENITE

Tonnes

|                                  | 2016         | 2017        | 2018         | 2019         | 2020       |
|----------------------------------|--------------|-------------|--------------|--------------|------------|
| <b><u>Production</u></b>         |              |             |              |              |            |
| <b>Southern Region</b>           |              |             |              |              |            |
| Nakhon Si Thammarat              | -            | 8           | 41           | 117          | 153        |
| <b>Total Production</b>          | -            | <b>8</b>    | <b>41</b>    | <b>117</b>   | <b>153</b> |
| <b>Value (Million Baht)</b>      | -            | <b>0.1</b>  | <b>0.4</b>   | <b>1.1</b>   | <b>1.5</b> |
| <b><u>Export</u></b>             |              |             |              |              |            |
| <b>Asia</b>                      |              |             |              |              |            |
| Bangladesh                       | 100          | -           | -            | -            | -          |
| Korea,South                      | 22           | -           | -            | 20           | 24         |
| Philippines                      | 154          | -           | 8            | -            | -          |
| <b>Total Export</b>              | <b>276</b>   | -           | <b>8</b>     | <b>20</b>    | <b>24</b>  |
| <b>Value (Million Baht)</b>      | <b>2.4</b>   | -           | <b>0.1</b>   | <b>1.4</b>   | <b>0.1</b> |
| <b><u>Import</u><sup>1</sup></b> |              |             |              |              |            |
| <b>Total Import</b>              | <b>1,040</b> | <b>960</b>  | <b>1,020</b> | <b>1,400</b> | <b>421</b> |
| <b>Value (Million Baht)</b>      | <b>15.0</b>  | <b>13.5</b> | <b>14.3</b>  | <b>17.7</b>  | <b>5.0</b> |

0.0\* denoting the amount of less than 0.05 million baht

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

# IRON

Tonnes

|                                  | 2016          | 2017         | 2018          | 2019           | 2020           |
|----------------------------------|---------------|--------------|---------------|----------------|----------------|
| <b><u>Production</u></b>         |               |              |               |                |                |
| <b>Northern Region</b>           |               |              |               |                |                |
| Nakhon Sawan                     | -             | -            | -             | -              | 27,478         |
| <b>Northeastern Region</b>       |               |              |               |                |                |
| Loei                             | -             | 135          | -             | 17,660         | 85,761         |
| <b>Total Production</b>          | <b>-</b>      | <b>135</b>   | <b>-</b>      | <b>17,660</b>  | <b>113,239</b> |
| <b>Value (Million Baht)</b>      | <b>-</b>      | <b>0.2</b>   | <b>-</b>      | <b>33.5</b>    | <b>239.4</b>   |
| <b><u>Export</u></b>             |               |              |               |                |                |
| <b>Asia</b>                      |               |              |               |                |                |
| China                            | 57,668        | 9,178        | 37,582        | 216,643        | 204,639        |
| <b>Total Export</b>              | <b>57,668</b> | <b>9,178</b> | <b>37,582</b> | <b>216,643</b> | <b>204,639</b> |
| <b>Value (Million Baht)</b>      | <b>61.3</b>   | <b>18.6</b>  | <b>73.4</b>   | <b>413.5</b>   | <b>418.9</b>   |
| <b><u>Import</u><sup>1</sup></b> |               |              |               |                |                |
| <b>1.Iron Ore</b>                | <b>2,768</b>  | <b>4,441</b> | <b>5,471</b>  | <b>712</b>     | <b>675</b>     |
| <b>Value (Million Baht)</b>      | <b>13.0</b>   | <b>23.3</b>  | <b>20.9</b>   | <b>7.6</b>     | <b>6.1</b>     |
| <b>2.Iron Pyrite</b>             | <b>321</b>    | <b>265</b>   | <b>442</b>    | <b>1,647</b>   | <b>835</b>     |
| <b>Value (Million Baht)</b>      | <b>5.0</b>    | <b>4.1</b>   | <b>7.4</b>    | <b>11.8</b>    | <b>7.0</b>     |
| <b><u>Consumption</u></b>        |               |              |               |                |                |
| <b>Total Consumption</b>         | <b>-</b>      | <b>-</b>     | <b>-</b>      | <b>192,441</b> | <b>61,151</b>  |
| <b>Value (Million Baht)</b>      | <b>-</b>      | <b>-</b>     | <b>-</b>      | <b>435</b>     | <b>138.2</b>   |

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

# KAOLIN

Tonnes

|  | 2016 | 2017 | 2018 | 2019 | 2020 |
|--|------|------|------|------|------|
|--|------|------|------|------|------|

## Production

### 1. Kaolin (Filler)

#### Northern Region

|           |   |   |        |        |        |
|-----------|---|---|--------|--------|--------|
| Uttaradit | - | - | 13,771 | 11,638 | 16,269 |
|-----------|---|---|--------|--------|--------|

|                         |          |          |               |               |               |
|-------------------------|----------|----------|---------------|---------------|---------------|
| <b>Total Production</b> | <b>-</b> | <b>-</b> | <b>13,771</b> | <b>11,638</b> | <b>16,269</b> |
|-------------------------|----------|----------|---------------|---------------|---------------|

|                             |          |          |             |             |             |
|-----------------------------|----------|----------|-------------|-------------|-------------|
| <b>Value (Million Baht)</b> | <b>-</b> | <b>-</b> | <b>26.2</b> | <b>22.1</b> | <b>30.9</b> |
|-----------------------------|----------|----------|-------------|-------------|-------------|

### 2. Kaolin (Washed)

#### Northern Region

|         |     |   |   |   |   |
|---------|-----|---|---|---|---|
| Lampang | 175 | - | - | - | - |
|---------|-----|---|---|---|---|

#### Central Region

|             |       |       |       |       |     |
|-------------|-------|-------|-------|-------|-----|
| Chanthaburi | 1,665 | 1,900 | 1,255 | 1,270 | 725 |
|-------------|-------|-------|-------|-------|-----|

#### Southern Region

|            |       |       |       |       |       |
|------------|-------|-------|-------|-------|-------|
| Narathiwat | 5,673 | 5,265 | 5,080 | 6,148 | 6,865 |
|------------|-------|-------|-------|-------|-------|

|        |        |        |        |        |        |
|--------|--------|--------|--------|--------|--------|
| Ranong | 94,105 | 95,914 | 90,331 | 73,358 | 63,391 |
|--------|--------|--------|--------|--------|--------|

|                         |                |                |               |               |               |
|-------------------------|----------------|----------------|---------------|---------------|---------------|
| <b>Total Production</b> | <b>101,618</b> | <b>103,079</b> | <b>96,666</b> | <b>80,776</b> | <b>70,981</b> |
|-------------------------|----------------|----------------|---------------|---------------|---------------|

|                             |             |             |             |             |             |
|-----------------------------|-------------|-------------|-------------|-------------|-------------|
| <b>Value (Million Baht)</b> | <b>97.6</b> | <b>99.0</b> | <b>92.8</b> | <b>77.5</b> | <b>68.1</b> |
|-----------------------------|-------------|-------------|-------------|-------------|-------------|

### 3. Kaolin (Unwashed)

#### Northern Region

|         |         |         |         |         |         |
|---------|---------|---------|---------|---------|---------|
| Lampang | 397,159 | 216,370 | 206,704 | 266,840 | 332,066 |
|---------|---------|---------|---------|---------|---------|

|           |        |        |        |        |        |
|-----------|--------|--------|--------|--------|--------|
| Uttaradit | 32,940 | 34,650 | 25,600 | 20,400 | 29,500 |
|-----------|--------|--------|--------|--------|--------|

#### Central Region

|             |        |        |    |   |   |
|-------------|--------|--------|----|---|---|
| Chanthaburi | 13,444 | 11,510 | 90 | - | - |
|-------------|--------|--------|----|---|---|

|              |         |         |         |         |         |
|--------------|---------|---------|---------|---------|---------|
| Kanchanaburi | 366,257 | 101,400 | 165,850 | 249,314 | 151,784 |
|--------------|---------|---------|---------|---------|---------|

|              |        |        |       |        |        |
|--------------|--------|--------|-------|--------|--------|
| Prachin Buri | 20,593 | 28,170 | 4,981 | 15,120 | 65,500 |
|--------------|--------|--------|-------|--------|--------|

#### Southern Region

|             |   |   |   |   |        |
|-------------|---|---|---|---|--------|
| Surat Thani | - | - | - | - | 16,000 |
|-------------|---|---|---|---|--------|

|                         |                |                |                |                |                |
|-------------------------|----------------|----------------|----------------|----------------|----------------|
| <b>Total Production</b> | <b>830,393</b> | <b>392,100</b> | <b>403,225</b> | <b>551,674</b> | <b>594,850</b> |
|-------------------------|----------------|----------------|----------------|----------------|----------------|

|                             |              |              |              |              |              |
|-----------------------------|--------------|--------------|--------------|--------------|--------------|
| <b>Value (Million Baht)</b> | <b>319.7</b> | <b>151.0</b> | <b>155.2</b> | <b>212.4</b> | <b>229.0</b> |
|-----------------------------|--------------|--------------|--------------|--------------|--------------|

|                             | Tonnes        |               |               |               |               |
|-----------------------------|---------------|---------------|---------------|---------------|---------------|
|                             | 2016          | 2017          | 2018          | 2019          | 2020          |
| <b><u>Export</u></b>        |               |               |               |               |               |
| <b>1. Washed</b>            |               |               |               |               |               |
| <b>Asia</b>                 |               |               |               |               |               |
| Bangladesh                  | 2,492         | 4,316         | 3,844         | 6,656         | 7,547         |
| China                       | 2,472         | 3,769         | 3,762         | 2,855         | 4,416         |
| India                       | 620           | 1,366         | 1,149         | 24            | 50            |
| Indonesia                   | 48            | 48            | 314           | 361           | 439           |
| Iran                        | -             | 282           | -             | -             | -             |
| Japan                       | -             | 42            | 59            | 40            | -             |
| Korea,South                 | 20            | 20            | 30            | -             | -             |
| Malaysia                    | 2,985         | 2,145         | 2,249         | 2,520         | 1,640         |
| Pakistan                    | -             | -             | -             | -             | -             |
| Philippines                 | 676           | 336           | 600           | 624           | 960           |
| Singapore                   | 26            | -             | -             | -             | -             |
| Taiwan                      | -             | -             | -             | -             | -             |
| Vietnam                     | 4,440         | 5,016         | 3,843         | 4,431         | 3,627         |
| <b>Europe</b>               |               |               |               |               |               |
| Belgium                     | -             | -             | -             | -             | 408           |
| Italy                       | -             | -             | -             | 2             | -             |
| Turkey                      | 6             | -             | -             | -             | -             |
| <b>Total Export</b>         | <b>13,785</b> | <b>17,340</b> | <b>15,850</b> | <b>17,513</b> | <b>19,087</b> |
| <b>Value (Million Baht)</b> | <b>82.1</b>   | <b>100.8</b>  | <b>93.2</b>   | <b>95.6</b>   | <b>119.0</b>  |
| <b>2. Kaolin (Filler)</b>   |               |               |               |               |               |
| <b>Asia</b>                 |               |               |               |               |               |
| China                       | -             | -             | 20            | -             | 20            |
| Korea,South                 | -             | -             | 24            | 120           | 39            |
| Singapore                   | 48            | 106           | 98            | 80            | 60            |
| Taiwan                      | -             | -             | -             | 6             | -             |
| Vietnam                     | -             | -             | 100           | 378           | 310           |
| <b>Europe</b>               |               |               |               |               |               |
| Turkey                      | 18            | 30            | 42            | 18            | 18            |
| <b>Total Export</b>         | <b>66</b>     | <b>136</b>    | <b>284</b>    | <b>602</b>    | <b>447</b>    |
| <b>Value (Million Baht)</b> | <b>0.5</b>    | <b>1.2</b>    | <b>2.7</b>    | <b>3.7</b>    | <b>3.1</b>    |

Tonnes

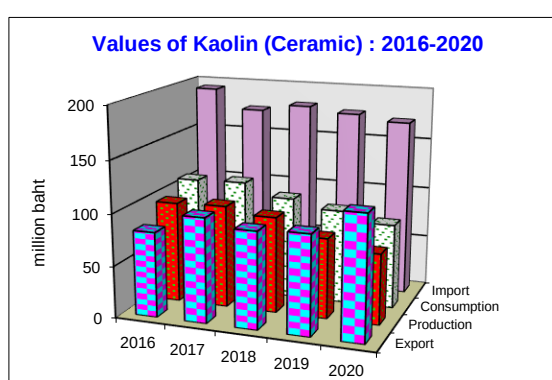
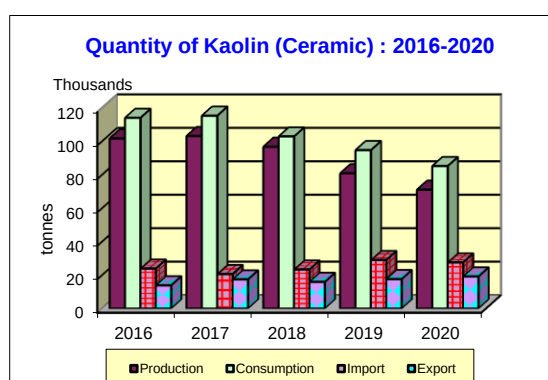
|  | 2016 | 2017 | 2018 | 2019 | 2020 |
|--|------|------|------|------|------|
|--|------|------|------|------|------|

**Consumption**

|                             |                |                |                |                |                |
|-----------------------------|----------------|----------------|----------------|----------------|----------------|
| <b>1. Washed</b>            | <b>113,947</b> | <b>115,224</b> | <b>102,802</b> | <b>94,636</b>  | <b>85,121</b>  |
| <b>Value (Million Baht)</b> | <b>109.4</b>   | <b>110.6</b>   | <b>98.7</b>    | <b>90.9</b>    | <b>81.7</b>    |
| <b>2. Unwashed</b>          | <b>849,767</b> | <b>326,956</b> | <b>334,578</b> | <b>523,191</b> | <b>533,568</b> |
| <b>Value (Million Baht)</b> | <b>327.2</b>   | <b>125.9</b>   | <b>128.8</b>   | <b>201.4</b>   | <b>205.4</b>   |
| <b>3. Filler</b>            | <b>-</b>       | <b>-</b>       | <b>13,818</b>  | <b>11,558</b>  | <b>16,082</b>  |
| <b>Value (Million Baht)</b> | <b>-</b>       | <b>-</b>       | <b>26.3</b>    | <b>22</b>      | <b>30.6</b>    |

**Import<sup>1</sup>**

|                             |               |               |               |               |               |
|-----------------------------|---------------|---------------|---------------|---------------|---------------|
| <b>1. Ceramic</b>           | <b>23,810</b> | <b>20,539</b> | <b>23,250</b> | <b>28,916</b> | <b>27,496</b> |
| <b>Value (Million Baht)</b> | <b>193.3</b>  | <b>174.4</b>  | <b>181.0</b>  | <b>176.0</b>  | <b>170.5</b>  |
| <b>2. Paper</b>             | <b>4,371</b>  | <b>4,781</b>  | <b>4,875</b>  | <b>5,818</b>  | <b>9,597</b>  |
| <b>Value (Million Baht)</b> | <b>49.8</b>   | <b>51.8</b>   | <b>49.6</b>   | <b>58.2</b>   | <b>89.7</b>   |
| <b>3. Others</b>            | <b>73,499</b> | <b>68,343</b> | <b>92,688</b> | <b>79,004</b> | <b>52,514</b> |
| <b>Value (Million Baht)</b> | <b>729.1</b>  | <b>658.5</b>  | <b>777.4</b>  | <b>669.9</b>  | <b>520.6</b>  |



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

# LEAD

|                                             | Tonnes     |            |            |             |             |
|---------------------------------------------|------------|------------|------------|-------------|-------------|
|                                             | 2016       | 2017       | 2018       | 2019        | 2020        |
| <b><u>Import (Lead Ore)</u><sup>1</sup></b> |            |            |            |             |             |
| <b>Total Import</b>                         | <b>42</b>  | <b>85</b>  | <b>104</b> | <b>98</b>   | <b>96</b>   |
| <b>Value (Million Baht)</b>                 | <b>0.7</b> | <b>1.3</b> | <b>5.9</b> | <b>11.0</b> | <b>42.7</b> |

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

|                                  | 2016         | 2017         | 2018         | 2019         | 2020         |
|----------------------------------|--------------|--------------|--------------|--------------|--------------|
| <b><u>Export</u></b>             |              |              |              |              |              |
| <b>Africa</b>                    |              |              |              |              |              |
| Tunisia                          | 125          | -            | -            | -            | -            |
| <b>Asia</b>                      |              |              |              |              |              |
| China                            | -            | 250          | -            | -            | 2,000        |
| India                            | 1,600        | 1,450        | -            | 9            | -            |
| Indonesia                        | -            | -            | -            | -            | -            |
| Iran                             | -            | -            | -            | -            | 224          |
| Japan                            | -            | -            | -            | 21           | -            |
| Hong Kong                        | -            | -            | 869          | -            | -            |
| Korea, South                     | 450          | 160          | -            | 80           | -            |
| Malaysia                         | 425          | 595          | 40           | 50           | 50           |
| Philippines                      | 1,320        | 934          | 369          | 383          | 572          |
| Singapore                        | -            | 80           | -            | -            | 60           |
| U.A.E.                           | -            | -            | -            | 200          | -            |
| Vietnam                          | 201          | -            | -            | -            | -            |
| <b>Europe</b>                    |              |              |              |              |              |
| Russia                           | 300          | -            | -            | 275          | -            |
| Turkey                           | 1,342        | 350          | -            | -            | -            |
| Ukraine                          | 150          | 175          | -            | 175          | -            |
| <b>North America</b>             |              |              |              |              |              |
| Brazil                           | 72           | -            | -            | -            | -            |
| <b>Total Export</b>              | <b>5,985</b> | <b>3,994</b> | <b>1,278</b> | <b>1,193</b> | <b>2,906</b> |
| <b>Value (Million Baht)</b>      | <b>148.8</b> | <b>127.6</b> | <b>45.8</b>  | <b>40.4</b>  | <b>70.6</b>  |
| <b><u>Import</u><sup>1</sup></b> |              |              |              |              |              |
| <b>Total Import</b>              | <b>2,960</b> | <b>4,382</b> | <b>5,080</b> | <b>5,760</b> | <b>401</b>   |
| <b>Value (Million Baht)</b>      | <b>96.9</b>  | <b>145.1</b> | <b>184.4</b> | <b>225.4</b> | <b>16</b>    |

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



# L I G N I T E

Tonnes

|                                  | 2016              | 2017              | 2018              | 2019              | 2020              |
|----------------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| <b><u>Production</u></b>         |                   |                   |                   |                   |                   |
| <b>Northern Region</b>           |                   |                   |                   |                   |                   |
| Lampang                          | 16,978,601        | 16,258,637        | 14,851,950        | 14,071,710        | 13,250,574        |
| <b>Total Production</b>          | <b>16,978,601</b> | <b>16,258,637</b> | <b>14,851,950</b> | <b>14,071,710</b> | <b>13,250,574</b> |
| <b>Value (Million Baht)</b>      | <b>16,299.5</b>   | <b>15,608.3</b>   | <b>14,257.9</b>   | <b>13,508.8</b>   | <b>12,720.6</b>   |
| <b><u>Consumption</u></b>        |                   |                   |                   |                   |                   |
| <b>Total Consumption</b>         | <b>16,869,269</b> | <b>16,240,637</b> | <b>14,417,889</b> | <b>13,973,815</b> | <b>13,404,786</b> |
| <b>Value (Million Baht)</b>      | <b>16,194.5</b>   | <b>15,591.0</b>   | <b>13,841.2</b>   | <b>13,414.9</b>   | <b>12,868.6</b>   |
| <b><u>Import</u><sup>1</sup></b> |                   |                   |                   |                   |                   |
| <b>Total Import</b>              | <b>91,721</b>     | <b>198,926</b>    | <b>245,458</b>    | <b>382,846</b>    | <b>147,806</b>    |
| <b>Value (Million Baht)</b>      | <b>120.1</b>      | <b>209.4</b>      | <b>231.2</b>      | <b>347.2</b>      | <b>132.3</b>      |

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

# L I M E S T O N E

Tonnes

|                             | 2016              | 2017              | 2018              | 2019              | 2020              |
|-----------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| <b><u>Production</u></b>    |                   |                   |                   |                   |                   |
| <b>1. Cement Industry</b>   |                   |                   |                   |                   |                   |
| <b>Northern Region</b>      |                   |                   |                   |                   |                   |
| Lampang                     | 2,560,891         | 3,832,460         | 1,320,000         | 3,628,470         | 3,237,320         |
| Nakhon Sawan                | 680,879           | 617,680           | 233,661           | -                 | -                 |
| <b>Northeastern Region</b>  |                   |                   |                   |                   |                   |
| Nakhon Ratchasima           | 69,051            | -                 | -                 | -                 | -                 |
| <b>Central Region</b>       |                   |                   |                   |                   |                   |
| Phetchaburi                 | 746,733           | 456,615           | 496,984           | 508,340           | 375,783           |
| Sara Buri                   | 59,859,201        | 57,836,801        | 55,825,324        | 54,144,189        | 53,845,831        |
| <b>Southern Region</b>      |                   |                   |                   |                   |                   |
| Nakhon Si Thammarat         | 6,505,696         | 5,280,291         | 6,288,717         | 6,992,762         | 7,739,671         |
| Trang                       | -                 | -                 | 137,816           | -                 | -                 |
| <b>Total Production</b>     | <b>70,422,450</b> | <b>68,023,847</b> | <b>64,302,502</b> | <b>65,273,761</b> | <b>65,198,605</b> |
| <b>Value (Million Baht)</b> | <b>17,605.6</b>   | <b>17,006.0</b>   | <b>16,075.6</b>   | <b>16,318.4</b>   | <b>16,299.6</b>   |
| <b>2. Other Industries</b>  |                   |                   |                   |                   |                   |
| <b>Northern Region</b>      |                   |                   |                   |                   |                   |
| Lampang                     | 1,370,122         | 1,362,092         | 1,127,326         | 1,049,308         | 886,749           |
| <b>Northeastern Region</b>  |                   |                   |                   |                   |                   |
| Nakhon Ratchasima           | -                 | -                 | 158,892           | -                 | -                 |
| <b>Central Region</b>       |                   |                   |                   |                   |                   |
| Lop Buri                    | -                 | -                 | -                 | 36,400            | -                 |
| Sara Buri                   | 5,095,627         | 6,147,107         | 7,975,114         | 7,823,372         | 6,335,438         |
| <b>Total Production</b>     | <b>6,465,749</b>  | <b>7,509,199</b>  | <b>9,261,332</b>  | <b>8,909,080</b>  | <b>7,222,187</b>  |
| <b>Value (Million Baht)</b> | <b>1,616.4</b>    | <b>1,877.3</b>    | <b>2,315.3</b>    | <b>2,227.3</b>    | <b>1,805.5</b>    |
| <b>3. Dimension Stone</b>   |                   |                   |                   |                   |                   |
| <b>Central Region</b>       |                   |                   |                   |                   |                   |
| Ratchaburi                  | -                 | -                 | -                 | 2,076             | -                 |
| Sara Buri                   | -                 | 43                | 3,765             | 2,011             | -                 |
| <b>Total Production</b>     | <b>-</b>          | <b>43</b>         | <b>3,765</b>      | <b>4,087</b>      | <b>-</b>          |
| <b>Value (Million Baht)</b> | <b>-</b>          | <b>0.1</b>        | <b>7.5</b>        | <b>8.2</b>        | <b>-</b>          |

0.0\* denoting the amount of less than 0.05 million baht

|                            |            |            |            |            | Tonnes     |
|----------------------------|------------|------------|------------|------------|------------|
|                            | 2016       | 2017       | 2018       | 2019       | 2020       |
| <b>4. Construction</b>     |            |            |            |            |            |
| <b>Northern Region</b>     |            |            |            |            |            |
| Chiang Mai                 | 2,811,000  | 2,052,226  | 2,963,568  | 1,397,111  | 2,226,635  |
| Chiang Rai                 | 1,860,356  | 1,800,681  | 2,936,629  | 1,445,839  | 1,277,368  |
| Kamphaeng Phet             | 311,196    | 250,344    | 263,400    | 242,136    | 262,782    |
| Lampang                    | 1,820,615  | 1,994,115  | 2,875,072  | 3,376,264  | 1,299,582  |
| Lamphun                    | 1,220,152  | 1,083,664  | 1,179,038  | 1,257,516  | 1,095,316  |
| Nakhon Sawan               | 2,738,069  | 2,736,363  | 2,711,728  | 2,874,657  | 3,561,180  |
| Nan                        | 469,065    | 461,142    | 720,685    | 554,167    | 1,189,116  |
| Phayao                     | 631,456    | 18,592     | 344,072    | 1,465,379  | 314,808    |
| Phetchabun                 | 2,414,606  | 2,066,838  | 2,481,138  | 2,630,089  | 2,538,407  |
| Phitsanulok                | 313,475    | 359,299    | 162,414    | -          | -          |
| Phrae                      | 578,550    | 704,054    | 1,199,335  | 1,014,231  | 532,709    |
| Sukhothai                  | 2,142,379  | 2,334,670  | 2,527,894  | 1,848,062  | 2,114,075  |
| Tak                        | 1,055,459  | 1,361,693  | 1,086,942  | 863,620    | 1,118,683  |
| Uthai Thani                | 198,516    | 329,207    | 261,023    | 264,375    | 476,287    |
| <b>Northeastern Region</b> |            |            |            |            |            |
| Khon Kaen                  | 2,418,741  | 2,735,140  | 3,269,698  | 3,884,946  | 3,093,644  |
| Loei                       | 5,042,611  | 7,245,121  | 7,986,729  | 5,464,295  | 7,982,245  |
| Nakhon Ratchasima          | 2,403,586  | 1,879,779  | 1,732,757  | 2,047,867  | 1,894,755  |
| Nong Bua Lamphu            | 1,166,225  | 1,774,304  | 2,417,411  | 1,405,976  | 2,323,963  |
| Udon Thani                 | 340,296    | 206,608    | -          | 215,536    | 366,784    |
| <b>Central Region</b>      |            |            |            |            |            |
| Cha Choeng Sao             | -          | 31,726     | 389,073    | 871,138    | 477,426    |
| Chai Nat                   | 113,161    | 111,565    | 139,976    | 124,800    | 133,761    |
| Chanthaburi                | 367,400    | 407,000    | 888,283    | 160,616    | 626,864    |
| Chon Buri                  | 12,875,789 | 9,162,843  | 9,640,328  | 9,530,067  | 10,172,906 |
| Kanchanaburi               | 2,211,319  | 1,592,862  | 2,029,787  | 2,266,507  | 1,199,094  |
| Lop Buri                   | 1,963,512  | 3,182,592  | -          | -          | 1,475,000  |
| Phetchaburi                | 1,555,925  | 1,366,121  | 1,532,706  | 1,215,815  | 1,662,256  |
| Prachin Buri               | 676,000    | 1,104,000  | 817,247    | 916,153    | 1,041,028  |
| Prachuap Khiri Khar        | 1,727,811  | 1,390,574  | 1,225,559  | 962,547    | 1,135,028  |
| Ratchaburi                 | 4,322,729  | 4,679,812  | 4,213,329  | 4,605,151  | 4,437,278  |
| Rayong                     | 583,974    | 1,406,190  | 1,681,877  | 2,097,800  | 1,628,182  |
| Sa Kaeo                    | 179,685    | 285,699    | 289,688    | 289,854    | 268,700    |
| Sara Buri                  | 15,980,362 | 15,871,414 | 15,067,756 | 19,215,170 | 17,129,462 |
| Suphan Buri                | 14,487,887 | 15,285,450 | 17,437,112 | 17,709,100 | 16,853,713 |

Tonnes

|                             | 2016               | 2017               | 2018               | 2019               | 2020               |
|-----------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| <b>Southern Region</b>      |                    |                    |                    |                    |                    |
| Chumphon                    | 1,765,925          | 1,741,660          | 1,546,697          | 1,504,413          | 848,279            |
| Krabi                       | 567,470            | 604,944            | 482,886            | 924,599            | 1,001,932          |
| Nakhon Si Thammarat         | 4,269,814          | 4,768,693          | 5,091,528          | 5,909,035          | 6,200,119          |
| Phangnga                    | 623,558            | 674,172            | 919,089            | 729,875            | 1,130,074          |
| Phatthalung                 | 33,120             | 442,980            | 409,419            | 375,406            | 354,212            |
| Satun                       | 902,484            | 983,182            | 783,788            | 104,627            | -                  |
| Songkhla                    | 411,122            | 216,160            | 231,830            | 276,025            | 224,407            |
| Surat Thani                 | 3,303,451          | 3,664,434          | 3,683,045          | 2,038,865          | 2,834,317          |
| Trang                       | 611,700            | 601,450            | 560,655            | 570,467            | 499,658            |
| Yala                        | 986,249            | 1,002,471          | 1,470,848          | 1,207,467          | 1,003,339          |
| <b>Total Production</b>     | <b>100,456,800</b> | <b>101,971,834</b> | <b>107,652,039</b> | <b>105,857,560</b> | <b>106,772,514</b> |
| <b>Value (Million Baht)</b> | <b>18,082.2</b>    | <b>18,354.9</b>    | <b>19,377.4</b>    | <b>19,054.4</b>    | <b>19,219.1</b>    |

**Export****1. Construction****Africa**

|            |        |   |   |   |   |
|------------|--------|---|---|---|---|
| Mozambique | 15,040 | - | - | - | - |
|------------|--------|---|---|---|---|

**Asia**

|            |         |         |         |         |         |
|------------|---------|---------|---------|---------|---------|
| Bangladesh | 238,131 | 392,460 | 150,945 | 377,430 | 246,875 |
| Cambodia   | -       | -       | 37,000  | -       | -       |
| India      | 120,085 | -       | -       | -       | -       |
| Malaysia   | -       | -       | 5,000   | -       | -       |
| Myanmar    | -       | -       | 6       | -       | 12      |
| Taiwan     | 125,147 | 141,060 | 5,000   | -       | -       |

**Australia / Oceania**

|               |         |        |        |        |        |
|---------------|---------|--------|--------|--------|--------|
| Australia     | -       | 1,476  | 31     | 162    | 108    |
| New Caledonia | 112,867 | 11,007 | 40,014 | 46,062 | 20,100 |

**Europe**

|        |   |   |   |     |   |
|--------|---|---|---|-----|---|
| France | - | - | - | 0.2 | - |
|--------|---|---|---|-----|---|

**South America**

|       |   |    |   |   |   |
|-------|---|----|---|---|---|
| Chile | - | 20 | - | - | - |
|-------|---|----|---|---|---|

|                             |                |                |                |                |                |
|-----------------------------|----------------|----------------|----------------|----------------|----------------|
| <b>Total Export</b>         | <b>611,270</b> | <b>546,023</b> | <b>237,996</b> | <b>423,654</b> | <b>267,095</b> |
| <b>Value (Million Baht)</b> | <b>271.0</b>   | <b>219.6</b>   | <b>236.4</b>   | <b>187.1</b>   | <b>118.4</b>   |

Tonnes

|                             | 2016       | 2017          | 2018         | 2019          | 2020         |
|-----------------------------|------------|---------------|--------------|---------------|--------------|
| <b>2. Other Industries</b>  |            |               |              |               |              |
| <b>Asia</b>                 |            |               |              |               |              |
| Cambodia                    | 40         | -             | 52           | 180           | 606          |
| China                       | -          | 2,916         | 1,785        | -             | -            |
| India                       | -          | -             | -            | 36            | -            |
| Japan                       | -          | -             | -            | -             | 1            |
| Laos                        | 241        | -             | 20           | 100           | 2,380        |
| Malaysia                    | -          | 11,843        | 772          | 15,256        | -            |
| Myanmar                     | 106        | 101           | 125          | 308           | 266          |
| Singapore                   | -          | -             | 6            | -             | -            |
| Taiwan                      | -          | 32            | -            | -             | -            |
| <b>Australia / Oceania</b>  |            |               |              |               |              |
| Australia                   | -          | 13            | 316          | 429           | 613          |
| <b>South America</b>        |            |               |              |               |              |
| Chile                       | -          | -             | 425          | 500           | -            |
| Colombia                    | -          | -             | 150          | -             | -            |
| <b>Total Export</b>         | <b>387</b> | <b>14,905</b> | <b>3,651</b> | <b>16,809</b> | <b>3,865</b> |
| <b>Value (Million Baht)</b> | <b>1.6</b> | <b>28.3</b>   | <b>8.7</b>   | <b>30.9</b>   | <b>8.4</b>   |

**Consumption**

|                             |                   |                   |                    |                    |                    |
|-----------------------------|-------------------|-------------------|--------------------|--------------------|--------------------|
| <b>1. Cement Industry</b>   | <b>70,790,395</b> | <b>73,124,917</b> | <b>66,707,813</b>  | <b>64,324,112</b>  | <b>60,942,224</b>  |
| <b>Value (Million Baht)</b> | <b>17,697.6</b>   | <b>18,281.2</b>   | <b>16,677.0</b>    | <b>16,081.0</b>    | <b>15,235.6</b>    |
| <b>2. Construction</b>      | <b>98,770,644</b> | <b>99,130,978</b> | <b>101,374,147</b> | <b>102,670,780</b> | <b>104,245,512</b> |
| <b>Value (Million Baht)</b> | <b>17,778.7</b>   | <b>17,843.6</b>   | <b>18,247.3</b>    | <b>18,480.7</b>    | <b>18,764.2</b>    |
| <b>3. Dimension Stone</b>   | <b>-</b>          | <b>43</b>         | <b>1,549</b>       | <b>4,536</b>       | <b>-</b>           |
| <b>Value (Million Baht)</b> | <b>-</b>          | <b>0.1</b>        | <b>3.1</b>         | <b>9.1</b>         | <b>-</b>           |
| <b>4. Other Industries</b>  | <b>6,970,446</b>  | <b>6,514,668</b>  | <b>8,487,771</b>   | <b>9,042,913</b>   | <b>8,675,260</b>   |
| <b>Value (Million Baht)</b> | <b>1,742.6</b>    | <b>1,628.7</b>    | <b>2,121.9</b>     | <b>2,260.7</b>     | <b>2,168.8</b>     |

Tonnes

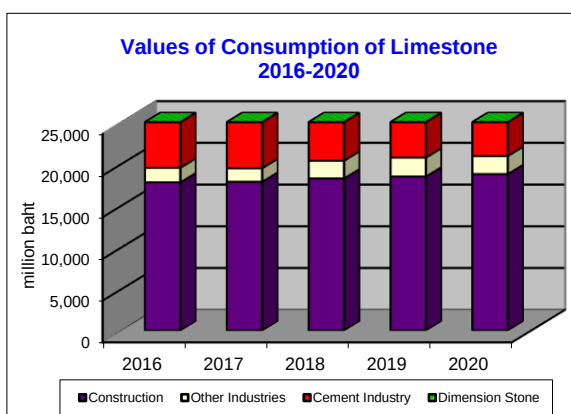
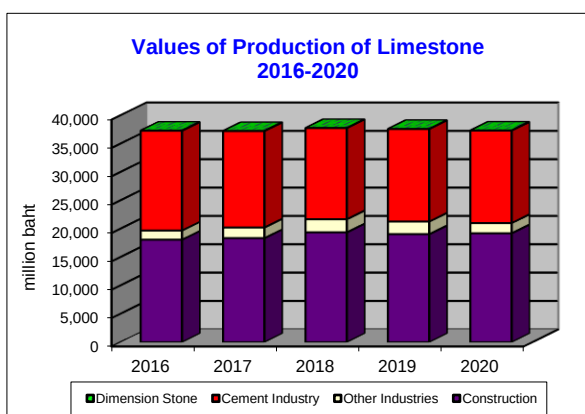
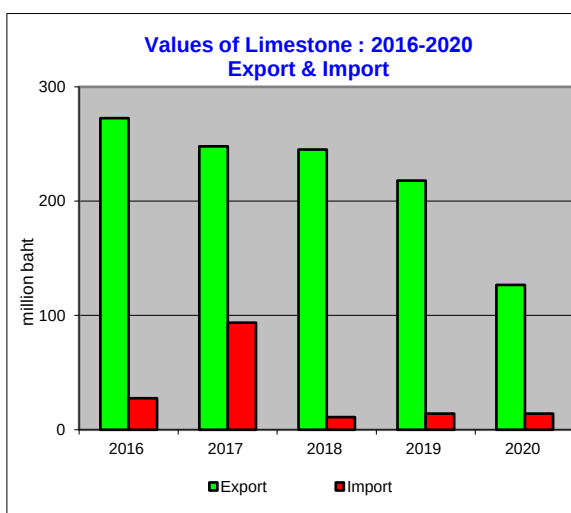
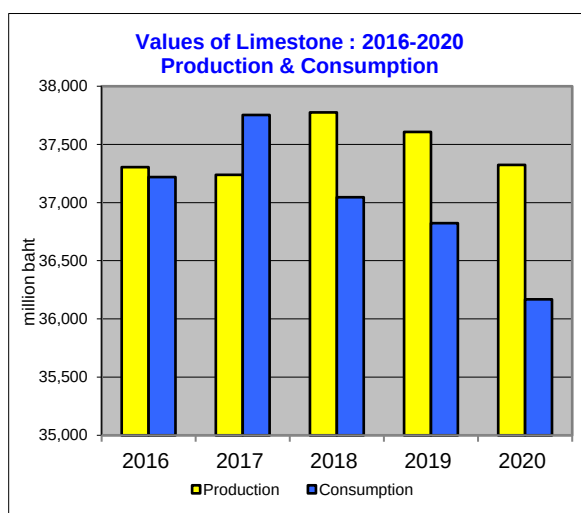
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|  | 2016 | 2017 | 2018 | 2019 | 2020 |
|--|------|------|------|------|------|
|--|------|------|------|------|------|

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**Import<sup>1</sup>**

|                             |               |                |              |              |              |
|-----------------------------|---------------|----------------|--------------|--------------|--------------|
| <b>Total Import</b>         | <b>76,654</b> | <b>374,399</b> | <b>4,054</b> | <b>1,527</b> | <b>1,807</b> |
| <b>Value (Million Baht)</b> | <b>27.5</b>   | <b>93.7</b>    | <b>10.9</b>  | <b>14.2</b>  | <b>20.4</b>  |




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

# M A N G A N E S E

|                                                  | Tonnes        |               |               |                |               |
|--------------------------------------------------|---------------|---------------|---------------|----------------|---------------|
|                                                  | 2016          | 2017          | 2018          | 2019           | 2020          |
| <b><u>Production</u> (Metallurgical grade)</b>   |               |               |               |                |               |
| <b>Northern Region</b>                           |               |               |               |                |               |
| Chiang Mai                                       | 400           | 3,520         | 500           | 4,800          | 1,400         |
| <b>Central Region</b>                            |               |               |               |                |               |
| Sa Kaeo                                          | 8,750         | 4,500         | -             | -              | -             |
| <b>Southern Region</b>                           |               |               |               |                |               |
| Narathiwat                                       | -             | -             | 3,500         | -              | -             |
| <b>Total Production</b>                          | <b>9,150</b>  | <b>8,020</b>  | <b>4,000</b>  | <b>4,800</b>   | <b>1,400</b>  |
| <b>Value (Million Baht)</b>                      | <b>24.1</b>   | <b>37.5</b>   | <b>21.2</b>   | <b>25.5</b>    | <b>7.4</b>    |
| <b><u>Export</u> (Metallurgical grade)</b>       |               |               |               |                |               |
| <b>Asia</b>                                      |               |               |               |                |               |
| Bangladesh                                       | -             | -             | -             | -              | -             |
| China                                            | 31,954        | 39,963        | 73,638        | 144,199        | 95,807        |
| Hong Kong                                        | -             | -             | 0**           | 0**            | -             |
| Indonesia                                        | -             | 0**           | -             | -              | -             |
| Singapore                                        | -             | -             | 0**           | 0**            | -             |
| <b>Africa</b>                                    |               |               |               |                |               |
| Kenya                                            | -             | -             | 0.1           | -              | -             |
| <b>Total Export</b>                              | <b>31,954</b> | <b>39,963</b> | <b>73,638</b> | <b>144,199</b> | <b>95,807</b> |
| <b>Value (Million Baht)</b>                      | <b>79.5</b>   | <b>78.7</b>   | <b>115.0</b>  | <b>397.3</b>   | <b>257.9</b>  |
| <b><u>Consumption</u></b>                        |               |               |               |                |               |
| <b>Total Consumption</b>                         | <b>2,566</b>  | <b>30</b>     | <b>2,310</b>  | <b>2,016.0</b> | <b>884.0</b>  |
| <b>Value (Million Baht)</b>                      | <b>10.6</b>   | <b>0.2</b>    | <b>12.3</b>   | <b>10.7</b>    | <b>4.7</b>    |
| <b><u>Import</u> (Manganese Ore)<sup>1</sup></b> |               |               |               |                |               |
| <b>Total Import</b>                              | <b>21,027</b> | <b>36,428</b> | <b>71,362</b> | <b>135,616</b> | <b>73,199</b> |
| <b>Value (Million Baht)</b>                      | <b>37.5</b>   | <b>60.5</b>   | <b>108.0</b>  | <b>203.8</b>   | <b>117.8</b>  |

0\*\* denoting the amount of less than 0.1 tonnes

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

# M A R B L E

Cubic metre

|  | 2016 | 2017 | 2018 | 2019 | 2020 |
|--|------|------|------|------|------|
|--|------|------|------|------|------|

## **Production**

### **1. Dimension Stone**

#### **Northern Region**

|                |       |       |     |   |     |
|----------------|-------|-------|-----|---|-----|
| Kamphaeng Phet | 1,675 | 1,164 | -   | - | 649 |
| Lamphun        | -     | -     | -   | - | 190 |
| Sukhothai      | -     | 200   | 331 | - | -   |

#### **Northeastern Region**

|                   |     |     |       |       |   |
|-------------------|-----|-----|-------|-------|---|
| Nakhon Ratchasima | 550 | 600 | 1,063 | 1,313 | - |
|-------------------|-----|-----|-------|-------|---|

#### **Central Region**

|           |       |        |       |        |       |
|-----------|-------|--------|-------|--------|-------|
| Sara Buri | 9,879 | 14,692 | 6,286 | 10,913 | 5,304 |
|-----------|-------|--------|-------|--------|-------|

|                             |               |               |              |               |              |
|-----------------------------|---------------|---------------|--------------|---------------|--------------|
| <b>Total Production</b>     | <b>12,104</b> | <b>16,656</b> | <b>7,680</b> | <b>12,226</b> | <b>6,143</b> |
| <b>Value (Million Baht)</b> | <b>49.6</b>   | <b>68.3</b>   | <b>34.6</b>  | <b>55.3</b>   | <b>29.2</b>  |

### **2. Fragment**

#### **Northern Region**

|                |         |         |         |         |         |
|----------------|---------|---------|---------|---------|---------|
| Kamphaeng Phet | 334,882 | 243,578 | 278,735 | 245,784 | 174,260 |
| Lamphun        | -       | -       | -       | -       | 2,280   |
| Uttaradit      | 668,590 | 519,184 | 916,706 | 66,685  | -       |

|                             |                  |                |                  |                |                |
|-----------------------------|------------------|----------------|------------------|----------------|----------------|
| <b>Total Production</b>     | <b>1,003,472</b> | <b>762,762</b> | <b>1,195,441</b> | <b>312,469</b> | <b>176,540</b> |
| <b>Value (Million Baht)</b> | <b>469.6</b>     | <b>396.6</b>   | <b>621.6</b>     | <b>162.5</b>   | <b>91.8</b>    |



Cubic metre

|                                  | 2016                | 2017            | 2018              | 2019              | 2020            |
|----------------------------------|---------------------|-----------------|-------------------|-------------------|-----------------|
| <b><u>Consumption</u></b>        |                     |                 |                   |                   |                 |
| <b>1. Dimension Stone*</b>       | <b>11,400*</b>      | <b>12,381*</b>  | <b>7,131*</b>     | <b>20,344*</b>    | <b>20,773*</b>  |
| <b>Value (Million Baht)</b>      | <b>46.7</b>         | <b>50.8</b>     | <b>32.1</b>       | <b>91.5</b>       | <b>98.7</b>     |
| <b>2. Fragment*</b>              | <b>1,003,471.3*</b> | <b>769,531*</b> | <b>1,283,400*</b> | <b>2,561,204*</b> | <b>341,324*</b> |
| <b>Value (Million Baht)</b>      | <b>469.6</b>        | <b>400.2</b>    | <b>667.4</b>      | <b>1,331.8</b>    | <b>177.5</b>    |
| <b><u>Import</u><sup>1</sup></b> |                     |                 |                   |                   |                 |
| <b>Total Import</b>              | <b>60,462</b>       | <b>59,121</b>   | <b>54,231</b>     | <b>45,128</b>     | <b>22,066</b>   |
| <b>Value (Million Baht)</b>      | <b>588.8</b>        | <b>720.1</b>    | <b>669.2</b>      | <b>598.7</b>      | <b>319.7</b>    |

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

\* Cubic Meter

# M A R L

Tonnes

|                             | 2016         | 2017          | 2018          | 2019          | 2020          |
|-----------------------------|--------------|---------------|---------------|---------------|---------------|
| <b><u>Production</u></b>    |              |               |               |               |               |
| <b>Northern Region</b>      |              |               |               |               |               |
| Phrae                       | -            | 2,000         | -             | 8,000         | 5,000         |
| <b>Central Region</b>       |              |               |               |               |               |
| Sara Buri                   | -            | 6,200         | 28,707        | 26,575        | 3,000         |
| <b>Total Production</b>     | -            | <b>8,200</b>  | <b>28,707</b> | <b>34,575</b> | <b>8,000</b>  |
| <b>Value (Million Baht)</b> | -            | <b>0.7</b>    | <b>2.4</b>    | <b>2.9</b>    | <b>0.7</b>    |
| <b><u>Consumption</u></b>   |              |               |               |               |               |
| <b>Total Consumption</b>    | <b>5,000</b> | <b>10,600</b> | <b>41,451</b> | <b>26,259</b> | <b>19,374</b> |
| <b>Value (Million Baht)</b> | <b>0.4</b>   | <b>0.9</b>    | <b>3.5</b>    | <b>2.2</b>    | <b>1.6</b>    |

# M I C A

Tonnes

|                                   | 2016         | 2017         | 2018         | 2019         | 2020         |
|-----------------------------------|--------------|--------------|--------------|--------------|--------------|
| <b><u>Import</u></b> <sup>1</sup> |              |              |              |              |              |
| <b>Total Import</b>               | <b>5,979</b> | <b>5,828</b> | <b>6,162</b> | <b>5,835</b> | <b>5,118</b> |
| <b>Value (Million Baht)</b>       | <b>176.2</b> | <b>180.0</b> | <b>164.8</b> | <b>150.7</b> | <b>130.1</b> |

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

# MONAZITE

Tonnes

|                             | 2016         | 2017         | 2018        | 2019        | 2020       |
|-----------------------------|--------------|--------------|-------------|-------------|------------|
| <b><u>Export</u></b>        |              |              |             |             |            |
| <b>Asia</b>                 |              |              |             |             |            |
| China                       | 2,620        | 2,150        | 655         | 108         | 42         |
| Hong Kong                   | -            | -            | 210         | -           | -          |
| Malaysia                    | -            | -            | -           | 54          | -          |
| <b>Total Export</b>         | <b>2,620</b> | <b>2,150</b> | <b>865</b>  | <b>162</b>  | <b>42</b>  |
| <b>Value (Million Baht)</b> | <b>111.0</b> | <b>216.4</b> | <b>85.7</b> | <b>13.4</b> | <b>3.1</b> |

# PERLITE

Tonnes

|                             | 2016          | 2017         | 2018         | 2019          | 2020         |
|-----------------------------|---------------|--------------|--------------|---------------|--------------|
| <b><u>Production</u></b>    |               |              |              |               |              |
| <b>Central Region</b>       |               |              |              |               |              |
| Lop Buri                    | 15,690        | 5,800        | 5,600        | 15,000        | 3,500        |
| <b>Total Production</b>     | <b>15,690</b> | <b>5,800</b> | <b>5,600</b> | <b>15,000</b> | <b>3,500</b> |
| <b>Value (Million Baht)</b> | <b>23.5</b>   | <b>8.7</b>   | <b>8.4</b>   | <b>22.5</b>   | <b>5.2</b>   |
| <b><u>Consumption</u></b>   |               |              |              |               |              |
| <b>Total Consumption</b>    | <b>12,190</b> | <b>7,300</b> | <b>5,500</b> | <b>5,000</b>  | <b>3,000</b> |
| <b>Value (Million Baht)</b> | <b>18.3</b>   | <b>10.9</b>  | <b>8.3</b>   | <b>7.5</b>    | <b>4.5</b>   |

# P H O S P H A T E

Tonnes

|                                  | 2016        | 2017         | 2018         | 2019       | 2020       |
|----------------------------------|-------------|--------------|--------------|------------|------------|
| <b><u>Production</u></b>         |             |              |              |            |            |
| <b>Central Region</b>            |             |              |              |            |            |
| Kanchanaburi                     | -           | 8,000        | -            | -          | -          |
| <b>Total Production</b>          | -           | <b>8,000</b> | -            | -          | -          |
| <b>Value (Million Baht)</b>      | -           | <b>3.3</b>   | -            | -          | -          |
| <b><u>Consumption</u></b>        |             |              |              |            |            |
| <b>Total Consumption</b>         | <b>120</b>  | <b>8,370</b> | <b>590</b>   | -          | -          |
| <b>Value (Million Baht)</b>      | <b>0.0*</b> | <b>3.5</b>   | <b>0.2</b>   | -          | -          |
| <b><u>Import</u><sup>1</sup></b> |             |              |              |            |            |
| <b>1. Ground</b>                 | <b>0**</b>  | <b>0**</b>   | <b>0**</b>   | -          | -          |
| <b>Value (Million Baht)</b>      | <b>0.0*</b> | <b>0.0*</b>  | <b>0.0**</b> | -          | -          |
| <b>2. Underground</b>            | <b>250</b>  | <b>1</b>     | <b>1</b>     | <b>1</b>   | <b>1</b>   |
| <b>Value (Million Baht)</b>      | <b>1.2</b>  | <b>0.2</b>   | <b>0.5</b>   | <b>0.5</b> | <b>0.8</b> |

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'

# P Y R O P H Y L L I T E

Tonnes

|                                  | 2016          | 2017          | 2018          | 2019          | 2020          |
|----------------------------------|---------------|---------------|---------------|---------------|---------------|
| <b><u>Production</u></b>         |               |               |               |               |               |
| <b>Central Region</b>            |               |               |               |               |               |
| Sara Buri                        | 96,800        | 54,000        | 50,920        | 6,500         | 31,522        |
| <b>Total Production</b>          | <b>96,800</b> | <b>54,000</b> | <b>50,920</b> | <b>6,500</b>  | <b>31,522</b> |
| <b>Value (Million Baht)</b>      | <b>58.1</b>   | <b>32.4</b>   | <b>30.6</b>   | <b>3.9</b>    | <b>18.9</b>   |
| <b><u>Export</u></b>             |               |               |               |               |               |
| <b>Asia</b>                      |               |               |               |               |               |
| Indonesia                        | 352           | 2,022         | 1,426         | 1,680         | 1,752         |
| Malaysia                         | 20            | 20            | -             | 150           | -             |
| Sri Lanka                        | -             | 40            | -             | -             | -             |
| Vietnam                          | 480           | 680           | 180           | 1,360         | 3,192         |
| <b>Australia / Oceania</b>       |               |               |               |               |               |
| New Zealand                      | -             | -             | -             | 25            | -             |
| <b>Total Export</b>              | <b>852</b>    | <b>2,762</b>  | <b>1,606</b>  | <b>3,215</b>  | <b>4,944</b>  |
| <b>Value (Million Baht)</b>      | <b>3.2</b>    | <b>9.7</b>    | <b>6.3</b>    | <b>12.3</b>   | <b>18.8</b>   |
| <b><u>Consumption</u></b>        |               |               |               |               |               |
| <b>Total Consumption</b>         | <b>71,220</b> | <b>67,816</b> | <b>32,374</b> | <b>33,061</b> | <b>27,559</b> |
| <b>Value (Million Baht)</b>      | <b>42.7</b>   | <b>40.7</b>   | <b>19.4</b>   | <b>19.8</b>   | <b>16.5</b>   |
| <b><u>Import</u><sup>1</sup></b> |               |               |               |               |               |
| <b>Total Import</b>              | <b>-</b>      | <b>-</b>      | <b>140</b>    | <b>20</b>     | <b>120</b>    |
| <b>Value (Million Baht)</b>      | <b>-</b>      | <b>-</b>      | <b>0.9</b>    | <b>0.1</b>    | <b>0.8</b>    |

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

|                                       | 2016          | 2017           | 2018          | 2019          | 2020          |
|---------------------------------------|---------------|----------------|---------------|---------------|---------------|
| <b>1. Unground</b>                    |               |                |               |               |               |
| <b>Central Region</b>                 |               |                |               |               |               |
| Kanchanaburi                          | 20,340        | 6,200          | 66,802        | 14,000        | 31,500        |
| Prachuap Khiri Khan                   | 13,500        | 5,500          | 1,000         | -             | -             |
| <b>Total Production</b>               | <b>33,840</b> | <b>11,700</b>  | <b>67,802</b> | <b>14,000</b> | <b>31,500</b> |
| <b>Value (Million Baht)</b>           | <b>25.4</b>   | <b>8.8</b>     | <b>50.9</b>   | <b>10.5</b>   | <b>23.6</b>   |
| <b>2. Quartzite (Industrial Rock)</b> |               |                |               |               |               |
| <b>Southern Region</b>                |               |                |               |               |               |
| Songkhla                              | 16,320        | 164,383        | -             | -             | -             |
| <b>Total Production</b>               | <b>16,320</b> | <b>164,383</b> | <b>-</b>      | <b>-</b>      | <b>-</b>      |
| <b>Value (Million Baht)</b>           | <b>3.3</b>    | <b>32.9</b>    | <b>-</b>      | <b>-</b>      | <b>-</b>      |
| <b><u>Consumption</u></b>             |               |                |               |               |               |
| <b>1. Unground</b>                    | <b>20,320</b> | <b>30,011</b>  | <b>15,818</b> | <b>19,290</b> | <b>31,500</b> |
| <b>Value (Million Baht)</b>           | <b>15.2</b>   | <b>22.5</b>    | <b>11.9</b>   | <b>14.5</b>   | <b>23.6</b>   |
| <b>2. Quartzite (Industrial Rock)</b> | <b>20,424</b> | <b>174,096</b> | <b>-</b>      | <b>-</b>      | <b>-</b>      |
| <b>Value (Million Baht)</b>           | <b>4.1</b>    | <b>34.8</b>    | <b>-</b>      | <b>-</b>      | <b>-</b>      |
| <b><u>Import</u><sup>1</sup></b>      |               |                |               |               |               |
| <b>Total Import</b>                   | <b>15,578</b> | <b>37,216</b>  | <b>16,867</b> | <b>18,576</b> | <b>19,855</b> |
| <b>Value (Million Baht)</b>           | <b>137.4</b>  | <b>229.2</b>   | <b>143.3</b>  | <b>130.2</b>  | <b>155.2</b>  |

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



# RHYOLITE

Tonnes

|                             | 2016           | 2017           | 2018           | 2019             | 2020           |
|-----------------------------|----------------|----------------|----------------|------------------|----------------|
| <b><u>Production</u></b>    |                |                |                |                  |                |
| <b>Central Region</b>       |                |                |                |                  |                |
| Sara Buri                   | 833,793        | 696,503        | 637,499        | 1,153,507        | 778,997        |
| <b>Total Production</b>     | <b>833,793</b> | <b>696,503</b> | <b>637,499</b> | <b>1,153,507</b> | <b>778,997</b> |
| <b>Value (Million Baht)</b> | <b>125.1</b>   | <b>104.5</b>   | <b>95.6</b>    | <b>173.0</b>     | <b>116.8</b>   |
| <b><u>Consumption</u></b>   |                |                |                |                  |                |
| <b>Total Consumption</b>    | <b>797,212</b> | <b>735,682</b> | <b>658,032</b> | <b>906,240</b>   | <b>799,343</b> |
| <b>Value (Million Baht)</b> | <b>119.6</b>   | <b>110.4</b>   | <b>98.7</b>    | <b>135.9</b>     | <b>119.9</b>   |

# ROCK SALT

Tonnes

|  | 2016 | 2017 | 2018 | 2019 | 2020 |
|--|------|------|------|------|------|
|--|------|------|------|------|------|

## Production

### Northeastern Region

|                   |           |           |           |           |           |
|-------------------|-----------|-----------|-----------|-----------|-----------|
| Nakhon Ratchasima | 1,390,548 | 1,497,223 | 1,487,364 | 1,580,390 | 1,439,877 |
|-------------------|-----------|-----------|-----------|-----------|-----------|

|                             |                  |                  |                  |                  |                  |
|-----------------------------|------------------|------------------|------------------|------------------|------------------|
| <b>Total Production</b>     | <b>1,390,548</b> | <b>1,497,223</b> | <b>1,487,364</b> | <b>1,580,390</b> | <b>1,439,877</b> |
| <b>Value (Million Baht)</b> | <b>2,711.6</b>   | <b>2,919.6</b>   | <b>2,900.4</b>   | <b>3,081.8</b>   | <b>2,807.8</b>   |

## Consumption

|                             |                  |                  |                  |                  |                  |
|-----------------------------|------------------|------------------|------------------|------------------|------------------|
| <b>Total Consumption</b>    | <b>1,339,851</b> | <b>1,475,405</b> | <b>1,491,766</b> | <b>1,528,522</b> | <b>1,465,622</b> |
| <b>Value (Million Baht)</b> | <b>2,612.7</b>   | <b>2,877.0</b>   | <b>2,908.9</b>   | <b>2,980.6</b>   | <b>2,858.0</b>   |

## Import<sup>1</sup>

|                             |            |            |
|-----------------------------|------------|------------|
| <b>Total Import</b>         | <b>963</b> | <b>414</b> |
| <b>Value (Million Baht)</b> | <b>7.2</b> | <b>3.1</b> |

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

# R U T I L E

Tonnes

|                                  | 2016         | 2017         | 2018         | 2019         | 2020         |
|----------------------------------|--------------|--------------|--------------|--------------|--------------|
| <b><u>Export</u></b>             |              |              |              |              |              |
| <b>Asia</b>                      |              |              |              |              |              |
| China                            | -            | 425          | 100          | -            | -            |
| India                            | 78           | 390          | 264          | -            | -            |
| <b>Europe</b>                    |              |              |              |              |              |
| Spain                            | -            | 50           | -            | -            | -            |
| Turkey                           | -            | 100          | -            | -            | -            |
| <b>North America</b>             |              |              |              |              |              |
| Mexico                           | 48           | -            | -            | 29           | -            |
| <b>South America</b>             |              |              |              |              |              |
| Brazil                           | 52           | -            | -            | -            | -            |
| Colombia                         | 48           | -            | -            | -            | -            |
| <b>Total Export</b>              | <b>226</b>   | <b>965</b>   | <b>364</b>   | <b>29</b>    | <b>-</b>     |
| <b>Value (Million Baht)</b>      | <b>7.7</b>   | <b>21.2</b>  | <b>7.8</b>   | <b>1.0</b>   | <b>-</b>     |
| <b><u>Import</u><sup>1</sup></b> |              |              |              |              |              |
| <b>Total Import</b>              | <b>4,108</b> | <b>2,423</b> | <b>2,278</b> | <b>4,937</b> | <b>4,687</b> |
| <b>Value (Million Baht)</b>      | <b>129.8</b> | <b>75.9</b>  | <b>82.8</b>  | <b>210.5</b> | <b>214.6</b> |

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

# S A N D   S T O N E

Tonnes

|  | 2016 | 2017 | 2018 | 2019 | 2020 |
|--|------|------|------|------|------|
|--|------|------|------|------|------|

## Production

### 1. Dimension Stone

#### Northeastern Region

|                   |     |       |     |   |   |
|-------------------|-----|-------|-----|---|---|
| Nakhon Ratchasima | 560 | 2,460 | 826 | - | - |
|-------------------|-----|-------|-----|---|---|

|                         |            |              |            |          |          |
|-------------------------|------------|--------------|------------|----------|----------|
| <b>Total Production</b> | <b>560</b> | <b>2,460</b> | <b>826</b> | <b>-</b> | <b>-</b> |
|-------------------------|------------|--------------|------------|----------|----------|

|                             |            |            |            |          |          |
|-----------------------------|------------|------------|------------|----------|----------|
| <b>Value (Million Baht)</b> | <b>0.4</b> | <b>1.7</b> | <b>0.6</b> | <b>-</b> | <b>-</b> |
|-----------------------------|------------|------------|------------|----------|----------|

### 2. Industrial Rock

#### Northern Region

|           |         |        |        |        |        |
|-----------|---------|--------|--------|--------|--------|
| Uttaradit | 155,356 | 80,651 | 61,008 | 49,468 | 10,541 |
|-----------|---------|--------|--------|--------|--------|

#### Northeastern Region

|           |   |   |   |        |        |
|-----------|---|---|---|--------|--------|
| Buang Kan | - | - | - | 29,500 | 21,799 |
|-----------|---|---|---|--------|--------|

|           |   |        |        |        |   |
|-----------|---|--------|--------|--------|---|
| Mukda Han | - | 75,557 | 25,500 | 23,985 | - |
|-----------|---|--------|--------|--------|---|

|               |         |   |         |         |         |
|---------------|---------|---|---------|---------|---------|
| Nakhon Phanom | 446,882 | - | 236,898 | 352,422 | 239,760 |
|---------------|---------|---|---------|---------|---------|

|                   |   |   |   |     |     |
|-------------------|---|---|---|-----|-----|
| Nakhon Ratchasima | - | - | - | 550 | 680 |
|-------------------|---|---|---|-----|-----|

|                  |   |   |         |         |         |
|------------------|---|---|---------|---------|---------|
| Ubon Ratchathani | - | - | 303,934 | 501,063 | 774,551 |
|------------------|---|---|---------|---------|---------|

#### Central Region

|            |   |       |   |   |   |
|------------|---|-------|---|---|---|
| Ratchaburi | - | 5,000 | - | - | - |
|------------|---|-------|---|---|---|

#### Southern Region

|          |         |         |         |         |         |
|----------|---------|---------|---------|---------|---------|
| Phangnga | 234,336 | 208,322 | 135,189 | 252,100 | 149,398 |
|----------|---------|---------|---------|---------|---------|

|       |   |   |   |   |        |
|-------|---|---|---|---|--------|
| Trang | - | - | - | - | 21,060 |
|-------|---|---|---|---|--------|

|                         |                |                |                |                  |                  |
|-------------------------|----------------|----------------|----------------|------------------|------------------|
| <b>Total Production</b> | <b>836,574</b> | <b>369,530</b> | <b>762,529</b> | <b>1,209,088</b> | <b>1,217,789</b> |
|-------------------------|----------------|----------------|----------------|------------------|------------------|

|                             |              |             |              |              |              |
|-----------------------------|--------------|-------------|--------------|--------------|--------------|
| <b>Value (Million Baht)</b> | <b>125.5</b> | <b>55.4</b> | <b>114.4</b> | <b>181.4</b> | <b>182.7</b> |
|-----------------------------|--------------|-------------|--------------|--------------|--------------|

## Export (industrial rock)

#### Asia

|            |   |   |       |   |   |
|------------|---|---|-------|---|---|
| Bangladesh | - | - | 5,000 | - | - |
|------------|---|---|-------|---|---|

|                     |          |          |              |          |          |
|---------------------|----------|----------|--------------|----------|----------|
| <b>Total Export</b> | <b>-</b> | <b>-</b> | <b>5,000</b> | <b>-</b> | <b>-</b> |
|---------------------|----------|----------|--------------|----------|----------|

|                             |          |          |            |          |          |
|-----------------------------|----------|----------|------------|----------|----------|
| <b>Value (Million Baht)</b> | <b>-</b> | <b>-</b> | <b>2.0</b> | <b>-</b> | <b>-</b> |
|-----------------------------|----------|----------|------------|----------|----------|

## Consumption

|                             |            |              |              |            |          |
|-----------------------------|------------|--------------|--------------|------------|----------|
| <b>1. Dimension Stone</b>   | <b>560</b> | <b>1,260</b> | <b>1,035</b> | <b>705</b> | <b>-</b> |
| <b>Value (Million Baht)</b> | <b>0.4</b> | <b>0.9</b>   | <b>0.7</b>   | <b>0.8</b> | <b>-</b> |

|                             |                |                |                |                  |                |
|-----------------------------|----------------|----------------|----------------|------------------|----------------|
| <b>2. Industrial Rock</b>   | <b>814,095</b> | <b>362,027</b> | <b>554,836</b> | <b>1,140,380</b> | <b>993,469</b> |
| <b>Value (Million Baht)</b> | <b>122.1</b>   | <b>54.3</b>    | <b>83.2</b>    | <b>171.1</b>     | <b>149.0</b>   |

|                                   | Tonnes |        |       |       |       |
|-----------------------------------|--------|--------|-------|-------|-------|
|                                   | 2016   | 2017   | 2018  | 2019  | 2020  |
| <b><u>Import</u></b> <sup>1</sup> |        |        |       |       |       |
| Dimension Stone                   | 14,182 | 14,871 | 8,023 | 8,097 | 1,882 |
| Value (Million Baht)              | 11.2   | 16.1   | 17.9  | 12.5  | 5.6   |

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

# S E R P E N T I N E

Tonnes

|                                            | 2016 | 2017 | 2018          | 2019           | 2020          |
|--------------------------------------------|------|------|---------------|----------------|---------------|
| <b><u>Production</u> (Industrial Rock)</b> |      |      |               |                |               |
| <b>Southern Region</b>                     |      |      |               |                |               |
| Narathiwat                                 | -    | -    | 29,384        | 117,473        | 5,013         |
| <b>Total Production</b>                    | -    | -    | <b>29,384</b> | <b>117,473</b> | <b>5,013</b>  |
| <b>Value (Million Baht)</b>                | -    | -    | <b>4.4</b>    | <b>17.6</b>    | <b>0.8</b>    |
| <b><u>Export</u> (industrial rock)</b>     |      |      |               |                |               |
| <b>Asia</b>                                |      |      |               |                |               |
| Taiwan                                     | -    | -    | -             | -              | 11,000        |
| <b>Total Export</b>                        | -    | -    | -             | -              | <b>11,000</b> |
| <b>Value (Million Baht)</b>                | -    | -    | -             | -              | <b>7.7</b>    |
| <b><u>Consumption</u></b>                  |      |      |               |                |               |
| <b>Total Consumption</b>                   | -    | -    | <b>11,892</b> | -              | -             |
| <b>Value (Million Baht)</b>                | -    | -    | <b>1.8</b>    | -              | -             |
| <b><u>Import</u><sup>1</sup></b>           |      |      |               |                |               |
| <b>Dimension Stone</b>                     | -    | -    | -             | <b>27</b>      | <b>404</b>    |
| <b>Value (Million Baht)</b>                | -    | -    | -             | <b>0.1</b>     | <b>5.1</b>    |

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

# SHALE

Tonnes

|                             | 2016             | 2017             | 2018             | 2019             | 2020             |
|-----------------------------|------------------|------------------|------------------|------------------|------------------|
| <b><u>Production</u></b>    |                  |                  |                  |                  |                  |
| <b>Northern Region</b>      |                  |                  |                  |                  |                  |
| Lampang                     | 18,750           | -                | -                | 10,300           | 6,500            |
| <b>Central Region</b>       |                  |                  |                  |                  |                  |
| Sara Buri                   | 7,571,322        | 6,505,772        | 6,715,746        | 4,942,783        | 3,216,330        |
| <b>Total Production</b>     | <b>7,590,072</b> | <b>6,505,772</b> | <b>6,715,746</b> | <b>4,953,083</b> | <b>3,222,830</b> |
| <b>Value (Million Baht)</b> | <b>1,897.5</b>   | <b>1,626.4</b>   | <b>1,678.9</b>   | <b>1,238.3</b>   | <b>805.7</b>     |
| <b><u>Consumption</u></b>   |                  |                  |                  |                  |                  |
| <b>Total Consumption</b>    | <b>7,615,048</b> | <b>6,527,217</b> | <b>5,015,765</b> | <b>5,146,264</b> | <b>3,269,369</b> |
| <b>Value (Million Baht)</b> | <b>1,903.8</b>   | <b>1,631.8</b>   | <b>1,253.9</b>   | <b>1,286.6</b>   | <b>817.3</b>     |

# S I L V E R

Gram

|                                  | 2016              | 2017 | 2018 | 2019 | 2020 |
|----------------------------------|-------------------|------|------|------|------|
| <b><u>Production</u></b>         |                   |      |      |      |      |
| <b>Northern Region</b>           |                   |      |      |      |      |
| Phetchabun                       | 34,350,652        | -    | -    | -    | -    |
| Phichit                          | 1,602,983         | -    | -    | -    | -    |
| <b>Total Production</b>          | <b>35,953,635</b> | -    | -    | -    | -    |
| <b>Value (Million Baht)</b>      | <b>712.5</b>      | -    | -    | -    | -    |
| <b><u>Export</u></b>             |                   |      |      |      |      |
| <b>Asia</b>                      |                   |      |      |      |      |
| Hong Kong                        | 35,953,635        | -    | -    | -    | -    |
| <b>Total Export</b>              | <b>35,953,635</b> | -    | -    | -    | -    |
| <b>Value (Million Baht)</b>      | <b>712.5</b>      | -    | -    | -    | -    |
| <b><u>Import</u><sup>1</sup></b> |                   |      |      |      |      |
| <b>Total Import</b>              | <b>11</b>         | -    | -    | -    | -    |
| <b>Value (Million Baht)</b>      | <b>0.7</b>        | -    | -    | -    | -    |

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



# STRUVERITE

Tonnes

|                             | 2016        | 2017        | 2018        | 2019     | 2020      |
|-----------------------------|-------------|-------------|-------------|----------|-----------|
| <b><u>Export</u></b>        |             |             |             |          |           |
| <b>Asia</b>                 |             |             |             |          |           |
| China                       | 100         | 248         | 128         | -        | 31        |
| Hong Kong                   | -           | 50          | -           | -        | -         |
| <b>Total Export</b>         | <b>100</b>  | <b>298</b>  | <b>128</b>  | <b>-</b> | <b>31</b> |
| <b>Value (Million Baht)</b> | <b>20.7</b> | <b>65.2</b> | <b>41.3</b> | <b>-</b> | <b>8</b>  |

# T A L C

Tonnes

|                                  | 2016           | 2017           | 2018           | 2019           | 2020           |
|----------------------------------|----------------|----------------|----------------|----------------|----------------|
| <b><u>Production</u></b>         |                |                |                |                |                |
| <b>Northern Region</b>           |                |                |                |                |                |
| Uttaradit                        | 7,126          | 7,436          | 7,756          | 8,064          | 6,624          |
| <b>Total Production</b>          | <b>7,126</b>   | <b>7,436</b>   | <b>7,756</b>   | <b>8,064</b>   | <b>6,624</b>   |
| <b>Value (Million Baht)</b>      | <b>4.3</b>     | <b>4.5</b>     | <b>4.7</b>     | <b>4.8</b>     | <b>4.0</b>     |
| <b><u>Consumption</u></b>        |                |                |                |                |                |
| <b>Total Consumption</b>         | <b>8,382</b>   | <b>7,312</b>   | <b>7,844</b>   | <b>7,962</b>   | <b>6,128</b>   |
| <b>Value (Million Baht)</b>      | <b>5.0</b>     | <b>4.4</b>     | <b>4.7</b>     | <b>4.8</b>     | <b>3.7</b>     |
| <b><u>Import</u><sup>1</sup></b> |                |                |                |                |                |
| <b>Total Import</b>              | <b>137,350</b> | <b>140,289</b> | <b>141,898</b> | <b>145,985</b> | <b>119,903</b> |
| <b>Value (Million Baht)</b>      | <b>1,646.5</b> | <b>1,634.2</b> | <b>1,643.5</b> | <b>1,627.7</b> | <b>1,219.7</b> |

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

# TANTALUM

|                                              | Tonnes       |              |                |              |              |
|----------------------------------------------|--------------|--------------|----------------|--------------|--------------|
|                                              | 2016         | 2017         | 2018           | 2019         | 2020         |
| <b><u>Import (Tantalite)</u><sup>1</sup></b> |              |              |                |              |              |
| <b>Total Import</b>                          | <b>208</b>   | <b>658</b>   | <b>685</b>     | <b>495</b>   | <b>550</b>   |
| <b>Value (Million Baht)</b>                  | <b>360.8</b> | <b>904.5</b> | <b>1,188.0</b> | <b>695.6</b> | <b>691.5</b> |

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

# T I N

Tonnes

|  | 2016 | 2017 | 2018 | 2019 | 2020 |
|--|------|------|------|------|------|
|--|------|------|------|------|------|

## Production

### 1. Production of Tin Concentrates by changwat

#### Northern Region

|            |    |    |    |    |     |
|------------|----|----|----|----|-----|
| Chiang Mai | 41 | 36 | 57 | 55 | 110 |
|------------|----|----|----|----|-----|

#### Central Region

|              |    |   |   |   |   |
|--------------|----|---|---|---|---|
| Kanchanaburi | 13 | - | - | - | - |
|--------------|----|---|---|---|---|

#### Southern Region

|                     |    |     |    |    |     |
|---------------------|----|-----|----|----|-----|
| Nakhon Si Thammarat | 21 | 502 | 16 | 18 | 205 |
| Ranong              | 17 | 3   | 2  | -  | -   |

|                             |             |              |             |             |              |
|-----------------------------|-------------|--------------|-------------|-------------|--------------|
| <b>Total Production</b>     | <b>92</b>   | <b>541</b>   | <b>75</b>   | <b>73</b>   | <b>315</b>   |
| <b>Value (Million Baht)</b> | <b>43.8</b> | <b>265.0</b> | <b>35.0</b> | <b>30.4</b> | <b>118.4</b> |

### 2. Production of Tin Concentrates by Mining Methods.

|                |    |     |    |    |     |
|----------------|----|-----|----|----|-----|
| Open Pitting   | 75 | 538 | 73 | 73 | 315 |
| Dulang Washing | 17 | 3   | 2  | -  | -   |

|                             |             |              |             |             |              |
|-----------------------------|-------------|--------------|-------------|-------------|--------------|
| <b>Total Production</b>     | <b>92</b>   | <b>541</b>   | <b>75</b>   | <b>73</b>   | <b>315</b>   |
| <b>Value (Million Baht)</b> | <b>43.8</b> | <b>265.0</b> | <b>35.0</b> | <b>30.4</b> | <b>118.4</b> |

### 3. Percentage of Tin Production by Mining Methods.

|                |      |      |      |     |       |
|----------------|------|------|------|-----|-------|
| Open Pitting   | 81.7 | 99.5 | 97.3 | 100 | 100.0 |
| Dulang Washing | 18.3 | 0.5  | 2.7  | -   | -     |

### 4. Production of Primary Tin Metal

|                             |                |                |                |                |                |
|-----------------------------|----------------|----------------|----------------|----------------|----------------|
| <b>Total Production</b>     | <b>10,807</b>  | <b>10,588</b>  | <b>10,721</b>  | <b>10,956</b>  | <b>11,265</b>  |
| <b>Value (Million Baht)</b> | <b>6,847.1</b> | <b>7,208.2</b> | <b>5,826.2</b> | <b>6,385.6</b> | <b>6,008.2</b> |

|                             | Tonnes         |                |                |                |                |
|-----------------------------|----------------|----------------|----------------|----------------|----------------|
|                             | 2016           | 2017           | 2018           | 2019           | 2020           |
| <b><u>Export</u></b>        |                |                |                |                |                |
| <b>1. Tin Metal</b>         |                |                |                |                |                |
| <b>Africa</b>               |                |                |                |                |                |
| Egypt                       | -              | 6              | 6              | -              | -              |
| <b>Asia</b>                 |                |                |                |                |                |
| Bangladesh                  | -              | -              | 10             | 220            | 55             |
| Cambodia                    | -              | -              | -              | 1              | -              |
| China                       | 304            | 9              | -              | 100            | 525            |
| Hong Kong                   | 43             | 37             | 79             | 34             | 16             |
| India                       | 30             | -              | -              | -              | -              |
| Israel                      | -              | -              | -              | -              | 1              |
| Japan                       | 2,965          | 3,348          | 2,795          | 2,762          | 2,073          |
| Korea, South                | 2,073          | 1,514          | 1,568          | 1,253          | 1,828          |
| Malaysia                    | 28             | 6              | 2              | 37             | 5              |
| Pakistan                    | 6              | 5              | 154            | 4              | -              |
| Philippines                 | 7              | 2              | 6              | 13             | 27             |
| Singapore                   | 42             | 63             | 56             | 36             | 17             |
| Sri Lanka                   | -              | -              | 1              | -              | -              |
| Taiwan                      | 486            | 312            | 557            | 547            | 812            |
| U.A.E.                      | 1              | -              | 24             | 38             | 14             |
| Vietnam                     | 2              | -              | -              | 43             | 122            |
| <b>Australia / Oceania</b>  |                |                |                |                |                |
| Australia                   | 76             | 65             | 99             | 111            | 107            |
| <b>Europe</b>               |                |                |                |                |                |
| Austria                     | -              | 2              | 2              | -              | -              |
| Belgium                     | 146            | 214            | 157            | 132            | 397            |
| Bosnia & Herzegovina        | -              | -              | -              | -              | -              |
| France                      | 5              | 25             | 150            | 125            | -              |
| Germany                     | 443            | 494            | 460            | 409            | 438            |
| Iceland                     | -              | -              | -              | -              | -              |
| Italy                       | 150            | 300            | 50             | 95             | 140            |
| Netherlands                 | 205            | 350            | 525            | 1,025          | 1,500          |
| Portugal                    | -              | -              | -              | -              | 1              |
| Spain                       | 75             | 25             | 595            | 900            | 875            |
| Russia                      | -              | -              | -              | -              | 1              |
| Switzerland                 | -              | -              | -              | -              | 0.1            |
| Turkey                      | 25             | 51             | -              | 26             | -              |
| U.K.                        | 316            | 361            | 322            | 317            | 380            |
| <b>North America</b>        |                |                |                |                |                |
| U.S.A.                      | 396            | 425            | 494            | 630            | 167            |
| Canada                      | -              | -              | -              | -              | 45             |
| <b>South America</b>        |                |                |                |                |                |
| Ecuador                     | -              | -              | -              | 5              | -              |
| <b>Total Export</b>         | <b>7,824</b>   | <b>7,614</b>   | <b>8,112</b>   | <b>8,862</b>   | <b>9,547</b>   |
| <b>Value (Million Baht)</b> | <b>4,989.2</b> | <b>5,345.5</b> | <b>5,424.9</b> | <b>5,411.1</b> | <b>5,373.6</b> |

Tonnes

|                             | 2016         | 2017        | 2018        | 2019         | 2020        |
|-----------------------------|--------------|-------------|-------------|--------------|-------------|
| <b>2. Tin-Lead Alloy</b>    |              |             |             |              |             |
| <b>Asia</b>                 |              |             |             |              |             |
| India                       | 1            | -           | -           | -            | -           |
| Korea, South                | -            | 0.2         | 0.5         | -            | -           |
| Malaysia                    | 1            | -           | 0.3         | 0.2          | -           |
| Philippines                 | 2            | 4           | 0.5         | 1.4          | -           |
| <b>Europe</b>               |              |             |             |              |             |
| Belgium                     | -            | 24          | 11          | -            | -           |
| Spain                       | -            | -           | 0.1         | -            | -           |
| <b>Total Export</b>         | <b>4</b>     | <b>28</b>   | <b>12</b>   | <b>2</b>     | <b>-</b>    |
| <b>Value (Million Baht)</b> | <b>2.0</b>   | <b>13.6</b> | <b>5.2</b>  | <b>1.1</b>   | <b>-</b>    |
| <b>3. Final Slag</b>        |              |             |             |              |             |
| <b>Asia</b>                 |              |             |             |              |             |
| China                       | 705          | 315         | -           | -            | -           |
| <b>Europe</b>               |              |             |             |              |             |
| Germany                     | 313          | 642         | 526         | 1,716        | 797         |
| <b>Total Export</b>         | <b>1,018</b> | <b>957</b>  | <b>526</b>  | <b>1,716</b> | <b>797</b>  |
| <b>Value (Million Baht)</b> | <b>36.4</b>  | <b>47.9</b> | <b>42.9</b> | <b>81.0</b>  | <b>27.9</b> |
| <b>4. Bismuth Slime</b>     |              |             |             |              |             |
| <b>Asia</b>                 |              |             |             |              |             |
| Hong Kong                   | -            | -           | -           | -            | <b>6.0</b>  |
| Korea, South                | -            | -           | <b>3</b>    | <b>710</b>   | -           |
| Malaysia                    | -            | 1           | -           | -            | -           |
| <b>Total Export</b>         | <b>-</b>     | <b>1</b>    | <b>3</b>    | <b>710</b>   | <b>6</b>    |
| <b>Value (Million Baht)</b> | <b>-</b>     | <b>1.7</b>  | <b>4.6</b>  | <b>10.6</b>  | <b>25.6</b> |
| <b>6. Copper Dross</b>      |              |             |             |              |             |
| <b>Europe</b>               |              |             |             |              |             |
| Belgium                     | 59           | -           | 12          | 21           | -           |
| <b>Total Export</b>         | <b>59</b>    | <b>-</b>    | <b>12</b>   | <b>21</b>    | <b>-</b>    |
| <b>Value (Million Baht)</b> | <b>23.2</b>  | <b>-</b>    | <b>4.8</b>  | <b>10.1</b>  | <b>-</b>    |

Tonnes

|                                  | 2016           | 2017           | 2018           | 2019           | 2020           |
|----------------------------------|----------------|----------------|----------------|----------------|----------------|
| <b>7. Copper Powder</b>          |                |                |                |                |                |
| <b>Asia</b>                      |                |                |                |                |                |
| Philippines                      | -              | 0.5            | -              | -              | -              |
| <b>Total Export</b>              | <b>-</b>       | <b>0.5</b>     | <b>-</b>       | <b>-</b>       | <b>-</b>       |
| <b>Value (Million Baht)</b>      | <b>-</b>       | <b>0.4</b>     | <b>-</b>       | <b>-</b>       | <b>-</b>       |
| <b>8. Hard Head</b>              |                |                |                |                |                |
| <b>Asia</b>                      |                |                |                |                |                |
| Bangladesh                       | -              | -              | -              | -              | 48             |
| <b>Europe</b>                    |                |                |                |                |                |
| Belgium                          | 421            | 192            | 138            | 341            | 608            |
| <b>Total Export</b>              | <b>421</b>     | <b>192</b>     | <b>138</b>     | <b>341</b>     | <b>656</b>     |
| <b>Value (Million Baht)</b>      | <b>137.0</b>   | <b>70.9</b>    | <b>21.7</b>    | <b>30.1</b>    | <b>84.4</b>    |
| <b>9. Tin Dross</b>              |                |                |                |                |                |
| <b>Europe</b>                    |                |                |                |                |                |
| U.K.                             | -              | 2              | -              | -              | -              |
| <b>Total Export</b>              | <b>-</b>       | <b>2</b>       | <b>-</b>       | <b>-</b>       | <b>-</b>       |
| <b>Value (Million Baht)</b>      | <b>-</b>       | <b>0.8</b>     | <b>-</b>       | <b>-</b>       | <b>-</b>       |
| <b><u>Consumption</u></b>        |                |                |                |                |                |
| <b>Primary Tin Metal</b>         | <b>3,132</b>   | <b>3,564</b>   | <b>2,545</b>   | <b>1,945</b>   | <b>1,756</b>   |
| <b>Value (Million Baht)</b>      | <b>1,976.2</b> | <b>2,430.6</b> | <b>1,545.2</b> | <b>1,137.9</b> | <b>934.0</b>   |
| <b><u>Import</u><sup>1</sup></b> |                |                |                |                |                |
| <b>Tin ore</b>                   | <b>7,870</b>   | <b>10,877</b>  | <b>12,261</b>  | <b>10,559</b>  | <b>16,136</b>  |
| <b>Value (Million Baht)</b>      | <b>2,738.3</b> | <b>4,237.0</b> | <b>4,494.3</b> | <b>3,586.3</b> | <b>4,782.2</b> |

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

# TRAVERTINE

Tonnes

|                                  | 2016         | 2017         | 2018         | 2019         | 2020       |
|----------------------------------|--------------|--------------|--------------|--------------|------------|
| <b><u>Production</u></b>         |              |              |              |              |            |
| <b>Central Region</b>            |              |              |              |              |            |
| Sara Buri                        | 2,600        | 1,969        | 1,628        | 2,494        | 696        |
| <b>Total Production</b>          | <b>2,600</b> | <b>1,969</b> | <b>1,628</b> | <b>2,494</b> | <b>696</b> |
| <b>Value (Million Baht)</b>      | <b>5.2</b>   | <b>3.9</b>   | <b>3.3</b>   | <b>8.5</b>   | <b>3.1</b> |
| <b><u>Consumption</u></b>        |              |              |              |              |            |
| <b>Total Consumption</b>         | <b>3,600</b> | <b>1,990</b> | <b>1,326</b> | <b>2,493</b> | <b>981</b> |
| <b>Value (Million Baht)</b>      | <b>7.2</b>   | <b>3.9</b>   | <b>2.7</b>   | <b>8.5</b>   | <b>4.4</b> |
| <b><u>Import</u><sup>1</sup></b> |              |              |              |              |            |
| <b>Total Import</b>              | <b>0**</b>   | -            | -            | -            | -          |
| <b>Value (Million Baht)</b>      | <b>0.0*</b>  | -            | -            | -            | -          |

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

|                             | 2016       | 2017       | 2018        | 2019       | 2020     |
|-----------------------------|------------|------------|-------------|------------|----------|
| <b><u>1. Wolfram</u></b>    |            |            |             |            |          |
| <b><u>Production</u></b>    |            |            |             |            |          |
| <b>Northern Region</b>      |            |            |             |            |          |
| Phrae                       | -          | 1          | 79          | 1          | -        |
| <b>Central Region</b>       |            |            |             |            |          |
| Kanchanaburi                | 15         | -          | -           | -          | -        |
| <b>Total Production</b>     | <b>15</b>  | <b>1</b>   | <b>79</b>   | <b>1</b>   | <b>-</b> |
| <b>Value (Million Baht)</b> | <b>4.9</b> | <b>0.3</b> | <b>24.9</b> | <b>0.4</b> | <b>-</b> |

Tonnes

|                                  | 2016        | 2017         | 2018        | 2019        | 2020        |
|----------------------------------|-------------|--------------|-------------|-------------|-------------|
| <b><u>2. Scheelite</u></b>       |             |              |             |             |             |
| <b><u>Production</u></b>         |             |              |             |             |             |
| <b>Northern Region</b>           |             |              |             |             |             |
| Chiang Mai                       | 42          | 82           | 48          | 41          | 110         |
| <b>Total Production</b>          | <b>42</b>   | <b>82</b>    | <b>48</b>   | <b>41</b>   | <b>110</b>  |
| <b>Value (Million Baht)</b>      | <b>11.8</b> | <b>26.6</b>  | <b>15.2</b> | <b>16.3</b> | <b>43.1</b> |
| <b><u>Export</u></b>             |             |              |             |             |             |
| <b>North America</b>             |             |              |             |             |             |
| U.S.A.                           | 18          | 40           | 66          | 36          | -           |
| <b>Total Export</b>              | <b>18</b>   | <b>40</b>    | <b>66</b>   | <b>36</b>   | <b>-</b>    |
| <b>Value (Million Baht)</b>      | <b>6.6</b>  | <b>14.1</b>  | <b>30.2</b> | <b>17.3</b> | <b>-</b>    |
| <b><u>3. Other Tungsten</u></b>  |             |              |             |             |             |
| <b><u>Import</u><sup>1</sup></b> |             |              |             |             |             |
| <b>Total Import</b>              | <b>0**</b>  | <b>553.0</b> | <b>-</b>    | <b>-</b>    | <b>-</b>    |
| <b>Value (Million Baht)</b>      | <b>0.0*</b> | <b>4.8</b>   | <b>-</b>    | <b>-</b>    | <b>-</b>    |

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'

# X E N O T I M E

|                             | Tonnes |            |      |      |      |
|-----------------------------|--------|------------|------|------|------|
|                             | 2016   | 2017       | 2018 | 2019 | 2020 |
| <b><u>Export</u></b>        |        |            |      |      |      |
| <b>Asia</b>                 |        |            |      |      |      |
| China                       | -      | 30         | -    | -    | -    |
| <b>Total Export</b>         | -      | <b>30</b>  | -    | -    | -    |
| <b>Value (Million Baht)</b> | -      | <b>1.5</b> | -    | -    | -    |

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

# Z I N C

Tonnes

|                             | 2016           | 2017         | 2018         | 2019        | 2020         |
|-----------------------------|----------------|--------------|--------------|-------------|--------------|
| <b><u>Production</u></b>    |                |              |              |             |              |
| <b>Northern Region</b>      |                |              |              |             |              |
| Tak                         | 175,632        | 7,877        | -            | -           | -            |
| <b>Total Production</b>     | <b>175,632</b> | <b>7,877</b> | <b>-</b>     | <b>-</b>    | <b>-</b>     |
| <b>Value (Million Baht)</b> | <b>2,388.2</b> | <b>153.6</b> | <b>-</b>     | <b>-</b>    | <b>-</b>     |
| <b><u>Export</u></b>        |                |              |              |             |              |
| <b>1. Zinc Metal</b>        |                |              |              |             |              |
| <b>Asia</b>                 |                |              |              |             |              |
| Bangladesh                  | 102            | 199          | -            | -           | -            |
| Cambodia                    | 0**            | 2            | 33           | 0.1         | -            |
| India                       | 2,575          | 432          | 79           | 47          | 25           |
| Indonesia                   | 205            | 14           | 11           | 1           | 548          |
| Laos                        | 91             | 12           | 28           | 4           | 23           |
| Malaysia                    | 2              | 3            | 65           | -           | -            |
| Myanmar                     | 96             | 32           | -            | 200         | 13           |
| Singapore                   | -              | 1            | 0.5          | -           | -            |
| Sri Lanka                   | 0.2            | 0.2          | 0**          | 0**         | -            |
| Taiwan                      | 182            | 66           | 2,076        | -           | 646          |
| Vietnam                     | 31             | 38           | 31           | 333         | 393          |
| <b>Europe</b>               |                |              |              |             |              |
| Belgium                     | -              | -            | -            | 50          | -            |
| <b>South America</b>        |                |              |              |             |              |
| Colombia                    | -              | -            | -            | 8           | -            |
| <b>Total Export</b>         | <b>3,284</b>   | <b>799</b>   | <b>2,324</b> | <b>643</b>  | <b>1,648</b> |
| <b>Value (Million Baht)</b> | <b>220.6</b>   | <b>68.1</b>  | <b>234.1</b> | <b>46.2</b> | <b>99.3</b>  |

0\*\* denoting the amount of less than 0.1 tonnes

Tonnes

|                                             | 2016           | 2017           | 2018        | 2019         | 2020         |
|---------------------------------------------|----------------|----------------|-------------|--------------|--------------|
| <b>2. Zinc Alloy</b>                        |                |                |             |              |              |
| <b>Asia</b>                                 |                |                |             |              |              |
| Cambodia                                    | -              | -              | -           | -            | -            |
| China                                       | -              | 77             | -           | -            | 26           |
| India                                       | 177            | 329            | 699         | 474          | 207          |
| Indonesia                                   | 145            | 503            | 265         | 648          | 770          |
| Japan                                       | 0.1            | -              | -           | -            | -            |
| Malaysia                                    | 26             | 19             | -           | 36           | -            |
| Pakistan                                    | -              | 0**            | -           | -            | -            |
| Taiwan                                      | -              | 114            | 24          | -            | 45           |
| Vietnam                                     | -              | 8              | -           | -            | -            |
| <b>Europe</b>                               |                |                |             |              |              |
| Belgium                                     | 34             | -              | -           | -            | -            |
| <b>Total Export</b>                         | <b>382</b>     | <b>1,050</b>   | <b>988</b>  | <b>1,158</b> | <b>1,048</b> |
| <b>Value (Million Baht)</b>                 | <b>26.1</b>    | <b>92.7</b>    | <b>83.4</b> | <b>93.8</b>  | <b>72.7</b>  |
| <b><u>Consumption</u></b>                   |                |                |             |              |              |
| <b>1. Zinc Alloy</b>                        | <b>23,697</b>  | <b>17,675</b>  | <b>-</b>    | <b>-</b>     | <b>-</b>     |
| <b>Value (Million Baht)</b>                 | <b>1,908.9</b> | <b>1,877.1</b> | <b>-</b>    | <b>-</b>     | <b>-</b>     |
| <b>2. Zinc Metal</b>                        | <b>33,063</b>  | <b>14,604</b>  | <b>-</b>    | <b>-</b>     | <b>-</b>     |
| <b>Value (Million Baht)</b>                 | <b>2,390.7</b> | <b>1,430.2</b> | <b>-</b>    | <b>-</b>     | <b>-</b>     |
| <b><u>Import (Zinc Ore)<sup>1</sup></u></b> |                |                |             |              |              |
| <b>Total Import</b>                         | <b>32,306</b>  | <b>0.1</b>     | <b>318</b>  | <b>3,414</b> | <b>3,265</b> |
| <b>Value (Million Baht)</b>                 | <b>757.3</b>   | <b>0.0*</b>    | <b>2.6</b>  | <b>12.6</b>  | <b>12.1</b>  |

0\*\* denoting the amount of less than 0.1 tonnes

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

# Z I R C O N

Tonnes

|                                                  | 2016          | 2017          | 2018          | 2019         | 2020         |
|--------------------------------------------------|---------------|---------------|---------------|--------------|--------------|
| <b><u>Export</u></b>                             |               |               |               |              |              |
| <b>Asia</b>                                      |               |               |               |              |              |
| China                                            | 6,500         | 5,723         | 1,400         | 2,104        | -            |
| Hong Kong                                        | -             | -             | 2,200         | -            | -            |
| India                                            | 2,106         | 1,716         | 25            | -            | -            |
| Malaysia                                         | -             | -             | -             | -            | 84           |
| U.A.E.                                           | 104           | -             | -             | -            | -            |
| Vietnam                                          | 120           | -             | -             | -            | -            |
| <b>Australia / Oceania</b>                       |               |               |               |              |              |
| Australia                                        | -             | -             | 78            | -            | -            |
| <b>Europe</b>                                    |               |               |               |              |              |
| Spain                                            | 176           | -             | -             | -            | -            |
| <b>South America</b>                             |               |               |               |              |              |
| Brazil                                           | 24            | -             | -             | -            | -            |
| <b>Total Export</b>                              | <b>9,030</b>  | <b>7,439</b>  | <b>3,703</b>  | <b>2,104</b> | <b>84</b>    |
| <b>Value(Million Baht)</b>                       | <b>250.4</b>  | <b>237.1</b>  | <b>135.7</b>  | <b>69.7</b>  | <b>1.3</b>   |
| <b><u>Import (Zirconium Ore)<sup>1</sup></u></b> |               |               |               |              |              |
| <b>Total Import</b>                              | <b>40,659</b> | <b>38,529</b> | <b>43,565</b> | <b>6,416</b> | <b>8,368</b> |
| <b>Value (Million Baht)</b>                      | <b>521.1</b>  | <b>586.0</b>  | <b>906.3</b>  | <b>324.4</b> | <b>366.6</b> |

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

## NUMBER OF ACTIVE MINES BY KIND OF MINERALS

|                           | 2016 | 2017 | 2018 | 2019 | 2020 |
|---------------------------|------|------|------|------|------|
| Andesite                  | 3    | 3    | 3    | 3    | 3    |
| Antimony                  | -    | 1    | 0    | 0    | 0    |
| Ball clay                 | 4    | 3    | 3    | 3    | 2    |
| Barite                    | 7    | 6    | 5    | 6    | 5    |
| Basalt (industrial rock)  | 39   | 41   | 41   | 39   | 39   |
| Calcite                   | 6    | 9    | 13   | 13   | 12   |
| Cement clay               | 23   | 27   | 28   | 25   | 25   |
| Ceramic clay              | 6    | 7    | 7    | 7    | 8    |
| Dolomite                  | 17   | 17   | 19   | 16   | 18   |
| Feldspar                  | 18   | 16   | 14   | 13   | 12   |
| Fluorite                  | 3    | 3    | 3    | 2    | 2    |
| Glass sand                | 14   | 16   | 18   | 18   | 20   |
| Gneiss                    | 1    | 1    | 1    | 1    | -    |
| Gold                      | 4    | 1    | -    | -    | -    |
| Granite (dimension stone) | 19   | 15   | 12   | 7    | 4    |
| Granite (industrial rock) | 19   | 21   | 24   | 28   | 28   |
| Graywacke                 | 1    | 1    | 1    | 1    | 3    |
| Gypsum                    | 50   | 52   | 45   | 35   | 37   |
| Iron                      | 5    | 6    | 5    | 5    | 6    |
| Kaolin                    | 25   | 20   | 18   | 15   | 18   |
| Lignite                   | 3    | 2    | 3    | 2    | 1    |
| Limestone (cement)        | 14   | 13   | 13   | 14   | 13   |
| Limestone (construction)  | 198  | 193  | 198  | 191  | 196  |
| Limestone (dimension)     | 3    | 3    | 1    | 1    | 1    |
| Limestone (others)        | 15   | 17   | 12   | 10   | 9    |
| Manganese                 | 3    | 3    | 2    | 2    | 2    |
| Marble                    | 17   | 15   | 14   | 12   | 8    |
| Marl                      | 4    | 4    | 4    | 4    | 4    |
| Perlite                   | 4    | 3    | 4    | 3    | 2    |
| Phosphate                 | 1    | 1    | -    | -    | -    |

## NUMBER OF ACTIVE MINES BY KIND OF MINERALS

|                              | 2016 | 2017 | 2018 | 2019 | 2020 |
|------------------------------|------|------|------|------|------|
| Pyrophyllite                 | 2    | 2    | 2    | 2    | 2    |
| Quartz                       | 8    | 7    | 4    | 2    | 1    |
| Rhyolite (industrial rock)   | 1    | 1    | 1    | 1    | 1    |
| Rock salt                    | 3    | 4    | 5    | 6    | 7    |
| Sand stone (dimension )      | 10   | 3    | 1    | 1    | 0    |
| Sand stone (industrial rock) | 4    | 5    | 9    | 10   | 10   |
| Shale                        | 6    | 5    | 6    | 6    | 6    |
| Talc                         | 1    | 1    | 1    | 1    | 1    |
| Tin & Tin-Tungsten           | 4    | 2    | 2    | 2    | 2    |
| Travertine                   | 2    | 2    | 2    | 2    | 1    |
| Wolfram                      | 1    | 1    | 1    | 1    | 1    |
| Zinc                         | 1    | 1    | -    | -    | -    |
| Total                        | 569  | 554  | 545  | 510  | 510  |



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

|                           | 2016  | 2017  | 2018  | 2019  | 2020  |
|---------------------------|-------|-------|-------|-------|-------|
| Andesite                  | 30    | 30    | 29    | 25    | 25    |
| Antimony                  | -     | 5     | -     | -     | -     |
| Ball clay                 | 120   | 80    | 80    | 78    | 75    |
| Barite                    | 137   | 98    | 105   | 87    | 61    |
| Basalt (industrial rock)  | 674   | 694   | 982   | 956   | 937   |
| Calcite                   | 52    | 76    | 155   | 182   | 153   |
| Cement clay               | 426   | 429   | 316   | 347   | 271   |
| Ceramic clay              | 67    | 79    | 117   | 93    | 143   |
| Dolomite                  | 304   | 315   | 296   | 257   | 332   |
| Feldspar                  | 254   | 224   | 247   | 188   | 194   |
| Fluorite                  | 71    | 70    | 177   | 53    | 67    |
| Glass sand                | 123   | 139   | 124   | 117   | 125   |
| Gneiss                    | 7     | 7     | 7     | 8     | -     |
| Gold                      | 333   | -     | -     | -     | -     |
| Granite (dimension )      | 220   | 184   | 126   | 108   | 80    |
| Granite (industrial rock) | 720   | 771   | 612   | 705   | 759   |
| Graywacke                 | 28    | 28    | 16    | 14    | 55    |
| Gypsum                    | 972   | 972   | 900   | 692   | 997   |
| Iron                      | 50    | 65    | 85    | 73    | 130   |
| Kaolin                    | 263   | 198   | 209   | 204   | 201   |
| Lignite                   | 1,649 | 1,648 | 1,641 | 1,561 | 1,624 |
| Limestone (cement)        | 868   | 916   | 1,046 | 1,099 | 1,054 |
| Limestone (construction)  | 3,986 | 3,891 | 4,241 | 4,399 | 4,784 |
| Limestone (dimension)     | 6     | 6     | 4     | 4     | 4     |
| Limestone (others)        | 501   | 456   | 302   | 315   | 282   |
| Manganese                 | 32    | 25    | 24    | 24    | 12    |
| Marble                    | 238   | 213   | 274   | 264   | 179   |
| Marl                      | 33    | 34    | 18    | 25    | 21    |
| Perlite                   | 65    | 54    | 55    | 49    | 11    |
| Phosphate                 | 67    | 43    | -     | -     | -     |

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

|                              | 2016   | 2017   | 2018   | 2019   | 2020   |
|------------------------------|--------|--------|--------|--------|--------|
| Pyrophyllite                 | 25     | 15     | 7      | 7      | 7      |
| Quartz                       | 98     | 79     | 79     | 29     | 15     |
| Rhyolite (industrial rock)   | 43     | 43     | 47     | 47     | 47     |
| Rock salt                    | 128    | 131    | 133    | 133    | 498    |
| Sand stone (dimension)       | 54     | 20     | 6      | 7      | -      |
| Sand stone (industrial rock) | 60     | 70     | 107    | 148    | 126    |
| Shale                        | 149    | 109    | 100    | 88     | 92     |
| Talc                         | 6      | 6      | 2      | 4      | 3      |
| Tin & Tin-Tungsten           | 213    | 133    | 185    | 165    | 162    |
| Travertine                   | 5      | 17     | 15     | 14     | 5      |
| Wolfram                      | 14     | 51     | 46     | 71     | 59     |
| Zinc                         | 148    | 65     | -      | -      | -      |
| Total                        | 13,239 | 12,489 | 12,915 | 12,640 | 13,590 |

## Mineral Production of Thailand 2016 - 2020

Quantity : Tonnes  
Value : Million Baht

| Mineral                                | 2016       |          | 2017       |          | 2018       |          | 2019       |          | 2020       |          |
|----------------------------------------|------------|----------|------------|----------|------------|----------|------------|----------|------------|----------|
|                                        | Quantity   | Value    | Quantity   | Value    | Quantity   | Value    | Quantity   | Value    | Quantity   | Value    |
| <b><u>Mineral Fuels and Energy</u></b> |            |          |            |          |            |          |            |          |            |          |
| Lignite                                | 16,978,601 | 16,299.5 | 16,258,637 | 15,608.3 | 14,851,950 | 14,257.9 | 14,071,710 | 13,508.8 | 13,250,574 | 12,720.6 |
| Total                                  |            | 16,299.5 |            | 15,608.3 |            | 14,257.9 |            | 13,508.8 |            | 12,720.6 |
| %                                      |            | 18.58    |            | 20.22    |            | 18.50    |            | 18.10    |            | 17.43    |
| <b><u>Iron and Ferro Alloy</u></b>     |            |          |            |          |            |          |            |          |            |          |
| Iron ore                               | -          | -        | 135        | 0.2      | -          | -        | 17,660     | 33.5     | 113,239    | 239.0    |
| Manganese (metallurgical grade)        | 9,150      | 24.1     | 8,020      | 38.9     | 4,000      | 21.2     | 4,800      | 25.5     | 1,400      | 7.4      |
| Tungsten                               |            |          |            |          |            |          |            |          |            |          |
| - Scheelite                            | 42         | 11.8     | 82         | 26.6     | 48         | 15.2     | 41         | 16.3     | 110        | 43.1     |
| - Wolfram                              | 15         | 4.9      | 32         | 10.0     | 79         | 24.9     | 1          | 0.4      | -          | -        |
| Total                                  |            | 40.8     |            | 75.7     |            | 61.3     |            | 75.7     |            | 289.5    |
| %                                      |            | 0.05     |            | 0.10     |            | 0.08     |            | 0.10     |            | 0.48     |
| <b><u>Base Metals</u></b>              |            |          |            |          |            |          |            |          |            |          |
| Antimony ore                           | 32         | 0.9      | -          | -        | -          | -        | -          | -        | -          | -        |
| Copper metal                           | -          | -        | -          | -        | -          | -        | -          | -        | -          | -        |
| Tin concentrates                       | 92         | 43.8     | 541        | 264.8    | 75         | 35.0     | 73         | 30.5     | 315        | 118.4    |
| Zinc ore                               | 175,632    | 2,388.2  | 7,877      | 158.5    | -          | -        | -          | -        | -          | -        |
| Total                                  |            | 2,432.9  |            | 423.3    |            | 35.0     |            | 30.5     |            | 118.4    |
| %                                      |            | 2.77     |            | 0.55     |            | 0.05     |            | 0.04     |            | 0.16     |

## Mineral Production of Thailand 2016 - 2020

Quantity : Tonnes  
Value : Million Baht

| Mineral                                   | 2016       |          | 2017       |          | 2018       |          | 2019       |          | 2020       |          |
|-------------------------------------------|------------|----------|------------|----------|------------|----------|------------|----------|------------|----------|
|                                           | Quantity   | Value    | Quantity   | Value    | Quantity   | Value    | Quantity   | Value    | Quantity   | Value    |
| <b>Precious Metals and Precious Stone</b> |            |          |            |          |            |          |            |          |            |          |
| Gold metal (unit : gram)                  | 4,292,946  | 6,039.9  | -          | -        | -          | -        | -          | -        | -          | -        |
| Silver metal (unit : gram)                | 35,953,635 | 712.5    | -          | -        | -          | -        | -          | -        | -          | -        |
| Total                                     |            | 6,752.4  |            | -        |            | -        |            | -        |            | -        |
| %                                         |            | 7.69     |            | -        |            | -        |            | -        |            | -        |
| <b>Light Metals and Rare Earth</b>        |            |          |            |          |            |          |            |          |            |          |
| Ilmenite                                  | -          | -        | 8          | 0.1      | 41         | 0.4      | 117        | 1.1      | 153        | 1.5      |
| Total                                     |            | -        |            | 0.1      |            | 0.4      |            | 1.1      |            | 1.5      |
| %                                         |            | -        |            | -        |            | -        |            | -        |            | -        |
| <b>Cement Industrial Minerals</b>         |            |          |            |          |            |          |            |          |            |          |
| Anhydrite                                 | 1,340,213  | 889.9    | 1,392,693  | 896.1    | 1,517,228  | 904.2    | 1,419,587  | 838.7    | 1,266,826  | 740.7    |
| Cement Clay                               | 4,506,878  | 405.6    | 4,254,783  | 387.2    | 5,837,807  | 525.4    | 7,455,441  | 671.0    | 7,205,870  | 648.5    |
| Gypsum (unground)                         | 10,460,598 | 6,910.0  | 9,253,951  | 5,960.7  | 9,680,429  | 5,767.1  | 8,367,700  | 4,903.7  | 8,024,333  | 4,684.3  |
| Limestone                                 | 70,422,450 | 17,605.6 | 68,023,847 | 17,006.0 | 64,302,502 | 16,075.6 | 65,273,761 | 16,318.4 | 65,198,605 | 16,299.7 |
| Marl                                      | -          | -        | 8,200      | 0.7      | 28,707     | 2.4      | 38,575     | 3.3      | 8,000      | 0.7      |
| Shale                                     | 7,590,072  | 1,897.5  | 6,505,772  | 1,626.4  | 6,715,747  | 1,678.9  | 4,953,083  | 1,238.3  | 3,222,830  | 805.7    |
| Total                                     |            | 27,708.6 |            | 25,877.1 |            | 24,953.6 |            | 23,973.4 |            | 23,179.6 |
| %                                         |            | 31.58    |            | 33.52    |            | 32.37    |            | 32.13    |            | 31.80    |
| <b>Ceramic Industrial Minerals</b>        |            |          |            |          |            |          |            |          |            |          |
| Ball clay                                 | 136,646    | 75.2     | 157,093    | 86.4     | 579,565    | 318.8    | 332,786    | 183.0    | 25,777     | 14.2     |
| Ceramic Clay                              | 371,686    | 204.4    | 357,982    | 196.9    | 485,853    | 267.2    | 378,086    | 207.9    | 403,677    | 222.0    |
| Dolomite                                  | 3,034,860  | 1,669.2  | 2,988,336  | 1,643.6  | 3,440,193  | 1,892.1  | 2,941,685  | 1,617.9  | 3,772,735  | 2,075.0  |

## Mineral Production of Thailand 2016 - 2020

Quantity : Tonnes  
Value : Million Baht

| Mineral                                   | 2016      |         | 2017       |         | 2018      |         | 2019      |         | 2020      |         |
|-------------------------------------------|-----------|---------|------------|---------|-----------|---------|-----------|---------|-----------|---------|
|                                           | Quantity  | Value   | Quantity   | Value   | Quantity  | Value   | Quantity  | Value   | Quantity  | Value   |
| <b><u>Ceramic Industrial Minerals</u></b> |           |         |            |         |           |         |           |         |           |         |
| Feldspar                                  |           |         |            |         |           |         |           |         |           |         |
| - Sodium (ground)                         | -         | -       | -          | -       | -         | -       | -         | -       | 6,204     | 8.7     |
| - Sodium (unground)                       | 1,163,947 | 814.8   | 1,385,925  | 970.1   | 1,117,803 | 782.5   | 1,253,143 | 877.2   | 1,099,140 | 769.4   |
| Glass sand                                | 1,102,699 | 1,091.7 | 17,563,088 | 1,738.7 | 1,557,218 | 1,541.6 | 1,224,758 | 1,212.5 | 1,227,659 | 1,215.4 |
| Kaolin                                    |           |         |            |         |           |         |           |         |           |         |
| - Filler                                  | -         | -       | -          | -       | 13,771    | 26.2    | 11,638    | 22.1    | 16,269    | 30.9    |
| - Unwashed                                | 830,393   | 319.7   | 401,450    | 154.6   | 403,225   | 155.2   | 960,194   | 369.7   | 594,850   | 229.0   |
| - Washed                                  | 101,618   | 97.6    | 103,659    | 98.6    | 96,666    | 92.8    | 80,776    | 77.5    | 70,981    | 68.1    |
| Quartz                                    |           |         |            |         |           |         |           |         |           |         |
| - Unground                                | 33,840    | 25.4    | 11,700     | 8.8     | 67,802    | 50.9    | 55,341    | 41.5    | 31,500    | 23.6    |
| Total                                     |           | 4,298.0 |            | 4,897.7 |           | 5,127.3 |           | 4,609.3 |           | 4,656.3 |
| %                                         |           | 4.90    |            | 6.34    |           | 6.65    |           | 6.18    |           | 6.38    |
| <b><u>Dimension Stone</u></b>             |           |         |            |         |           |         |           |         |           |         |
| Gneiss                                    | -         | -       | 485        | 1.9     | 1,180     | 4.7     | -         | -       | -         | -       |
| Granite                                   | 5,524*    | 32.0    | 5,367*     | 34.9    | 5,114*    | 32.2    | 18,668*   | 117.3   | 2,386*    | 12.4    |
| Limestone                                 | -         | -       | 43         | 0.1     | 3,765     | 7.5     | 4,087     | 8.2     | -         | -       |
| Marble                                    | 12,104*   | 49.6    | 16,656*    | 68.3    | 7,681*    | 34.6    | 12,226*   | 55.3    | 6,143*    | 29.2    |

## Mineral Production of Thailand 2016 - 2020

Quantity : Tonnes  
Value : Million Baht

| Mineral                       | 2016        |          | 2017        |          | 2018        |          | 2019        |          | 2020        |          |
|-------------------------------|-------------|----------|-------------|----------|-------------|----------|-------------|----------|-------------|----------|
|                               | Quantity    | Value    | Quantity    | Value    | Quantity    | Value    | Quantity    | Value    | Quantity    | Value    |
| <b><u>Dimension Stone</u></b> |             |          |             |          |             |          |             |          |             |          |
| Sandstone                     | 560         | 0.4      | 2,460       | 1.7      | 826         | 0.6      | -           | -        | -           | -        |
| Serpentine                    | -           | -        | -           | -        | 29,384      | 4.4      | 117,473     | 17.6     | 5,013       | 0.8      |
| Travertine                    | 2,600       | 5.2      | 1,969       | 3.9      | 1,628       | 3.3      | 2,494       | 8.5      | 696         | 3.1      |
| Total                         |             | 87.2     |             | 110.8    |             | 87.3     |             | 206.9    |             | 45.5     |
| %                             |             | 0.10     |             | 0.14     |             | 0.11     |             | 0.28     |             | 0.06     |
| <b><u>Industrial Rock</u></b> |             |          |             |          |             |          |             |          |             |          |
| Andesite                      | 815,115     | 163.0    | 1,174,854   | 234.9    | 1,264,963   | 252.9    | 985,751     | 197.2    | 2,428,606   | 485.7    |
| Basalt                        | 13,547,442  | 2,709.5  | 12,772,085  | 2,554.4  | 14,301,581  | 2,860.3  | 13,482,817  | 2,696.6  | 13,674,328  | 2,734.9  |
| Granite                       | 9,458,745   | 1,891.8  | 9,035,991   | 1,807.2  | 11,280,995  | 2,256.2  | 13,819,507  | 2,763.9  | 14,760,209  | 2,952.0  |
| Graywacke                     | 1,055,349   | 211.1    | 1,607,696   | 321.5    | 1,276,366   | 255.3    | 1,432,288   | 286.5    | 1,375,255   | 275.1    |
| Limestone                     | 100,456,800 | 18,082.2 | 100,960,229 | 18,172.8 | 107,652,039 | 19,377.4 | 105,857,560 | 19,054.4 | 106,005,373 | 19,080.9 |
| Marble (fragment)             | 1,003,472*  | 469.6    | 762,762*    | 396.6    | 1,195,441*  | 621.6    | 312,469*    | 162.5    | 176,540*    | 91.8     |
| Perlite                       | 15,690      | 23.5     | 5,800       | 8.7      | 5,600       | 8.4      | 15,000      | 22.5     | 3,500       | 5.3      |
| Quartzite                     | 16,320      | 3.3      | 164,383     | 32.9     | -           | -        | -           | -        | -           | -        |
| Rhyolite                      | 833,793     | 125.1    | 696,503     | 104.5    | 637,499     | 95.6     | 1,153,507   | 173.0    | 778,997     | 116.8    |
| Sandstone                     | 836,574     | 125.5    | 369,530     | 55.4     | 762,529     | 114.4    | 1,209,088   | 181.4    | 1,217,789   | 182.7    |
| Total                         |             | 23,804.6 |             | 23,688.9 |             | 25,842.1 |             | 25,538.0 |             | 25,925.2 |
| %                             |             | 27.13    |             | 30.68    |             | 33.53    |             | 34.22    |             | 35.73    |

## Mineral Production of Thailand 2016 - 2020

Quantity : Tonnes  
Value : Million Baht

| Mineral                          | 2016      |                 | 2017      |                 | 2018      |                 | 2019      |                 | 2020      |                 |
|----------------------------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|
|                                  | Quantity  | Value           | Quantity  | Value           | Quantity  | Value           | Quantity  | Value           | Quantity  | Value           |
| <b>Other Industrial Minerals</b> |           |                 |           |                 |           |                 |           |                 |           |                 |
| Barite                           |           |                 |           |                 |           |                 |           |                 |           |                 |
| - Chemical grade (ground)        | 2,232     | 13.8            | 1,563     | 14.8            | 1,647     | 15.9            | 1,757     | 17.0            | 1,260     | 12.2            |
| - Drilling mud (ground)          | 155,799   | 606.8           | 105,000   | 489.3           | 52,694    | 246.1           | 31,557    | 147.4           | -         | -               |
| - Unground                       | 65,070    | 96.6            | 41,391    | 61.5            | 13,149    | 19.5            | 330       | 0.5             | 21,134    | 31.4            |
| Calcite                          | 1,452,235 | 1,089.2         | 1,456,747 | 1,092.6         | 1,467,822 | 1,100.9         | 1,440,030 | 1,080.0         | 1,430,044 | 1,072.5         |
| Dickite                          | -         | -               | -         | -               | -         | -               | 5,000     | 3.0             | -         | -               |
| Dolomitic Marl                   | -         | -               | -         | -               | 6,920     | 2.4             | 1,585     | 0.6             | -         | -               |
| Fluorite (metallurgical grade)   | 20,100    | 120.2           | 5,500     | 26.8            | 16,700    | 80.9            | 22,247    | 107.2           | 9,807     | 50.0            |
| Limestone                        | 6,465,749 | 1,616.4         | 7,519,555 | 1,879.9         | 9,261,332 | 2,315.3         | 8,909,080 | 2,227.3         | 7,222,187 | 1,805.5         |
| Phosphate                        | -         | -               | 8,000     | 3.3             | -         | -               | -         | -               | -         | -               |
| Pyrophyllite                     | 96,800    | 58.1            | 54,000    | 32.4            | 50,920    | 30.6            | 6,500     | 3.9             | 31,522    | 18.9            |
| Rock salt                        | 1,390,548 | 2,711.6         | 1,497,223 | 2,919.6         | 1,487,364 | 2,900.4         | 1,580,390 | 3,081.8         | 1,439,877 | 2,807.8         |
| Talc (unground)                  | 7,126     | 4.3             | 7,436     | 4.5             | 7,756     | 4.7             | 8,064     | 4.8             | 6,624     | 3.9             |
| Total                            |           | 6,317.0         |           | 6,524.7         |           | 6,716.7         |           | 6,673.5         |           | 5,802.2         |
| %                                |           | 7.20            |           | 8.45            |           | 8.71            |           | 8.94            |           | 7.96            |
| <b>Grand Total</b>               |           | <b>87,746.4</b> |           | <b>77,206.6</b> |           | <b>77,081.6</b> |           | <b>74,617.1</b> |           | <b>72,738.8</b> |

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

## Mineral Export of Thailand 2016 - 2020

Quantity : Tonnes

Value : million Baht

| Mineral                            | 2016     |         | 2017     |         | 2018     |         | 2019     |         | 2020     |         |
|------------------------------------|----------|---------|----------|---------|----------|---------|----------|---------|----------|---------|
|                                    | Quantity | Value   | Quantity | Value   | Quantity | Value   | Quantity | Value   | Quantity | Value   |
| <b><u>Iron and Ferro Alloy</u></b> |          |         |          |         |          |         |          |         |          |         |
| Iron ore                           | 57,668   | 61.3    | 9,178    | 18.6    | 37,582   | 73.4    | 216,643  | 413.5   | 204,639  | 418.9   |
| Manganese (metallurgical grade)    | 31,954   | 79.5    | 39,963   | 78.7    | 73,638   | 115.0   | 144,199  | 397.3   | 95,807   | 257.8   |
| Tungsten                           |          |         |          |         |          |         |          |         |          |         |
| - Scheelite                        | 18       | 6.6     | 40       | 14.1    | 66       | 30.2    | 36       | 17.3    | -        | -       |
| - Wolfram                          | -        | -       | -        | -       | -        | -       | 15       | 0.7     | -        | -       |
| Total                              |          | 147.4   |          | 111.4   |          | 218.6   |          | 828.8   |          | 676.7   |
| %                                  |          | 0.73    |          | 0.86    |          | 1.70    |          | 6.26    |          | 5.68    |
| <b><u>Base Metals</u></b>          |          |         |          |         |          |         |          |         |          |         |
| Antimony ore                       | 3,906    | 95.4    | 1,399    | 21.6    | 2,022    | 86.8    | 3,624    | 64.9    | 727      | 20.4    |
| Tin                                |          |         |          |         |          |         |          |         |          |         |
| - Final slag                       | 1,018    | 36.4    | 957      | 47.8    | 526      | 42.9    | 1,716    | 80.9    | 797      | 27.9    |
| - Hard head                        | 421      | 137.0   | 192      | 70.8    | 138      | 21.7    | 341      | 30.1    | 656      | 84.4    |
| - Metallic residue                 | -        | -       | -        | -       | -        | -       | -        | -       | -        | -       |
| - Tin-lead alloy                   | 4        | 2.0     | 28       | 13.6    | 12       | 5.2     | 2        | 1.1     | -        | -       |
| - Tin metal                        | 7,824    | 4,989.2 | 7,614    | 5,345.5 | 8,112    | 5,424.9 | 8,862    | 5,411.1 | 9,547    | 5,373.6 |
| - Tin slime                        | -        | -       | -        | -       | -        | -       | -        | -       | -        | -       |
| - Tin dross                        | -        | -       | 2        | 0.8     | -        | -       | -        | -       | -        | -       |
| - Copper dross                     | 59       | 23.2    | -        | -       | 12       | 4.8     | 21       | 10.1    | -        | -       |
| - Copper powder                    | -        | -       | 1        | 0.4     | -        | -       | -        | -       | -        | -       |
| - Bismuth Slime                    | -        | -       | 1        | 1.7     | 3        | 4.6     | 710      | 10.6    | 6        | 25.6    |
| <b><u>Base Metals</u></b>          |          |         |          |         |          |         |          |         |          |         |
| Zinc                               |          |         |          |         |          |         |          |         |          |         |
| - Zinc alloy                       | 382      | 26.1    | 1,050    | 92.7    | 987      | 83.4    | 1,158    | 93.8    | 1,048    | 72.7    |
| - Zinc metal                       | 3,284    | 220.6   | 799      | 68.1    | 2,324    | 234.1   | 643      | 46.2    | 1,648    | 99.3    |
| Total                              |          | 5,529.9 |          | 5,663.0 |          | 5,908.4 |          | 5,748.8 |          | 5,703.9 |
| %                                  |          | 27.46   |          | 43.97   |          | 45.82   |          | 43.39   |          | 47.90   |



## Mineral Export of Thailand 2016 - 2020

Quantity : Tonnes

Value : million Baht

| Mineral                                          | 2016       |         | 2017      |         | 2018      |         | 2019      |         | 2020      |         |
|--------------------------------------------------|------------|---------|-----------|---------|-----------|---------|-----------|---------|-----------|---------|
|                                                  | Quantity   | Value   | Quantity  | Value   | Quantity  | Value   | Quantity  | Value   | Quantity  | Value   |
| <b><u>Precious Metals and Precious Stone</u></b> |            |         |           |         |           |         |           |         |           |         |
| Garnet                                           | -          | -       | 6,868     | 43.5    | 4,600     | 46.5    | 539       | 2.7     | -         | -       |
| Gold metal (unit : gram)                         | 4,292,946  | 6,039.9 | -         | -       | -         | -       | -         | -       | -         | -       |
| Silver metal (unit : gram)                       | 35,953,635 | 712.5   | -         | -       | -         | -       | -         | -       | -         | -       |
| Total                                            |            | 6,752.4 |           | 43.5    |           | 46.5    |           | 2.7     |           | -       |
| %                                                |            | 33.53   |           | 0.34    |           | 0.36    |           | 0.02    |           | -       |
| <b><u>Light Metals and Rare Earth</u></b>        |            |         |           |         |           |         |           |         |           |         |
| Columbite-tantalite                              | -          | -       | -         | -       | -         | -       | -         | -       | -         | -       |
| Ilmenite                                         | 276        | 2.4     | -         | -       | 8         | 0.1     | 20        | 1.4     | 24        | 0.1     |
| Leucoxene                                        | 5,985      | 148.8   | 3,994     | 127.6   | 1,278     | 45.8    | 1,193     | 40.4    | 2,906     | 70.6    |
| Monazite                                         | 2,620      | 110.9   | 2,150     | 216.4   | 865       | 85.7    | 162       | 13.4    | 42        | 3.1     |
| Rutile                                           | 226        | 7.7     | 965       | 21.2    | 364       | 7.8     | 29        | 1.0     | -         | -       |
| Struverite                                       | 100        | 20.7    | 298       | 65.2    | 128       | 41.3    | -         | -       | 31        | 7.9     |
| Xenotime                                         | -          | -       | 30        | 1.5     | -         | -       | -         | -       | -         | -       |
| Zircon                                           | 9,030      | 250.4   | 7,439     | 237.1   | 3,703     | 135.7   | 2,104     | 69.7    | 84        | 1.3     |
| Total                                            |            | 540.9   |           | 669.0   |           | 316.4   |           | 125.9   |           | 83.0    |
| %                                                |            | 2.68    |           | 5.20    |           | 2.45    |           | 0.95    |           | 0.70    |
| <b><u>Cement Industrial Minerals</u></b>         |            |         |           |         |           |         |           |         |           |         |
| Anhydrite                                        | 1,350,250  | 880.2   | 1,449,160 | 896.2   | 1,528,207 | 913.3   | 1,366,080 | 797.7   | 1,366,877 | 813.1   |
| Gypsum                                           |            |         |           |         |           |         |           |         |           |         |
| - Ground                                         | 1,435      | 6.1     | 6,880     | 11.1    | 62,620    | 45.1    | 97,290    | 63.5    | 72,360    | 48.6    |
| - Unground                                       | 6,460,030  | 4,329.6 | 5,731,950 | 3,663.7 | 5,633,845 | 3,622.8 | 5,194,388 | 3,141.1 | 4,508,517 | 2,878.6 |
| Total                                            |            | 5,215.9 |           | 4,571.0 |           | 4,581.2 |           | 4,002.3 |           | 3,740.3 |
| %                                                |            | 25.90   |           | 35.49   |           | 35.53   |           | 30.21   |           | 31.41   |

## Mineral Export of Thailand 2016 - 2020

Quantity : Tonnes

Value : million Baht

| Mineral                                   | 2016      |         | 2017      |         | 2018      |         | 2019      |         | 2020      |         |
|-------------------------------------------|-----------|---------|-----------|---------|-----------|---------|-----------|---------|-----------|---------|
|                                           | Quantity  | Value   | Quantity  | Value   | Quantity  | Value   | Quantity  | Value   | Quantity  | Value   |
| <b><u>Ceramic Industrial Minerals</u></b> |           |         |           |         |           |         |           |         |           |         |
| Ball clay                                 | 13,338    | 63.9    | 13,850    | 61.1    | 21,853    | 97.9    | 12,858    | 56.3    | 9,033     | 34.2    |
| Dolomite                                  |           |         |           |         |           |         |           |         |           |         |
| - Ground                                  | 4,640     | 7.4     | 820       | 0.2     | 40        | 0.4     | 814       | 0.9     | 142       | 0.8     |
| - Unground                                | 1,261,885 | 547.4   | 1,080,416 | 487.2   | 1,269,600 | 508.7   | 1,168,785 | 394.4   | 1,392,030 | 479.6   |
| Feldspar                                  |           |         |           |         |           |         |           |         |           |         |
| - Potassium (unground)                    |           |         | 37,350    | 30.7    | -         | -       | -         | -       | -         | -       |
| - Sodium (ground)                         | 638,497   | 569.4   | 660,876   | 579.5   | 699,913   | 593.4   | 1,135,031 | 1,396.7 | 823,294   | 637.1   |
| Kaolin                                    |           |         |           |         |           |         |           |         |           |         |
| - Filler                                  | 66        | 0.5     | 136       | 1.2     | 284       | 2.7     | 602       | 3.7     | 447       | 3.1     |
| - Washed                                  | 13,785    | 82.1    | 17,340    | 100.8   | 15,850    | 93.2    | 17,513    | 95.6    | 19,087    | 118.9   |
| Total                                     |           | 1,270.7 |           | 1,260.7 |           | 1,296.3 |           | 1,947.6 |           | 1,273.7 |
| %                                         |           | 6.31    |           | 9.79    |           | 10.05   |           | 14.70   |           | 10.70   |
| <b><u>Industrial Rock</u></b>             |           |         |           |         |           |         |           |         |           |         |
| Granite (industrial rock)                 | 149,995   | 36.1    | 419,320   | 93.3    | 212,100   | 35.8    | 444,261   | 89.9    | 128,400   | 35.4    |
| Gravel (industrial rock)                  | 144       | 0.8     | 528       | 2.4     | 250       | 1.0     | 270       | 1.2     | 48        | 0.2     |
| Limestone (industrial rock-constructi     | 611,270   | 271.0   | 546,023   | 219.6   | 237,996   | 236.4   | 423,654   | 187.1   | 267,095   | 118.4   |
| Sand stone (industrial rock)              | -         | -       | -         | -       | 5,000     | 2.0     | -         | -       | -         | -       |
| Total                                     |           | 307.9   |           | 315.3   |           | 275.2   |           | 278.2   |           | 154.0   |
| %                                         |           | 1.53    |           | 2.45    |           | 2.13    |           | 2.10    |           | 1.29    |
| <b><u>Other Industrial Minerals</u></b>   |           |         |           |         |           |         |           |         |           |         |
| Barite                                    |           |         |           |         |           |         |           |         |           |         |
| - Chemical grade (ground)                 | 16,506    | 94.2    | 3,094     | 22.8    | 1,731     | 18.4    | 1,230     | 12.3    | 1,260     | 14.2    |
| - Drilling mud (ground)                   | 26,541    | 69.9    | 9,939     | 53.8    | 5,452     | 32.8    | 527       | 3.5     | -         | -       |
| - Unground                                | 6,331     | 31.8    | 3,674     | 18.8    | -         | -       | -         | -       | -         | -       |

## Mineral Export of Thailand 2016 - 2020

Quantity : Tonnes

Value : million Baht

| Mineral                            | 2016     |                 | 2017     |                 | 2018     |                 | 2019     |                 | 2020     |                 |
|------------------------------------|----------|-----------------|----------|-----------------|----------|-----------------|----------|-----------------|----------|-----------------|
|                                    | Quantity | Value           | Quantity | Value           | Quantity | Value           | Quantity | Value           | Quantity | Value           |
| Diatomite                          |          |                 |          |                 |          |                 | 72       | 0.1             | -        | -               |
| Fluorite (metallurgical grade)     | 32,174   | 174.2           | 20,723   | 111.5           | 38,479   | 186.2           | 45,683   | 256.3           | 38,372   | 226.7           |
| Limestone (industrial rock-others) | 387      | 1.6             | 14,905   | 28.3            | 3,652    | 8.7             | 16,809   | 30.9            | 3,865    | 8.4             |
| Pyrophyllite                       | 852      | 3.2             | 2,762    | 9.7             | 1,606    | 6.3             | 3,215    | 12.3            | 4,944    | 18.8            |
| Serpentine (industrial rock)       | -        | -               | -        | -               | -        | -               | -        | -               | 11,000   | 7.7             |
| Total                              |          | 374.9           |          | 244.9           |          | 252.4           |          | 315.4           |          | 275.8           |
| %                                  |          | 1.86            |          | 1.90            |          | 1.96            |          | 2.38            |          | 2.32            |
| <b>Grand Total</b>                 |          | <b>20,140.0</b> |          | <b>12,878.8</b> |          | <b>12,895.0</b> |          | <b>13,249.7</b> |          | <b>11,907.4</b> |

## Mineral Consumption of Thailand 2016 - 2020

Quantity : Tonnes  
Value : Million Baht

| Mineral                                  | 2016       |          | 2017       |          | 2018       |          | 2019       |          | 2020       |          |
|------------------------------------------|------------|----------|------------|----------|------------|----------|------------|----------|------------|----------|
|                                          | Quantity   | Value    | Quantity   | Value    | Quantity   | Value    | Quantity   | Value    | Quantity   | Value    |
| <b><u>Mineral Fuels and Energy</u></b>   |            |          |            |          |            |          |            |          |            |          |
| Lignite                                  | 16,869,269 | 16,194.5 | 16,240,637 | 15,591.0 | 14,417,889 | 13,841.2 | 13,973,815 | 13,414.9 | 13,404,786 | 12,868.6 |
| Total                                    |            | 16,194.5 |            | 15,591.0 |            | 13,841.2 |            | 13,414.9 |            | 12,868.6 |
| %                                        |            | 20.75    |            | 20.26    |            | 19.53    |            | 18.81    |            | 18.90    |
| <b><u>Iron and Ferro Alloy</u></b>       |            |          |            |          |            |          |            |          |            |          |
| Iron ore                                 | -          | -        | -          | -        | -          | -        | 192,441    | 434.9    | 61,151     | 138.2    |
| Manganese (metallurgical grade)          | 2,566      | 10.6     | 30         | 0.2      | 2,310      | 12.3     | 2,016      | 10.7     | 884        | 4.7      |
| Total                                    |            | 10.6     |            | 0.2      |            | 12.3     |            | 445.6    |            | 142.9    |
| %                                        |            | 0.01     |            | -        |            | 0.02     |            | 0.63     |            | 0.21     |
| <b><u>Base Metals</u></b>                |            |          |            |          |            |          |            |          |            |          |
| Tin                                      |            |          |            |          |            |          |            |          |            |          |
| - Tin metal                              | 3,132      | 1,976.2  | 3,564      | 2,430.6  | 2,545      | 1,545.2  | 1,945      | 1,137.9  | 1,756      | 934.0    |
| - Tin-lead alloy                         | -          | -        | -          | -        | -          | -        | -          | -        | -          | -        |
| Zinc                                     |            |          |            |          |            |          |            |          |            |          |
| - Zinc alloy                             | 23,697     | 1,908.9  | 17,675     | 1,877.1  | -          | -        | -          | -        | -          | -        |
| - Zinc metal                             | 33,063     | 2,390.7  | 14,604     | 1,430.2  | -          | -        | -          | -        | -          | -        |
| Total                                    |            | 6,275.9  |            | 5,737.9  |            | 1,545.2  |            | 1,137.9  |            | 934.0    |
| %                                        |            | 8.04     |            | 7.46     |            | 2.18     |            | 1.60     |            | 1.37     |
| <b><u>Cement Industrial Minerals</u></b> |            |          |            |          |            |          |            |          |            |          |
| Anhydrite                                | -          | -        | 102        | 0.1      | -          | -        | 4,546      | 2.6      | 10,871     | 6.4      |
| Cement clay                              | 4,278,942  | 385.1    | 3,142,781  | 282.9    | 5,786,258  | 520.8    | 8,630,270  | 776.7    | 6,696,958  | 602.7    |
| Gypsum (unground)                        | 4,077,140  | 2,707.2  | 3,798,078  | 2,449.5  | 4,207,417  | 2,506.2  | 4,051,629  | 2,370.7  | 3,537,593  | 2,066.0  |

## Mineral Consumption of Thailand 2016 - 2020

Quantity : Tonnes

Value : Million Baht

| Mineral                                          | 2016       |          | 2017       |          | 2018       |          | 2019       |          | 2020       |          |
|--------------------------------------------------|------------|----------|------------|----------|------------|----------|------------|----------|------------|----------|
|                                                  | Quantity   | Value    | Quantity   | Value    | Quantity   | Value    | Quantity   | Value    | Quantity   | Value    |
| <b><u>Cement Industrial Minerals (cont.)</u></b> |            |          |            |          |            |          |            |          |            |          |
| Limestone                                        | 70,790,395 | 17,697.6 | 73,124,917 | 18,281.2 | 66,707,813 | 16,677.0 | 64,324,112 | 16,081.0 | 60,942,224 | 15,235.6 |
| Marl                                             | 5,000      | 0.4      | 10,600     | 0.9      | 41,451     | 3.5      | 26,259     | 2.2      | 19,374     | 1.6      |
| Shale                                            | 7,615,048  | 1,903.8  | 6,527,217  | 1,631.8  | 5,015,765  | 1,253.9  | 5,146,264  | 1,286.6  | 3,269,369  | 817.3    |
| Total                                            |            | 22,694.1 |            | 22,646.4 |            | 20,961.4 |            | 20,519.8 |            | 18,729.6 |
| %                                                |            | 29.08    |            | 29.42    |            | 29.57    |            | 28.78    |            | 27.52    |
| <b><u>Ceramic Industrial Minerals</u></b>        |            |          |            |          |            |          |            |          |            |          |
| Ball clay                                        | 915,326    | 503.4    | 153,677    | 84.5     | 284,563    | 156.5    | 357,420    | 196.6    | 322,490    | 177.4    |
| Ceramic clay                                     | 361,182    | 198.7    | 341,762    | 187.9    | 337,964    | 185.9    | 478,769    | 263.3    | 516,770    | 284.2    |
| Dolomite                                         | 2,263,982  | 1,245.2  | 2,195,261  | 1,207.4  | 2,225,240  | 1,223.9  | 1,718,019  | 944.9    | 2,469,086  | 1,358.0  |
| Feldspar                                         |            |          |            |          |            |          |            |          |            |          |
| - Sodium (ground)                                | 24,080     | 33.7     | 16,254     | 22.8     | 32,598     | 45.6     | 32,762     | 45.9     | 12,541     | 17.6     |
| - Sodium (unground)                              | 229,618    | 160.7    | 496,357    | 347.4    | 441,345    | 308.9    | 857,771    | 600.4    | 634,231    | 444.0    |
| Glass sand                                       | 918,481    | 909.3    | 1,383,058  | 1,369.2  | 1,529,709  | 1,514.4  | 1,206,501  | 1,194.4  | 1,278,387  | 1,265.6  |
| Kaolin                                           |            |          |            |          |            |          |            |          |            |          |
| - Filler                                         | -          | -        | -          | -        | 13,818     | 26.3     | 11,558     | 22.0     | 16,082     | 30.6     |
| - Unwashed                                       | 849,767    | 327.2    | 326,956    | 125.9    | 344,578    | 128.8    | 523,191    | 201.4    | 533,568    | 205.4    |
| - Washed                                         | 113,947    | 109.4    | 115,224    | 110.6    | 102,802    | 98.7     | 94,636     | 90.9     | 85,121     | 81.7     |
| Quartz                                           |            |          |            |          |            |          |            |          |            |          |
| - Unground                                       | 20,320     | 15.2     | 30,011     | 22.5     | 15,818     | 11.9     | 19,290     | 14.5     | 31,500     | 23.6     |
| Total                                            |            | 3,504.8  |            | 3,478.2  |            | 3,700.9  |            | 3,574.3  |            | 3,888.1  |
| %                                                |            | 4.49     |            | 4.52     |            | 5.22     |            | 5.00     |            | 5.72     |

## Mineral Consumption of Thailand 2016 - 2020

Quantity : Tonnes

Value : Million Baht

| Mineral                       | 2016       |          | 2017       |          | 2018        |          | 2019        |          | 2020        |          |
|-------------------------------|------------|----------|------------|----------|-------------|----------|-------------|----------|-------------|----------|
|                               | Quantity   | Value    | Quantity   | Value    | Quantity    | Value    | Quantity    | Value    | Quantity    | Value    |
| <b><u>Dimension Stone</u></b> |            |          |            |          |             |          |             |          |             |          |
| Granite                       | 4,718*     | 27.4     | 3,873*     | 25.2     | 1,352*      | 8.5      | 2,059*      | 12.6     | 2,104*      | 10.9     |
| Limestone                     | -          | -        | 43         | 0.1      | 1,549       | 3.1      | 4,536       | 9.1      | -           | -        |
| Marble                        | 11,400*    | 46.7     | 12,381*    | 50.8     | 7,131*      | 32.1     | 20,344*     | 91.5     | 20,773*     | 98.7     |
| Sand stone                    | 560        | 0.4      | 1,260      | 0.9      | 1,035       | 0.7      | 705         | 0.8      | -           | -        |
| Serpentine                    | -          | -        | -          | -        | 11,892      | 1.8      | -           | -        | -           | -        |
| Travertine                    | 3,600      | 7.2      | 1,990      | 3.9      | 1,326       | 2.7      | 2,493       | 8.5      | 981         | 4.4      |
| Total                         |            | 81.7     |            | 80.9     |             | 48.9     |             | 122.5    |             | 114.0    |
| %                             |            | 0.11     |            | 0.10     |             | 0.07     |             | 0.17     |             | 0.17     |
| <b><u>Industrial Rock</u></b> |            |          |            |          |             |          |             |          |             |          |
| Andesite                      | 789,284    | 157.9    | 890,965    | 178.2    | 1,040,277   | 208.1    | 1,349,235   | 269.8    | 2,177,153   | 435.4    |
| Basalt                        | 12,927,838 | 2,585.6  | 12,822,093 | 2,564.4  | 12,486,969  | 2,497.4  | 12,165,737  | 2,433.1  | 14,390,606  | 2,878.1  |
| Granite                       | 8,392,556  | 1,678.5  | 8,926,182  | 1,785.2  | 11,570,394  | 2,314.1  | 12,287,216  | 2,457.4  | 12,217,021  | 2,443.4  |
| Grawacke                      | 819,237    | 163.8    | 1,546,315  | 309.3    | 1,343,459   | 268.7    | 1,414,867   | 283.0    | 1,402,537   | 280.5    |
| Limestone                     | 98,770,644 | 17,778.7 | 98,991,214 | 17,818.4 | 101,374,147 | 18,247.3 | 102,670,780 | 18,480.7 | 104,245,512 | 18,764.2 |
| Marble (fragment)             | 1,003,471* | 469.6    | 769,531*   | 400.2    | 1,283,400*  | 667.4    | 2,561,204*  | 1,331.8  | 341,324*    | 177.5    |
| Perlite                       | 12,190     | 18.3     | 7,300      | 10.9     | 5,500       | 8.3      | 5,000       | 7.5      | 3,000       | 4.5      |
| Quartzite                     | 20,424     | 4.1      | 174,096    | 34.8     | -           | -        | -           | -        | -           | -        |
| Rhyolite                      | 797,212    | 119.6    | 735,682    | 110.4    | 658,032     | 98.7     | 906,240     | 135.9    | 799,343     | 119.9    |
| Sand stone                    | 814,095    | 122.1    | 362,027    | 54.3     | 554,836     | 83.2     | 1,140,380   | 171.1    | 993,469     | 149.0    |
| Total                         |            | 23,098.2 |            | 23,266.1 |             | 24,393.2 |             | 25,570.3 |             | 25,252.5 |
| %                             |            | 29.59    |            | 30.23    |             | 34.41    |             | 35.87    |             | 37.10    |

## Mineral Consumption of Thailand 2016 - 2020

Quantity : Tonnes

Value : Million Baht

| Mineral                                 | 2016      |                 | 2017      |                 | 2018      |                 | 2019      |                 | 2020      |                 |
|-----------------------------------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|
|                                         | Quantity  | Value           | Quantity  | Value           | Quantity  | Value           | Quantity  | Value           | Quantity  | Value           |
| <b><u>Other Industrial Minerals</u></b> |           |                 |           |                 |           |                 |           |                 |           |                 |
| Barite                                  |           |                 |           |                 |           |                 |           |                 |           |                 |
| - Chemical grade (ground)               | -         | -               | -         | -               | -         | -               | 1,091     | 10.6            | 676       | 6.6             |
| - Drilling mud (ground)                 | 155,179   | 604.4           | 105,000   | 489.3           | 54,221    | 253.2           | 30,745    | 143.6           | -         | -               |
| - Unground                              | 37,017    | 54.9            | 22,320    | 33.1            | 4,522     | 6.7             | 2,199     | 3.3             | 17,456    | 25.9            |
| Calcite                                 | 1,504,067 | 1,128.1         | 1,443,368 | 1,082.5         | 1,408,695 | 1,056.5         | 1,448,141 | 1,086.1         | 1,398,348 | 1,048.8         |
| Diatomite                               | -         | -               | -         | -               | -         | -               | 5,000     | 4.5             | -         | -               |
| Dickite                                 | -         | -               | -         | -               | -         | -               | 3,969     | 2.4             | 6,479     | 3.9             |
| Dolomitic Marl                          | -         | -               | -         | -               | 10,634    | 3.7             | 11,495    | 4.0             | 10,130    | 3.5             |
| Fluorite (metallurgical grade)          | 204       | 1.2             | 1,640     | 7.9             | 500       | 2.4             | 200       | 1.0             | -         | -               |
| Limestone                               | 6,970,446 | 1,742.6         | 6,514,668 | 1,628.7         | 8,487,771 | 2,121.9         | 9,042,913 | 2,260.7         | 8,675,260 | 2,168.8         |
| Phosphate                               | 120       | 0.1             | 8,370     | 3.5             | 590       | 0.2             | -         | -               | -         | -               |
| Pyrophyllite                            | 71,220    | 42.7            | 67,816    | 40.7            | 32,374    | 19.4            | 33,061    | 19.8            | 27,559    | 16.5            |
| Rock salt                               | 1,339,851 | 2,612.7         | 1,475,405 | 2,877.0         | 1,491,766 | 2,908.9         | 1,528,522 | 2,980.6         | 1,465,622 | 2,858.0         |
| Talc (unground)                         | 8,382     | 5.0             | 7,312     | 4.4             | 7,844     | 4.7             | 7,962     | 4.8             | 6,128     | 3.7             |
| Total                                   |           | 6,191.7         |           | 6,167.1         |           | 6,377.6         |           | 6,521.4         |           | 6,135.7         |
| %                                       |           | 7.93            |           | 8.01            |           | 9.00            |           | 9.15            |           | 9.01            |
| <b>Grand Total</b>                      |           | <b>78,051.4</b> |           | <b>76,967.8</b> |           | <b>70,880.7</b> |           | <b>71,306.7</b> |           | <b>68,065.4</b> |

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

# Mineral Import of Thailand 2016 - 2020

Quantity : Tonnes

Value : Million Baht

| Mineral                                | 2016       |          | 2017       |          | 2018       |          | 2019       |          | 2020       |          |
|----------------------------------------|------------|----------|------------|----------|------------|----------|------------|----------|------------|----------|
|                                        | Quantity   | Value    | Quantity   | Value    | Quantity   | Value    | Quantity   | Value    | Quantity   | Value    |
| <b><u>Mineral Fuels and Energy</u></b> |            |          |            |          |            |          |            |          |            |          |
| Anthracite                             | 181,673    | 777.4    | 138,649    | 573.2    | 173,288    | 760.8    | 125,723    | 566.5    | 153,844    | 578.6    |
| Bituminous coal                        | 10,172,204 | 23,061.7 | 9,903,771  | 25,517.0 | 7,877,106  | 21,389.1 | 8,146,105  | 21,748.6 | 8,201,652  | 19,369.4 |
| Coal Solid Fuels from Coal             | 11,335,865 | 17,816.0 | 12,135,732 | 23,170.2 | 16,781,738 | 31,069.9 | 13,009,892 | 22,297.6 | 15,378,874 | 21,537.8 |
| Coke                                   | 30,079     | 338.5    | 32,747     | 448.9    | 18,049     | 335.3    | 19,205     | 330.0    | 17,307     | 234.8    |
| Lignite                                | 91,721     | 120.1    | 198,926    | 209.4    | 245,458    | 231.2    | 382,846    | 347.2    | 147,806    | 132.3    |
| Peat                                   | 15,975     | 133.6    | 20,844     | 177.7    | 17,369     | 148.2    | 18,164     | 132.8    | 20,748     | 161.0    |
| Total                                  |            | 42,247.3 |            | 50,096.4 |            | 53,934.5 |            | 45,422.7 |            | 42,013.9 |
| %                                      |            | 73.00    |            | 75.53    |            | 73.87    |            | 72.83    |            | 73.71    |
| <b><u>Iron and Ferro Alloy</u></b>     |            |          |            |          |            |          |            |          |            |          |
| Chromite ore                           | 2,268      | 28.7     | 2,298      | 37.7     | 2,352      | 48.8     | 1,289      | 19.8     | 1,583      | 16.3     |
| Cobalt ore                             | -          | -        | 0.3        | 0.2      | 0*         | 0.2      | 0*         | 0.3      | 0*         | 0.2      |
| Columbite                              | 25         | 9.8      | 291        | 107.4    | 377        | 209.0    | 357        | 167.4    | 216        | 70.7     |
| Iron ore                               | 2,768      | 13.0     | 4,441      | 23.3     | 5,471      | 20.9     | 712        | 7.6      | 675        | 6.1      |
| Iron pyrites                           | 321        | 5.0      | 265        | 4.1      | 442        | 7.4      | 1,647      | 11.8     | 835        | 7.0      |
| Manganese ore                          | 21,027     | 37.5     | 36,428     | 60.5     | 71,362     | 108.0    | 135,616    | 203.8    | 73,199     | 117.8    |
| Molybdenite ore                        | 11,293     | 967.0    | 13,599     | 916.4    | 12,385     | 1,810.4  | 14,946     | 2,562.5  | 9,247      | 1,330.7  |
| Nickel ore                             | 7.1        | 2.6      | 2          | 0.9      | 2          | 1.2      | 135        | 2.9      | 4          | 2.0      |
| - Other tungsten                       | 0*         | 0.0*     | 553        | 4.8      | -          | -        | -          | -        | -          | -        |
| Total                                  |            | 1,063.6  |            | 1,155.3  |            | 2,205.9  |            | 2,976.1  |            | 1,550.8  |
| %                                      |            | 1.84     |            | 1.74     |            | 3.02     |            | 4.77     |            | 2.72     |



## Mineral Import of Thailand 2016 - 2020

Quantity : Tonnes  
Value : Million Baht

| Mineral                                          | 2016     |         | 2017     |         | 2018     |         | 2019     |         | 2020     |         |
|--------------------------------------------------|----------|---------|----------|---------|----------|---------|----------|---------|----------|---------|
|                                                  | Quantity | Value   | Quantity | Value   | Quantity | Value   | Quantity | Value   | Quantity | Value   |
| <b><u>Base Metals</u></b>                        |          |         |          |         |          |         |          |         |          |         |
| Aluminium ore                                    | 33,712   | 264.5   | 24,325   | 271.3   | 22,213   | 288.9   | 20,453   | 248.7   | 14,911   | 173.2   |
| Antimony ore                                     | 4,143    | 90.3    | 2,184    | 63.2    | 1,914    | 54.5    | 3,989    | 60.5    | 1,361    | 52.8    |
| Copper                                           | 19,868   | 619.9   | 299      | 3.9     | 384      | 3.9     | 142      | 1.2     | 3,403    | 11.4    |
| Lead ore                                         | 42       | 0.7     | 85       | 1.3     | 104      | 5.9     | 98       | 11.0    | 96       | 42.7    |
| Tin ore                                          | 7,870    | 2,738.3 | 10,877   | 4,237.0 | 12,261   | 4,494.3 | 10,559   | 3,586.3 | 16,136   | 4,782.2 |
| Zinc ore                                         | 32,306   | 757.3   | 0.1      | 0.0*    | 318      | 2.6     | 3,414    | 12.6    | 3,265    | 12.1    |
| Total                                            |          | 4,471.0 |          | 4,576.7 |          | 4,850.1 |          | 3,920.3 |          | 5,074.4 |
| %                                                |          | 7.73    |          | 6.90    |          | 6.64    |          | 6.29    |          | 8.90    |
| <b><u>Precious Metals and Precious Stone</u></b> |          |         |          |         |          |         |          |         |          |         |
| Emery                                            | 7,725    | 76.5    | 5,908    | 66.9    | 6,578    | 66.8    | 5,427    | 53.1    | 5,733    | 57.9    |
| Silver ore                                       | 11       | 0.7     | 19       | 1.3     | 8        | 0.7     | -        | -       | 9.0      | 0.7     |
| Total                                            |          | 77.2    |          | 68.2    |          | 67.5    |          | 53.1    |          | 58.6    |
| %                                                |          | 0.13    |          | 0.10    |          | 0.09    |          | 0.09    |          | 0.10    |
| <b><u>Light Metals and Rare Earth</u></b>        |          |         |          |         |          |         |          |         |          |         |
| Ilmenite ore                                     | 222      | 6.8     | 150      | 4.9     | 112      | 4.1     | 120      | 4.8     | 72       | 3.2     |
| Niobium and Vanadium ore                         | 16,278   | 1,657.7 | 6,771    | 1,137.3 | 21,771   | 2,086.3 | 22,344   | 1,242.7 | 61,478   | 1,148.9 |
| Titanium ore                                     |          |         |          |         |          |         |          |         |          |         |
| - Rutile                                         | 4,108    | 129.8   | 2,423    | 75.9    | 2,278    | 82.8    | 4,937    | 210.5   | 4,687    | 214.6   |
| - Leucoxene                                      | 2,960    | 96.9    | 4,382    | 145.1   | 5,080    | 184.4   | 5,760    | 225.4   | 401      | 16.1    |
| - Ilmenite                                       | 1,040    | 15.0    | 960      | 13.5    | 1,020    | 14.3    | 1,400    | 17.7    | 421      | 5.0     |
| - Other Titanium ore                             | 26       | 0.7     | 21       | 0.7     | 5        | 0.2     | 864      | 43.3    | 304      | 13.5    |

## Mineral Import of Thailand 2016 - 2020

Quantity : Tonnes  
Value : Million Baht

| Mineral                                           | 2016     |         | 2017     |         | 2018     |         | 2019     |         | 2020     |         |
|---------------------------------------------------|----------|---------|----------|---------|----------|---------|----------|---------|----------|---------|
|                                                   | Quantity | Value   | Quantity | Value   | Quantity | Value   | Quantity | Value   | Quantity | Value   |
| <b><u>Light Metals and Rare Earth (cont.)</u></b> |          |         |          |         |          |         |          |         |          |         |
| Tantalite                                         | 208      | 360.8   | 658      | 904.5   | 685      | 1,188.0 | 495      | 695.6   | 550      | 691.5   |
| Thorium ore                                       | -        | -       | 0.1      | 0.2     | -        | -       | -        | -       | -        | -       |
| Zirconium ore                                     | 40,659   | 521.1   | 38,529   | 586.0   | 43,565   | 906.3   | 6,416    | 324.4   | 8,368    | 366.6   |
| Total                                             |          | 2,788.8 |          | 2,868.1 |          | 4,466.4 |          | 2,764.4 |          | 2,459.4 |
| %                                                 |          | 4.82    |          | 4.32    |          | 6.12    |          | 4.43    |          | 4.32    |
| <b><u>Cement Industrial Minerals</u></b>          |          |         |          |         |          |         |          |         |          |         |
| Anhydrite                                         | 0*       | 0.0*    | -        | -       | 0*       | 0.0*    | 0*       | 0.1     | 1        | 0.0*    |
| Gypsum                                            | 227      | 3.8     | 214      | 4.4     | 267      | 5.4     | 340      | 6.6     | 288      | 5.9     |
| Limestone                                         | 76,654   | 27.5    | 374,399  | 93.7    | 4,054    | 10.9    | 1,527    | 14.2    | 1,807    | 20.4    |
| Total                                             |          | 31.3    |          | 98.1    |          | 16.3    |          | 20.9    |          | 26.2    |
| %                                                 |          | 0.05    |          | 0.15    |          | 0.02    |          | 0.03    |          | 0.05    |
| <b><u>Ceramic Industrial Minerals</u></b>         |          |         |          |         |          |         |          |         |          |         |
| Andalusite, Kyannite and Silliman                 | 5,849    | 64.5    | 4,324    | 46.5    | 3,196    | 38.6    | 4,402    | 48.9    | 2,566    | 30.3    |
| Attapulgit                                        | 152      | 6.4     | 163      | 5.5     | 86       | 2.9     | 32       | 0.5     | -        | -       |
| Ball Clay                                         | 16,815   | 98.3    | 25,594   | 156.9   | 24,895   | 149.5   | 27,961   | 175.0   | 22,273   | 126.6   |
| Dolomite                                          | 785      | 7.9     | 1,078    | 25.6    | 1,549    | 30.5    | 1,349    | 18.4    | 1,232    | 19.5    |
| Feldspar                                          |          |         |          |         |          |         |          |         |          |         |
| - Potassium, Sodium                               | 29,467   | 106.6   | 34,325   | 123.9   | 30,929   | 103.4   | 21,377   | 77.7    | 22,946   | 86.4    |
| - Other Feldspar                                  | 7,658    | 57.1    | 12,141   | 66.5    | 13,085   | 72.3    | 19,091   | 90.0    | 13,330   | 58.8    |

# Mineral Import of Thailand 2016 - 2020

Quantity : Tonnes  
Value : Million Baht

| Mineral                                           | 2016     |         | 2017     |         | 2018     |         | 2019     |         | 2020     |         |
|---------------------------------------------------|----------|---------|----------|---------|----------|---------|----------|---------|----------|---------|
|                                                   | Quantity | Value   | Quantity | Value   | Quantity | Value   | Quantity | Value   | Quantity | Value   |
| <b><u>Ceramic Industrial Minerals (cont.)</u></b> |          |         |          |         |          |         |          |         |          |         |
| Kaolin                                            |          |         |          |         |          |         |          |         |          |         |
| - Ceramic                                         | 23,810   | 193.3   | 20,539   | 174.4   | 23,250   | 181.0   | 28,916   | 176.0   | 27,496   | 170.5   |
| - Paper                                           | 4,371    | 49.8    | 4,781    | 51.8    | 4,875    | 49.6    | 5,818    | 58.2    | 9,597    | 89.7    |
| - Others                                          | 73,499   | 729.1   | 68,343   | 658.5   | 92,688   | 777.4   | 79,004   | 669.9   | 52,514   | 520.6   |
| Lucite, Nepheline and Nepheline S                 | 409      | 12.4    | 556      | 16.5    | 740      | 24.6    | 537      | 14.5    | 464      | 12.5    |
| Mullite                                           | 1,959    | 34.0    | 2,548    | 44.6    | 2,623    | 50.8    | 2,040    | 34.0    | 1,727    | 27.1    |
| Quartz                                            | 15,578   | 137.4   | 37,216   | 229.2   | 16,867   | 143.3   | 18,576   | 130.2   | 19,855   | 155.2   |
| Silica sand                                       | 143,315  | 277.3   | 190,852  | 380.1   | 156,550  | 477.9   | 150,830  | 446.1   | 86,004   | 340.0   |
| Total                                             |          | 1,774.1 |          | 1,980.0 |          | 2,101.8 |          | 1,939.4 |          | 1,637.2 |
| %                                                 |          | 3.06    |          | 2.99    |          | 2.88    |          | 3.11    |          | 2.87    |
| <b><u>Dimension Stone</u></b>                     |          |         |          |         |          |         |          |         |          |         |
| Ecaussine                                         | -        | -       | 0*       | 0.0*    | 3        | 3.5     | -        | -       | -        | -       |
| Granite                                           | 114,134  | 465.4   | 98,569   | 373.4   | 82,568   | 351.3   | 133,251  | 366.4   | 64,418   | 229.9   |
| Marble                                            | 60,462   | 588.8   | 59,121   | 720.1   | 54,231   | 669.2   | 45,128   | 598.7   | 22,066   | 319.7   |
| Sandstone                                         | 14,182   | 11.2    | 14,871   | 16.1    | 8,023    | 17.9    | 8,097    | 12.5    | 1,882    | 5.6     |
| Serpentine                                        | -        | -       | -        | -       | -        | -       | 27       | 0.1     | 404      | 5.1     |
| Slate                                             | 188      | 2.2     | 51       | 0.5     | 116      | 1.7     | 132      | 1.5     | 76       | 1.0     |
| Travertine                                        | 0*       | 0.0*    | -        | -       | -        | -       | -        | -       | -        | -       |
| Total                                             |          | 1,067.6 |          | 1,110.1 |          | 1,043.6 |          | 979.2   |          | 561.3   |
| %                                                 |          | 1.84    |          | 1.68    |          | 1.43    |          | 1.57    |          | 0.98    |

## Mineral Import of Thailand 2016 - 2020

Quantity : Tonnes  
Value : Million Baht

| Mineral                                 | 2016     |       | 2017     |       | 2018     |       | 2019     |       | 2020     |       |
|-----------------------------------------|----------|-------|----------|-------|----------|-------|----------|-------|----------|-------|
|                                         | Quantity | Value | Quantity | Value | Quantity | Value | Quantity | Value | Quantity | Value |
| <b><u>Industrial Rock</u></b>           |          |       |          |       |          |       |          |       |          |       |
| Basalt                                  | 40,860   | 298.3 | 90,726   | 235.0 | 201,574  | 177.7 | 131,889  | 131.9 | 28,604   | 119.0 |
| Flint                                   | 19,705   | 14.1  | 303,909  | 90.3  | 414,793  | 111.7 | 484,595  | 115.5 | 330,123  | 65.7  |
| Pumice stone                            | 4,727    | 53.2  | 4,829    | 48.0  | 6,332    | 55.9  | 5,699    | 48.7  | 7,167    | 53.3  |
| Vermiculite, Perlite and Chlorites      | 5,239    | 55.0  | 4,827    | 45.5  | 4,286    | 41.3  | 3,736    | 37.1  | 3,957    | 44.3  |
| Total                                   |          | 420.6 |          | 418.8 |          | 386.6 |          | 333.2 |          | 282.3 |
| %                                       |          | 0.73  |          | 0.63  |          | 0.53  |          | 0.54  |          | 0.50  |
| <b><u>Other Industrial Minerals</u></b> |          |       |          |       |          |       |          |       |          |       |
| Apatite (ground)                        | 1,110    | 4.4   | 2,066    | 7.6   | 1,695    | 7.3   | 875      | 3.9   | 3,321    | 9.8   |
| Asbestos                                | 33,898   | 527.3 | 41,060   | 616.2 | 40,453   | 574.6 | 40,171   | 512.2 | 35,072   | 457.7 |
| Barite                                  | 86,651   | 163.0 | 81,133   | 177.1 | 90,092   | 197.0 | 161,560  | 274.1 | 128,380  | 221.7 |
| Bentonite                               | 107,644  | 758.0 | 120,287  | 776.6 | 127,807  | 776.4 | 137,667  | 763.2 | 122,247  | 683.7 |
| Calcite                                 | 30       | 0.1   | 216      | 0.5   | 304      | 0.6   | 1        | 0.0*  | 47       | 0.0*  |
| Chalk                                   | 76       | 1.3   | 41       | 1.1   | 58       | 1.1   | 45       | 0.8   | 58       | 0.9   |
| Epsomite                                | -        | -     | -        | -     | 49       | 0.4   | 58       | 0.5   | 77       | 0.8   |
| Fireclay                                | 1,756    | 19.1  | 1,975    | 18.2  | 1,709    | 16.5  | 1,248    | 12.8  | 836      | 11.9  |
| Fluorite                                | 1,517    | 10.3  | 2,962    | 22.3  | 1,994    | 16.2  | 11,658   | 45.5  | 9,325    | 34.5  |
| Graphite                                | 5,359    | 132.9 | 6,767    | 141.5 | 4,571    | 127.1 | 6,626    | 147.2 | 6,509    | 102.2 |
| Kieserite                               | 5,853    | 30.4  | 8,425    | 35.0  | 4,451    | 25.2  | 3,082    | 17.9  | 3,956    | 17.8  |
| Magnesite                               | 3,232    | 37.5  | 4,303    | 42.0  | 3,396    | 36.7  | 2,346    | 31.1  | 1,559    | 16.7  |
| Mica                                    | 5,979    | 176.2 | 5,828    | 180.0 | 6,162    | 164.8 | 5,835    | 150.7 | 5,118    | 130.1 |
| Orpiment                                | 14.4     | 0.7   | 15.0     | 0.7   | 706      | 4.0   | 1,136    | 7.2   | 1,023    | 7.6   |

## Mineral Import of Thailand 2016 - 2020

Quantity : Tonnes

Value : Million Baht

| Mineral                                  | 2016     |                 | 2017     |                 | 2018     |                 | 2019     |                 | 2020     |                 |
|------------------------------------------|----------|-----------------|----------|-----------------|----------|-----------------|----------|-----------------|----------|-----------------|
|                                          | Quantity | Value           | Quantity | Value           | Quantity | Value           | Quantity | Value           | Quantity | Value           |
| <b>Other Industrial Minerals (cont.)</b> |          |                 |          |                 |          |                 |          |                 |          |                 |
| Phosphate                                |          |                 |          |                 |          |                 |          |                 |          |                 |
| - Ground                                 | 0*       | 0.0*            | 0*       | 0.0*            | 0*       | 0.0*            | -        | -               | -        | -               |
| - Unground                               | 250      | 1.2             | 1        | 0.2             | 1        | 0.5             | 1        | 0.5             | 1        | 0.8             |
| Pyrophyllite                             | -        | -               | -        | -               | 140.0    | 0.9             | 20.0     | 0.1             | 120.0    | 0.8             |
| Rock salt                                | -        | -               | -        | -               | -        | -               | 963.0    | 7.0             | 414.0    | 3.1             |
| Steatite                                 | 495      | 14.8            | 1,501    | 22.3            | 1,269    | 19.5            | 855      | 12.7            | 756      | 11.0            |
| Sulphur                                  | 96,241   | 405.3           | 56,255   | 274.4           | 51,049   | 330.5           | 70,509   | 338.1           | 118,976  | 399.8           |
| Talc                                     | 137,350  | 1,646.5         | 140,289  | 1,634.2         | 141,898  | 1,643.5         | 145,985  | 1,627.7         | 119,903  | 1,219.7         |
| Witherite                                | 253      | 3.8             | 125      | 2.1             | 75       | 1.3             | 125      | 2.1             | 50       | 0.7             |
| Total                                    |          | 3,932.8         |          | 3,952.0         |          | 3,944.1         |          | 3,955.3         |          | 3,331.3         |
| %                                        |          | 6.80            |          | 5.96            |          | 5.40            |          | 6.34            |          | 5.85            |
| <b>Grand Total</b>                       |          | <b>57,874.3</b> |          | <b>66,323.7</b> |          | <b>73,016.8</b> |          | <b>62,364.6</b> |          | <b>56,995.4</b> |

:- 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 2016-2020

unit: Thousand Baht

| Mineral                    | 2016       | 2017       | 2018       | 2019      | 2020       |
|----------------------------|------------|------------|------------|-----------|------------|
| Andesite (Industrial rock) | 11,329.83  | 10,984.60  | 13,141.55  | 11,707.34 | 16,084.78  |
| Anhydrite                  | 36,694.07  | 35,320.16  | 41,973.14  | 56,235.23 | 56,376.10  |
| Antimony                   | 4.62       | -          | -          | -         | -          |
| Ball clay                  | 22,556.50  | 3,915.36   | 8,270.38   | 8,606.01  | 7,488.53   |
| Barite                     |            |            |            |           |            |
| - Chemical grade (ground)  | 473.23     | 413.99     | 725.59     | 1,058.15  | 1,216.10   |
| - Drilling mud (ground)    | 12,988.19  | 7,753.64   | 5,660.69   | 2,947.42  | -          |
| - Unground                 | 6,462.05   | 3,894.90   | 3,147.50   | 154.47    | 1,772.56   |
| Basalt (Industrial rock)   | 112,266.03 | 106,241.04 | 108,960.63 | 99,568.75 | 117,737.85 |
| Calcite                    | 46,154.47  | 47,516.31  | 46,329.00  | 44,968.78 | 42,206.40  |
| Cement clay                | 21,009.58  | 17,631.17  | 22,216.41  | 34,609.45 | 21,995.29  |
| Ceramic clay               | 7,863.02   | 7,614.24   | 7,474.90   | 11,323.03 | 11,424.58  |
| Diatomite                  | -          | -          | -          | 93.24     | -          |
| Dickite (Industrial grade) | -          | -          | -          | -         | 222.00     |
| Dolomite                   | 65,082.80  | 68,208.39  | 92,772.92  | 99,881.80 | 104,528.45 |
| Dolomitic Marl             | 5.73       | 14.70      | 128.83     | 172.39    | 158.30     |
| Feldspar                   |            |            |            |           |            |
| - Potassium (ground)       | 110.88     | 50.88      | 38.54      | -         | -          |
| - Potassium (unground)     | 21.15      | -          | -          | -         | -          |
| - Sodium (ground)          | 8,142.04   | 7,356.54   | 5,298.94   | 1,283.81  | 1,550.72   |
| - Sodium (unground)        | 20,935.57  | 34,775.97  | 36,442.42  | 51,371.60 | 50,410.23  |
| Final Slag                 | 61.04      | 58.36      | -          | -         | -          |
| Fluorite                   | 19,421.87  | 8,396.30   | 13,517.19  | 17,213.32 | 13,812.05  |
| Garnet                     | -          | -          | -          | 88.20     | 67.20      |
| Glass sand                 | 46,758.85  | 65,396.63  | 55,784.18  | 54,895.62 | 52,228.24  |
| Gneiss (Dimension stone)   | 5.92       | 19.20      | 126.40     | 78.80     | 1,165.50   |
| Gold Metal                 | 519,865.28 | -          | -          | -         | -          |

# Mineral Royalty of Thailand 2016-2020

unit: Thousand Baht

| Mineral                         | 2016         | 2017         | 2018         | 2019         | 2020         |
|---------------------------------|--------------|--------------|--------------|--------------|--------------|
| Granite                         |              |              |              |              |              |
| - Dimension stone               | 1,605.07     | 1,062.20     | 1,380.47     | 2,235.95     | 1,745.81     |
| - Industrial rock-construction  | 74,615.55    | 76,453.35    | 103,165.54   | 111,884.00   | 107,552.91   |
| - Industrial rock-ceramic       | 448.00       | -            | 320.00       | -            | -            |
| Graywacke                       | 7,891.04     | 12,146.72    | 9,539.60     | 11,416.95    | 12,065.30    |
| Gypsum                          | 274,757.14   | 246,463.94   | 253,447.10   | 307,174.30   | 255,591.10   |
| Ilmenite                        | -            | 955.00       | 555.05       | -            | -            |
| Iron Ore                        | 327.60       | 2,169.30     | 2,286.48     | 25,453.75    | 38,426.66    |
| Kaolin                          |              |              |              |              |              |
| - Filler                        | 2,091.85     | 2,097.60     | 1,425.23     | 1,311.51     | 1,475.41     |
| - Unwashed                      | 11,976.61    | 4,695.77     | 5,380.49     | 8,093.26     | 8,717.32     |
| - Washed                        | 4,944.95     | 4,430.05     | 4,177.75     | 4,344.13     | 4,251.10     |
| - Washed < 75mm                 | -            | -            | -            | -            | 1,159.68     |
| Lead                            | -            | 74.22        | 5,621.31     | -            | -            |
| Lignite                         | 647,780.02   | 623,642.07   | 553,646.94   | 536,594.50   | 515,329.24   |
| Limestone                       |              |              |              |              |              |
| - Dimension stone               | -            | 3.44         | 212.54       | 252.80       | -            |
| - Industrial rock-construction  | 761,127.29   | 759,963.57   | 783,810.18   | 760,944.90   | 756,834.92   |
| - Industrial rock-cement        | 1,240,760.86 | 1,280,736.45 | 1,235,989.97 | 1,250,658.31 | 1,219,342.76 |
| - Industrial rock-others        | 65,755.48    | 69,499.65    | 93,388.89    | 90,774.29    | 84,745.27    |
| Manganese (Metallurgical grade) | 867.18       | 390.68       | 614.70       | 2,898.74     | 4,071.60     |
| Marble                          |              |              |              |              |              |
| - Dimension stone               | 1,720.28     | 4,062.51     | 1,991.98     | 2,323.82     | 998.01       |
| - Fragment                      | 18,598.38    | 14,444.54    | 19,205.55    | 31,419.38    | 20,383.07    |
| Marl                            | 142.80       | 322.32       | 202.30       | 171.36       | 25.16        |
| Monazite                        | 359.17       | 138.43       | 112.44       | 516.32       | -            |
| Other Industrial Stone          | 4,817.48     | 4,964.44     | 5,823.50     | 6,452.70     | 5,427.38     |

## Mineral Royalty of Thailand 2016-2020

*unit: Thousand Baht*

| Mineral                        | 2016                | 2017                | 2018                | 2019                | 2020                |
|--------------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| Perlite (Industrial rock)      | 986.40              | 2,988.00            | 330.00              | 312.00              | 180.00              |
| Phosphate                      | 9.65                | 137.45              | 4.83                | -                   | -                   |
| Potash                         | -                   | 1.23                | -                   | -                   | -                   |
| Pyrophyllite                   |                     |                     |                     |                     |                     |
| - Industrial grade             | 1,800.48            | 1,682.40            | 816.72              | 794.02              | 684.80              |
| - Hand carved grade            | -                   | -                   | -                   | 5.19                | -                   |
| Quartz                         | 830.76              | 1,413.45            | 1,464.19            | 1,140.84            | 1,847.64            |
| Quartzite                      | 163.39              | 1,392.77            | -                   | -                   | -                   |
| Rock salt                      | 104,910.00          | 116,050.39          | 117,956.20          | 121,030.34          | 113,330.26          |
| Rutile                         | -                   | 70.67               | 215.46              | -                   | -                   |
| Sand Stone                     |                     |                     |                     |                     |                     |
| - Dimension stone              | 112.22              | 265.17              | 343.47              | 47.61               | 13.40               |
| - Industrial rock              | 7,393.38            | 2,253.35            | 5,993.86            | 6,692.27            | 5,859.75            |
| Scheelite                      | 1,331.81            | 2,400.03            | 3,520.44            | 995.72              | 1,018.91            |
| Shale (Industrial rock-cement) | 156,182.64          | 111,038.62          | 99,621.74           | 98,949.62           | 58,753.61           |
| Shale (Industrial rock-other)  | -                   | -                   | -                   | -                   | 30.00               |
| Silver Metal                   | 71,630.57           | -                   | -                   | -                   | -                   |
| Struverite                     | 987.90              | 1,294.94            | 984.15              | 776.60              | -                   |
| Talc                           | 171.02              | 167.04              | 185.47              | 193.54              | 158.98              |
| Tin                            | 5,330.61            | 34,138.93           | 11,320.77           | 11,965.33           | 9,229.59            |
| Travertine (Dimension)         | 304.68              | 356.73              | 385.38              | 674.64              | 180.00              |
| Wolfram                        | 791.40              | -                   | 960.99              | 720.75              | -                   |
| Xenotime                       | -                   | -                   | -                   | -                   | 72.11               |
| Zinc Metal                     | 70,710.64           | 25,990.89           | -                   | -                   | -                   |
| Zircon                         | 265.67              | 100.13              | 226.72              | 198.38              | 209.80              |
| <b>Total</b>                   | <b>4,502,712.69</b> | <b>3,836,020.81</b> | <b>3,788,637.63</b> | <b>3,895,675.23</b> | <b>3,730,156.43</b> |



## Total Values of Mineral of Thailand 2016-2020

Million Baht

|             | 2016     | 2017     | 2018     | 2019     | 2020     |
|-------------|----------|----------|----------|----------|----------|
| PRODUCTION  | 87,746.4 | 77,206.6 | 77,081.6 | 74,617.1 | 72,738.8 |
| CONSUMPTION | 78,051.4 | 76,967.8 | 70,880.7 | 71,306.7 | 68,065.4 |
| IMPORT      | 57,874.3 | 66,323.7 | 73,016.8 | 62,364.6 | 56,995.4 |
| EXPORT      | 20,140.0 | 12,878.0 | 12,895.0 | 13,249.7 | 11,907.4 |

