

## BOSNIA AND HERZEGOVINA

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**B**osnia and Herzegovina are endowed with valuable mineral resources that include bauxite, coal, industrial minerals, iron ore and lead and zinc. These resources and their mining and processing facilities, however, are exploited in two politically distinct regions, with distinct administrative structures within a formal national government organisation. The two constituent regions, the Federation of Bosnian Moslems and Croats (FBC) and Republika Sprska (RS) account for about 51% and 49% of Bosnia and Herzegovina's territory, respectively. This organisation is an outcome of a series of compromises that led to peace accords between factions involved in civil war in the 1990s.

Despite disparate systems for reporting of data by the entities to the Central Government authorities in Sarajevo, a greater degree of published information had become available in 2002 than was available in previous years. According to the latest available official data, the country's gross domestic product (GDP) in 2001 amounted to about US\$4.8 billion, an increase of approximately 5.7% compared with that of 2000. The FBC's share of Bosnia and Herzegovina's GDP amounted to about US\$3.33 billion, or 69% of the total GDP, showing growth of about 4.9% compared with the GDP of 2000. The GDP of the RS amounted to US\$1.37 billion, an increase of about 6.1% compared with that of 2000. Although foreign financial assistance and transfers from abroad continued to be of economic significance, foreign capital flows appeared to have increased with positive economic impact and were discernible in the country's minerals sector.

In 2002, the value of FBC's mining output represented about 12.2% of the value of the entity's total industrial production. The FBC's exploitable mineral resources include coal, bauxite, gypsum, lead and zinc, magnesite, and rock salt. The FBC also operated the country's only aluminium and steel plants. The major issues and events in the FBC's minerals sector during 2002 concerned the re-emergence these facilities. A major investment programme, valued at US\$70 million, to reconstruct and refurbish Aluminijum DD Mostar (Mostar), the country's sole aluminium

producer, was completed in 2002. New equipment and facilities at Mostar include modernised potlines (converted to centre-worked feed cells), a more efficient alumina dosing installation, and fume scrubbing system. These improvements and the addition of greater electric current potential to the pots are expected to increase Mostar's annual production capacity by 16,000 t to 114,000 t of aluminium. In 2002, Mostar's aluminium production reached a record level of 103,140 t, almost 9% more than in 2001; production in 2003 is planned to reach 107,000 t. Additional planned investments include the upgrading of the company's casthouse and slab casting operations in 2003.

Bauxite production amounted to about 123,600 t, an increase of 61%, compared with that of 2001. However, the reconstruction of Mostar's alumina refinery, which was badly damaged during the war, was put into abeyance. Greater economy was achieved by importing alumina (from Glencore) than would have been achieved through re-establishing a domestic refining capacity. The issue of Mostar's ownership remained unresolved during the year; the FBC's Central Government apparently disputed the legitimacy of Mostar's privatisation during the period of civil conflict in the 1990s. An arbitration commission under World Bank auspices was to oversee the resolution of the issue.

BH-Steel-Zeljezara Ltd (B-H Steel) is the country's other major metallurgical facility, and also located in the FBC. In 2002, B-H Steel continued to be a joint venture with Kuwait Consulting & Investment Co. (50% equity); the joint venture was instituted with assistance from Bosnian and Kuwaiti government bodies. Crude steel-making capacity at B-H Steel is rated at about 1.4 Mt/y. Crude steel production, however, amounted to only 84,000 t in 2001, which was representative of a mainly increasing production trend that started with the resumption of production in 1996 when an output of about 54,000 t was achieved. An hiatus in steel production lasted from 1993 until 1995, essentially the period of the country's civil war. Of total steel production in 2000 and 2001, about 31% and 30% was produced in an electric arc furnace (EAF); the balance was produced by open-hearth process. In 1992, prior to the war, B-H Steel produced 261,000 t of crude steel, of which about 164,000 t was continuously cast. This process does not appear to have been restored. Plans to install a new EAF, a ladle furnace and billet caster were included in the upgrading programme for the steel mill in 2002.

With respect to activities in the FBC's industrial minerals sector, investment in the cement industry continued to be of major importance. In 2002, Fabrika Cementa Lukavac, which became fully privatised through the sale of government assets in 2001, was approved by the International Finance Corp. (IFC) for loans worth a total of about US\$22.6 million. The loans are for modernising Lukavac's 340,000 t/y cement production capacity, thereby allowing the facility to become competitive and to contribute to the country's reconstruction programmes. Local quarries were to provide the necessary feedstock to the plant.

Modernisation plans were also initiated at the Kakanj cement plant, owned by a subsidiary of the Heidelbergcement Group of Germany. The first stage of investment, completed in mid year, was valued at US\$10.4 million, of which about US\$7.7 million was earmarked for pollution control technology. A second investment stage was initiated, earmarking about US\$43.1 million for a coal-processing facility, the study of alternative fuels usage, and the start up of quarrying operation.

In early 2002, Banovici Mining Enterprise, a major coal producer operating three surface mines and one underground brown coal mine in the FBC's Tuzla region, anticipated coal production of 1.3 Mt, of which 800,000 t was

earmarked for thermal power stations in Tuzla and about 300,000 t for the domestic market, as well as to customers in Serbia and Montenegro.

Other issues concerning the energy sector included agreements that were concluded between the governments of Bosnia and Herzegovina and Croatia to permit petroleum and derivatives shipments from Croatia at designated border shipment areas. Earlier attempts to agree on border shipment ports for petroleum and refinery products were unsuccessful, despite Bosnia and Herzegovina's total dependence on imports of hydrocarbon fuels. Also, Petropars Ltd of Iran reported plans to invest in an exploration programme for petroleum and natural gas in Bosnia and Herzegovina.

The total value of industrial output in the RS declined by 2% compared with that of 2001. The output of coal, lignite, and peat production declined by 11%. In 2002, RS's production of brown coal amounted to more than 1.2 Mt, about 2% less than was produced in 2001; lignite output amounted to about 1.42 Mt, representing a 26% decline.

The gross value output of petroleum refinery products and coke registered an increase of 7% compared with that of 2001, and an increase in physical terms of about 16%.

The value of RS's mine production of metals declined by 24%, compared with that of 2001; that of base metals production declined by 37%. In physical units, however, the aggregated production of steel semis rose by almost 11%. Secondary recovery of iron and steel, aluminium, and lead declined by 11%, 8%, and 30% respectively. The production secondary copper increased by 3.3%, compared with that of 2001. Quantitatively, these percentages represent minor output levels of less than 1,000 t. The RS was known to mine bauxite, as well as iron and lead and zinc ores.

In terms of value, RS's production of mineral fuels registered a decline of about 11% for coal, lignite and peat, and a 7% increase for coke and refined petroleum. In 2002, the output of brown coal amounted to more than 1.2 Mt and that of lignite, about 1.4 Mt, representing declines of about 2% and 26%, respectively, compared with 2001. The RS's physical output of petroleum refinery products rose by about 16%, albeit from a low output level.

A significant event in RS's mineral fuels sector was an agreement reached in midyear by the RS Government with an international consortium, comprising Bosnian Serb, Russian, and Swiss financial interests, to build a 456 km pipeline. The pipeline project, valued at US\$110 million, is designed to transport Russian natural gas via Serbia and Montenegro to the RS through Zvornik and then to the rest of Bosnia and Herzegovina. The pipeline is to be completed in 2005.

Industrial mineral production in the RS included asbestos, ceramic and refractory clays, gypsum, limestone magnesite, marble and silica. In 2002, the value of mine and quarry production of industrial mineral declined by about 11% compared with output levels achieved in 2001. The physical output of

mine and quarry products, however, largely showed production increases compared with their respective output levels in 2001; increases were reported for gypsum, crude dolomite, limestone (gravel, crushed stone, and blocks) and lime. Only the production of ceramic clays and gravel from all sources declined.