SECRETARIAT OF GEOLOGY, MINING AND MINERAL TRANSFORMATION

MINISTRY OF MINES AND ENERGY

PÁTRIA AMADA BRASIL GOVERNO FEDERAL

MINERAL
Sector Bulletin

2019

Credits: stock.adobe.com

MINING

Prosperity for Development and Social Welfare

To the Reader

It is with great pleasure that we present the Brazilian Mineral Sector Bulletin.

In it, the reader can find some relevant data about the country's mineral economy, from geological survey, through extraction to industry.

The purpose of this Bulletin is to provide greater knowledge and dissemination of this very important sector of the national economy.

Enjoy your reading!

Alexandre Vidigal de Oliveira

National Secretary of Geology, Mining and Mineral Transformation

Participate in the preparation of our Bulletin!

Participations can be sent to sgm@mme.gov.br

Digital version available on MME website: www.mme.gov.br/web/guest/secretarias/geologia-mineracao-e-transformacao-mineral/publicacoes/boletim-do-setor-mineral

MINERAL
Sector Bulletin

2st ISSUE

Summary

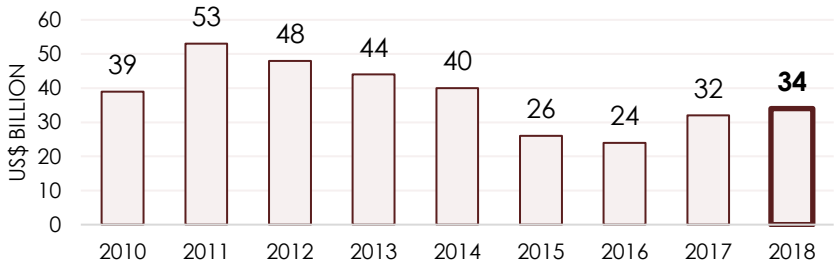
Brazil, Brasília, 2019

Updated on February, 2020

English Version

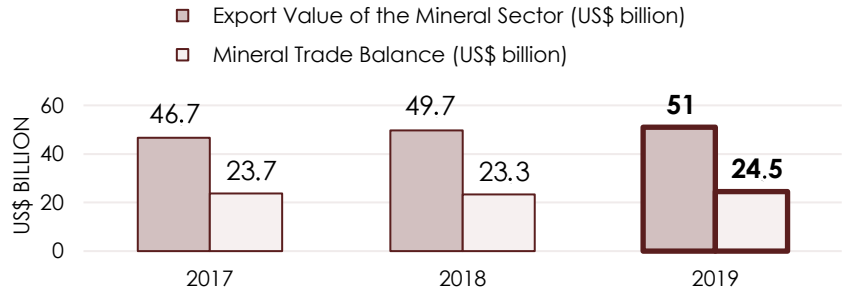
1 Sector Overview

VALUE OF BRAZILIAN MINERAL PRODUCTION (PMB)[1]



Source: Brazilian Mining Association (IBRAM, 2019)

EXPORTS AND TRADE BALANCE OF THE MINERAL SECTOR



Source: DTTM/SGM (2020), Economy Ministry (COMEX-STAT/ME)

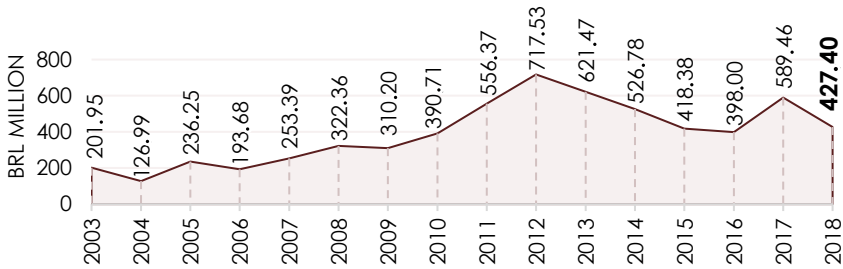
GDP PARTICIPATION (APPROACH)	2017	2018
Brazil GDP (BRL billion)	**6,752**	**6,828**
Mineral Extractive Industry GDP[2] (%) (including Petroleum and Gas)	2.26	2.26
Metallurgy GDP (%)	1.34	1.34
Transf. Non-Metallic GDP (%)	0.47	0.46
Mineral Sector GDP (%) (Extractive Ind.+ Met+ Non Met. Transf.)	**4.07**	**4.06**

Source: *Synopsis* (DTTM/SGM, 2019), Brazilian Institute of Geography and Statistics (IBGE)

[1] PMB (abbrev. in portuguese) is the sum of all mineral goods produced in the country calculated in billions of dollars, methodology of the Brazilian Mining Association (IBRAM).

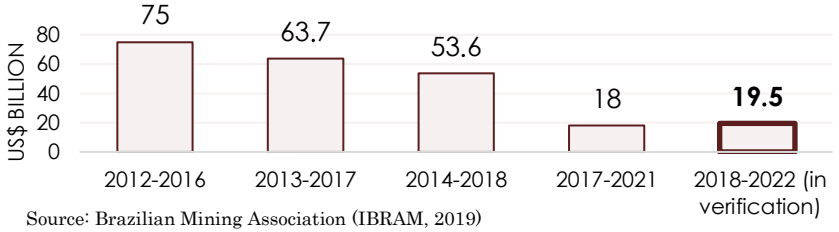
[2] GDP of Mineral Extractive Industries excluding Petroleum and Gas: 2017 = 0.66; 2018=0.64.

MINERAL EXPLORATION INVESTIMENT STATEMENT (BRL MILLION)



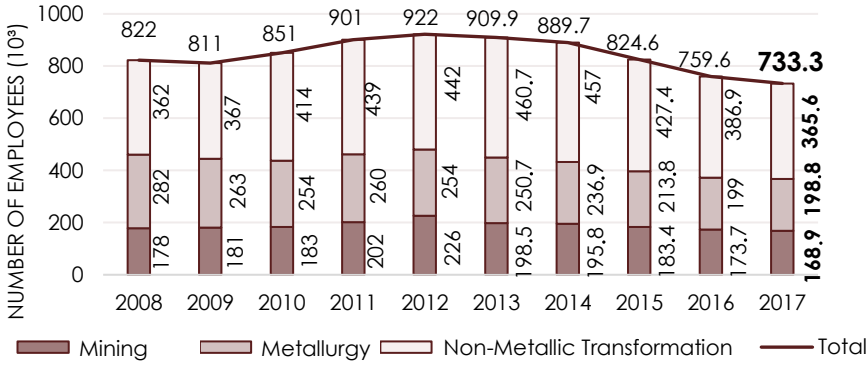
Source: National Mining Agency (DIPEM/ANM, 2019)

INVESTIMENTS IN MINING PROJECTS (US$ BILLION)



Source: Brazilian Mining Association (IBRAM, 2019)

MINERAL SECTOR DIRECT EMPLOYMENT



Source: DTTM/SGM (2019), Economy Ministry (RAIS/ME)

2 Mineral Reserves

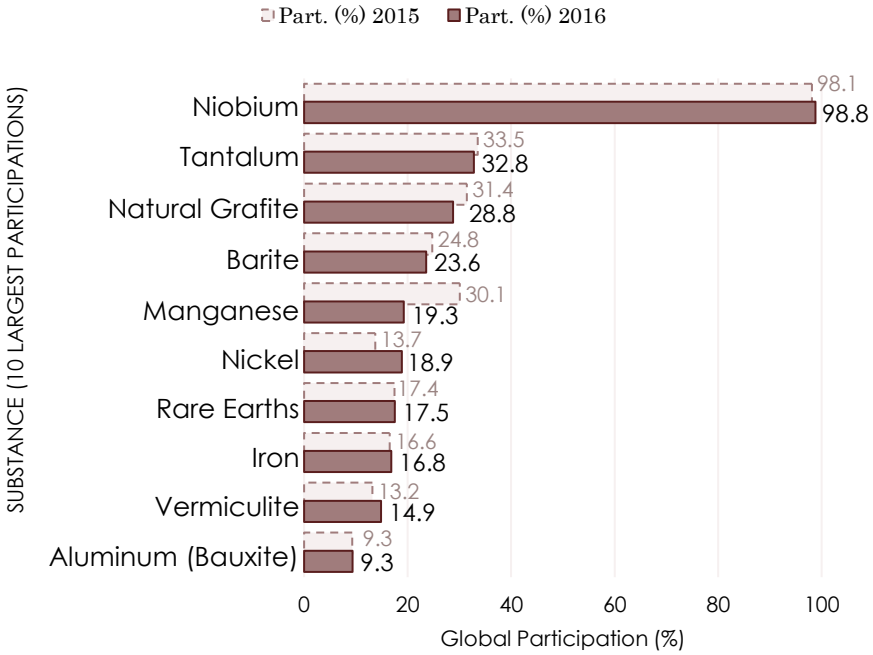
Main Mineral Reserves in Brazil

Substance	Reserve (10^3 t)	Global Participation (%)
Aluminum (Bauxite)[1]	2,600,000	9.3
Barite[2]	81,570	23.6
Chromite[2]	2,451	0.5
Cobalt[2]	70	1.0
Copper[2]	11,212	1.6
Gold[2]	2.4	4.2
Graphite[1] (natural)	72,000	28.8
Iron Ore[1]	28,603,000	16.8
Lead[2]	74	0.1
Lithium[2]	54	0.4
Magnesite[1]	391,000	4.6
Manganese[6]	136,492	19.3
Mineral Coal[1]	3,799,000	0.4
Niobium[2]	16,166	98.8
Níquel[2]	15,991	18.9
Phosphate Rock[4]	315,000	0.5
Platinum Gr. Metals[3]	*n.a.*	*n.a.*
Potash[4]	1,400	0.0
Rare Earths[2]	21,000	17.5
Silver[2]	3.8	0.7
Talc and Pyrophyllite[1]	45,163	*n.a.*
Tantalum[2]	33.7	32.8
Tin[2]	382.7	8.8
Titanium[5]	6,181	0.8
Tungsten[2]	28	0.9
Vanadium[2]	119	0.6
Vermiculite[1]	7,000	14.9
Zinc[2]	2,464	1.1
Zirconium[1]	2,319	3.1

Source: *Brazilian Mineral Summary* (National Mining Agency, ANM, 2017)

Notes: 1- Recoverable ore reserve; 2- Contained metal recoverable reserve; 3- Contained metal recoverable reserve of Pt+Pd; 4- Contained metal recoverable reserve in P_2O_5 or K_2O equivalent; 5- Contained metal recoverable reserve of ilmenite + rutile; 6 – Contained metal in the proven reserve; n.a. not available.

Global Participation of Brazilian Mineral Reserves (2015 versus 2016)



Source: *Brazilian Mineral Summary* (National Mining Agency, ANM, 2016 and 2017)

Did You Know?

Mineral Resource is a concentration of minerals in or on the Earth's crust, in adequate quantity and quality for industrial use and that there are reasonable prospects for economic extraction, but which has not been submitted to a detailed economic evaluation yet.

Mineral Reserve is the economically mineable part of the Mineral Resource duly demonstrated by technical and economic feasibility studies.

3 Mineral Production

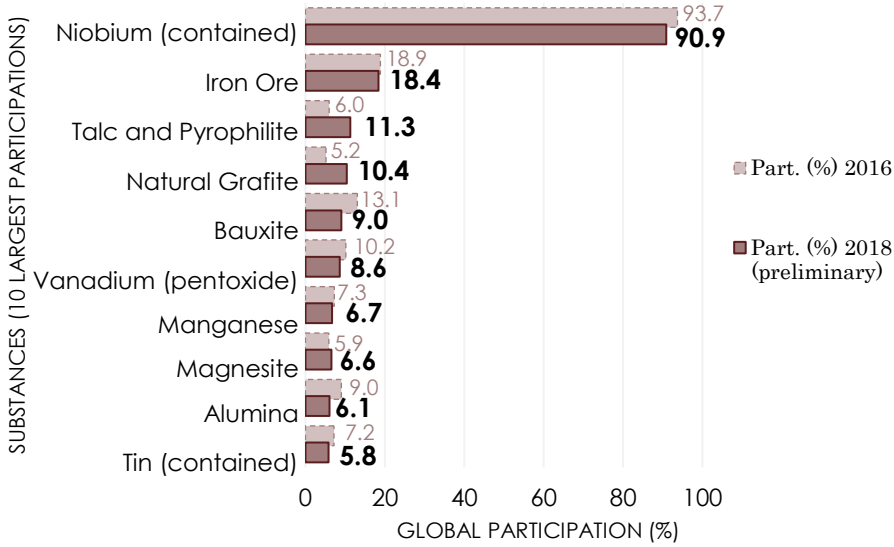
National Production(B) of Mineral Goods 2015 to 2018 (10^3 t)

Substance	2015	2016	2017	2018(p)
Agricultural Limestone	29,433	32,469	37,600(p)	43,000
Barite[1]	17.8	12.1	*n.a.*	*n.a.*
Bauxite	35,715	37,389	36,375	27,000
Chromite[3]	526.7	426.3	542.9	*n.a.*
Copper[1]	350.9	338.9	384.5	381.0
Gold[6]	0.083	0.094	0.080	0.081
Grafite[2] (natural)	81.8	61.7	95(p)	96.8
Iron Ore	430,838	421,358	453,703	460,000
Kaolin	1,802	1,737	1,800(p)	2,000
Lithium[4]	0.31	0.44	0.2(p)	0.60
Magnesite	1,621	1,652	1,800(p)	1,900
Manganese[1]	1,243	1,200	1,343	1,200
Mineral Coal (metallurgical)	150.9	52.9	*n.a.*	*n.a.*
Mineral Coal (thermal)	6,748.6	6,009.8	3,878.3(p)	4,449.9
Nickel[1]	182.9	134.6	68.8	80.0
Niobium[5]	80.5	80.7	83.2	80.0
Phosphate Rock[2]	6,100	5,850	5,345(p)	5,098
Potash[7]	304.0	316.4	306.2(p)	201.2
Rare Earths (monazite)	1.63	4.53	1.7(p)	1.00
Sulfur	514.0	530.0	530(p)	530.0
Talc and Pyrophillite[8]	642.6	657.0	850(p)	850.0
Tantalum[2]	0.27	0.13	0.11(p)	0.10
Tin[1] (cassiterite)	20	15.2	17.1	18.0
Titanium[2]	81.0	66.5	50.0	50.0
Vanadium (V_2O_5)	5.81	7.97	5.21(p)	6.30
Zinc[1]	157.0	158.2	156.5	*n.a.*

Source: *Mineral Summary* (National Mining Agency, ANM, 2017 and 2018), *Mineral Yearbook* (ANM, 2018); *Mineral Commodity Summaries* (USGS, 2018 and 2019); *Synopsis* (DTTM/SGM, 2019), *Non-Metallic Transformation Sector Yearbook* (DTTM/SGM, 2019).

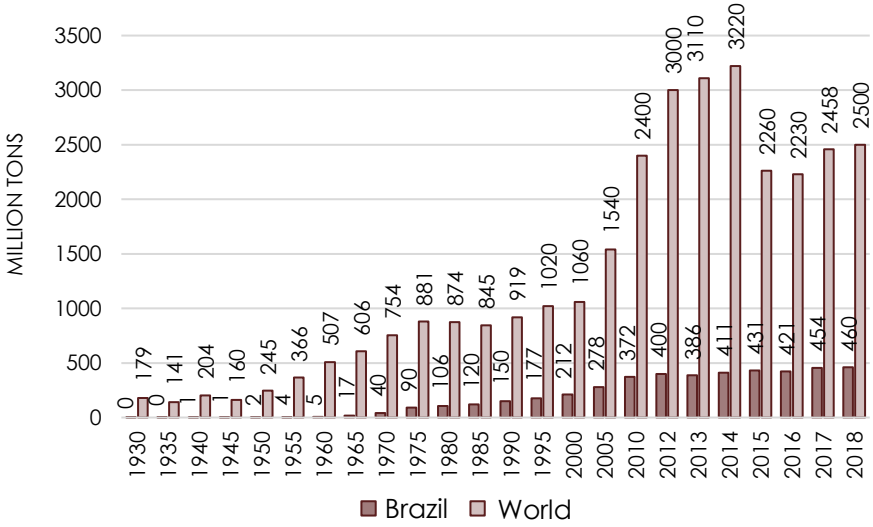
Note: (B) Beneficiated production; 1- Contained metal; 2- Concentrate; 3- Lump Ore + chromite concentrate; 4- Contained in lithium oxide; 5- Nb_2O_5 contained in concentrate; 6- Companies + small-scale mining; 7- K_2O equivalent; 8- Total; (p) preliminary; n.a. not available.

BRAZILIAN PARTICIPATION IN WORLD PRODUCTION OF MINERAL GOODS (2016 VERSUS 2018(P))



Source:, *Mineral Summary* (National Mining Agency, ANM, 2017), *Mineral Commodity Summaries* (USGS, 2019), *Synopsis* (DTTM/SGM, 2019). Note: (p) preliminary. Data subject to revision.

HISTORICAL NATIONAL AND WORLD PRODUCTION OF IRON ORE



Source: DTTM/SGM (2019), USGS, DNPM/ANM

NATIONAL METAL AND ALLOY PRODUCTION 2015 TO 2018 (10^3 T)

Substance	2015	2016	2017(p)	2018(p)
Alumina	10,452	10,886	10,900	7,900
Aluminum (primary metal)	772.2	792.7	801.7	659.0
Copper (primary metal)	241.5	225.6	143.0	147.0
Iron-Nickel Alloy	71.5	156.0	210.0	62.2
Iron-Niobium Alloy (Nb contained)	52.9	44.4	58.7	*n.a.*
Pig Iron	32,110	29,587	32,100	32,500
Raw Steel	33,256	31,275	34,400	34,900
Silicon (metallic)	117.0	110.0	110.0	190.0
Zinc (primary metal)	270.7	284.5	262.4	258.5

Source: *Mineral Summary* (National Mining Agency, ANM, 2017), *Mineral Commodity Summaries* (USGS, 2018 and 2019), *Synopsis* (DTTM/SGM, 2016 to 2019), Paranapanema company (2020).

Note: (p) preliminary; n.a. not avalaible

NATIONAL PRODUCTION(B) OF CONSTRUCTION MATERIALS 2015 A 2018 (10^3 T)

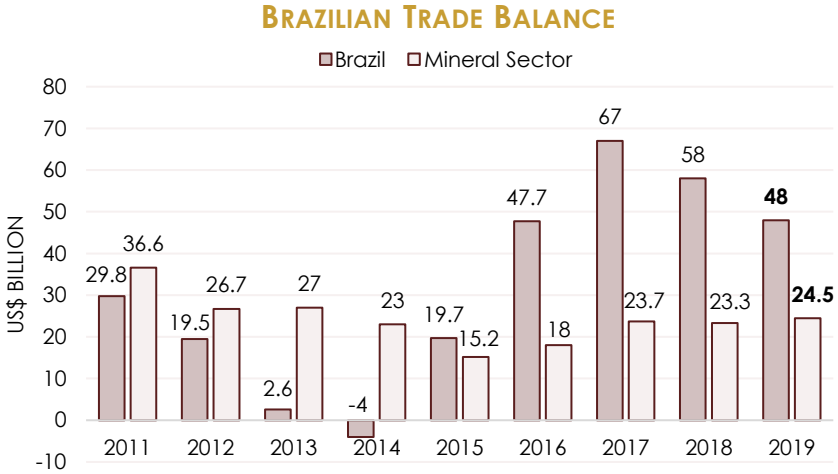
Substance	2015	2016	2017(p)	2018(p)
Construction Sand	349,087	312,044	294,000	*n.a.*
Crushed Stone and Gravel	261,022	236,387	203,000	*n.a.*
Lime	*n.a.*	8,300	8,300	8,400
Cement	64,874	57,630	53,703	53,458
Dimension Stone	9,500	9,300	9,240	9,000

Source: *Mineral Summary* (National Mining Agency, ANM, 2017), ANEPAC, *Synopsis* (DTTM/SGM, 2016 to 2019) and *Non-Metallic Transformation Sector Yearbook* (DTTM/SGM, 2019).

Note: (B) Beneficiated production; (p) preliminary; n.a. not avalaible

4 Foreign Trade

Brazil's trade balance closed 2019 with positive balance of US$ 48 billion, equivalent to US$ 225.3 billion of exports and US$ 177.3 billion of imports. Of these exports, the mineral sector participated with 22.6%, registering US$ 51 billion in goods exported (ores and transformed) by the country.



Source: DTTM/SGM (2020), Economy Ministry (COMEX-STAT/ME, 2020)

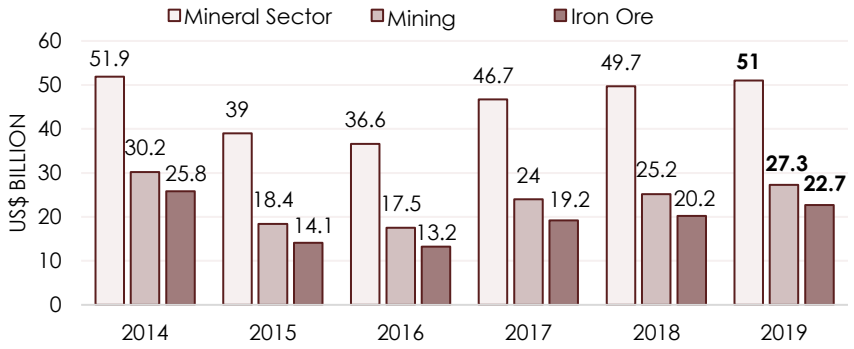
DID YOU KNOW?

Mineral Coal is widely used in power generation and steel production. The coal existing in the Brazilian territory has a large percentage of ashes mixed with carbonous matter and a low degree of carbonification, being considered of medium to low quality. Thus, it is basically intended for energy use, which allows for the full range of coal quality possible.

As an input used in blast furnaces, metallurgical coal is coking coal, noble, of high quality, and needs to be imported from other countries to meet the demand of the domestic steel industry.

Considering only mining (extractive industry), total exports for 2019 were US$ 27.3 billion, which represents 53.5% of mineral sector and 12% of Brazilian exports. Compared to the previous year, exports showed an increase of 8.3%, attributed mainly to the recovery in the average price of iron ore sales, which, although the smaller volume shipped, registered a value higher than 2018. Iron ore represented 83% of mining industry exports, 45% of mineral sector exports and 10% of Brazilian total exports.

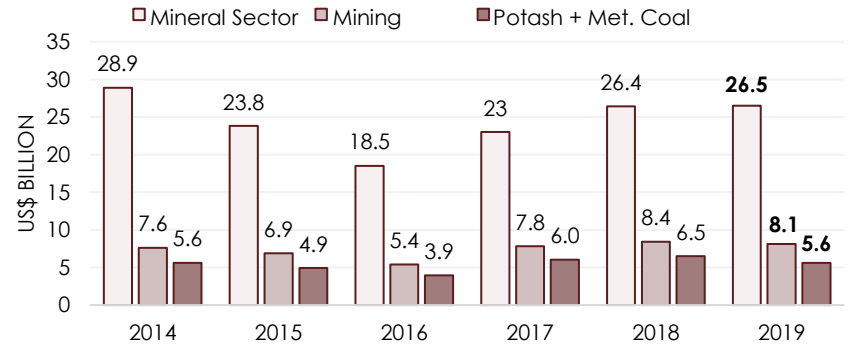
EXPORT



Source: DTTM/SGM (2020), Economy Ministry (COMEX-STAT/ME, 2020)

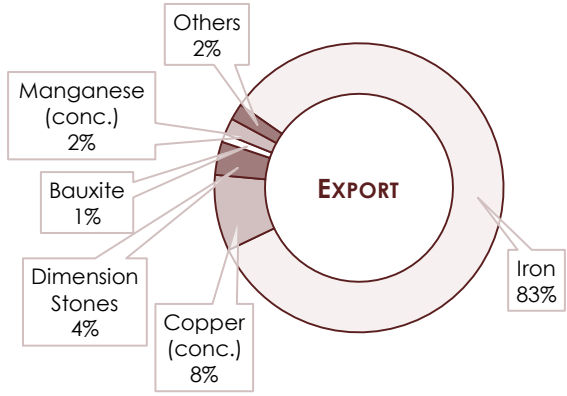
In 2019, mining imports totaled US$ 8.1 billion, 3.5% lower than 2018, observing a fall in the price of main imported items such as metallurgical coal, potash and copper.

IMPORT

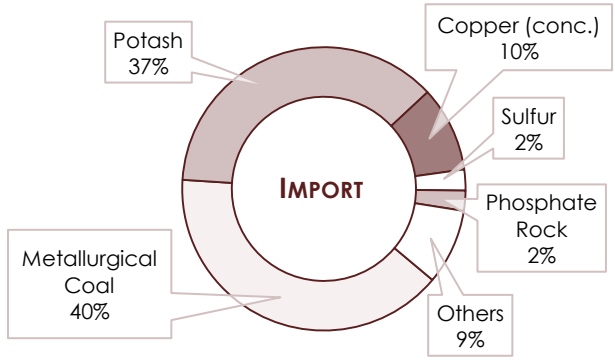


Source: DTTM/SGM (2020), Economy Ministry (COMEX-STAT/ME, 2020)

MAIN COMPONENTS OF THE EXPORT AND IMPORT AGENDA FOR MINING IN 2019



Source: DTTM/SGM (2020), Economy Ministry (COMEX-STAT/ME, 2020)



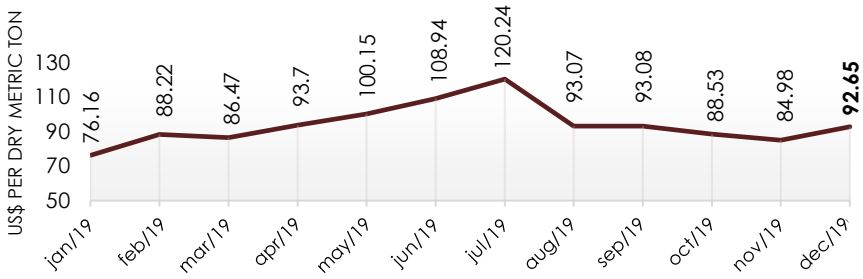
Source: DTTM/SGM (2020), Economy Ministry (COMEX-STAT/ME, 2020)

FERTILIZERS FOREIGN TRADE (2019)	Import		Export		Balance	
	10^3 t	10^3 US$	10^3 t	10^3 US$	10^3 t	10^3 US$
Phosphate Rock	2,369	181,504	0.07	13.7	***-2,369***	***-181,490***
Potash (KCl)	10,453	3,409,061	3.20	1,977	***-10,450***	***-3,407,084***
Sulfur	1,703	194,734	75	3,435	***-1,628***	***-191,299***

Souce: DTTM/SGM (2020), Economy Ministry (COMEX-STAT/ME, 2020)

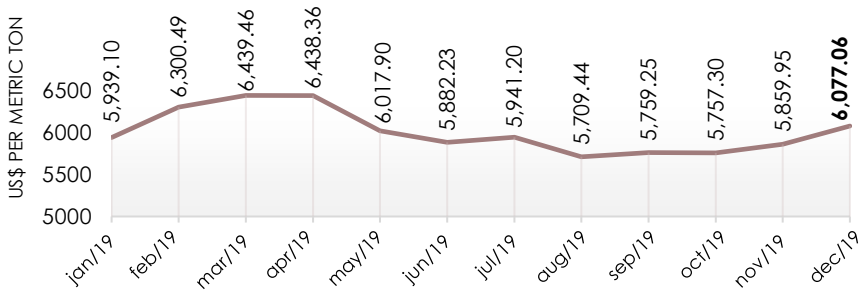
5 Commodities Prices

Iron Ore Price Evolution (US$)



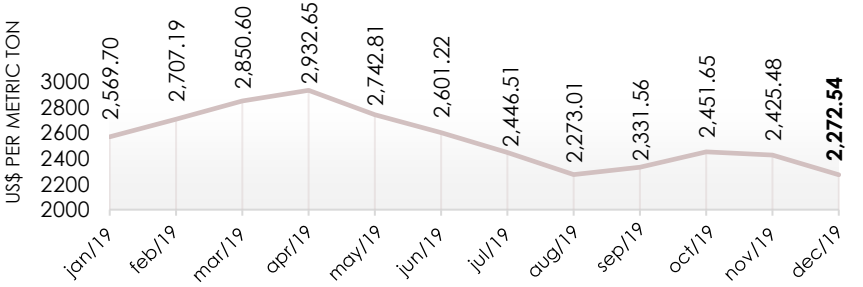
Source: IndexMundi, Thomson Reuters Datastream, World Bank (Feb., 2020)
Description: Iron ore 62% Fe, Spot price, CFR China

Copper Price Evolution (US$)



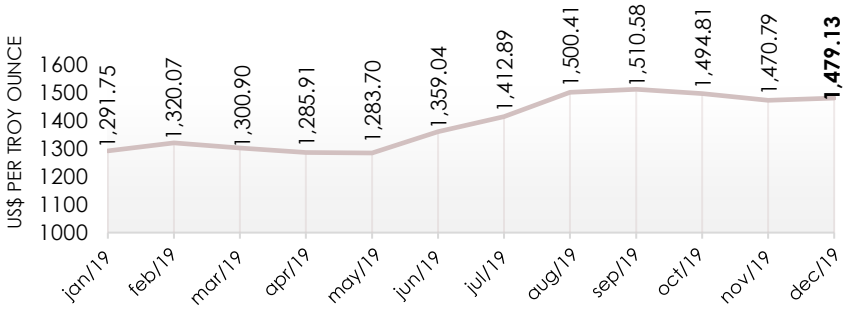
Source: IndexMundi, Platts Metals; Thomson Reuters Datastream; World Bank (Feb., 2020)
Description: Copper (LME), grade A, cathodes and wire bar shapes

Zinc Price Evolution (US$)



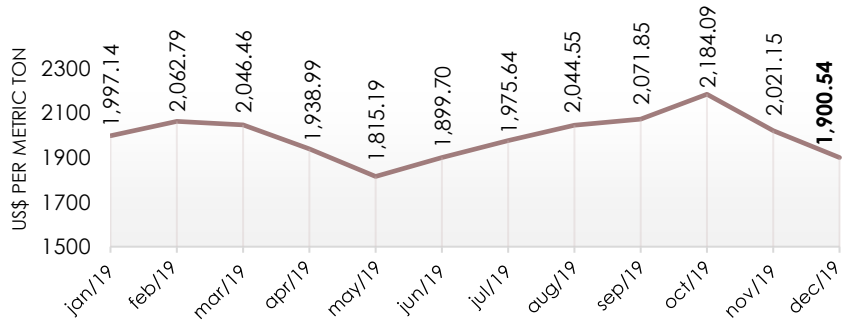
Source: IndexMundi, Platts Metal Week, Thomson Reuters, World Bank (Feb., 2020)
Description: Zinc (LME), high grade

GOLD PRICE EVOLUTION (US$)



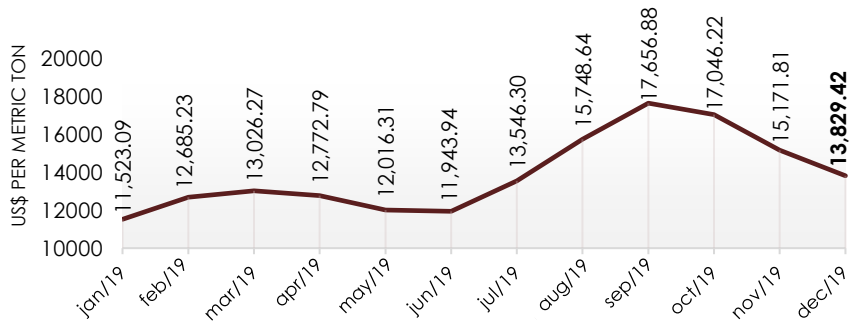
Source: IndexMundi, World Bank (Feb., 2020)
Description: Gold (UK) 99.5% fine.

LEAD PRICE EVOLUTION (US$)



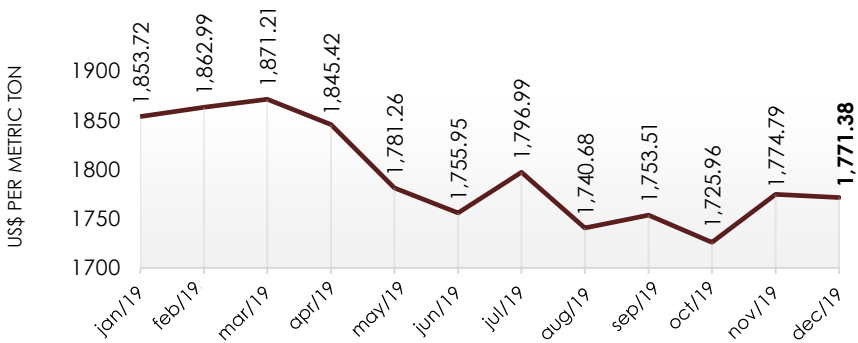
Source: IndexMundi, Platts Metal Week, Thomson Reuters, World Bank (Feb., 2020)
Description: Lead (LME), refined, 99.97% purity.

NICKEL PRICE EVOLUTION (US$)



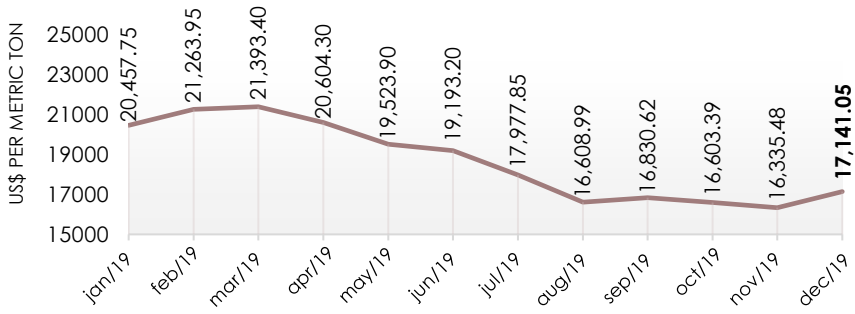
Source: IndexMundi, Platts Metals Week, Thomson Reuters, World Bank (Feb., 2020)
Description: Nickel (LME), cathodes, minimum 99.8% purity.

Aluminum Price Evolution (US$)



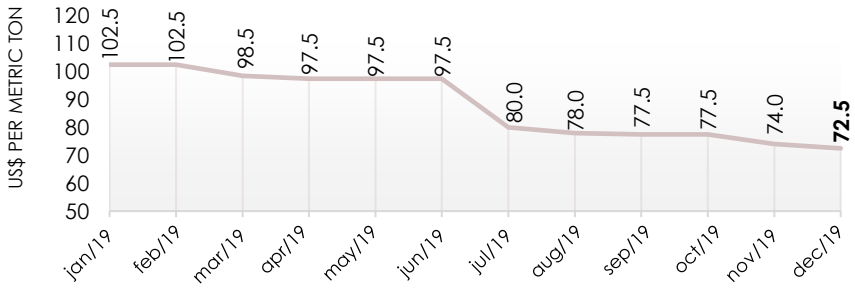
Source: IndexMundi, World Bank (Feb., 2020)
Description: Aluminum (LME), high grade.

Tin Price Evolution (US$)



Source: IndexMundi, Platts Metal Week, Thomson Reuters, World Bank (Feb., 2020)
Description: Tin (LME), refined, 99.85% purity.

Phosphate Rock Price Evolution (US$)



Source: IndexMundi, Fertilizer Week, Fertilizer International, World Bank (Feb., 2020)
Description: Phosphate rock (Morocco), 70% BPL.

6 Mining Processes

Most Required* Substances for Exploration in 2019 (until December)		
1º	Sand	1,288
2º	Gold	1,283
3º	Gravel	371
4º	Clay	321
5º	Quartzite	321

Source: SIGMINE/ANM (Feb., 2020)

Requirements* Filed[3] in 2019 per State (until December)		
1º	BA	1,638
2º	MG	1,592
3º	PA/AP	1,013
4º	MT	864
5º	GO/DF	810

Source: ANM (Feb., 2020)

Note: *includes requirements for: exploration, small-scale mining, extraction registration and licensing.

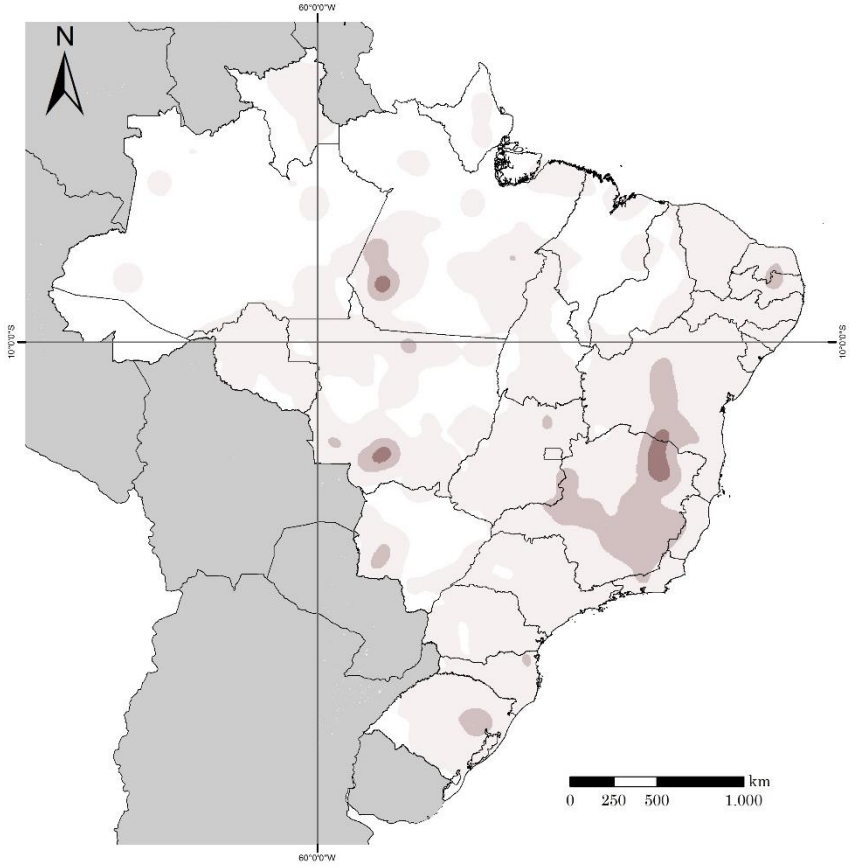
Status of Mining Processes by Stage	Quantity
Mining concession	11,231 (5.6%)
Mining application	18,604 (9.3%)
Exploration authorization	82,693 (41.4%)
Exploration requirement	26,360 (13.2%)
Small-scale mining consent	2,497 (1.3%)
Small-scale mining requirement	17,787 (8.9%)
Mineral licensing	16,632 (8.3%)
Mineral licensing requirement	9,500 (4.8%)
Extraction registration	2,462 (1.2%)
Extraction registration requirement	963 (0.5%)
Availability[4]	10,957 (5.5%)
TOTAL	***199,686*** (100%)

Source: SIGMINE/ANM (02/02/2020)

[3] Statistics available on the ANM website: www.anm.gov.br/acesso-a-informacao/estatisticas

[4] Active mining processes in the availability stage, according to the ANM *Cadastro Mineiro* system.

Requirements* Focuses for Mineral Exploration in 2019



Source: DDSM/SGM, SIGMINE/ANM (02/02/2020)
Note: * includes requirements for: exploration, small-scale mining, extraction registration and mineral licensing.

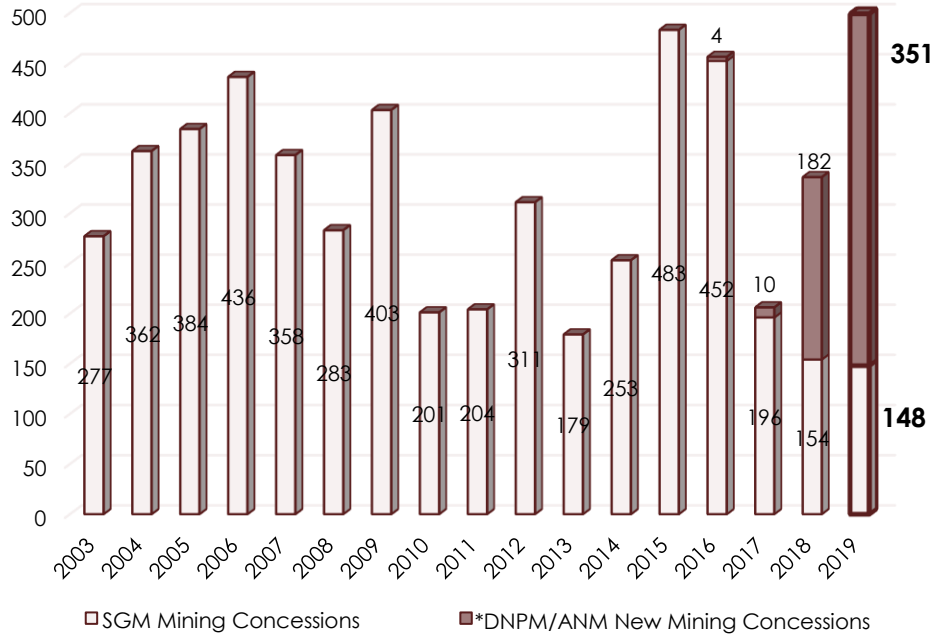
Did You Know?

Mining activity cover only 0.62%* of the Brazilian territory. In this small space inputs for all sectors of the economy are produced, directly benefiting society.

Note: *area of the Brazilian territory burdened by mining permits (DDSM/SGM, 2019)

7 Mining Concessions

Annual Evolution of Published Mining Concessions - ANM and MME



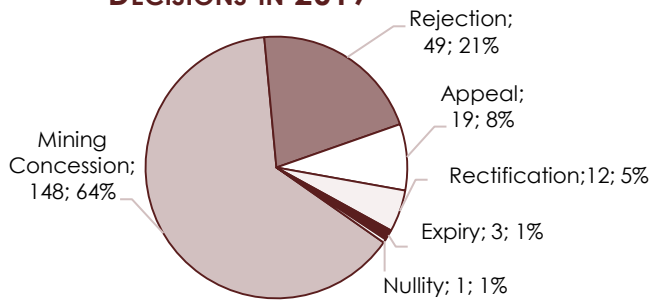
Source: DGPM/SGM, ANM (Feb., 2020)

Note: *With the advent of Law 13.575/17, the signing of the Mining Concessions for construction minerals (sand, gravel, clay...) became the competence of DNPM/ANM.

Did You Know?

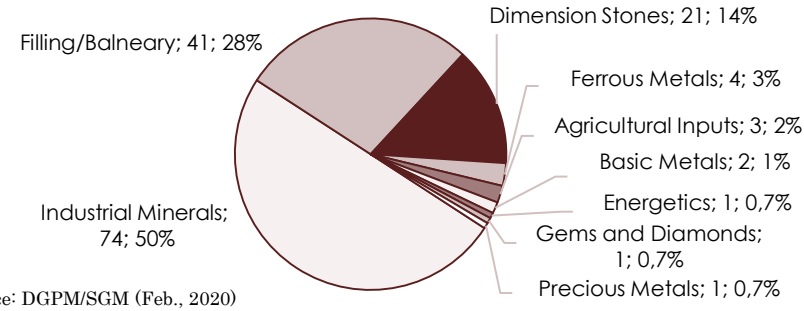
Mineral goods are present in everyone's life: in vehicles, in household appliances, in the structure of our homes and schools, on the roads, in tools, machines, in agriculture, in cell phones and even in cosmetic lines. Your smartphone, for example, besides aluminum, copper, iron and silicon, it can contain precious and high-value metals, such as gold, silver, palladium and platinum. All of this without mentioning the glass, the battery and the plastic, essential for its manufacture.

Types of Proceedings with MME Published Decisions in 2019



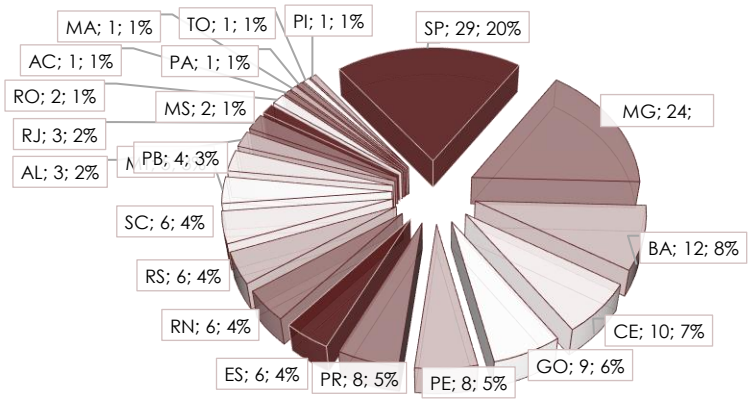
Source: DGPM/SGM (Feb., 2020)

MME Mining Concessions per Group Use in 2019



Source: DGPM/SGM (Feb., 2020)

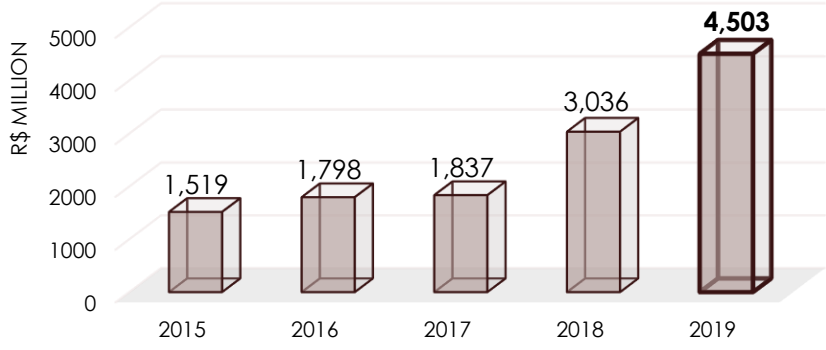
MME Mining Concessions per State in 2019



Source: DGPM/SGM (Feb., 2020)

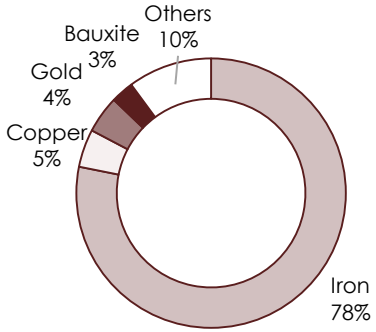
8 CFEM

General Collection of Royalties for the Exploitation of Mineral Resources (CFEM)

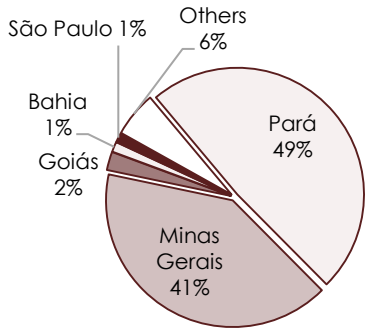


Source: ANM Website (Feb., 2020)

The Royalties for the Exploitation of Mineral Resources[5] (CFEM) in 2019 was 48.3% higher than in 2018. This fact can be attributed, due to the price of iron ore mainly, which exceeded US $ 100/t in May 2019, and had an annual price average of US$ 93.85, due to the restriction of the world supply, after production cuts in Brazil (consequences of the rupture of the Brumadinho dam) and in Australia (due to climatic problems).



CFEM by Mineral Substance
(ANM, 11/02/2020)



Largest CFEM Collectors
(ANM, 11/02/2020)

[5] CFEM data available on the ANM website: www.anm.gov.br/assuntos/arrecadacao

This year, the price of iron ore added a growth more than 20%.

MUNICIPALITIES WITH THE HIGHEST CFEM COLLECTIONS FROM 2019

Ranking	Municipality	Qty. of Titles	CFEM Collection (BRL)	% of Total
1	Parauapebas/PA	10	1,156,139,681.25	25.7%
2	Canaã dos Carajás/PA	2	706,068,474.12	15.7%
3	Congonhas/MG	5	284,157,465.30	6.3%
4	Itabira/MG	7	241,078,393.45	5.4%
5	Nova Lima/MG	10	197,805,274.30	4.4%
6	Conceição Mato Dentro/MG	2	180,902,066.95	4.0%
7	São Gonçalo Rio Ab./MG	7	160,027,388.02	3.6%
8	Marabá/PA	19	134,098,280.77	3.0%
9	Itabirito/MG	17	106,906,775.44	2.4%
10	Mariana/MG	14	83,089,486.62	1.8%
11	Brumadinho/MG	24	72,625,996.35	1.6%

Source: ANM Website (Feb., 2020)

COMPANIES WITH THE HIGHEST CFEM COLLECTIONS FROM 2019

Ranking	Company	Qty. of Titles	CFEM Collection (BRL)	% of Total
1	Vale	22	2,468,208,878.07	54.8%
2	CSN Mineração	2	303,584,229.48	6.7%
3	Min. Brasileiras Reunidas	6	269,724,875.83	6.0%
4	Anglo American Ferro Br	2	210,835,190.81	4.7%
5	Salobo Metais	1	114,633,138.18	2.5%
6	Mineracao Rio do Norte	1	54,292,082.63	1.2%
7	Kinross Brasil Mineração	1	48,385,873.64	1.1%
8	Mineração Usiminas	1	42,342,327.59	0.9%
9	Mineração Paragominas	1	38,876,950.73	0.9%
10	Baovale Mineração	2	38,611,375.49	0.9%

Source: ANM Website (Feb., 2020)

9 Sustainability

BRAZILIAN MINERAL SECTOR ENERGY CONSUMPTION IN 2018

Final Energy Consumption (10^6 toe)	2000	2010	2017	2018	Δ (%) 18/17
BRAZIL	**171.949**	**241.194**	**258.4**	**255.7**	**-1.0%**
INDUSTRY	**61.204**	**85.567**	**85.1**	**80.9**	**-4.9%**
Mineral Extraction	**2.22**	**3.181**	**2.655**	**2.784**	**4.9%**
Mineral Transformation	**26.813**	**33.372**	**31.608**	**30.429**	**-3.7%**
Metallurgy	20.408	24.632	23.355	22.472	-3.8%
Pig Iron and Steel	14.906	16.445	16.447	16.648	1.2%
Iron Alloys	1.174	1.695	1.248	1.307	4.7%
Non-ferrous/others	4.328	6.492	5.66	4.517	-20.2%
Non-Metallic	6.405	8.74	8.253	7.957	-3.6%
Ceramic	3.068	4.485	4.28	4.172	-2.5%
Cement	3.337	4.255	3.973	3.785	-4.7%

Source: *Brazilian Energy Balance 2019 Year 2018* (Company of Energy Research, EPE/MME, 2019)

The Brazilian industrial sector had a 4.2 million toe (tonne of oil equivalent) retraction in its final energy consumption in 2018, with the reduction in consumption in the Non-Ferrous Transformation Sector and others in metallurgy, whose drop in aluminum (17.8%) and alumina (-27%) production caused the energy demand of this segment to drop -20.2% compared to 2017.

In terms of CO_2 emissions associated to the energy matrix, Brazil emitted around 416.1 million tons of carbon dioxide equivalent, of which 78.4 Mt CO_2-eq (18.8%) are associated to the industrial sector. Regarding emissions per inhabitant, each Brazilian, producing and consuming energy in 2018, emitted on average 2.0 t CO_2- eq, according to the Brazilian Energy Balance 2019 Year 2018[6] of the Ministry of Mines and Energy (EPE/MME, 2019).

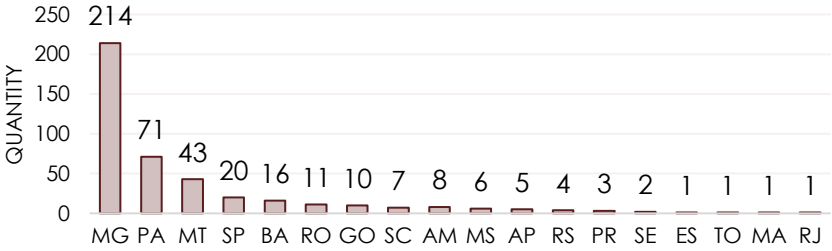
[6] Final report available on the EPE website: www.epe.gov.br/pt/publicacoes-dados-abertos/publicacoes/balanco-energetico-nacional-2019

10 Dams

National Registration of Mining Dams in Brazil

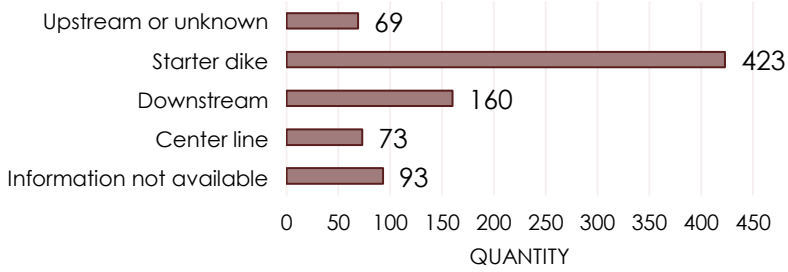
Source: SIGBM/ANM (Feb.,2020)
Note: * National Dam Safety Policy, established by Law 12.334/2010

Mining Dams inserted in PNSB* per State



Source: SIGBM/ANM (Feb.,2020)
Note: * National Dam Safety Policy, established by Law 12.334/2010

Construction Method of Mining Dams



Source: SIGBM/ANM (Feb.,2020)
Note 1: The construction method graph considers all mining dams (818).
Note 2: ANM Mining Dam Safety Management System (SIGBM) is available on the website: www.anm.gov.br/assuntos/barragens/sigbm

11 SGM Highlights

1. Strenghtening of the ANM

The MME has been working with the Ministry of Economy in order to ensure sufficient budgetary resources to carry out the activities of the National Mining Agency (ANM). In addition, public employs from other bodies were moved to ANM, in order to guarantee the provision services of excellence to society. Besides, professional training workshops were held.

2. CPRM Area Auction

Within the scope of the Partnership Program for Investments (PPI), CPRM held the auction of mining rights at the Palmeirópolis Complex (TO) in October 2019, with the potential for copper, lead and zinc exploitation. The area was successfully auctioned by Australian *Perth Minerais*, and the contract was signed this 2020.

3. Regulatory Adjustments in Mining

Throughout 2019, SGM worked to perfecting a set of standards that still impose limitations and restrictions on the best performance in the mineral sector. For the Frontier Band, a proposal to amend Law No. 6,634 / 1979 ("Frontier Band Law") was consolidated, in order to increase the participation of companies with foreign capital interested in carrying out mining activities. In respect to the Small-Scale Mining, a Working Group (Regulation SGM No. 108/2019) was created to study the possibility to simplify the procedures necessary to acquire the mining concession (grant). With regard to indigenous land, a working group coordinated by the Presidency of the Republic was set up to preparing a proposal for a draft law aiming at regulating art. 231 of the Federal Constitution. The Bill 191/2020 was sent to the National Congress by the President of the Republic on 02/05/2020.

4. Improving Dam Safety

In 2019, after the rupture of the Brumadinho / MG dam, ANM Resolution No. 13/2019 was published, which prohibited the use of the construction method or raising of mining dams called "upstream" throughout the national territory, and established a deadline for mischaracterization of that kind of dams. ANM's budget was supplemented by BRL 7,1 milhões (about US $ 1.8 million), which enabled the purchase of vehicles for inspection and electronic resources, the development of the SIGBM Public System, the hiring of specialized technical assistance and training of civil employee. In 2019, 274 mining dams were inspected (64% of the dams were included in the National Dam Safety Policy - PNSB).

5. Encouraging Adding Value

The actions to adding value to the mineral good and the densification of the production chains through research, technological development and innovation in the mineral sector were articulated in interinstitutional partnerships and promoted, mainly, through seminars focusing on technology and innovation. In 2019, workshops were held at the MME on Remineralizers of Soils, Niobium Production Chain, Urban Mining, and Application of Niobium in Steel on Infrastructure projects.

6. Mapping and Diagnosis of the Brazilian Mining Sector

In 2019, a “Decentralized Execution Instrument” was signed with the Applied Economics Research Institute (IPEA), with the objective of mapping and diagnosing the Brazilian mining sector, with the qualification of the available information, production of indicators and analysis of scenarios of the sector, pointing out economic potentials, and challenges. The work will be carried out throughout 2020 and 2021.

Our Team

Minister of Mines and Energy
Bento Costa Lima Leite de Albuquerque Junior

National Secretary of Geology, Mining and Mineral Transformation
Alexandre Vidigal de Oliveira

Deputy National Secretary
Lilia Mascarenhas Sant'Agostino

Managing Directors
Ricardo Monteiro (Dept. Policy Management on Geol., Mining & Transf. - DGPM)
Frederico Oliveira (Dept. Geology and Mineral Production - DGPM)
Enir Mendes (Dept. Transformation and Mineral Technology - DTTM)
Gabriel Maldonado (Dept. Sustainable Development in Mining - DDSM)

Technical Staff
Hélio França (DPGM)
Patrícia Pego (DPGM)
Ranielle Araujo (DDSM)
José Luiz Ubaldino (DGPM)
Daniel Lima (DTTM)
Sandra Angelo (DTTM)

Technical Assistance
Blenda Carvalho (intern at DDSM)

Art and Design
Ranielle Araujo (DDSM)

English Version
ASSINT (MME)
Samir Nahass (SGM)

Printing
Geological Survey of Brazil (CPRM)

Institutional Cooperation

Geological Survey of Brazil (CPRM)
National Mining Agency (ANM)

MINISTRY OF MINES AND ENERGY - MME
SECRETARIAT OF GEOLOGY, MINING AND MINERAL TRANSFORMATION - SGM
ESPLANADE OF THE MINISTRIES BLOCK U - 4TH FLOOR
70065-900 - BRASÍLIA-DF, BRAZIL.
PHONE: +55 61 2032 - 5175 FAX +55 61 2032 – 5949
SGM@MME.GOV.BR