

# 2016 Minerals Yearbook

### **BOSNIA AND HERZEGOVINA**

## THE MINERAL INDUSTRY OF BOSNIA AND HERZEGOVINA

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In 2016, the production of mineral commodities—notably metals, industrial minerals, and mineral fuels—represented only a minor part of the economy of Bosnia and Herzegovina (U.S. Agency for International Development, 2016; Agency for Statistics of Bosnia and Herzegovina, 2017, p. 3, 4). The legislative framework for the mineral sector in Bosnia and Herzegovina is provided by the Mining Law No. 26/10; the Law on Concessions No. 40/02; and the Law on Environmental Protection No. 33/03. Data on mineral production are in table 1. Table 2 is a list of major mineral industry facilities. More-extensive coverage of the mineral industry of Bosnia and Herzegovina can be found in previous editions of the U.S. Geological Survey Minerals Yearbook, volume III, Area Reports—International—Europe and Central Eurasia, which

are available at https://www.usgs.gov/centers/nmic/europe-and-central-eurasia.

#### **References Cited**

Agency for Statistics of Bosnia and Herzegovina, 2017, Gross domestic product of Bosnia and Herzegovina 2016—Production approach, first results: Sarajevo, Bosnia and Herzegovina, Agency for Statistics of Bosnia and Herzegovina, July 21, 6 p. (Accessed November 3, 2017, at http://www.bhas.ba/saopstenja/2017/BDP%202016%20proizvodni.pdf.)

U.S. Agency for International Development, 2016, Annex—List of laws and regulations: U.S. Agency for International Development, January 31, 46 p. (Accessed February 7, 2018, at https://www.usaideia.ba/wp-content/ uploads/2016/06/Annex-1-List-of-Laws-and-Regulations-English-1-31-16final.pdf.)

TABLE 1
BOSNIA AND HERZEGOVINA: PRODUCTION OF MINERAL COMMODITIES

(Metric tons, gross weight, unless otherwise specified)

| - 1:, <sup>2</sup>                      |                      | 2012                | 2013                 | 2014               | 2015                | 2016                |
|---|----------------------|---------------------|----------------------|--------------------|---------------------|---------------------|
| Commodity <sup>2</sup> METALS           |                      | 2012                | 2013                 | 2014               | 2013                | 2010                |
|   |                      |                     |                      |                    |                     |                     |
| Aluminum:                               |                      | 000.216             | 655 115              | 605.015            | 707.400             | 641.001             |
| Bauxite                                 |                      | 800,316             | 657,115              | 605,215            | 787,409             | 641,231             |
| Alumina                                 |                      | 202,416             | 175,961              | 170,646            | 250,845             | 187,545             |
| Metal, primary and secondary            |                      | 101,000 e           | 129,000 <sup>e</sup> | 125,531            | 98,540 <sup>r</sup> | 106,500             |
| Iron and steel:                         |                      |                     |                      | 0.50 400           | 0.15.155            |                     |
| Pig iron                                |                      | 749,539             | 759,100              | 860,430            | 845,462             | 778,123             |
| Raw steel                               |                      | 700,341             | 722,155              | 792,019            | 795,942             | 783,045             |
| Iron ore, mine production:              |                      |                     |                      |                    |                     |                     |
| Crude ore, gross weight                 |                      | 2,075,732           | 2,121,907            | 2,127,564          | 2,122,802           | 1,751,800           |
| Fe content <sup>e</sup>                 |                      | 872,000             | 899,000              | 901,000            | 898,000             | 741,000             |
| Lead:                                   |                      |                     |                      |                    |                     |                     |
| Mine production, ore and concentrate:   |                      |                     |                      |                    |                     |                     |
| Gross weight                            |                      | 7,210               | 8,105                | 7,533              | 9,000 e             | 8,600 e             |
| Pb content <sup>e</sup>                 |                      | 4,000               | 4,500                | 4,000 <sup>r</sup> | 5,000               | 4,800               |
| Refinery production, secondary, smelted |                      | 3,327 <sup>r</sup>  | 2,382 <sup>r</sup>   | 1,227 <sup>r</sup> | 145 <sup>r</sup>    | 182                 |
| Silicon, silicon metal                  |                      | 15,874              | 16,707               | 18,383             | 18,716              | 28,138              |
| Zinc, mine production:                  |                      |                     |                      |                    |                     |                     |
| Ore and concentrate                     |                      | 13,331              | 16,631               | 14,422             | 15,500 r, e         | 17,700 <sup>e</sup> |
| Zn content <sup>e</sup>                 |                      | 7,600 <sup>r</sup>  | 9,100 <sup>r</sup>   | 8,100 r            | 8,800 r             | 10,000              |
| INDUSTRIAL MINERA                       | LS                   |                     |                      |                    |                     |                     |
| Barite                                  |                      | 28                  |                      |                    |                     |                     |
| Cement, hydraulic                       | thousand metric tons | 846                 | 882                  | 840                | 808                 | 841                 |
| Clay and shale:                         |                      |                     |                      |                    |                     |                     |
| Bentonite                               |                      | 18,000              | 18,808               | 80,952             | 67,261              | 102,858             |
| Kaolin, crude                           |                      | 149,495             | 44,940               | 21,610             | 252,268             | 248,685             |
| Gypsum, including anhydrite             |                      | 73,365 <sup>r</sup> | 73,300               | 67,700             | 58,800              | 61,231              |
| Lime                                    |                      | 397,802             | 386,908              | 427,914            | 422,531             | 458,402             |
| Salt, all sources                       |                      | 862,017             | 856,713              | 921,239            | 991,534             | 1,092,496           |
| Soda ash, synthetic, sodium bicarbonate |                      | 58,620              | 66,340               | 73,460             | 81,815              | 97,570              |
| See footnotes at end of table.          |                      |                     |                      |                    |                     |                     |

See footnotes at end of table

### $\label{total loss} \mbox{TABLE 1---Continued} \\ \mbox{BOSNIA AND HERZEGOVINA: PRODUCTION OF MINERAL COMMODITIES}^1$

(Metric tons, gross weight, unless otherwise specified)

| Commodity <sup>2</sup>                                    | 2012      | 2013      | 2014                   | 2015                   | 2016        |
|---|-----------|-----------|------------------------|------------------------|-------------|
| INDUSTRIAL MINERALS—Continued                             |           |           |                        |                        |             |
| Stone, sand, and gravel:                                  |           |           |                        |                        |             |
| Sand and gravel, construction:                            |           |           |                        |                        |             |
| Gravel  | 1,126,176 | 1,089,402 | 928,626 <sup>r</sup>   | 1,722,860 <sup>r</sup> | 3,764,963   |
| Sand  | 499,916   | 625,509   | 347,747                | 514,463                | 538,894     |
| Silica, mine production, unspecified                      | 121,491   | 113,576   | 92,427                 | 213,809                | 71,477      |
| Stone, crushed:   |           |           |                        |                        |             |
| Aggregate   | 3,711,065 | 4,216,610 | 4,521,475 <sup>r</sup> | 4,391,580 <sup>r</sup> | 3,489,797   |
| Limestone   | 1,834,677 | 2,399,580 | 1,897,225              | 2,092,085              | 1,777,967   |
| Stone, dimension:   |           |           |                        |                        |             |
| Dolomite, crude   | 127,774   | 59,851    | 58,241                 | 92,201 <sup>r</sup>    | 47,657      |
| Ecaussine, and other calcareous stone                     | 234,120   | 48,827    | 88,500                 | 87,500                 | 116,381     |
| Granite   | 2,944     | 8,413     | 13,467                 | 2,668                  | 3,876       |
| Marble, including travertine                              | 692       | 411       | 2,247 <sup>r</sup>     | 632 <sup>r</sup>       | 2,641       |
| Porphyry  | 1,728,593 | 2,156,256 | 2,053,809              | 3,347,477 <sup>r</sup> | 3,300,000 e |
| Slate   | 30        | 87,202    | 11,684 <sup>r</sup>    | 4,560                  | 11,126      |
| Stone, size and shape unspecified, chalk                  | 675       | 2,655     | 2,205                  | 5,970                  | 3,300       |
| MINERAL FUELS AND RELATED MATERIALS                       |           |           |                        |                        |             |
| Coal:   |           |           |                        |                        |             |
| Lignite   | 6,359,156 | 6,054,037 | 5,969,455              | 6,208,151              | 6,291,481   |
| Subbituminous   | 5,952,467 | 5,710,790 | 5,703,865              | 5,903,679              | 7,196,666   |
| Coke, metallurgical                                       | 696,231   | 748,834   | 908,662                | 911,497                | 861,067     |
| Petroleum, refinery production thousand 42-gallon barrels | 8,590     | 8,950     | 8,360                  | 7,930                  | 7,340       |

<sup>&</sup>lt;sup>e</sup>Estimated. <sup>r</sup>Revised. -- Zero.

 ${\it TABLE~2} \\ {\it BOSNIA~AND~HERZEGOVINA: STRUCTURE~OF~THE~MINERAL~INDUSTRY~IN~2016} \\$ 

(Thousand metric tons unless otherwise specified)

|           | Major operating companies                  |  | Annual       |
|-----------|--|--|--------------|
| Commodity | and major equity owners                    | Location of main facilities            | capacity     |
| Alumina   | Alumina d.o.o. Zvornik (UAB Ukio Banko     | Plant at Zvornik                       | 600.1        |
|           | Investicine Grupe, 56.8%; Government of    |  |              |
|           | Republika Srprska, 9.1%; Balkanika, 7.1%;  |  |              |
|           | Restitution Fund, 4.6%)                    |  |              |
| Aluminum  | Aluminij d.d. Mostar (Government of        | Smelter at Mostar                      | 130.         |
|           | Federation of Bosnia and Herzegovina, 44%; |  |              |
|           | workers, 44%; Government of Croatia, 12%)  |  |              |
| Bauxite   | Boksit a.d. Milici                         | Mine at Milici, west of Srebrenica     | 1,500.       |
| Cement    | Tvornica Cementa Kakanj d.d.               | Plant at Kakanj                        | 400.         |
|           | (HeidelbergCement AG, 100%)                |  |              |
| Do.       | Fabrika Cementa Lukavac d.d.               | Plant in Lukavac                       | 800 cement,  |
|           | (Asamer Baustoffe AG, 100%)                |  | 600 clinker. |
| Coal      | RMU Banovici (Government, 69.3%, and       | Opencast mines at Cubric, Grivice, and | 1,500.       |
|           | workers, 30.7%)                            | Turija, and the Omazici and Separacija |              |
|           |  | underground mines at Banovici          |              |
| Do.       | Zenica Group (Elektroprivreda BiH, 100%)   | Stara Jama, Raspotocje, and Stranjani  | 430.         |
|           |  | Mines at Zenica                        |              |

See footnotes at end of table.

<sup>&</sup>lt;sup>1</sup>Table includes data available through December 11, 2017. All data are reported unless otherwise noted. Estimated data are rounded to no more than three significant digits.

<sup>&</sup>lt;sup>2</sup>In addition to the commodities listed, calcined gypsum, common clay, crude ceramic clay, ferroalloys, magnesite, manganese ore, and steel semimanufactures may have been produced in Bosnia and Herzegovina, but available information was inadequate to make reliable estimates of output.

### TABLE 2—Continued BOSNIA AND HERZEGOVINA: STRUCTURE OF THE MINERAL INDUSTRY IN 2016

(Thousand metric tons unless otherwise specified)

|                            |           | Major operating companies                                |                                       | Annual           |  |
|----------------------------|-----------|--|---------------------------------------|------------------|--|
| Commodity                  |           | and major equity owners                                  | Location of main facilities           | capacity         |  |
| Coal—Continued             |           | Durdevik Group (Elektroprivreda BiH,                     | Potocari and Visca II opencast mines  | 600.             |  |
|                            |           | 100%)  | and Durdevik underground mine         |                  |  |
|                            |           |  | south of Zivinice                     |                  |  |
| Do.                        |           | Kakanj Group (Elektroprivreda BiH, 100%)                 | Vrtliste opencast mine at Kakanj, and | 1,200.           |  |
|                            |           |  | Haljinici underground mine about      |                  |  |
|                            |           |  | 5 kilometers southeast of Kakanj      |                  |  |
| Do.                        |           | Breza Group (Elektroprivreda BiH, 100%)                  | Sretno and Kamenice underground       | 450.             |  |
|                            |           |  | mines 20 kilometers northwest of      |                  |  |
|                            |           |  | Sarajevo                              |                  |  |
| Do.                        |           | Abid Lolic Group (Elektroprivreda BiH,                   | Grahovcici underground mine           | NA.              |  |
|                            |           | 100%)  | 10 kilometers west of Zenica          |                  |  |
| Do.                        |           | Tusnica Mine   | Drage opencast mine at Livno          | NA.              |  |
| Do.                        |           | Rudnik i Termoelektrana Ugljevik                         | Opencast mine at Ugljevik             | NA.              |  |
|                            |           | (Elektroprivreda Republike Srpske, 100%)                 | 1                                     |                  |  |
| Do.                        |           | Kreka Group (Elektroprivreda BiH, 100%)                  | Opencast mines at Dubrave and         | 2,650.e          |  |
|                            |           | 1 \ 1,,  | Sikulje, underground mine at          | _,000.           |  |
|                            |           |  | Mramor                                |                  |  |
| Do.                        |           | EFT Rudnik i Termoelektrana Stanari d.o.o.               | Stanari opencast mine 20 kilometers   | 2,000.           |  |
| 20.                        |           | (EFT Group)  | west of Doboj                         | 2,000.           |  |
| Do.                        |           | Rudnik I Termoelektrana Gacko                            | Opencast mine at Gacko                | NA.              |  |
|                            |           | (Elektroprivreda Republike Srpske, 100%)                 | openeust imme ut Gueko                | 1171.            |  |
| Do.                        |           | Gracanica Group (Elektroprivreda BiH,                    | Dimnjace opencast mine at Gornji      | 270.             |  |
| 20.                        |           | 100%)  | Vakuf-Uskoplje                        | 2,0.             |  |
| Do.                        |           | Tusnica Mine   | Opencast mine at Livno                | NA.              |  |
| Coke                       |           | Global Ispat Koksa Industrija d.o.o.                     | Lukavac                               | 700.             |  |
| one                        |           | Lukavac (Global Steel Holdings and Coke                  | Danavao                               | 700.             |  |
|                            |           | and Chemical Conglomerate)                               |                                       |                  |  |
| Do.                        |           | ArcelorMittal Zenica d.o.o. (ArcelorMittal S.A.)         | Plant at Zenica                       | NA.              |  |
| Terroalloys, ferrosilicon  |           | Steelmin BH (Steelmin Ltd., 80%, and                     | Plant at Jajce                        | 50.              |  |
| remainlys, terrosineon     |           | Kemokomplex Group, 20%)                                  | i min at sujec                        | 50.              |  |
| Do.                        |           | B.S.I. d.o.o. (Metalleghe S.p.a., 100%)                  | do.                                   | 20.              |  |
| Do.                        |           | R-S Silicon d.o.o. (Metalleghe S.p.a., 100%)             | Mrkonjic Grad                         | 16.              |  |
|                            |           | ArcelorMittal Prijedor d.o.o. (ArcelorMittal S.A.,       | Buvac open pit mines at Ljubija       | 3,000.           |  |
| Iron ore                   |           | 51%, and Rudnici Zeljezne Rude "Ljubija" a.d.            | Buvae open pit innies at Ljubija      | 3,000.           |  |
|                            |           | Prijedor, 49%)   |                                       |                  |  |
| ead-zinc, ore, gross weigh | >+        | Gross d.o.o. Gradiska (Mineco Ltd., 66.67%, and          | Sase Mine and mill at Srebrenica      | 330.             |  |
| ead-zinc, ore, gross weigi | It        | Metexcel Trading Ltd., 33.33%)                           | Sase withe and film at Steptenica     | 330.             |  |
| atualarum ma£mad           | thousand  | •  | Oil refinery at Bosanski Brod         | 20.000           |  |
| Petroleum, refined         |           | Rafinerija nafte Brod a.d. (OAO<br>"NefteGazInkor," 80%) | Off fermery at Bosanski Brod          | 30,000.          |  |
|                            | 42-gallon | NetteGazilikor, 80%)                                     |                                       |                  |  |
| D-                         | barrels   | D-6  | Oil as finance of Madeira             | NIA              |  |
| Do.                        |           | Rafineriji ulja Modriča a.d. Modriča (OAO                | Oil refinery at Modrica               | NA.              |  |
| :_ :                       |           | "NefteGazInkor," 77%)                                    | D14 f                                 | 1 100            |  |
| ig iron                    |           | ArcelorMittal Zenica d.o.o. (ArcelorMittal S.A.)         | Blast furnace at Zenica               | 1,100.           |  |
| alt                        |           | Rudnik Soli Tuzla d.d.                                   | Tuzla                                 | NA.              |  |
| Steel:                     |           | 1.100.17   | N 7                                   | 1.100            |  |
| Crude                      |           | ArcelorMittal Zenica d.o.o. (ArcelorMittal S.A.)         | Plant at Zenica                       | 1,100.           |  |
| Do.                        |           | Jelsingrad Livar Steel Foundry a.d.                      | Banja Luka                            | NA. <sup>2</sup> |  |
| Semimanufactured           |           | ArcelorMittal Zenica d.o.o. (ArcelorMittal S.A.)         | Plant at Zenica                       | NA.              |  |

<sup>&</sup>lt;sup>e</sup>Estimated. Do., do. Ditto. NA Not available.

<sup>&</sup>lt;sup>1</sup>The company entered bankruptcy in 2013.

<sup>&</sup>lt;sup>2</sup>Secondary production.