

MARKET SURVEY

# MINING SECTOR



Caracas, May, 2016  
Bolivarian Republic of Venezuela



May, 2016

Survey by **AL&C** Consulting Group  
for the Embassy of India in Caracas- Venezuela

*Contact email:*

Alfredo Ordoñez: [alfordonez@gmail.com](mailto:alfordonez@gmail.com)

Carlos Longa: [clonga@hotmail.com](mailto:clonga@hotmail.com)

Luis Angarita: [luisangarital@gmail.com](mailto:luisangarital@gmail.com)





# TABLE OF CONTENTS

## **PART I: ECONOMIC SITUATION OF THE BOLIVARIAN REPUBLIC OF VENEZUELA 6**

Bolivarian Republic of Venezuela	7
Demography	8
Venezuelan population pyramid	8
Geography	9
Location	9
Attractiveness	9
Happiness Index	10
Profitability	10
Marketing Channels	10
Regional agreements and trade blocs	10
Economic situation in Venezuela	11
Chart 1.1: GDP: Constant Prices, 2004-2014	11
Chart 1.2: Oil sector production, 2012-2015	11
Chart 1.3: Price index, 2012-2015	12
Chart 1.4: International Reserves, 2012-2015	12
Chart 1.5: Relation between external debt and International Reserves, 2012-2015	13
Chart 1.6: Reserve assets (gold and foreign currency), 2010-2015	13
Chart 1.7: International Investment Balance (USD\$), 2010-2015	14
Chart 1.8: Trade Balance, 2010-2015	14

## **PART II: MINING SECTOR IN THE BOLIVARIAN REPUBLIC OF VENEZUELA 15**

Mining sector in Venezuela	16
Mining economy in Venezuela	17
Types of minerals most exploited in Venezuela according to its classification	18
Metallic minerals	18
Non-metallic minerals	18
Legal aspects of the mining sector in Venezuela	19

## **PART III: INVESTMENT PLAN TO REACTIVATE MINING IN VENEZUELA 21**

National Executive Strategy	22
Formation of the Orinoco Mining Arc	22

Companies blocks	23
<b>PART IV: OPPORTUNITIES FOR INDIAN COMPANIES IN MINING INDUSTRY</b>	<b>24</b>
Areas of interest for India	25
<b>FINAL CONSIDERATIONS</b>	<b>26</b>
<b>ANNEXES MAPS:</b>	<b>27</b>
Venezuelan mining regions	28
Diamond-bearing in Bolívar state	29
Metallic minerals	30
Non- metallic minerals	31



# PART I

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## ECONOMIC SITUATION OF THE BOLIVARIAN REPUBLIC OF VENEZUELA

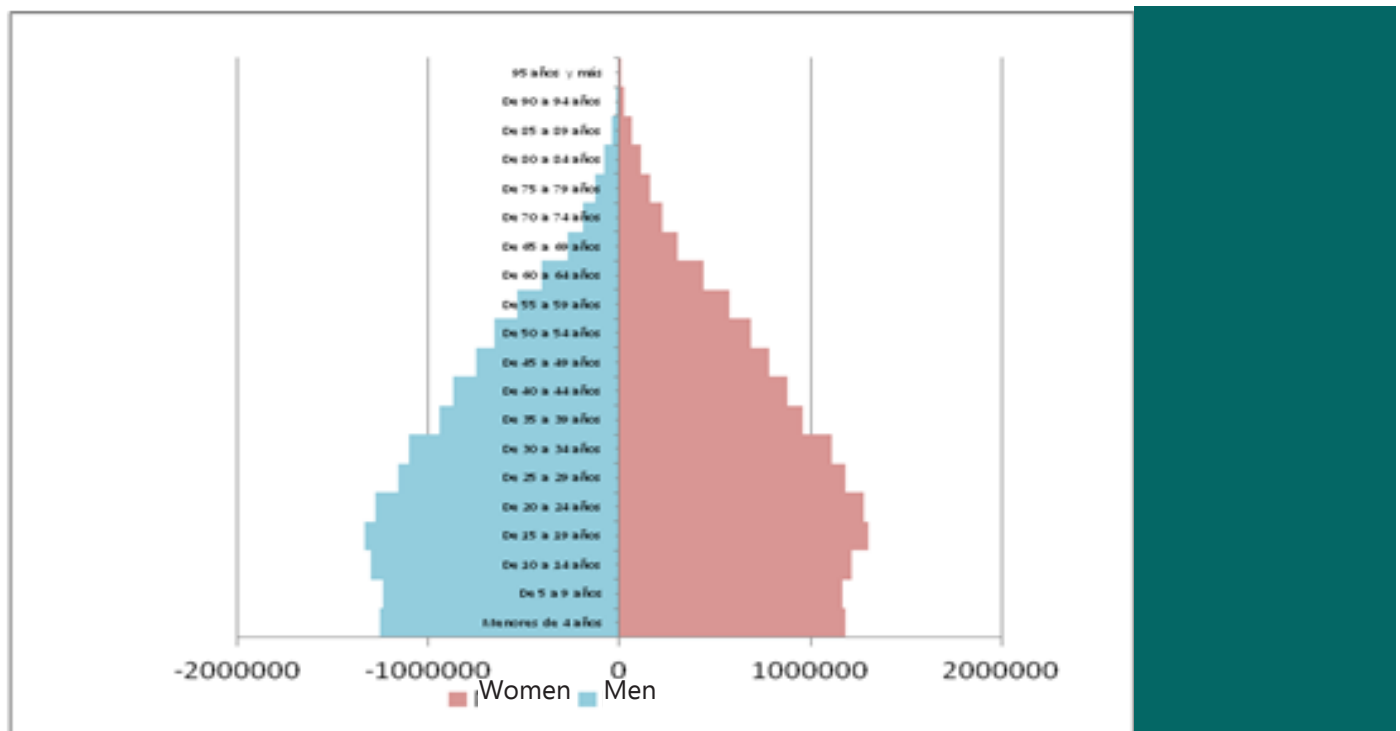
# Bolivarian Republic of Venezuela

Country profile	Bolivarian Republic of Venezuela
Official language	Spanish
Population (2016)	30,851,343 inhabitants
Form of Government	Federal Presidential Republic
Head of State	President, Nicolás Maduro Moros
GDP Per cápita (2016)	12.820 US\$.
Foreign Direct Investment (FDI) (% of GDP) (2015)	1.6% (UN)
Gross Fixed Capital Formation (% GDP) (2015)	20,3%
Public expenditure on education (2015)	6,9% of GDP
Public expenditure on health (2015)	3,4% of GDP
Currency	The official currency is the Bolívar (VEF), with a system of foreign exchange control which has two rates: DIPRO (type: protected change) for essential products 10 Bs/\$ and DICOM (type: complementary change) for all transactions not contained in DIPRO. The floating rate is controlled by the BCV and starts at 206.92 Bs/\$1

## Demography

### Venezuelan population pyramid

Venezuelan population pyramid shows that the bulk of the Venezuelan population is between the ages of 10-24 years old, which results in a young population with aspirations to enter the labor market, after an average of 8.9 years of studies, representing an educated population that almost finish high school and that can become labor for any growing industry or development, also the Venezuelan population has a life expectancy at birth of 74.2 years .



Life expectancy at birth

74.2 years

HDI (ajusted for inequality)

0.612 (UN)

Population density (2015)

33.34 inhabitants per Km2

Mortality at birth

110 (deaths per 100,000 live births) (2015)

Expected years of schooling

14.2 years

Average years of schooling

8.9 years



## Geography

### Location:

Venezuela is a country located at the most northern point of South America, with coasts on the Caribbean Sea and the Atlantic Ocean. It has a land area of 916,445 km<sup>2</sup>. Its borders are: Brazil and Guyana to the East, Colombia and Brazil to the South, Colombia to the West, and the Caribbean Sea and the Atlantic Ocean to the North. Because of its location, Venezuela enjoys a tropical climate with two seasons a rainy one and drought one, with temperatures ranging between 28 ° C.

Venezuela has four well defined regions:

**1.- Central-coastal Region:** Where the capital city, Caracas, is located. It is a region con-

sisting of coasts and is the seat of major cities that have international ports and industrial cities.

**2.- Andes Region:** Formed by Táchira, Mérida and Trujillo states; defined as the country's mountainous zone with agricultural settlements with banana, potatoes and coffee plantations.

**3.- Los Llanos Region (Plain region):** Consisting of plains and rivers and formed by Guárico, Apure, Barinas and Portuguesa states, it is the fertile land of the country for agricultural industry.

**4.- Guyanese massif:** In geological terms, it is the oldest part of the country, consists of large plateaus, and is the region with the largest mineral reserves.



### Attractiveness

There are regulations affecting business efficiency in the country, such as exchange control, which puts the country in the position 182 in the world ranking. In terms of labor freedoms, Venezuela occupies position 181 in the world ranking and in the post 169 worldwide about freedom of business .

Doing Business 2016 classification puts the Venezuelan economy at No. 186 among 189 eco-

nomies, taking into account aspects such as: operational aspects regarding the opening of a business, dealing with construction permits, getting electricity, registering property, obtaining credit, protecting minority investors, paying taxes, trading across borders, enforcing contracts and resolving insolvency.

Venezuelan market is constituted by 30 million inhabitants, is the fifth largest GDP in Latin America, owns the largest proven reserves of crude oil in the world. Regarding to gas reserves, Venezuela possesses the eighth worldwide. Never-

theless, there is need for renewal the national infrastructure (roads, rails, ports), industries and machinery.

## Happiness Index

In addition to the basic economic indices it is important to know how does work the subjective well-being of the population of a country and evaluates the human being's ultimate goal: happiness. Because economic policies should enhance the usefulness of the population defined as the amount of pleasure, satisfaction or happiness of individuals ; to carry out the survey, people's opinion is asked by a series of questions. In this survey, Venezuelan people perceived themselves as a people with high levels of happiness. Venezuela in ranked in the 44th place, above El Salvador, Ecuador and Japan, but below countries such as France, UK, Colombia, Germany, Chile, Uruguay, among others .

## Profitability

According to ECLAC, FDI decreased in 2014 by 80%, from 2,680 million dollar to 320 million dollar. In previous years had happened the opposite, because of the difficulty of repatriation of capital due to exchange controls, foreign companies tried to reinvest in the country in real estate sector. However, it is possible that because of the economic contraction in 2014, foreign companies have decided to back their investment because of reduced profits .

## Marketing Channels

In Venezuela there are six commercial ports, whose customs are authorized to import, export and transit, as well as to provide services of transshipment, cabotage and postal packages :

**1.- Port of Puerto Cabello:** It is Venezuela's main port, located in Carabobo state. It is the sixth largest port in Latin America and the Caribbean. In terms of capacity, has a total regional foreland of 75%: to United States and Canada (20%), the Caribbean (17%), Colombia and Trinidad (15 %), South America East Coast (10%), Central America (8%) and South America West Coast (3%); to other ports in Venezuela, this port foreland is 15% and to the rest of the world 10%.

**2.- Port of La Guaira:** An artificial port located in Vargas state. It has a total of 26 docks, some of them are not operational, and its maximum depth of water is of 9,7 m.

**3.- Port of Guanta:** Located in Anzoátegui state, has 6 docks, and a maximum depth of water of 10,5 m.

**4.- Port of Maracaibo:** Located in Zulia state, has 12 docks, 8 of them remain operational and have a maximum depth of water of 10,97 m.

**5.- Port of Sucre-Cumaná:** Located in Sucre state, has two floating docks for general cargo and vehicles, its maximum depth of water is of 10,4 m.

**6.- Port of Guaranao:** Located in Falcón state. Currently, this port is operating only for refinery and industrial zone products import.

## Regional agreements and trade blocs

- **ALADI (Latin American Integration Association):** Signed by Argentina, Brazil, Bolivia, Colombia, Chile, Cuba, Ecuador, Uruguay, Mexico, Panama, Paraguay, Peru and Venezuela, in which Venezuela signed a Regional Tariff Preference agreement, which decreases the proportion of ad-valorem duties stipulated to the tariff schedule.

- **MERCOSUR (Southern Common Market):** Signed by Argentina, Brazil, Uruguay, Paraguay and Venezuela, where the total elimination of taxes is agreed through the signing of three agreements: "Treaty of Asuncion", "Protocol of Ouro Prieto" and "Olivos Protocol for the settlement of MERCOSUR disputes".

- **ALBA-TCP (Bolivarian Alliance for the Peoples of America- Treaty of the Peoples):** Signed by Venezuela, Cuba, Bolivia, Antigua and Barbuda, Dominica, Ecuador, Granada, Nicaragua, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Suriname and as observers: Haiti, Iran and Syria. It is based on the use of hedge funds to reduce socioeconomic differences among its member countries.

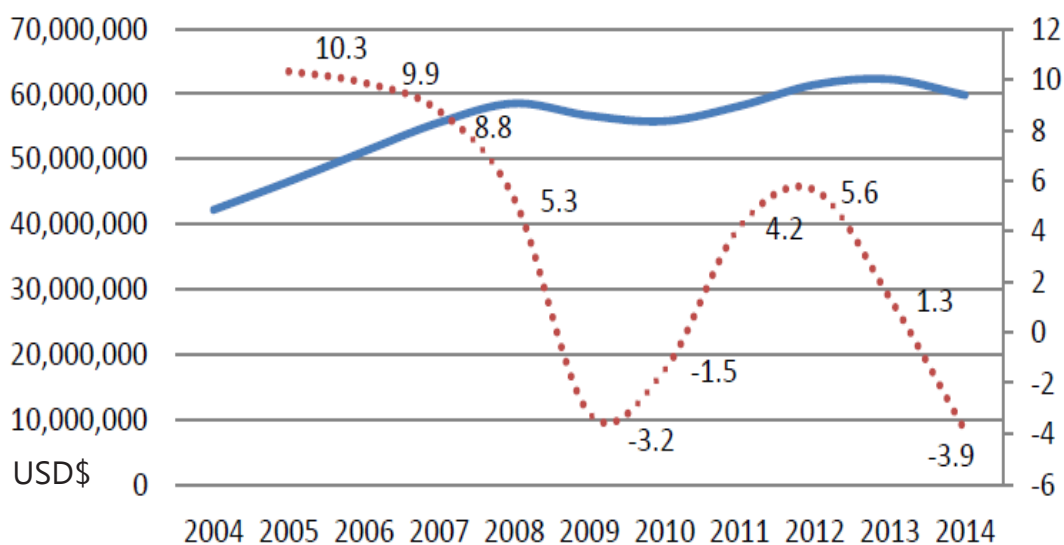
# Economic situation in Venezuela

According to the data submitted by the Venezuelan National Bank (or Banco Central de Venezuela - BCV), Venezuelan economy shows very unstable levels of economic growth, with high rates (8% and 10%) in 2005 and 2007, while a sharp drop occurred in 2010, 2014 and 2015, with levels around -4%. (Chart 1.1)

Despite being an oil economy, the contribution of the oil sector in the country's economy is decreasing, representing only 11% of the Gross Do-

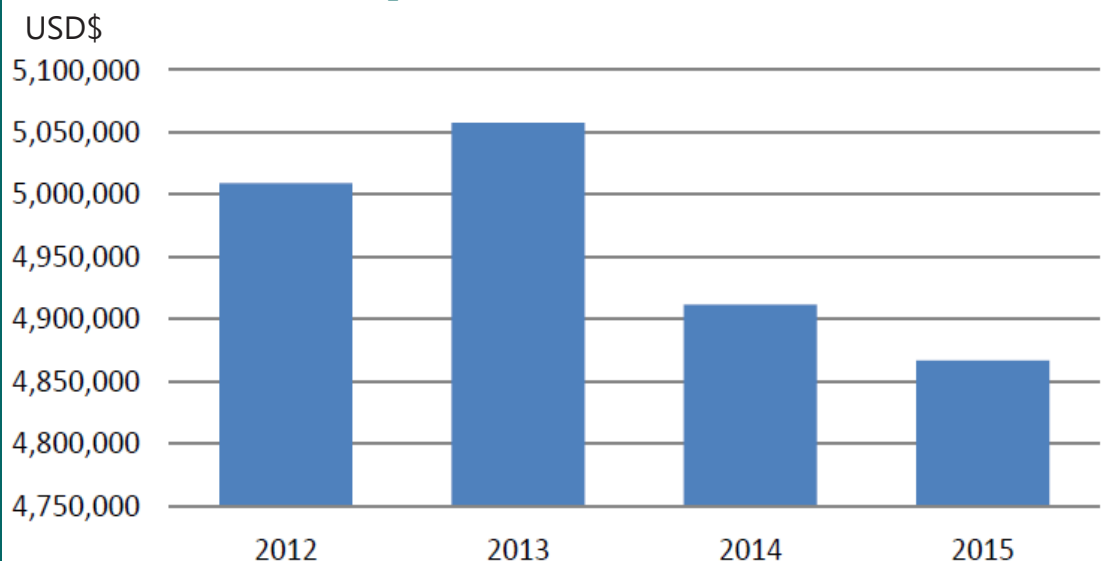
mestic Product (GDP), which is a worrying situation because this is the only productive sector participating in international trade, and which contributes 98% of income in foreign currency. (Chart 1.2)

**Chart 1.1**  
**GDP: Constant Prices (USD\$), 2004-2014**



Venezuelan economy shows very unstable levels of economic growth, with high rates in 2005 and 2007, while a sharp drop occurred in 2010, 2014 and 2015, with levels around -4%.

**Chart 1.2**  
**Oil sector production, USD, 2012-2015**

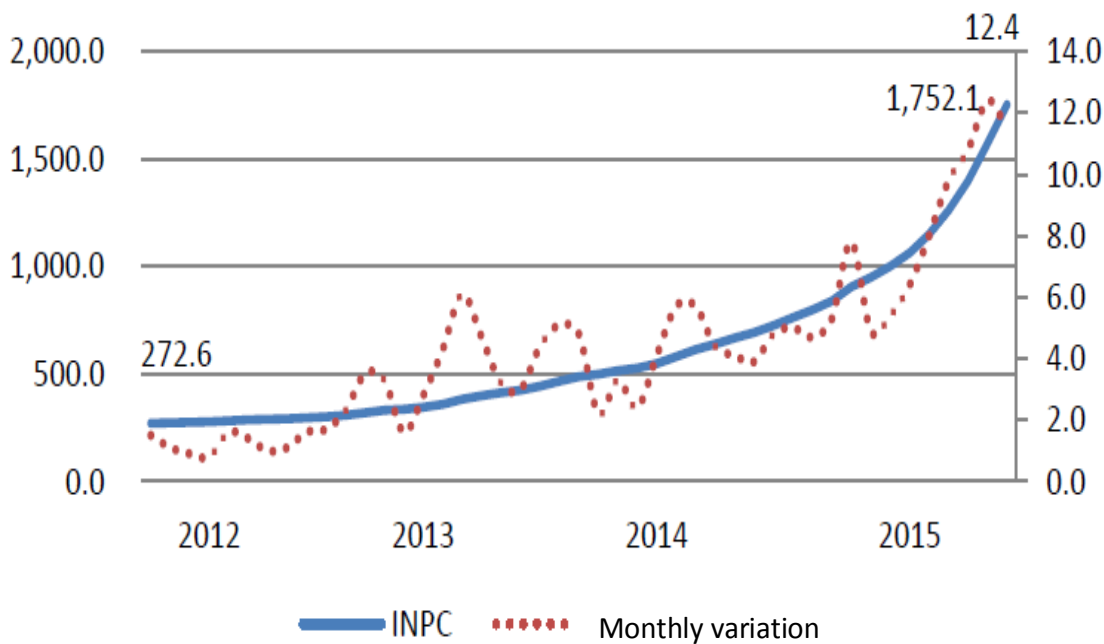


Despite being an oil economy, the contribution of the oil sector is becoming less to the national productive apparatus, representing only 11% of the Gross Domestic Product

The variation of prices is changing exponentially: prices are six times higher in the period between 2012 and 2015. Inflation in 2015 was 200%. In 2016, inflation rate is projected 600%. A month-on-month variation of 10% will represent an annual inflation rate of 313%. (Chart 1.3)

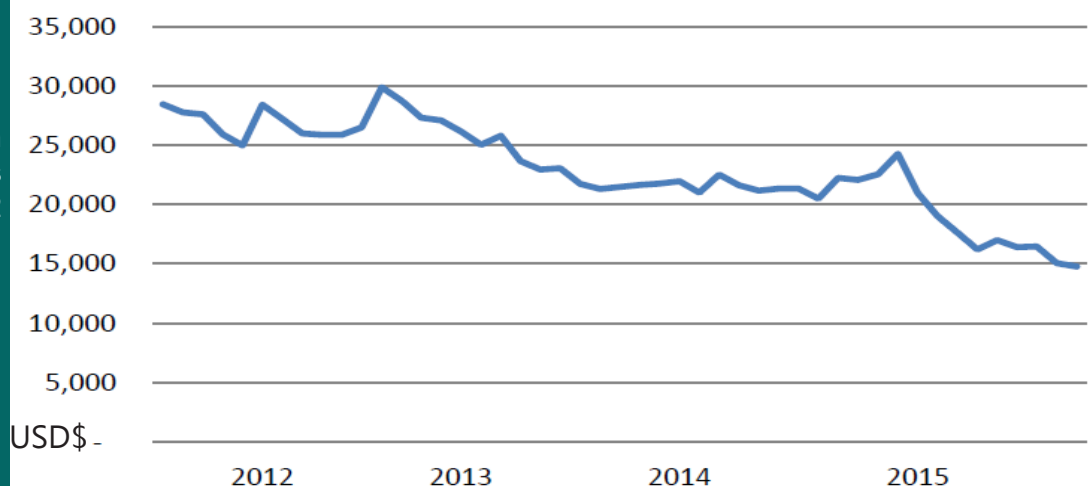
In the same period, international reserves have fallen to less than half, reaching levels as low as those of 12 years ago. This creates a strong pressure on their external balances. (Chart 1.4)

Chart 1.3  
Price index, 2012-2015.  
2007=100



The variation of prices is changing exponentially: prices are six times higher in the period between 2012 and 2015.

Chart 1.4  
International Reserves USD, 2012-2015



International reserves have fallen to less than half, reaching levels as low as those of 12 years ago

The growth of external debt adds to the drop in international reserves, makes that the current coverage be less than 10%. That means the amount of the international reserves only pays 10% of the total external debt. By beginning of 2016, the country already had a trade deficit of 24 billion dollars. (Chart 1.5)

Venezuelan external debt is divided in two sectors: government owes 83%, and private sector owes the remaining 17%. At the same time, this is related to 25% of short term debts (less than

a year) and 75% of long term debts. Public and private commercial credits represent 19% of the external debt, while most are concentrated in bonds and other forms of loans.

As to the position of the reserve assets, Venezuela has decided to concentrate 70% in monetary gold, and this assets has had the same behavior as of international reserves. It has fallen almost by half: from twenty-one billion in 2011 to eleven and a half billion in 2015. Although public operations regarding monetary gold have not been made. The fall is evident in the Venezuelan

Chart 1.5

Relation between external debt and International Reserves, 2012-2015

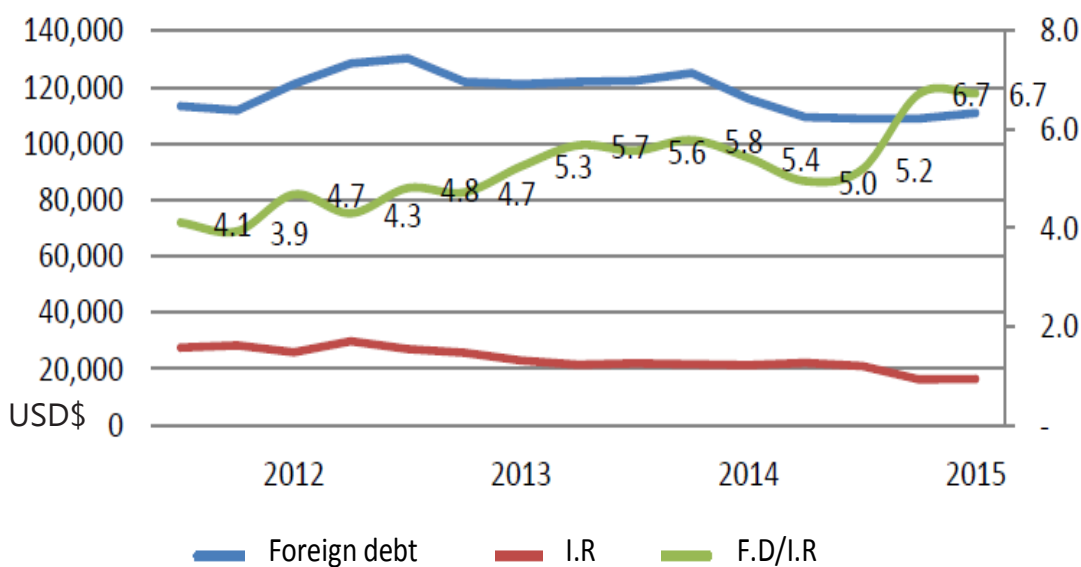
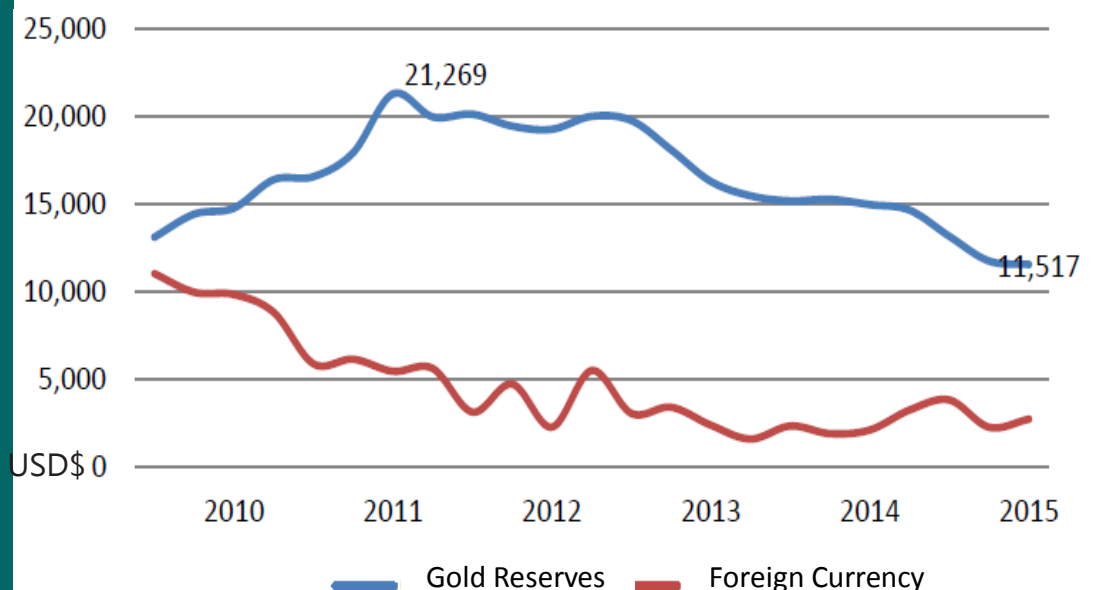


Chart 1.6

Reserve assets (gold and foreign currency), 2010-2015





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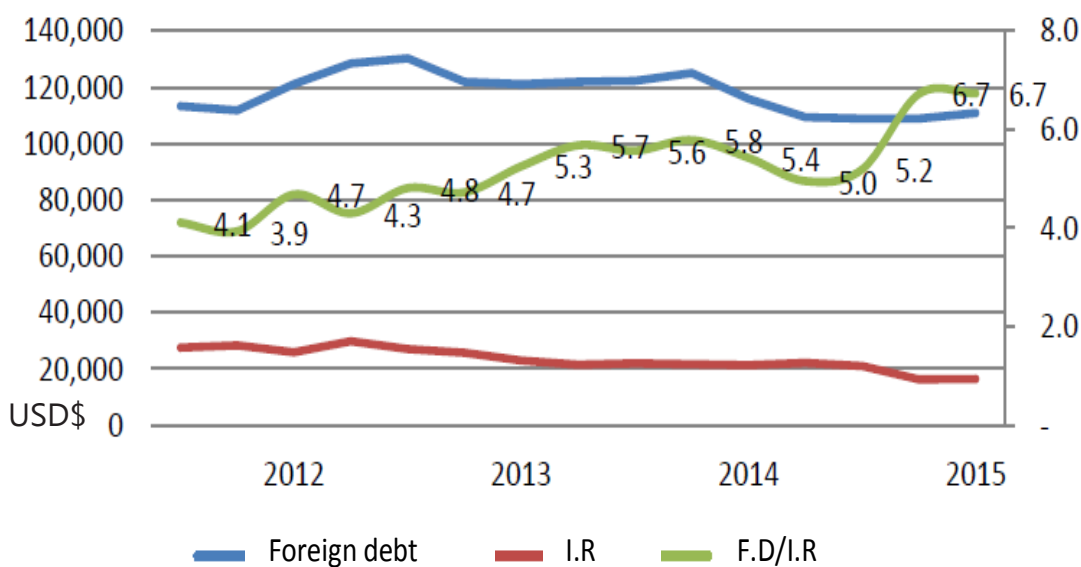
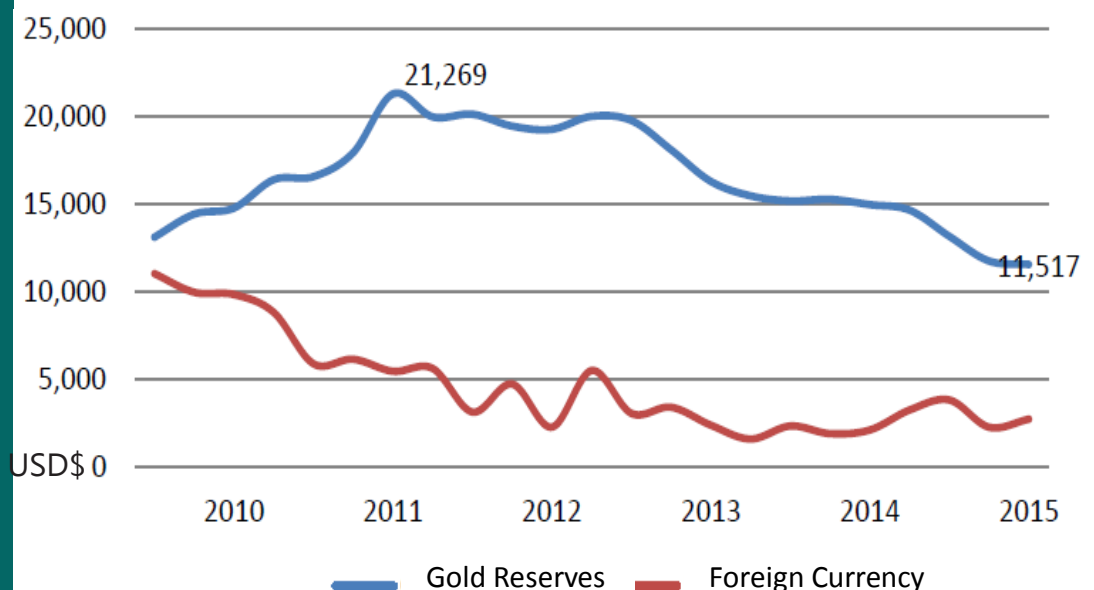


Chart 1.6

Reserve assets (gold and foreign currency), 2010-2015



## PART II

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### MINING SECTOR IN THE BOLIVARIAN REPUBLIC OF VENEZUELA

# Mining sector in Venezuela

Mining as an activity dedicated to the acquisition by selective extraction of minerals and materials of the earth's crust is divided into three stages: exploration (detection of natural deposits), exploitation (extraction of minerals) and supply (productive process).

Due to its geological structure, Venezuela is a rich country in mineral deposits, mainly in the Guayana region (south of the country), which has experienced a metamorphosis process and fractures that have formed the mineral wealth in the subsoil. Currently, Venezuela accounts for about 3% of the global supply of minerals, among which are: iron, bauxite, phosphates, limestone, man-

ganese, nickel, gypsum, gold, diamond and coal.

Guayana region represents 49% of national territory; it owns 100% of mineral reservations in iron, aluminum and steel, more than 60% of the country's hydroelectrical potential together with 80% of fresh water in great rivers and natural water falls, which increases the hydroelectrical potential with Guri Lake, that serves as a source for the Caroní electrification system.

Venezuela is one of the few countries in the world, where even half of deposits nationwide, leaving virtually untouched mining research for the development of the sector. However, it is im-



portant to note that during the twentieth century, a major resource exploited for industrial development of the country was iron.

**Venezuelan mining sites are located in three regions:**

**Guayana Region:** is the richest region in the country. Due to its geological condition, the Guyanese massif places uncovered mineral deposits of the subsoil, which facilitates discovery and exploitation of mineral resources.

- Imataca mountain chain and Nuria high

plateau contain deposits of iron, manganese, kaolin, bauxite and marble.

- In the El Callao zone, there are deposits of auriferous quartz.
- In Maracas, Barretero and Amaro, there are carbonate and chloritic deposits. Also, there are several deposits of diamond and reagent minerals.
- In Los Pijiguaos takes place one the most important aluminum country farms.
- In Amazonas state, the most abundant mineral resources are gold and diamond.

**Coast-mountain Region:** it is the most important region for oil sector. Nevertheless, this región has a enormous mineral reserves in:

- Depression zone of Maracaibo Lake (oil)
- Coast mountain chain (gypsum, salt and phosphate)
- The Andean mountain chain (coal, gypsum, mica, copper and sulfur)
- Perijá mountain chain and Falcón-Lara formation, where there are deposits of zinc, lead, magnesium, mercury, titanium, silica, feldspar, iron, aluminum, chromium, barite, silica and crystalline quartz.

**Los Llanos (plains) Region** is formed by:

- Central plain depression and Orinoco delta. In Perijá Massif, Caño Tigre, Cinacuro areas iron, uranium, copper, feldspar and silicon are exploited.

Despite the high levels of wealth generated by mineral deposits in Venezuela, mining represents only about 1.5% of Venezuela's GDP. Most traded minerals are iron, gold, bauxite, salt, coal, limestone, sand and gravel.

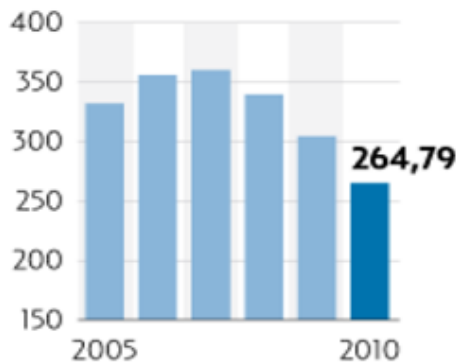
Since 2010, levels of production and productivity of the mining industry have been experiencing a decline process, generated by operating costs, energy crisis and labor problems. It is important to highlight that the mining sector depends on oil revenues, so if that income goes down, the demand for resources increases, from salaries to the purchase of raw materials for the maintenance of state companies, such as Minerven (gold) or Alcasa, Venalum and Bauxilum (aluminum).

## Mining economy in Venezuela

### MINING AND METALLURGY IN VENEZUELA

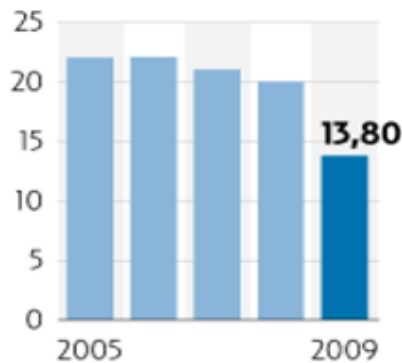
Mining GDP

Constant prices 1997  
million Bs



Iron mineral

production  
Million of tons



Wrought iron

Million of tons

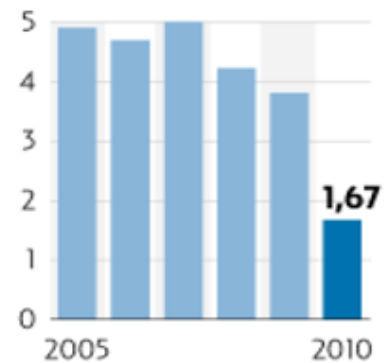
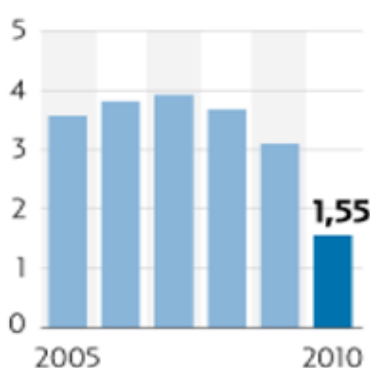


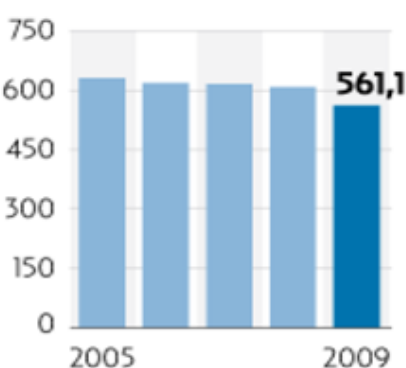
Plate iron

Million of tons



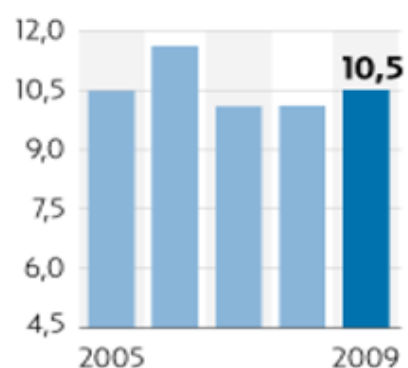
Aluminium

Million of metrics tons



Gold

Miles of Kg



Fuentes: Instituto Latinoamericano del Fierro y el Acero- ILAFA,  
World Mineral Production, British Geological Survey

REUTERS-EL UNIVERSAL

# Types of minerals most exploited in Venezuela according to its classification

Metallic minerals	Non-metallic minerals
Elements valued for its hardness and malleability, as well as, its capacity to transmit heat and electricity very easily	Elements valued by its utility
Iron - Gold - Aluminium - Nickel - Manganese - Copper - Zinc - Niobite-tantalite	Coal - Limestone - Diamond - Salt

## Aspects to be considered in several minerals:

### Metallic minerals:

• **Iron:** after aluminum, iron is the most abundant metallic mineral in nature. The Corporación Venezolana de Guayana Siderúrgica del Orinoco C.A. (SIDOR) on April 1, 1964 was registered as a state enterprise, in order to exploit and process iron ore. The main products of SIDOR are tubes, steel bars, plates, rails, wires, among others. National reserves are estimated at 12,000 million tons.

• **Gold:** together with silver, platinum, palladium and rhodium are the group of precious metals. Commercial exploitation of gold in Venezuela dates back to 1824. The Callao village has traditionally remained the most important center of gold mining activity in the country. National reserves are estimated at 4 million tons.

• **Aluminum:** is a metal produced from bauxite ore. It is one of the most abundant elements in the earth's crust. In May 1951, the first important deposit of bauxite was discovered: Cerro El Chorro, located in Guayana, which promotes the declaration of the five eastern districts of Bolívar State as a National Reserve for bauxite ores. National reserves are estimated at 6 million tons.

• **Nickel:** after manganese, nickel is the most used metal in ferro-alloys. In January 1961, the Ministry of Mines and Hydrocarbons through the Directorate of Mines and Geology, conducted a systematic research of nickel in deposit

named Loma de Hierro, in order to establish its economic importance.

• **Manganese:** It is one of the strategic minerals in the metallurgical industry for steel. It is possible to find it in Nueva Esparta, Miranda, Sucre, Yaracuy, Falcón, Lara and Delta Amacuro states, but with greater abundance and exploited commercially in Bolívar state, specifically in the area of Guacuripia, in Upatá city.

• **Copper:** The existence of copper in Venezuela was known since colonial times. Copper deposits in Los Teques, Villa de Cura and Chacao, were exploited, as well as, the famous mines of Cocorote, and the mines of Aroa, discovered in 1605.

• **Zinc:** The most important deposit of zinc is located in Las Tapias place, 10 km south from Bailadores village (Mérida state).

• **Niobite-tantalite:** it is a strategic resource used in the manufacture of certain electronic components. At the west end of Bolívar state, specifically in Parguaza place, deposits of this important mineral have been confirmed.

### Non-metallic minerals:

• **Coal:** It is one of the "big three" in the field of mining economy. The most important coal mining areas of the country are: Naricual, Capiricual and Tacarapo mines in Anzoátegui state; Lobatera, Táchira, Santo Domingo, and Guasare mines located in Zulia state. National reserves are estimated at 10 billion metric tons.

• **Limestone:** with the exception of Guyana



Shield, Venezuela has large deposits of limestone, located along its geography and are presented as extensive layers associated with commercial deposits of phosphate, dolomite and clays. Venezuela is one of the countries with the highest production and consumption of limestone.

- **Salt:** Scientifically known as Halite. Rock salt and its colorless crystals have been used mostly in recent years for optical research, rubbing them lenses and prisms to study with infrared radiation.

- **Diamond:** In Venezuelan market the three types of diamonds widely known are industrial type, bort type and size type: Venezuelan diamond areas are located in Bolivar State, in the northeast and in the Gran Sabana, specifically in Santa Elena de Uairén village.

## Legal aspects of the mining sector in Venezuela

- Mining Act. Decree N° 295, September 5th, 1999.

Mines or mineral deposits of any kind, in this country, belong to the Republic, and are public property, therefore, inalienable and imprescriptible.

Exploration and exploitation of mining resources can be made only through the following methods:

- a) Directly by the Executive;
- b) Concessions for exploration and subsequent exploitation;
- c) Operating Permits for the exercise of small mining;
- d) Mining associations; and,
- e) Artisanal mining.

Mining activities should be carried out in compliance with environmental legislation and other regulations governing that matter.

Any person, natural or legal, national or foreign, skilled in law and domiciled in the country, may obtain mining rights to perform the activities mentioned in this Act, except as set forth herein.

Foreign governments may not be holders of mi-

ning rights within the national territory. In the case of entities that depend on these governments or companies, in which such governments may have an interest by capital or statutes, the country shall confer control of the company. For the granting of mining rights, shall be required the prior approval of the Congress of the Republic.

- Decree with Rank, Value and Force of Organic Law that reserves to the State the Activities of Gold Exploration and Exploitation.

This decree aims to regulate the system of mines and gold deposits, reserves to the State the execution of primary activities and other related to the use and exploitation of gold, as well as, the creation of companies and strategic alliances in order to reverse the serious effects of capitalist mining model.

The decree also states that the existing deposits of gold in the country whatever nature, belongs to the Republic and are public property and attributes of the territorial sovereignty of the State. Therefore, they are inalienable, imprescriptible and of non commercial nature, for being non-renewable and exhaustible natural resources.

Activities to which the Act refers may be exercised only by:

- The Republic or through its public institutions or companies wholly owned or subsidaries thereof.
- Joint ventures (Mixed Companies), in which the Republic or any of the public institutions or State enterprises have control of their decisions and hold a 55% equity interest.
- Strategic alliances between the Republic with all societies or other forms of association allowed by law for the performance of small-scale mining.

The Executive, through Decree, may transfer to joint ventures, the right to exercise all or part of the reserved activities. Also, it can transfer property rights or other real or private personal properties of the Republic required for the efficient exercise of such activities.

On the other hand, the law states that the amount of gold extracted from any mine or deposit, the State is entitled to a share of 135 as royalty on the final product of the mineral. The National Executive may reduce the royalty from 13% to a minimum of 3%.

All the gold obtained as a result of any mining activity in the country will be mandatory preferential sale and delivery to the Central Bank of Venezuela (BCV). The BCV will participate, regulate and conduct operations in the gold market in the terms and conditions established by regulatory instruments issued to that effect.

Gold jewelry for personal use is excluded from the scope of Decree marketing.



## PART III

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### INVESTMENT PLAN TO REACTIVATE MINING IN VENEZUELA

# National Executive Strategy

Given that low oil prices in the international market has generated a negative impact on economic development of the country, in November 2015, the Venezuelan government agreed to plan revenues for fiscal year 2016: 3.414 million bolivars (Bs) (USD\$ 341,4 million) from mining and basic industries. So, the main objective of national government for 2016 is to intensify the activities related to the mining sector.

These revenues from mining industry will be distributed as follows:

- Bs. 570 million (USD\$57 million) iron industry
- Bs. 196 million (USD\$19.6 million) derived from the exploitation of other minerals
- Bs. 2,643 million (USD\$ 264.3 million) activities associated with gold mining
- Bs. 5 million (USD\$ 0.5 million) mining corresponding to special benefits

The institutions responsible for promoting those activities are the Ministry of Petroleum and Mining, together with the Venezuelan General Mining Company C.A. (Minerven) and the Central Bank of Venezuela (BCV), who will assume the exploratory projects to quantify the existing mineral resources in the identified and potential deposits, as well as, increasing the extraction of minerals considered of strategic character, such as gold, diamond and cobalt.

For these purposes, initially Venezuelan government considered as appropriate to establish partnerships with foreign capital from the People's Republic of China and South Africa, to assist the momentum of the Ecosocialist Mining Plan and the National Mining Plan, but eventually chose to expand the strategy, and is established the Orinoco Mining Arc Plan for research, exploration (certification), exploitation, processing and marketing of Venezuelan mining sector.

(\*). Decree quantification and certification of re-

serves contained in the Orinoco Mining Arc and its creation as a Strategic Development National Zone.

## Formation of the Orinoco Mining Arc

### Objective:

- Establish strategic development national zone Mining Arc and Mining Magna Reserve Project, will allow certification of gold reserves.

- Carry out exploration works to certify mineral reserves, and then move to the operational phase for the exploitation of gold, diamond, iron and coltan.

Private participation (foreign or local): maximum 45%.

Territorial expansion: 114.000 square kilometers.

Minerals: there are huge deposits not yet fully quantified containing gold, nickel, coltan and precious gemstones, as well as almost all of the national reserves of iron, bauxite and other minerals of high industrial value. It is estimated that in five areas of southern Bolivar state, there is the existence of gold reserves exceeding 81 million ounces.

### Goals set the Venezuelan government:

- Increase gold production. 7 thousand tons of gold reserves are estimated at the Mining Arc.
- Since December 2014, after the reform of the BCV Law via enabling law, diamond became part of international reserves. However, to include diamond in international reserves, Venezuela must be reinstated to Kimberley Process Certification System (worldwide regulation authorizing the lawful marketing of the diamond).

<sup>1</sup>: To this date, the Ministry of Petroleum and Mining and Production Vice President of Venezuela, are defining the work schemes and strategies to be developed together with national and international private companies interested in participating in the project. Currently, interested companies are conducting bilateral meetings with representatives of the Ministry to assess the profitability and the benefits will be given the Venezuelan State.

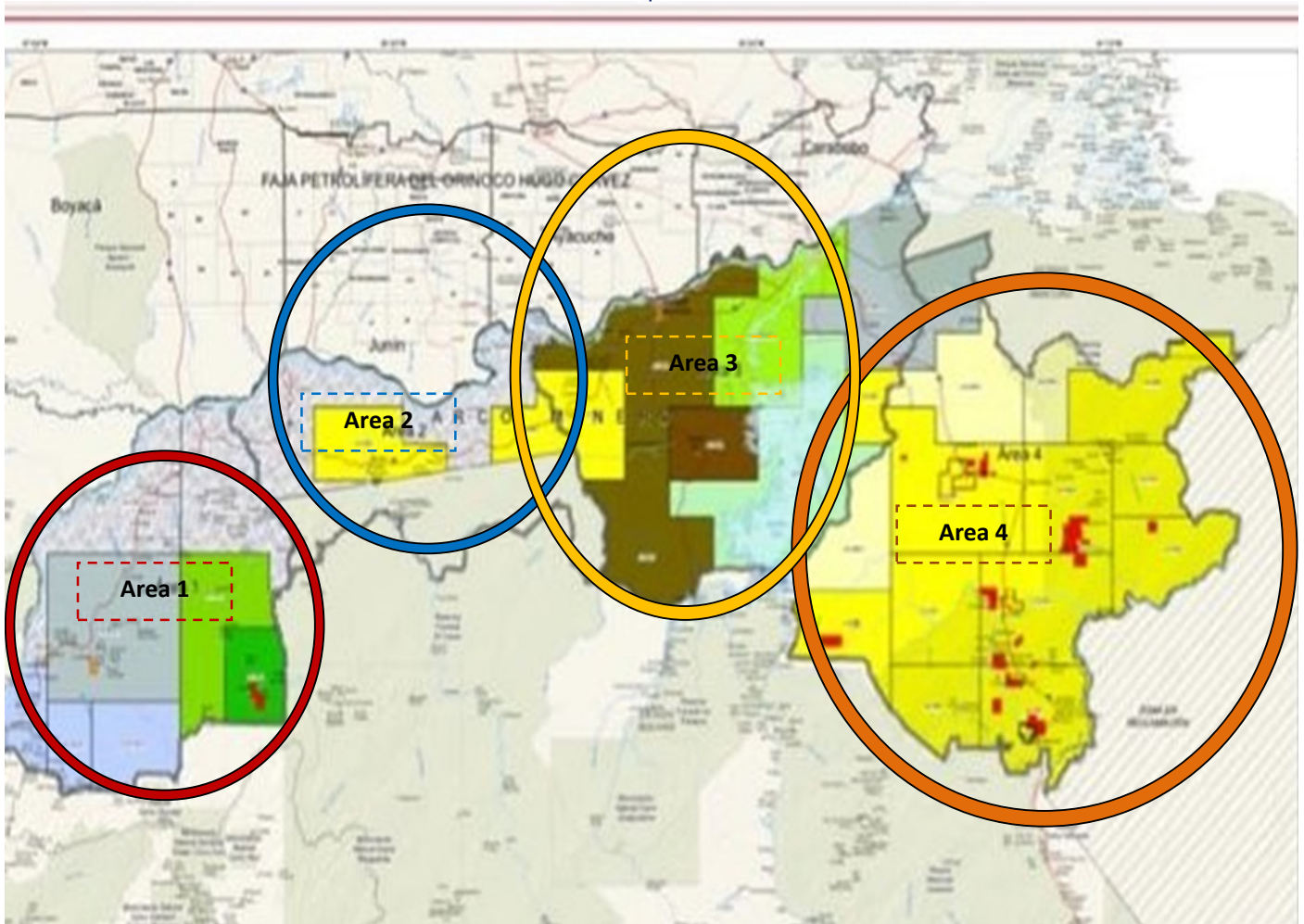


- Develop Magna Reserva Mining Program to evaluate, quantify and certify country reserves of valuable minerals.
- Develop scientific studies with support from universities and specialized companies from different areas of the country where is feasible the presence of gold, diamonds, coltan, nickel, and other minerals of high industrial or commercial value.
- Once certified these deposits, joint ventures with public or private, national or international sector will have access to for industrial development of Venezuela's mining sector.
- Increase and reactivation of coal production in Carbozulia. It is expected an investment of over 1,000 million dollars in financing, to be repaid with the production of coal and nickel. The intention is to bring coal production to 8 or 10 million tons per year in Carbozulia; as well as, to increase production of nickel in Lomas de Níquel, a very important mine in Aragua state.

### Companies blocks:

Mining sector reorientation, consists of the allocation of exploration and quantification of mineral-rich areas in Bolivar state, as detailed below:

- **Area 1**, an extension of 24,717 Km<sup>2</sup> in the west of Bolivar state, on the boundary line with Apure and Amazonas states. There prevail coltan and diamond deposits. For this area, was signed an agreement with the China CAMC Engineering CO. LTD, which will work in area 1; and one another with a mining company from the Republic of Congo, which will operate in areas 1 and 4.
- **Area 2**, of 17,246 Km<sup>2</sup> of extension, where abound non-metallic minerals and alluvial gold.
- **Area 3**, starting at the Aro River to the eastern boundary of the Mining Arc, with 29,730 Km<sup>2</sup> where iron and bauxite predominate.
- **Area 4**, which covers the area known as Sierra de Imataca of the Orinoco Mining Arc, to the south of Bolivar state. For this sector, a letter of intent was signed with the Chinese company Yakuang Group.





## PART IV

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### OPPORTUNITIES FOR INDIAN COMPANIES IN MINING INDUSTRY OF VENEZUELA

# Areas of interest for India

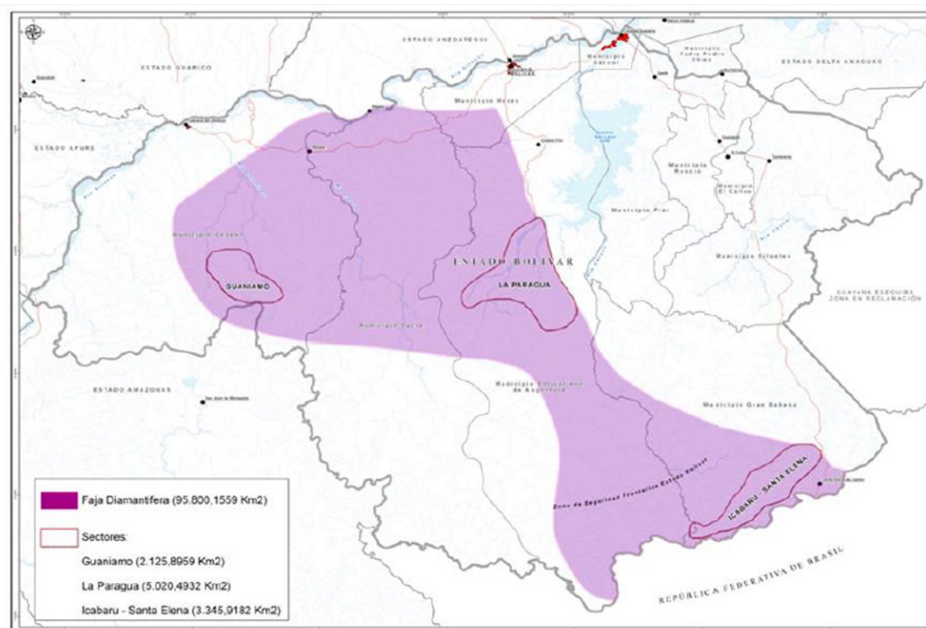
Considering that the territorial impact of new mining and energy investments is an ongoing process and will have an impact of social, territorial and environmental dimensions at the southern part of Venezuela, it may be considered the importance for Indian investors to invest in new industries dimensional to present and prospective requirements of national and international markets:

- Participation in the exploitation and marketing of gold, taking into account that 7.000 tons of gold reserves are estimated at the Mining Arc.
- Participation in the exploitation and marketing of diamond. In Venezuela there are only diamond-bearing demonstrations in Bolivar state, specifically in three areas, located in the region of Guaniamo and in the basins of the Caroní and Paragua rivers, according to the National Mining Plan, conducted by the Corporación Venezolana de Guayana in 2011.

Thus, in the event of a change of government, this project surely will have changes that could affect foreign investors. Commitments previously agreed will remain, but will be involved in new

environmental regulations and demands of the locality.

- Exploitation of phosphate in Táchira state for industrial development of fertilizer N-P-K type. Phosphate is characterized by setting phosphorus in plants, which is fundamental for improving crops. The development of a production line of fertilizers would have national and international markets, primarily in Brazil, Peru, Uruguay, Argentina, Chile and Paraguay. It is important to emphasize that currently, Venezuela only exports urea, and important element for fixing nitrogen in soils and plants.
- Establishment of production lines of coltan based semiconductors. The incorporation of these production lines will allow to investors have an important market in Latin America, as well as having the advantages of incorporation into the Southern Common Market (Mercosur).
- Taking into account that the mining industry in Venezuela operates with "obsolete" technology, this situation offers an open market niche, ideal for the supply of high-level machinery and technological equipment for the activities in the mining sector in the country.



Participation in the exploitation and marketing of diamond. In Venezuela there are only diamond-bearing demonstrations in Bolivar state.

Note: participation in the Orinoco Mining Arc should be considered as an investment of relevant opportunity (short term). The current government that is looking for foreign currency, presents to investors an open project for mining, with large commercial advantages. However, this project has many detractors for being considered as devastating for the environment, taking into account that in Guayana is concentrated 80% of fresh water of the country.

## Final Considerations

Excluding energetic minerals of fossil type (coal, oil), it can be considered that Venezuela, as a mining country, only very recently emerged due to the exploitation of limestone for cement and iron ore. Despite the exploitation of salt, clay, gold and copper, none of these sectors has given to the country a major development of industries based on mineral raw materials. Only after 1950, the iron ore mining and quarrying limestone for cement factories, became the two branches of the industrial mining dominant in the country, to this date.

Thus, the mining industry in Venezuela still represents an underdeveloped sector, technologically laggard compared with countries such as Chile, Peru and Bolivia.

Undoubtedly, the little development of the mining industry in Venezuela has left a wide margin of untapped territory, thus creating an opportunity to participate in the process of mining and

the development of industries associated with the mining activity. Currently, it has been confirmed the presence and interest of foreign companies: Gold Reserve (Canada), China CAMC Engineering CO. LTD (China), Yakuang Group (China) and others from Africa.

However, this situation of little industrial development in the mining area, has promoted illegal mining activities. According to the Center for Ecological Research of Venezuela (CIEV, in Spanish), per month, about 600 kg of gold are illegally extracted. The situation is worrying not only because it harms the amount of wealth that is subtracted directly but also because for the damages made consequently. Given this situation, and as part of the mega project that promotes the Venezuelan government, security and presence of the armed forces, have been increased in the area.

## ANNEXES

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### MAPS:

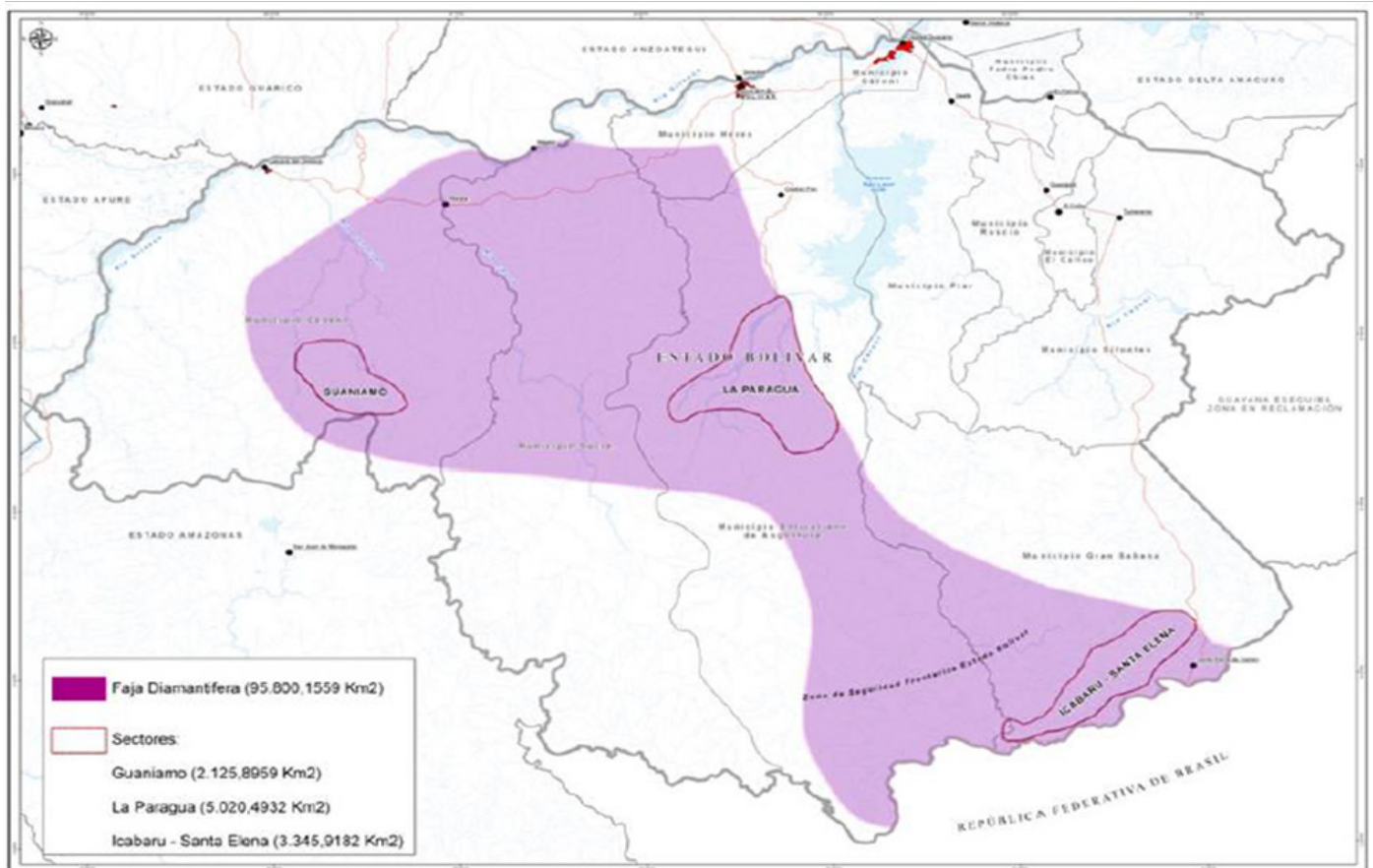
- Venezuelan mining regions
- Diamond-bearing in Bolívar state
- Metallic minerals
- Non-metallic minerals
- Orinoco Mining Arc

# Venezuelan mining regions

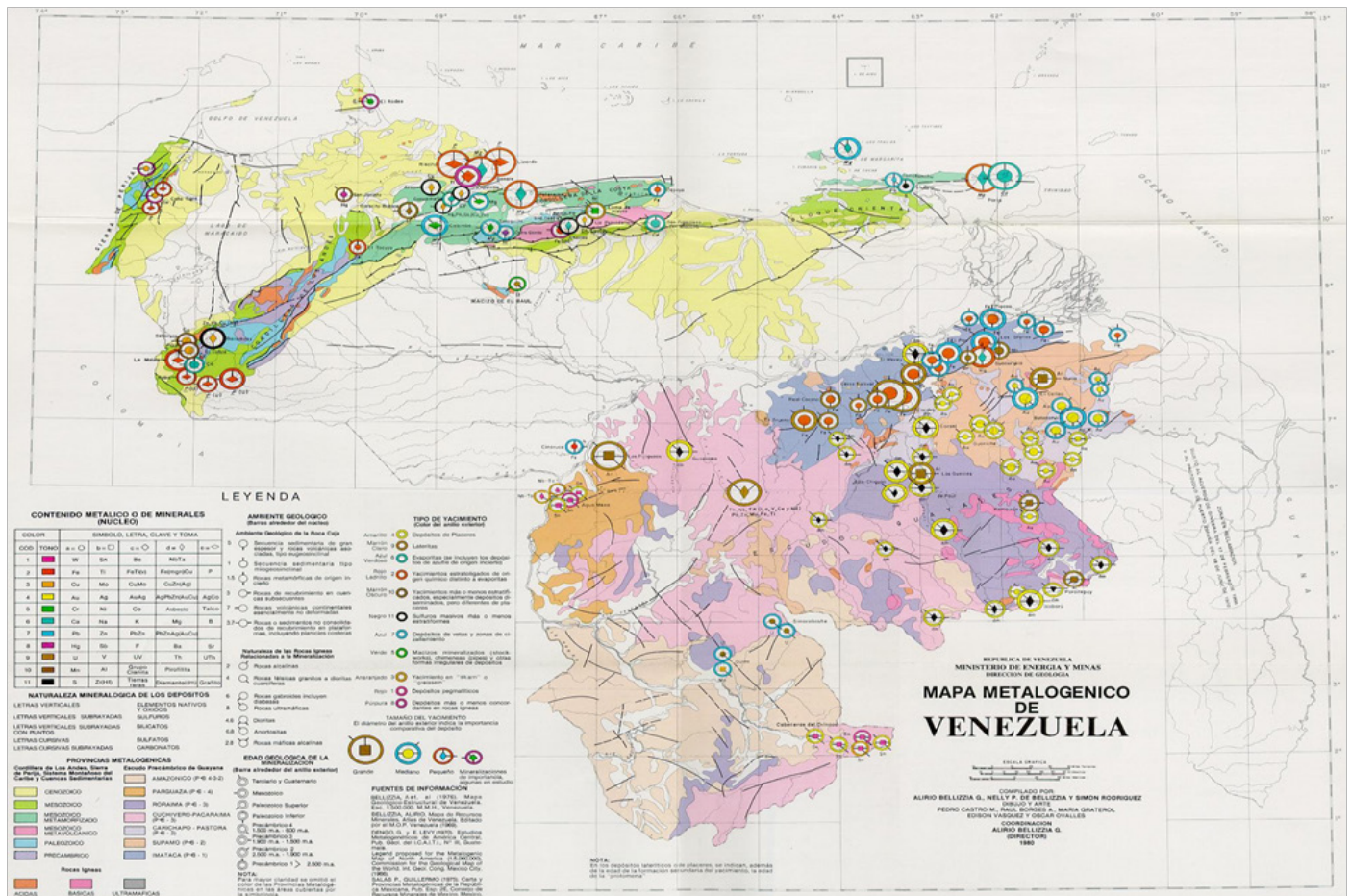




# Diamond-bearing in Bolívar state



# Metallic minerals



# Non-metallic minerals

