

# ALBANIA

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In 1999, Albania showed signs of economic recovery as the gross domestic product rose by 7% compared with that of 1998. The economy's turnaround began in 1998 following a major downturn in 1997 that was caused partly by internal economic issues related to Albania's transition to a market economy and by regional instability, especially in the neighboring republics of the former Yugoslavia (U.S. Central Intelligence Agency, 2000; Hope, 2000).

The chief mineral commodities that traditionally had been produced in Albania were chromite, copper, ferrochromium, nickeliferous iron ore, and petroleum refinery products, which, until recently, constituted the dominant component of the country's foreign exchange earnings (Kocibelli, 2000). In 1999, the output of these and many other minerals continued to decline.

Under central economic planning, especially from the late 1970's through 1990, Albania's chromite mining operations were among the most important components of the mineral industry. During this period, Albania was a leading world producer and exporter of chromite and often was ranked second in terms of export (after South Africa) and third in terms of production (after the former South Africa and former Soviet Union). The export of chromite and ferrochromium also was among the country's chief sources of foreign exchange.

Although some chromite deposits and outcroppings can be found throughout Albania, the principal commercial chromite deposits are in ultramafic massifs in the Midrita region, in the north-central and northern parts of the country. The mainly podiform ore was mined at seven mining districts, of which Bulquize and Batra, about 30 kilometers (km) northeast of the capital, Tirana, represented about two-thirds of Albania's total production capacity. Albanian chromium ore grades from 18% to 43% chromium oxide ( $\text{Cr}_2\text{O}_3$ ). The lumpy ores that grade 39% to 42%  $\text{Cr}_2\text{O}_3$  and the concentrates that grade from 50% to 53%  $\text{Cr}_2\text{O}_3$  have been designated for export. About 25% of the ore was suitable for direct shipment; the balance was divided equally between beneficiation and shipment as feedstock for the Burrel ferrochromium plant (Steblez, 1994). In 1999, the production of run-of-mine chromite declined by 47% compared with that of 1998; the production of such marketable products as chromite concentrate, direct shipping chromite, and ferrochromium fell by 66%, 21%, and 7%, respectively (Government of Albania, 2000). There also was little apparent headway with respect to the denationalization and foreign investment in the country's chromium industry.

Albania's output of copper ore, which grades between 1.5% to 4% copper, had reached its greatest level in the late 1980's at

about 1 million metric tons per year (Mt/yr). All copper ore was mined underground. With the exception of the Rehove Mine and beneficiation plant in southeastern Albania, copper ore was mined, processed, smelted, and refined largely in the northern part of the country. The largest copper mining and beneficiation complex, which was at Fushe Arrez, produced more than 320,000 metric tons per year (t/yr) of copper ore during this period. After beneficiation, copper concentrates were smelted at the Gjegjan (Kukes), the Lac, and the Rubic pyrometallurgical primary smelters. The refineries and rolling mills at Rubic and Lac produced copper wire, most of which was exported. The production of copper ore in 1999 amounted to about 34,000 metric tons; compared with that of 1998, this was a decline of 37%. The production of refined copper declined by about 70% and that of copper cable and wire resumed following a steady decline between 1993 and 1997 and a hiatus of output in 1998 (Government of Albania, 2000).

The production of nickeliferous iron ore in Albania ceased in 1994 following the collapse of centrally planned economic systems in the countries of Central Europe and the Balkans. In 1992, the former Czechoslovakia, which was a major consumer of Albania's iron ore output, in 1992 divided into the constituent Czech and Slovak parts, and, subsequently, Slovakia no longer operated its plant to produce nickel and cobalt. At Elbasan, the production at the iron and steel plant declined rapidly, and production at the nickel and cobalt refinery ceased, which finally resulted in the stoppage of mining for nickeliferous iron ore. Albania's commercial resources of lateritic nickeliferous iron ore were estimated to be about 300 million metric tons (Mt). In the 1980's, output ranged from 1 to 1.2 Mt/yr of ore, of which about one-half was consumed at the Elbasan iron and steel works to produce pig iron, a small amount of steel, and salts of nickel and cobalt. Deposits of commercial-grade nickeliferous iron ore had been exploited in ultramafic massifs near Pogradec in east-central Albania. The principal mines were at Prrenjas, Guri i Kuq, and Bitinska. Until 1991, the largest mining operation was at Prrenjas, which produced about 600,000 t/yr of ore. The majority of Albanian nickel ores are lateritic nickeliferous iron ore, grading about 35% to 45% Fe, 1.4% Ni, and 0.05% Co. The Bitinska deposit was believed to contain considerable resources of nickeliferous iron ore, as well as silicate ores, however, only the former material had been mined.

Albania's bauxite deposits are mainly in the central part of the country, just east of Tirana, as well as in the Northern Alpine region near the border with former Yugoslavia. Bauxite reserves were estimated to be about 12 Mt. The largest deposit, which was at Daijti, contained approximately 8 to 9 Mt of resources

with an average grade of 39% to 40% aluminum oxide, 13% silica, 6% sulfur, 4% to 5% calcium oxide, and 18.3% iron oxide. The production of bauxite apparently ceased between 1992 and 1996, but small-scale mining was resumed in 1997 with output amounting to less than 5,000 t/yr.

In past years, the production of lignite, hydroelectric power, natural gas, and petroleum and the low consumption of fuel made Albania a net exporter of energy. Because of reduced hydroelectric power output resulting from several years of drought, a general downturn in petroleum production, and increasing indigenous energy requirements, the status of Albania as net energy exporter has become less certain. The country's exploitable coal resources amounted to about 158 Mt of low-calorie lignite. Lignite was mined for domestic consumption, mainly at thermal electric power stations. In 1999, the production of all mineral fuels fell significantly compared with that of 1998; the declines in the output of lignite, natural gas, and petroleum amounted 37%, 14%, and 11%, respectively.

Albania had about 17,300 km of highways, railroads, and waterways. The railroad system consisted of 509 km of 1.435-meter standard-gauge track and 34 km of narrow-gauge single track. The road system consisted of 6,700 km of highways and main roads and 10,000 km of forest and rural roads. About 60% of all domestic cargo was transported by truck; 35%, by rail; and

2%, by coastal shipping along the Adriatic Sea and sections of Lakes Ohrid, Prespa, and Scutari. Nickeliferous iron ore mining areas at Guri i Kuq and Prrenjas were linked by rail to processing centers at Elbasan. The copper mining district at Shkoder also was linked by rail to the copper smelter and refinery at Lac. Hydroelectric sources accounted for most of Albania's capacity to generate 1,630-megawatts of electricity. The country's petroleum and natural gas sector had about 145 km of crude oil pipeline, 55 km of refinery products pipeline, and 64 km of pipeline for natural gas. Seaports were at Durres, Sarande, and Vlore, but most bulk mineral cargoes were handled at Durres.

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TABLE 1  
ALBANIA: PRODUCTION OF MINERAL COMMODITIES 1/ 2/

(Metric tons unless otherwise specified)

Commodity 3/ METALS	1995	1996	1997	1998	1999
Bauxite	-- r/	-- r/	4454 r/	4128 r/	4624
Chromium:					
Chromite, gross weight	242,998	236,358	157,203	150,285 r/	79,445
Marketable ore and concentrate:					
Marketable ore (41.6% Cr <sub>2</sub> O <sub>3</sub> )	129,475	113,361	84,423	81,994 r/	64,597
Concentrate	30,892	30,402	21,881	20,195 r/	6,837
Total	160,367	143,763	106,304	102,189	71,434
Ferrochromium	42,986	31,189	31,144	30,252 r/	28,120
Copper:					
Ore:					
Gross weight	257,709	187,765	24,895	53,477 r/	33,945
Concentrate	16,664 r/	10,807 r/	869 r/	2,294 r/	8,691
Cu content e/	3,800	2,500	220	3,200	3,200
Metal, primary:					
Smelter (blister)	2,902 r/	1,424	--	1,632 r/	1,281
Refined, electrolytically	3,010 r/	1,544 r/	--	1,150 r/	342
Iron and steel:					
Pig iron e/	10,000	10,000	10,000	10,000	10,000
Crude steel e/	5,000	5,000	5,000	5,000	5,000
Rolled steel	-- r/	-- r/	43,000 r/	42,000 r/	8,700
INDUSTRIAL MINERALS					
Cement, hydraulic thousand tons	240 r/	203 r/	150 r/	84 r/	106
Clay, kaolin e/	500	500	500	500	500
Dolomite e/	50,000	50,000	50,000	50,000	50,000
Fertilizer, manufactured:					
Phosphatic	-- r/	-- r/	26,604 r/	12,284 r/	8,600
Urea e/	4,000	3,000	3,000	3,000	3,000
Nitrogen, N content of ammonia e/	15,000	15,000	10,000	10,000	10,000
Olivinite e/	300	300	300	300	300
Phosphate rock (12% to 15% P <sub>2</sub> O <sub>5</sub> ) e/	1,000	1,000	1,000	1,000	1,000
Pyrite, roasted	2,649 r/	--	--	--	--
Salt e/	10,000	10,000	10,000	10,000	10,000
Sodium compounds, n.e.s., soda ash, calcined e/	100	100	100	--	--
Sulfuric acid e/	1,000	1,000	500	500	500
MINERAL FUELS AND RELATED MATERIALS					
Asphalt and bitumen, natural 4/	32,850	19,597	16,900	15,782 r/	16,625
Coal, lignite	80,906	68,936	38,900 r/	33,000	30,000
Gas, natural, gross production 5/ thousand cubic meters	27,706	22,698	18,271	16,551 r/	14,167
Petroleum:					
Coke	68,939	63,472	33,678	57,842	47,543
Crude:					
Gross weight	520,866	488,214	359,666	364,627 r/	323,009
Converted e/ thousand 42-gallon barrels	3,500	3,300	2,400 e/	2,000	2,000
Refinery products	564,033 r/	503,995 r/	315,072 r/	379,131 r/	328,875

e/ Estimated. r/ Revised. -- Zero.

1/ Table includes data available through October 2000.

2/ Estimated data are rounded to no more than three significant digits.

3/ In addition to commodities listed, a variety of industrial minerals and construction materials (common clay, quartz, titanomagnetite, stone, and sand and gravel) are produced, but output is not reported quantitatively, and available information is inadequate to make reliable estimates of output levels.

4/ Includes asphalt and bitumen produced at petroleum refineries.

5/ Separate data on marketable production are not available, but gross and marketed output are regarded as being nearly equal.

TABLE 2  
ALBANIA: STRUCTURE OF THE MINERAL INDUSTRY FOR 1999 1/

(Thousand metric tons unless otherwise specified)

Commodity	Location of main facilities (all state-owned)	Annual capacity
Cement	Elbasan, 32 kilometers southeast of Tirana; Kruje, 20 kilometers northwest of Tirana; Shkoder, 85 kilometers northwest of Tirana; and Vlore, southwest of Tirana	1,200
Chromite	Bater (including Bater I and II and Martanesh), 40 kilometers northwest of Tirana	450
Do.	Bulquize (including Bulquize south, Fush, Terrnove, and Todo Maco), 35 kilometers northwest of Tirana	450
Do.	Kalimash, 60 kilometers north of Tirana	250
Do.	Kam, 70 kilometers north of Tirana	100
Do.	Klos, 20 kilometers northeast of Tirana	50
Do.	Pogradec (including Katjtel, Memelisht, Pojske, Pishkash, and Prrenjas), 50 kilometers east of Tirana	100
Ferrochromium	Burrel, 35 kilometers northeast of Tirana	40
Do.	Elbasan, 32 kilometers southeast of Tirana	36
Copper:		
Ore	Fushe-Arrez, 80 kilometers north of Tirana	350
Do.	Gjejan, 100 kilometers northeast of Tirana	150
Do.	Golaj (including Nikoliq and Pus), 120 kilometers northeast of Tirana	150
Do.	Kurbnesh-Perlat, 55 kilometers northeast of Tirana	100
Do.	Rehove, 110 kilometers southeast of Tirana	100
Do.	Reps (including Gurch, Lajo, Spac, and Thurr), 55 kilometers north of tirana	350
Do.	Rreshen, 50 kilometers north of Tirana	50
Do.	Shkoder (including Palaj, Karma I and II), 85 kilometers northwest of Tirana	100
Smelter	Kukes, 110 kilometers northeast of Tirana	6
Do.	Lac, 35 kilometers northwest of Tirana	7
Do.	Rubik, 50 kilometers north of Tirana	4
Iron ore	Prrenjas (Bushttrica, Prrenjas, Skorska I and II), 70 kilometers southeast of Tirana	650
Do.	Guri i Kuq (including Cervenake, Grasishta, Guri i Kuq, Hudenisht, and Guri Pergjrgjur), 25 kilometers east of Tirana	500
Steel	"Steel of the Party" Metallurgical Combine at Elbasan	150
Nickel, smelter	Elbasan	6
Coal, lignite	Maneze, Mezes, and Valias Mines in Tirana Durres area; Krabe Mine, 20 kilometers southeast of tirana; Alarup and Cervnake Mines, in Pogradec area, 80 kilometers southeast of Tirana; Mborje-Drenove Mine in Korce area, 85 kilometers southwest of Tirana; and Memaliaj Mine in Tepelene area, 110 kilometers south of Tirana	2,500
Natural gas	million cubic feet Gasfields on southwest Albania between Ballsh and Fier	16,000
Petroleum:		
Crude	42-gallon barrels per day Oilfields at Marineze, Ballsh, Shqisht, Patos, Kucova, Gorrisht, and others	35,000
Refined	do. Refineries: Ballsh, Cerrik, Fier, and Stalin	33,000

1/ A substantial portion of these enterprises have been operating significantly below capacity during the 1990-1999 period. Because of the recent political and economic instability in Albania and the surrounding region, the actual status of the mineral industry was not known with certainty.