Iron (Fe)

Base Year 2025

World Production

2,600 Mt of beneficiated iron ore

0.0%

Brazil Production

468.8 Mt of iron ore (61.8% Fe)

+4.5%

National Highlight

MG (59.8%), PA (36.9%) and MS (3.2%)

Mineral Sector Trade Balance

Surplus of USD FOB 30.7 billion

Mineral Sector Exports

USD FOB 39.2 billion

-2.4%

Mining Royalties (CFEM)

R$ 5.46 billion

-6.5%

% Change 2025 vs 2024

What is Iron Ore?

Iron (Fe) is a metallic chemical element belonging to group 8 of the Periodic Table, with atomic number 26 and an atomic mass of 55.85 u. It is one of the most abundant metals in the Earth's crust and the main component used in steelmaking.

Occurrence

Iron occurs mainly in association with the following minerals:
• Hematite (Fe_2O_3);
• Magnetite (Fe_3O_4).
Secondarily, in association with:
• Goethite ($FeO(OH)$);
• Siderite ($FeCO_3$).
The deposits are associated with Banded Iron Formations (BIFs), locally known as itabirite (Quadrilátero Ferrífero-MG) and jaspilite (Carajás-PA, Corumbá-MS), which are important iron ore deposits mined on a large scale.

Main Applications

Iron has a range of uses, such as:
• steelmaking: the main raw material in steel production;
• infrastructure and transportation: railways, ships, machinery;
• civil construction: steel structures, rebar, bridges and buildings;
• automotive industry: vehicles, engines and mechanical components;
• energy: transmission towers and power plants; and
• energy transition: equipment for power generation and transmission, such as wind farms, solar plants and storage systems.



The main Brazilian deposits are associated with Banded Iron Formations (BIFs). The largest Brazilian mineral provinces are the Quadrilátero Ferrífero in Minas Gerais, the Carajás Mineral Province in the state of Pará and the Corumbá region in Mato Grosso do Sul. These regions hold large, high-quality mineral reserves (high iron content and low levels of impurities).

1. World Supply

This section presents global iron ore production data, indicating Brazil's share in the international context.

In 2025, world iron ore production was approximately 2,600 Mt, stable compared with 2024.



In 2025, **Brazil** occupied 2nd place worldwide in iron ore production.

Table 1 – Main producing countries of beneficiated iron ore – 2025

Country	Production (10^3 t)	Share (%)
Brazil	**468,804**	**18.0**
Australia	980,000	37.7
India	310,000	11.9
China	290,000	11.2
Iran	93,000	3.6
Russia	91,000	3.5
Other Countries	367,196	14.1
Total	**2,600,000**	**100.0**

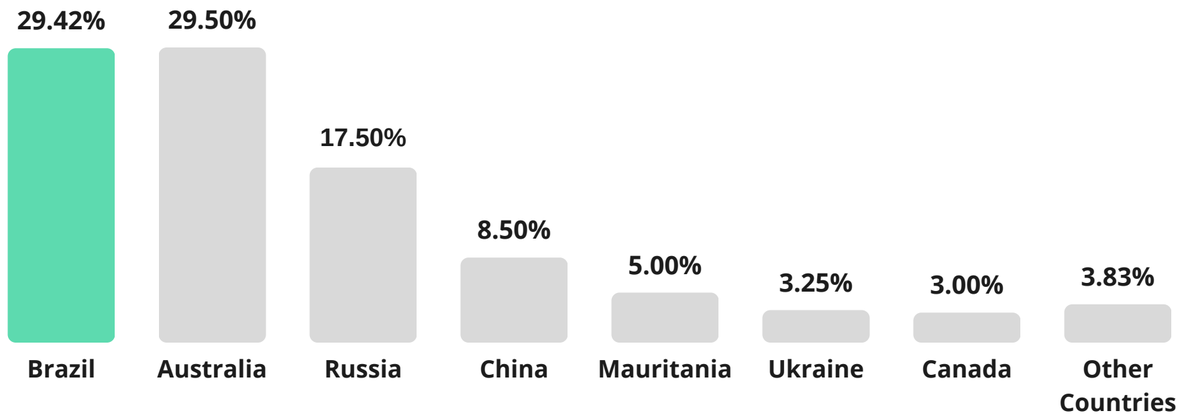
Source: ANM; USGS - Mineral Commodity Summaries 2026.

2. Reserves

World iron ore reserves reflect the global availability of the ore and its geographic distribution among the main producing countries.

According to the United States Geological Survey (USGS), world iron ore reserves totaled 200.0 billion tonnes in 2025, distributed mainly among:

Main World Iron Ore Reserves – 2025





Iron ore reserves in **Brazil**, in 2025, totaled 58.8 billion tonnes (proven and probable), with an average grade of 40.2% iron.

Source: ANM/USGS - Mineral Commodity Summaries 2026 – Brazil data: ANM.

3. Domestic Production

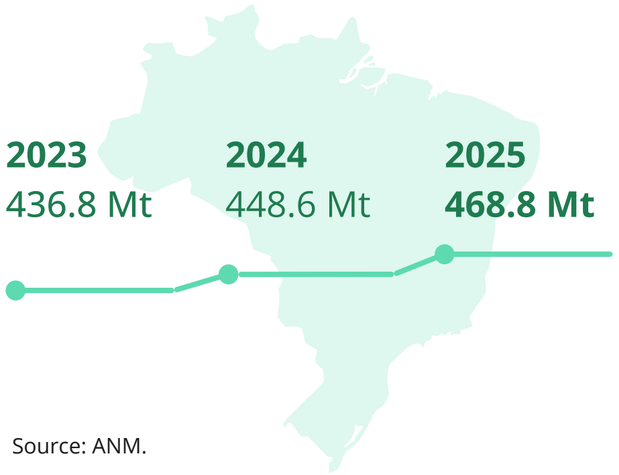
In 2025, national production of beneficiated iron ore totaled 468.8 million tonnes (average grade of 61.8% Fe), an increase of 4.5% over the previous year.

Iron ore beneficiation is the set of operations that prepares the ore extracted from the mine to obtain a product with a higher iron content and characteristics suitable for steelmaking.

Production was concentrated in:
Minas Gerais: 280.1 Mt (59.8%)
Pará: 172.8 Mt (36.9%)
Mato Grosso do Sul: 14.9 Mt (3.2%)

Brazilian Production of Beneficiated Iron Ore

Last 3 years



2023
436.8 Mt

2024
448.6 Mt

2025
468.8 Mt

Source: ANM.

4. Foreign Trade

In 2025, the iron ore foreign trade balance in the Mineral Sector (IEM + ITM) reached **USD 30.7 billion, 45.2% of Brazil's trade balance.**



Mineral Sector Exports (IEM + ITM)

Total: USD FOB 39.2 billion
Decrease: -2.4%

Main destinations:

- China (50.3%)
- United States (14.3%)
- Malaysia (3.5%)

Mineral Sector Imports (IEM + ITM)

Total: USD FOB 8.5 billion
Decrease: -2.1%

Main origins:

- China (44.9%)
- South Korea (7.0%)
- United States (6.6%)

Foreign trade: main products of the mineral extractive industry (IEM) in 2025

Main Exported Products

	NCM 26011100 - Iron ores and concentrates, non-agglomerated	NCM 26011210 - Iron ores agglomerated by pelletizing (8 to 18 mm)
USD FOB	26,290,907,269	2,679,249,507
EXP Share (%)	90.7	9.2

Main Imported Products

	NCM 26011100 - Iron ores and concentrates, non-agglomerated	NCM 26011290 - Other agglomerated iron ores
USD FOB	20,517	3,259
IMP Share (%)	86.3	13.7

Foreign trade: main products of the mineral processing industry (ITM) in 2025

Main Exported Products

	NCM 72071200 - Semi-finished products of non-alloy iron/steel, < 0.25% C	NCM 72011000 - Non-alloy pig iron, ≤ 0.5% phosphorus
USD FOB	3,574,058,860	1,672,363,883
EXP Share (%)	34.9	16.3

Main Imported Products

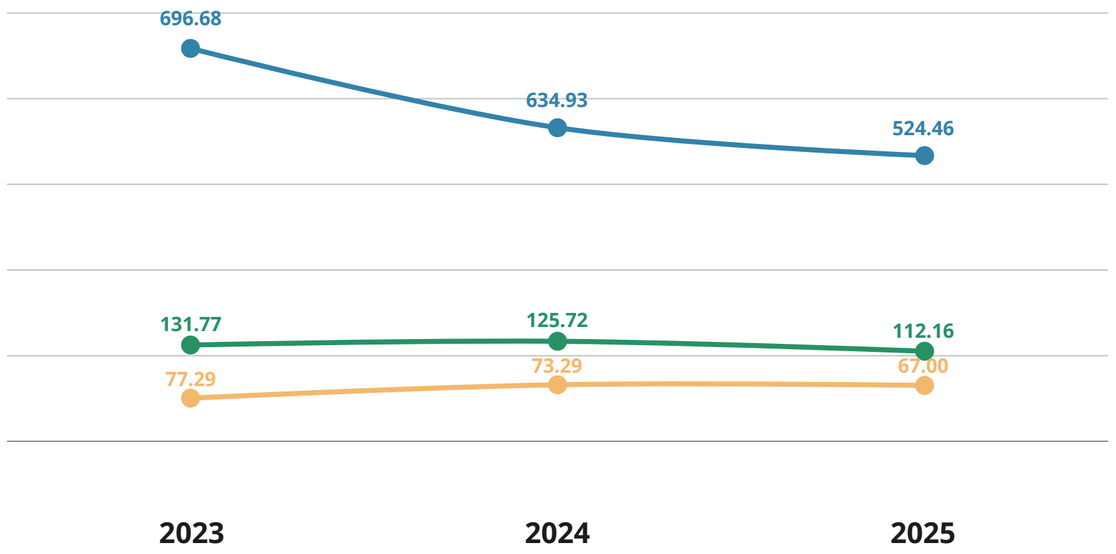
	NCM 73269090 - Other articles of iron or steel	NCM 73181500 - Other screws and bolts, of cast iron, iron or steel
USD FOB	528,985,229	491,802,513
IMP Share (%)	6.2	5.8

Source: COMEXSTAT/Ministry of Development, Industry, Trade and Services (MDIC) and COMEXMIN/ANM.

5. Prices

The chart shows the evolution of average export prices of the main iron products between 2023 and 2025, calculated based on COMEXSTAT value and quantity data.

Chart – Average FOB Prices - USD/t - Last 3 Years



Source: COMEXSTAT/Ministry of Development, Industry, Trade and Services (MDIC). Note: prices calculated based on COMEXSTAT values and quantities.
***USD FOB/t** = The seller fulfills its obligations and responsibilities when the goods, cleared for export, are delivered, stowed on board the vessel at the port of shipment, both indicated by the buyer, on the date or within the agreed period.

6. Financial Compensation for the Exploitation of Mineral Resources (CFEM)

Revenue from CFEM, Brazil's mining royalty, on iron ore was R$ 5.46 billion, representing 69.1% of total CFEM revenue of R$ 7.91 billion in 2025.

CFEM - Iron (2025)

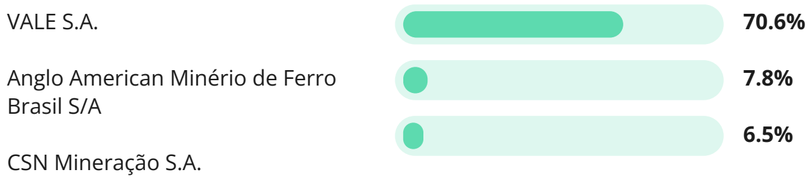
- Total revenue: R$ 5.46 billion
- Change: -6.5% compared with 2024 (R$ 5.84 billion)
- Rate: 3.5% (Law No. 13,540/2017)

Main Collecting States

Minas Gerais (56.5%)

Pará (42.7%)

Main Paying Companies



Revenue fell 6.5% compared with 2024, reflecting the drop in iron ore prices on the international market.

Minas Gerais and Pará together accounted for 99.2% of the total collected for iron ore.

7. Investments and Mining Rights

Iron ore mining investments (exploration, mines and plants) are concentrated in Minas Gerais, Pará and Mato Grosso do Sul, which together accounted for 98.9% of the amount invested in 2025.

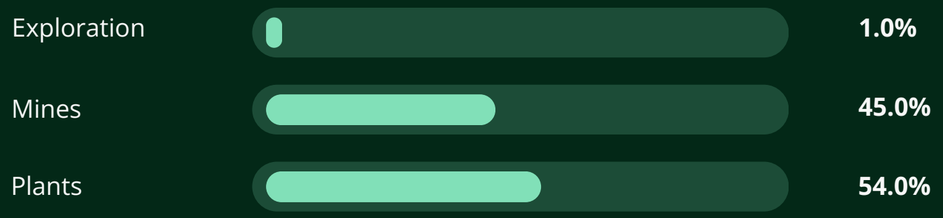
Mining Investments

In 2025, according to the Mineral Exploration Investment Statement (DIPEM) and the Annual Mining Report (RAL), investments in iron ore mining totaled R$ 25.1 billion, with 1.0% in mineral exploration and 99.0% in the mining phase, a decrease of 1.6% over the previous year.

Main States

- MG (63.3%)
- PA (34.0%)
- MS (1.6%)

Investment Breakdown



Mining Rights Granted in 2025

Mineral Exploration

- 796 new exploration permits
- -13.2% compared with 2024
- 79 final exploration reports approved and published

Main States

- BA (219 permits)
- MG (189 permits)
- MA (124 permits)

Mining Applications Filed

- 64 mining applications

Mining Concession

- 13 mining concession orders published

8. Relevant Factors

Novo Carajás Program and a new investment cycle in Pará: In February 2025, Vale announced the Novo Carajás Program, with investments of around R$ 70 billion between 2025 and 2030, aimed at expanding the production of high-quality iron ore and copper in the Northern System. The program plans to raise the complex's iron ore production to a rate of 200 million tonnes per year by 2030, through the expansion of the Serra Sul mine (S11D) and the replacement of depleting capacity at current mines. (Source: Vale, market announcement, 2025)

Licensing of the Serra Sul +20 Mtpa Project: In September 2025, the Brazilian Institute of Environment and Renewable Natural Resources (IBAMA) issued the operating license for activities related to the Serra Sul +20 Mtpa Project mine, in Pará. This milestone consolidates the main project to expand production capacity at the Carajás hub, with commissioning scheduled for the second half of 2026. (Source: IBAMA; Vale, 2025)

Start-up of Simandou and new supply of high-grade ore: On November 11, 2025, operations officially began at the Simandou project in Guinea, with the first shipment of ore bound for China. With an average grade of around 65% Fe and a projected capacity of up to 120 million tonnes per year at full operation, the project opens a new export corridor in West Africa and is likely to intensify competition in the high-quality ore segment, in which Brazil has traditionally been competitive. (Source: Rio Tinto; Winning Consortium Simandou, 2025)

Price decline and impact on revenue: The downward trend in international prices in 2025 directly affected the sector's indicators. The average export price of non-agglomerated ore fell from USD FOB 77.29/t in 2023 to USD FOB 67.00/t in 2025, a movement that helps explain the 2.4% decrease in export value and the 6.5% drop in iron ore CFEM revenue, even though national physical production grew over the period. (Source: COMEXSTAT/MDIC; ANM, 2025)