Uranium (U)

Base Year 2025

World Production

~66.1 thousand t of contained U

-2.7%

Brazil Production

64 t of U (contained)

-24.2%

National Highlight

Bahia (100% of national production)

Mineral Sector Trade Balance

Deficit of USD FOB 74.1 million

Mineral Sector Exports

None

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Mining Royalties (CFEM)

R$ 265.9 thousand

-35.7%

% Change 2025 vs 2024

What is Uranium?

Uranium is a radioactive metallic chemical element with atomic number 92. Natural uranium consists of the isotopes U-238 (99.27%), U-235 (0.72%) and U-234 (about 0.005%).

The isotope U^{235} is fissile: when struck by neutrons, its nucleus splits and triggers a chain reaction that releases a significant amount of energy. This characteristic makes it a fundamental fuel for generating heat in nuclear reactors for power generation.

Occurrence

Uranium mineralogy is divided into primary minerals (U^{4+}), from reducing environments, and secondary minerals (U^{6+}), formed by oxidation and weathering.

The main primary mineral, and the one of greatest economic interest, is uraninite/pitchblende (UO_2, with UO_2 grades of up to 88%).

Secondary minerals include carnotite [$K_2(UO_2)_2(VO_4)_2 \cdot 3H_2O$], torbernite [$Cu(UO_2)_2(PO_4)_2 \cdot 8–12H_2O$] and autunite [$Ca(UO_2)_2(PO_4)_2 \cdot 8–12H_2O$], as well as associations in phosphorites and organic-rich sandstones.

Main Applications

Uranium's applications derive from the energy released by U^{235} fission and from the high density of U^{238}. Its main use is as nuclear fuel for electricity generation in commercial reactors (e.g., Angra 1 and 2) and for the naval propulsion of submarines and defense vessels.

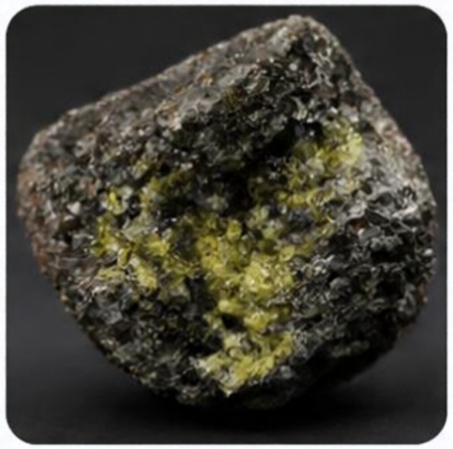
Depleted uranium (U^{238}), with its high specific mass, is used in aircraft counterweights and radiation shielding. In nuclear medicine, fission provides radioisotopes such as ^{99}Mo, the precursor of the ^{99m}Tc used in scintigraphy diagnostics.

Uranium is a critical and strategic mineral, used mainly as nuclear fuel for low-carbon electricity generation, as well as for military and medical purposes, among others. Growing demand for energy security and climate neutrality has increased its economic and geopolitical relevance.

1. World Supply

World uranium supply data are provided by the Nuclear Energy Agency (NEA) and the International Atomic Energy Agency (IAEA), and published in the “Red Book”.

In 2025, world beneficiated uranium production, in concentrates, was estimated at 66,074 t U (contained). About 74% of this took place in Kazakhstan (39.0%), Canada (21.6%) and Namibia (13.2%). Production decreased by 2.7% compared with 2024.



U production (contained) in concentrates in Brazil:
2024: 84.4 t U
2025: 64.0 t U

Table 1 – Main uranium-producing countries (t U contained) – 2025 (NEA, estimated data)

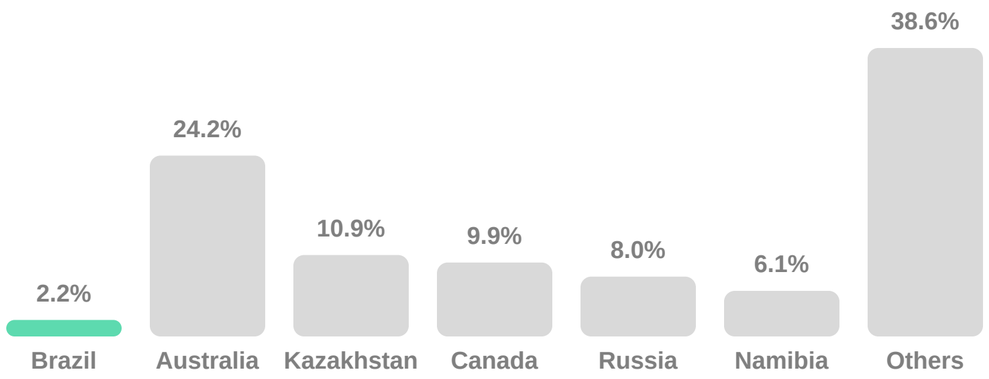
Country	Production (t U)	Share (%)
Brazil	64	0.1
Kazakhstan	25,789	39.0
Canada	14,251	21.6
Namibia	8,720	13.2
Uzbekistan	6,000	9.1
Australia	5,395	8.2
Other Countries	5,855	8.9
Total	66,074	100.0

Source: Brazil: ANM; World: Nuclear Energy Agency (NEA/OECD) and International Atomic Energy Agency (IAEA) ("Red Book"), NEA (2026), Uranium 2026: Resources, Production and Demand, OECD Publishing, Paris.

2. Reserves

According to NEA (2026), uranium resources are classified under a system based on the degree of geological certainty and production costs into: Identified (RAR and IR), Undiscovered (PR and SR) and Unconventional. RAR have high geological confidence to support mining decisions (pre-feasibility/feasibility studies), while IR require additional investigation. PR and SR represent potential resources not yet confirmed by exploration, and unconventional resources include low-grade occurrences and by-product/co-product production. In 2025, global identified recoverable uranium resources (RAR + IR), at a production cost < USD 260/kg U, totaled 8,104,700 t U.

Identified Uranium Resources (RAR + IR) (< USD 260/kg U) – 2025





According to the NEA (2026) classification, Brazil's Identified Resources (RAR + IR), at a cost < USD 260/kg U, totaled 177,800 t U in 2025 (2.2% of the global total).

According to INB (2025), total estimated resources at the Caetité/BA unit are around 87.1 thousand tonnes of U_3O_8. Under the CRIRSCO/CBRR classification, the unit had proven and probable reserves of 69,900 t in 2025, according to ANM data.

Sources: Brazil: ANM; INB (2025); World: NEA (2026), Uranium 2026: Resources, Production and Demand.

3. Domestic Production

Brazilian uranium production reflects the country's operational capacity and its regional concentration.

According to ANM, uranium concentrate production in 2025 was 75.5 t of U_3O_8 (64.0 t of contained U), a decrease of 24.2% compared with 2024 (84.4 t of contained U).

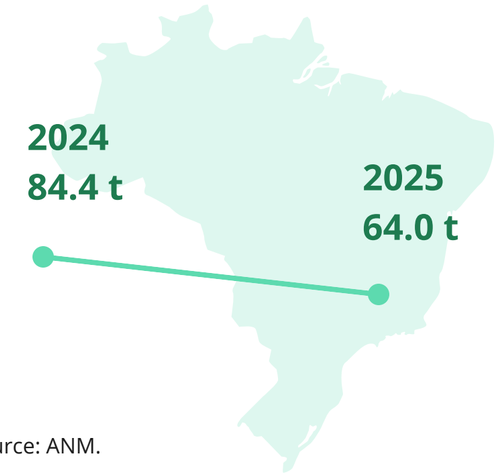
According to INB (2026), six batches of ADU (yellowcake) were produced, resulting in an inventory of 386 t of U_3O_8 available for shipment. In addition, enriched uranium (UF_6) production reached 10,305.6 kg.



- The **State of Bahia** remains the main producing unit (INB, Engenho Mine, Caetité/BA), with 100% of national production

Brazilian Processed Uranium Production (t U contained)

Last 2 years



Source: ANM.

4. Foreign Trade

Uranium foreign trade shows the absence of exports of uranium products and a dependence on imports of products from its Mineral Transformation Industry. In 2025, the uranium sector recorded a trade deficit of **USD FOB 74.1 million.**



Mineral Sector Exports

There were no exports in 2025.

Mineral Sector Imports

Total: USD FOB 74.1 million
Growth: +40.6%

Main origins:

- Russia (91.8%)
- United States (5.3%)
- Sweden (1.3%)

Source: Open Data/Ministry of Development, Industry, Trade and Services (MDIC).

- Data include the Mineral Extractive Industry (IEM) and the Mineral Transformation Industry (ITM)

***FOB** = 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.

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

Main exported products

No exports recorded in the IEM in 2025

USD FOB	–
EXP Share (%)	–

Main imported products

No imports recorded in the IEM in 2025

USD FOB	–
IMP Share (%)	–

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

Main exported products

No exports recorded in the ITM in 2025

USD FOB	–
EXP Share (%)	–

Main imported products

	NCM 28441000 - Natural uranium and its compounds; alloys, dispersions...	**NCM 28442000 - Uranium enriched in U235 and its compounds; plutonium...**
USD FOB	54,967,822	18,920,838
IMP Share (%)	74.1	25.5

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

5. Prices

Prices reflect the dynamics of the international market and are influenced by factors such as global demand, production costs and economic fluctuations.

Table – Average prices (USD FOB/kg) – 2023 to 2025

NCM	2023	2024	2025	Δ% 25/24
28441000	551.20	2,286.32	3,249.07	42.1%
28442000	698.47	871.53	998.15	14.5%
84013000	659.93	3,605.71	3,053.35	-15.3%

- NCM 28441000 - Natural uranium and its compounds; alloys, dispersions, ceramic products and mixtures
- NCM 28442000 - Uranium enriched in U235 and its compounds; plutonium and its compounds
- NCM 84013000 - Non-irradiated fuel elements (cartridges) for nuclear reactors

Source: BI-Sumário/COMEX (accessed on September 18, 2026); Open Data/MDIC and COMEXMIN/ANM.
***USD FOB/kg** = 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)

Collection of CFEM, Brazil's mining royalty, reflects the economic contribution of mining activity to the country, showing the distribution of revenues among producing states and the share of the main companies in the sector. The data consider the amounts collected in 2025 for uranium.

CFEM - Uranium (2025)

- Total collected: R$ 265.9 thousand
- Change: -35.7% compared with 2024 (R$ 413.7 thousand)

Main collecting states

Bahia (100.0%)

Main collecting companies

Indústrias Nucleares do Brasil S.A. (INB)	**100.0%**

Collection decreased by 35.7% compared with 2024, due to a lower volume of processed ore (68,205 t) in 2025.

Bahia accounted for 100% of collections in 2025, associated with the production of uranium concentrate in the municipality of Caetité/BA.

Source: ANM.

7. Investments and Mining Rights

Investments in uranium mining were entirely concentrated in Bahia (100.0%) in 2025.

Investments in mining

In 2025, according to data from the Annual Mining Report (RAL), investments in uranium mining totaled R$ 6.3 million, an increase of 87.9% compared with 2024. No data on investments in uranium exploration were reported in the Mineral Exploration Investment Declaration (DIPEM) for the year.

Main States

BA (100.0%)

Investment Share



Mining Rights Granted in 2025

Mineral Exploration

- No exploration permit granted
- 1 final exploration report approved and published

Main States

No permits granted in 2025

Mining applications

- No mining applications

Mining concession/PLG

- No mining concession granted

Source: ANM.

8. Relevant Factors

Uranium maintained high strategic relevance in 2025, driven by the resurgence of nuclear energy, energy security and projected demand growth. According to the World Nuclear Association (WNA), world production in 2025 remained concentrated in a few countries, with Kazakhstan, Canada, Namibia and Australia accounting for more than three quarters of mine production, while reactor requirements were estimated at approximately 68.9 thousand tonnes of uranium in 2025.

In 2025, the market was marked by the appreciation of long-term contracts and uncertainties regarding future supply. The spot price was volatile and reached an annual average of US$ 73.54/lb, while the long-term price reached US$ 86.50/lb in December, its highest level in 14 years, according to Cameco.

The geopolitics of uranium gained prominence. In Niger, the nationalization of SOMAIR, previously operated by France's Orano, increased uncertainty over African supply, according to Reuters. In parallel, according to the China National Nuclear Corporation (CNNC), China advanced its domestic production, with the National No. 1 Uranium project in Ordos (Inner Mongolia Autonomous Region) producing its first batch of uranium.

According to the International Energy Agency (IEA), Small Modular Reactors (SMRs) and growing electricity demand from data centers also strengthened the market's growth prospects. In this context, the WNA estimates that annual uranium demand could exceed 150 thousand tonnes by 2040 in the reference scenario.

In Brazil, 2025 was marked by efforts to expand production and achieve greater autonomy in the fuel cycle. INB signed a contract to send up to 275 t of uranium concentrate from Caetité (BA) abroad for conversion and enrichment. Also according to INB, BNDES began structuring partnerships to expand production in five INB areas under the Pró-Urânio program, while the Santa Quitéria Project (CE) advanced in its technical review by CNEN. These actions reinforce Brazil's strategic potential in light of growing global demand and the need to diversify supply sources.

Sources: IEA; World Nuclear Association (WNA); Cameco; Reuters; CNNC; INB; CNEN.