



## The Icabarú Mines in the Caroní River Basin: Incoherence, State-Sponsored Anarchy and Criminality



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## Contents

1. The Icabarú River	3
2. Mining along the Santa Elena de Uairén - Icabarú Corridor	4
3. Background, Legality and Incoherence of Mining Activity in the Icabarú River Basin	10
4. Conclusion	17

## Figures

Figure 1. Santa Elena de Uairén-Paraitepui-Apoipo-Icabaru-Southern Sector of Canaima National Park Corridor (relief map)	6
Figure 2. The Santa Elena de Uairén-Paraitepui-Apoipó-Icabarú - Southern Sector of Canaima National Park Corridor (elevation contour map)	7
Figure 3. Parkupi Mine, near Icabarú. Photo taken in 2020	9

## 1. The Icabarú River

The Icabarú River, located in the southern part of the state of Bolívar, adjacent to the border with Brazil, is one of the most important tributaries of the Caroní River, whose 5,030 km<sup>2</sup> basin is still covered mostly by a valuable and strategic rainforest<sup>1</sup> despite the ugly scars resulting from all the mining activity. The basins of the Icabarú, Surucún, Cuquenán and Aponwao Rivers drain into the upper Caroní River basin. The confluence of the Cuquenán and the Yuruaní Rivers forms the Caroní River, which then flows north through the state of Bolívar until it reaches the Orinoco. Halfway downstream, the Caroní is joined by its main tributary, the Paragua River, and their combined waterflow then fills the reservoirs of the hydroelectric dams at Guri, Caruachi and Macagua I, II and III, all of which generate at least 72% of Venezuela's electricity.

Important tributaries, such as the Uaiparú, Parcupí and Uonán Rivers drain into the Icabarú River basin. All these areas, covered by forested ecosystems, are being affected by mining sites dispersed along a corridor defined by a 121 km gravel by road connecting the towns of Santa Elena de Uairén and Icabarú. According to studies conducted by EDELCA (the former regional state-owned hydroelectric company), there are two predominant types of landscape in the area, that of foothills with grades steeper than 30%, geologically associated with the Cuchivero Group, and that of the flat-top *tepui* structures belonging to the Roraima Group. "In both cases, the areas with increased mining activity are located in the sedimentary environments that give shape to the bottom of the embedded valleys. At a more detailed geomorphological level, at the bottom of these valleys, the terrain being affected the most consists of colluvial-alluvial glaciais and fluvial meadows located along both banks of the main rivers."<sup>2</sup>

By the early 1990's, the population of the Icabarú River basin consisted of 4,383 inhabitants, most of whom were associated with the extraction of diamonds and gold (Barreto et al. 1991). By 2014, according to projections by the National Statistics Institute (INE), the estimated population of the Gran Sabana municipal district in the state of Bolívar was 36,728 inhabitants, of whom approximately 7,000 were working at the Icabarú mines.<sup>3</sup> It goes without saying that this situation changed drastically following the presidential announcement of the creation of the "Orinoco Mining Arc" in February of 2016. Following that date, thousands of people began to arrive along the Santa Elena de Uairén-Icabarú corridor to work at the mines.<sup>4</sup> Ever since then, there has been an increase in environmental and social damage in the area, as well as in homicides, personal insecurity and conflicts between outsiders and the Pemón people, the original settlers in these territories.

<sup>1</sup> Dezzio, N. 1994. Ecología de la Altiplanicie de la Gran Sabana (Guayana Venezolana) I. Revista Scientia Guaianae. No. 4, p. 207.

<sup>2</sup> Barreto, A. and Pérez S. 1991. Estudio integral de la actividad minera de la cuenca hidrográfica del Alto Caroní. II Jornadas Profesionales de Edelca. October. Mimeograph.

<sup>3</sup> Information provided by a member of the Pemón community.

<sup>4</sup> <https://runrun.es/rr-es-plus/393967/ikabaru-en-claves-de-bloque-especial-del-arco-minero-a-escenario-de-una-masacre/> Consultado el 16/02/20.

## 2. Mining along the Santa Elena de Uairén - Icabarú Corridor

For purposes of this report, we will use the terms “Santa Elena de Uairén Mining Corridor” (Santa Elena de Uairén - Paraitepui - Apoipo - Icabarú - Canaima National Park South) or “Icabarú Mining Corridor” when referring to all mining activity taking place within the Icabarú River basin. At the far eastern end of this corridor is the town of Santa Elena de Uairén, the seat of Gran Sabana municipal district, and also the main population center, where gasoline and various mining supplies are sold, and which also has an airport with an asphalt-paved runway for commercial and tourist flights. We refer to this area as the “Santa Elena de Uairén Mining Corridor” because Santa Elena is the focus of this functional unit, even though this activity also encompasses the Icabarú River basin and the headwaters of the Caroní. In other words, the corridor covers the Icabarú River basin, as well as surrounding areas that include parts of the Gran Sabana and Raúl Leoni municipal districts, all of which are in the upper Caroní River basin, which has a total surface area of 10,724 km<sup>2</sup>.

We must remember that anything that affects the Caroní River will also affect the life cycle of the Guri Dam and the operation of its turbines that generate electric power, which is vital for all of Venezuela.<sup>5</sup> The rainfall in forested areas provide water that runs into the small rivers that determine the flow of water into the larger waterways. If the forests are eliminated and the woody vegetation layer is removed, then the waters will drain more rapidly during the rainy season, causing ground erosion, and during the dry season the lowered river levels will become more accentuated. The woody vegetation acts like a sponge, holding back the water during the rainy season and slowly releasing it during dry spells. The rainforest, so characteristic of the Guiana Shield, is dependent on complex and fragile biological systems that define the cycle for soil nutrients, which occurs in the few upper centimeters of the topsoil, which lies over a substratum that lacks fertility, which is a natural characteristic of the ground surface of the Guiana Shield. These forests have very little resistance against changes, and a low rate of recovery.<sup>6</sup>

The sediments carried by the rivers affected by the mining activity are deposited mainly at the entrance, or “head” of the Guri Dam reservoir, thus preventing a greater flow of water.<sup>7</sup> These sediments are rich in quartzite and sandstone particles that originate in the region’s geological formations and have a high potential for eroding the blades of the turbines that drive the electric generators.<sup>8</sup> Lake Guri acts like an enormous decanter that lessens the amount of suspended sediments that are damaging to the turbines. However, the accumulation of sediments in the reservoir diminishes the water

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<sup>5</sup> Gutman, P. 2002. Putting a Price Tag to Conservation: cost benefit analysis of Venezuela’s national parks. J. Lat. Amer. Stud. 34: 43-70.

<sup>6</sup> Dezzeo, N. 1992. “La Degradación de la Vegetación y los Problemas de Erosión de Suelos en la Gran Sabana”. CVG-Edelca.

<sup>7</sup> Meade, Robert. 1989. Report for CVG. United States Department of the Interior, U.S. Geological Survey.

<sup>8</sup> Dezzeo, N. (Ed.). 1994. Ecología de la Altiplanicie de la Gran Sabana (Guayana Venezolana) I. Revista Scientia Guiana. No. 4.

storage capacity, as well as the capacity for generating electricity. Meanwhile, the loss of forested areas within the Caroní River basin has led to fluctuations, or peaks and troughs, in the amount of river water that then flows into the reservoir in an unregulated way. This means that the water supply becomes less predictable, thus leading to greater uncertainty in the dam's operations. Greater conservation of the basin's forested areas will lead to a more sustained flow of water over time, which in turn will lead to greater reliability in the performance of the hydroelectric system. The Caroní River was chosen for the development of hydroelectric projects largely because its waters carried a relatively small amount of suspended sediments. Suspended quartzite and sandstone particles act on hydroelectric turbine blades in a manner similar to what happens to outboard motor propeller blades, which can be quickly pitted and eroded by these suspended particles. This issue is fundamental in the design of hydroelectric turbines, not just at Guri, but also at Tocomá, Caruachi and Macagua. Avoidance or abatement of this erosive phenomenon will result in lowering the costs of repairing and replacing these components. The erosive effects of these sediments were considered important enough to lead the former EDELCA to plan a future "compensation" dam at Tayucay, upstream from the Guri Dam, which was to have the double purpose of regulating water flow and minimizing sedimentation. All of this can be avoided by having a healthy upper Caroní River basin, where perturbation of the original vegetation cover is kept at a minimum, and where there is no mining activity.

[Figure 1](#) (downloadable) presents a relief map depicting the lower and mid Roraima Group's mountainous region consisting of *tepui* formations, Precambrian sandstone and metasandstone escarpments and diabase hillocks. In [Figure 2](#) (downloadable), one can clearly see the exact same surface, but with the contour lines added. By observing both maps, each having the same set of symbols, along with the explanation given below, one can visualize the rather complex scenario that includes the location and magnitude of the mining activity along the corridor. In order to become better acquainted with the map in Figure 2, the reader must first locate the olive-green line, demarcating the totality of the mining corridor (10,724 km<sup>2</sup>), and depicting the general boundaries, and then find the chartreuse-green line that defines with greater precision the Icabarú River basin, which serves as the watershed as far north as the confluence of the Icabarú and Caroní rivers. The blue line follows the main course of the Icabarú River as far as its confluence with the Caroní, which is represented by an ochre-yellow line that also defines the boundaries of Canaima National Park. Downstream from its confluence with the Icabarú River, the Caroní is also represented in blue where it runs parallel to but separate from the park's boundaries already represented in ochre-yellow. For reference purposes, other rivers outside the basin are also depicted in blue. The red-colored patches represent mining areas (81.87 km<sup>2</sup>), while the deforested areas are represented in fuchsia (42.71 km<sup>2</sup>). This information was obtained by processing and analyzing Sentinel 2A satellite imagery captured on 5 December 2019. The incomplete rectangle, outlined in a pinkish-brown color, represents one of several blocks that are officially considered to be part of the Mining Arc project. However, it is frequently left out on official maps, even though it is clearly established in the "decree" that created the Mining Arc. This rectangle is incomplete as it is cut off by the international border with Brazil, which is depicted in grey over the dotted line, and it would make no legal sense to extend its jurisdiction into Brazil.



Mapa de curvas de nivel del Eje Minero Santa Elena de Uairén – Paraitepui – Apoipó – Icabarú – Sector Sur Parque Nacional Canaima. Fuente: SOSORINOCO 2020

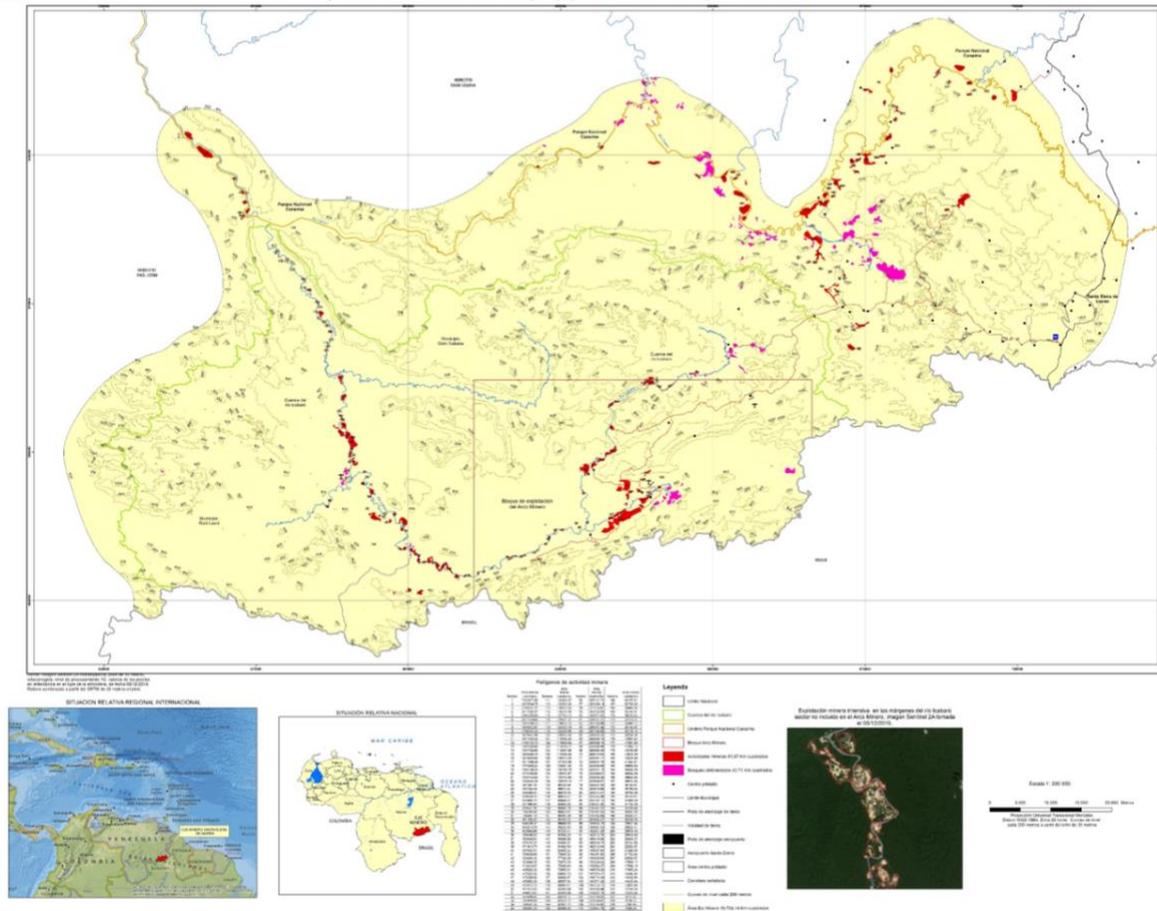


Figure 2. The Santa Elena de Uairén-Paraitepui-Apoipó-Icabarú - Southern Sector of Canaima National Park Corridor (elevation contour map)

The following description of the mining corridor begins at Santa Elena de Uairén. Starting at the airport, we head in the direction of the village of Icabarú, following a highway that soon turns into a dirt road that is in poor condition, and cuts through the mountainous landscape for approximately 110 kilometers.<sup>9</sup> The regular dirt road then resumes, still heading toward the village of Icabarú and crosses the Surucún River, on whose banks the El Polaco and La Faisca mines are located. This river follows a fairly straight line, some of its segments having a north-to-south alignment, defining a contour line that follows a geological fault that likewise has a north-to-south alignment. This is a geological belt that is part of the Uairén formation and is approximately 15 to 20 kilometers in width and projects away from the mountain known as Cerro El Patrol. Upon reaching Paraitepui, in a northeasterly direction, one can see areas that show mining activity (depicted in red in the map) and deforestation (depicted in fuchsia) in the environs of the Apoipó settlement, and in the southeastern sector of Canaima National Park.

<sup>9</sup> The Santa Elena de Uairén to Icabarú highway was built before the El Dorado to Santa Elena highway, which was inaugurated in 1972. This was just a trail. When the highway was extended to Icabarú in 1963, the MOP also built the landing strip at El Paují, where at the time, there were no indigenous inhabitants, but only employees of the MOP. Even though it has received no maintenance in more than 40 years, this landing strip is in excellent condition.

Further along the highway to Icabarú is the town of El Paují, which also has a gravel airstrip, built in 1963 by what was then the Ministry of Public Works (MOP), and which had been used for tourist operations up until recently, but is now used mainly by aircraft bringing in gasoline for the nearby mines. Continuing ahead through the El Cajón area, there is a turnoff leading to a site called Puerto Polo on the Uaiparú River. Here there is an area that has been affected, but which is impossible to view by means of satellite because it is hidden by the thick canopy of the forest that grows here. The inhabitants of the indigenous villages along the Uaiparú River filed a complaint with the military authorities in Santa Elena de Uairén in March of 2020 because the river water was excessively muddy, people were getting sick, and the water wasn't suitable even for washing clothes. This seems to be related to recently confirmed information from March of 2020 indicating that the Uaiparú River was being diverted in order to commence mining operations along its riverbed.

From the center of the village of Icabarú one is now able to see mining sites and evidence of deforestation in the surrounding areas. At the very center of the village there is also an unpaved landing strip used by light aircraft. These mining sectors are at the heart of the Icabarú mining block, which was designated as part of the Mining Arc project. Downstream from Icabarú, one can see more deforested mining sites along both banks of the Icabarú, and also another settlement with an unpaved landing strip. At the confluence of the Icabarú and Caroní rivers there is a small settlement with a dirt runway for light aircraft, and one can also see mining sites located inside, as well as outside of Canaima National Park.

As we go eastward along the Caroní River, upstream and away from its confluence with the Icabarú River, where it serves as the southern boundary of Canaima National Park and also demarcates the northern edge of the mining region, we observe even more mining activity and deforestation along both banks of the Caroní River, whose northern bank is actually inside the park. These mining operations are conducted with a disregard for any industrial safety standards, let alone environmental considerations. Miners die on a regular basis as a result of being buried alive as flimsy cliffs collapse from the action of pressurized water jets ejected by the monitors used in the hydraulic mining method (see Figure 3). Late in March of 2020, there was an accident at Apoipó involving a high wall collapsing from the effects of the rising waters of the Caroní River during its flood stage. Reportedly, at least four people died in that accident. At the Apoipó mines, work takes place not only along the banks of the river, but also within the river itself. Upstream, as well as downstream from the waterfall, there are numerous mining rafts, around thirty of them, each with anywhere between ten and twelve divers, most of them indigenous men that are highly skilled at doing this kind of work. They work in shifts, thus allowing the mining operations to run uninterruptedly 24 hours a day, 365 days a year. Given the current fuel shortage in Venezuela, gasoline is smuggled in from Brazil. What's more, despite the crisis and the quarantine resulting from the COVID-19 pandemic, the light aircraft continue to bring fuel and supplies from Santa Elena de Uairén to Icabarú, with an

average of three roundtrip flights per day, arriving between 10:00 a.m. and 2:00 p.m.<sup>10</sup> Likewise, work at the mines has not stopped as a result of the pandemic.



*Figure 3. Parkupi Mine, near Icabarú. Photo taken in 2020*

In the map's square insert we have included a list of those mining areas (coded in red), consisting of 220 units, which would be equivalent to 220 mines, depending on what is understood to be a "mine." In this case, what is important is the fact that there are 220 discrete areas totaling 81.87 square kilometers that have been totally devastated by the mining activity, while there are deforested areas totaling 42.71 km<sup>2</sup> that cannot be directly correlated with the mining activity (coded in fuchsia). For purposes of this report, we understand "deforestation" to be the loss or removal of woody vegetation, bushland or scrubland, but in any case, any dense wooded vegetation, where there is evidence of this being the result of anthropic activity, whether by fire or by mechanical action. In this definition, we have not included areas that were already savannas, where the surface

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<sup>10</sup> Record based on field observations conducted between 12 and 15 April of 2020, the closing date for this report.

obviously consists of established grasslands that cannot be associated with current anthropic perturbation. We do not wish to enter into polemics as to whether these savannas are anthropic or not. We are only interested in highlighting in fuchsia those areas where our satellite image analysis shows some evidence of anthropic perturbation over the dense woody vegetation cover. These areas represented in fuchsia may well have already been integrated into some kind of mining activity or may well be in the process of being integrated. We do not consider these to be farming operations, given their large surface area. Farming activity in this area is done on a small scale involving the *conuco or slash and burn* agriculture, whereby an individual farmer clears a small area for planting corn or other crops, but this does not involve deforestation of these degrees of magnitude.

If we count only the mining areas located inside the Icabarú block of the Mining Arc project we will find that there are 51 mining units covering 15.28 km<sup>2</sup>, in other words, just 18.66% of the entire surface of the mining corridor, which accounts for 23.1% of the detected mining sites. In conclusion, most of the mining activity along the Icabarú corridor is outside the officially designated Icabarú block of the Mining Arc project

In order to obtain 6 grams of gold, it is necessary to process approximately 10 tons of dirt, in other words crude geological material taken from alluvial deposits. Meanwhile close to 1 kg of mercury is needed to process 10 tons of dirt.<sup>11</sup> This means that for every gram of gold 166 grams of mercury is needed, of which 75% goes into the air by sublimation, or evaporation, and ends up a short distance away on plants, animals and people, and is eventually bio-absorbed, while about 25% of it falls directly onto the ground.<sup>12</sup>

### 3. Background, Legality and Incoherence of Mining Activity in the Icabarú River Basin

The Icabarú River basin, specifically along the road that connects the seat of the Gran Sabana municipal district, which is Santa Elena de Uairén, to the mining village of Icabarú, founded in 1949,<sup>13</sup> has seen mining activity for decades, specifically for gold and diamonds. All of this activity had been taking place under conditions of “free exploitation,” requiring no specific authorization, while at the same time the government was issuing concessions and mining contracts through the respective ministry.

This mining activity has been taking place in this section of the upper Caroní River basin, in a territory that is legally protected under the legal concept of the “Protection Zone for the Southern Part of the State of Bolívar,” created in 1975,<sup>14</sup> and has automatically resulted in a conflict between its use for mining and the conservation of a basin which is supposed to be protected under this instrument of legal protection. This

<sup>11</sup> Information obtained from a mining entrepreneur that was interviewed in the field.

<sup>12</sup> Calculation made by a mining technician with experience in the use of mercury in mining processes.

<sup>13</sup> <http://repositorio.geotech.cu/jspui/bitstream/1234/407/1/Transformaciones%20ambientales%20de%20la%20Ocuena%20del%20rio%20Caron%C3%AD%2C%20Venezuela.pdf> Accessed on 26 FEB 2020

<sup>14</sup> The Protection Zone for the Southern Part of the State of Bolívar was created by Decree No. 942 of 27 May 1975, published in Official Gazette No. 30.704 dated 28 May 1975. The decree does not include a land use and regulation plan.

Protection Zone is an Area Under Special Administrative Control (ABRAE), whose objective it is to protect a vast surface area, and in following with the “whereas clauses” of the legislation that created, it was designated as such, “because of its natural characteristics of climate, vegetation, soils and hydrology, that constitute the principal source of water for the Reservoir known as El Guri.”... “Because the aforementioned Reservoir is the principal source of electric energy at the level of the central, eastern and southern regions of the country”...“Which, according to what is foreseen by the Commission for the National Plan for the Use of Water Resources (COPLANARH), must be established within a framework of technical orientation toward the protection and rational use of our hydrographic basins.” Article 1 of this proclamation defines the “Zone for the Protection of Soils, Forests and Waters,” in accordance with Articles 18 and 22 of the Law of Forests, Soils and Waters. In the subsequent articles, the ministers of Internal Affairs, Defense, Public Works, Agriculture and Animal Husbandry, Health and Social Services, and Education are charged with executing the decree and “conducting studies inherent to territorial planning, in order to promote an integral use of management so that the development of the area will be balanced and harmonious in all its objective.” (Article 3). As of this date, the respective Land Use Plan and Regulation for this ABRAE has not been enacted.

It is important to note that, for some unexplained reason, the above proclamation did not mention the Ministry of Mines and Hydrocarbons among those having any responsibility, which leads one to infer that, from the very beginning, attention was not given to the potential for subsequent socio-environmental damage and conflicts over use between the mining operators and the protectors of the strategic river basin that supplies water to the Guri Dam. This is probably the most important river basin in the country in economic terms, and totally disregards the fact that beginning in the 1930’s there was already widespread gold and diamond mining activity in Santa Elena de Uairén, as well as in the Icabarú River basin and other places in the Gran Sabana.<sup>15</sup>

By the mid 1980’s, in this geographical area, later renamed officially as Gran Sabana municipal district,<sup>16</sup> there were focal points of mining activity, much of it inside Canaima National Park<sup>17</sup> as well as in the Zone for the Protection of the Southern Part of the State of Bolívar, classified as an ABRAE area, and which is located in the southern part of this municipal district. This is where most of the mining activity has been concentrated, because of the presence of an abundance of gold and diamond deposits, which have been

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<sup>15</sup> According to several authors, the discovery of gold and diamonds in the Gran Sabana resulted from explorations by Dr. Lucas Fernández Peña, who arrived there in 1924, settled in 20 km from the border with Brazil, on a mountain called Cerro Acurimá, near the Uairén River and founded the town of Santa Elena de Uairén in 1927. Four years later, mining operations had already begun throughout the Gran Sabana, starting in the vicinity of Cerro Paratepuy, near Cerro Surukum, 40 km west of Santa Elena de Uairén. Please see: [http://guayanaweb.ucab.edu.ve/revistas-informes-ciepv.html?page=2&file=tl\\_files/ciepv/files/informes/Competitividad%20en%20el%20Sector%20Minero%20en%20el%20Estado%20Bolivar.pdf](http://guayanaweb.ucab.edu.ve/revistas-informes-ciepv.html?page=2&file=tl_files/ciepv/files/informes/Competitividad%20en%20el%20Sector%20Minero%20en%20el%20Estado%20Bolivar.pdf) Accessed on 9 FEB 2020.

<sup>16</sup> Gran Sabana municipal district has a surface area of 32,990 km<sup>2</sup> and is divided into two parishes: Gran Sabana parish and Icabarú parish. The seat of the municipal district is Santa Elena de Uairén. Meanwhile, Canaima National Park and part of the Protection Zone for the Southern Part of the State of Bolívar are located inside of Gran Sabana municipal district.

<sup>17</sup> Please see the Canaima reports prepared by SOS Orinoco.

traditionally mined by Brazilian *garimpeiros* and Venezuelans, as well as by adventurers from other countries, not to mention the local Pemón inhabitants. Reports issued in those years by official entities such as the Ministry of the Environment or the Congress of the Republic's Committee on the Environment noted that the better known mining sectors in the municipal district were: (a) **Icabarú**, where the mining sites spread out from the outskirts of the village of Icabarú to points as far as 150 km away. This is located in the southern part of the municipal district, very near the border with Brazil, making it easy for gold and diamonds to be carried over into that country. During the 1980's these sites were known as Playa Blanca, Zapata, Trompa, Hacha and Los Caribes, and further downstream along the Caroní as far as San Salvador de Paúl. (b) **El Polaco**, in the Surucún River basin, located about 40 km from Santa Elena de Uairén on the previously mentioned road; and the La Faisca mines near El Polaco and La Hoyada in the Paraitepuy sector.

Over the years that followed, the National Executive implemented a mining policy whereby the Ministry of Mines (MEM) granted concessions in many of these areas, in accordance with legislation enacted in 1945. According to a map prepared by CVG-TECMIN, a state-owned mining services corporation, in 1995 the mining plots awarded by MEM in the Icabarú River basin included Hans, Saray 1 through 9, Trompa 1, Mezquita 1 through 9, Aripichi Falls 1 and 2, Zapata 1 through 5, and Apreme. In the El Polaco sector, concessions such as Camyc 1 and 2, Wariven, Lote C, Mawariton, Promi, Codsa, Pemón, Sabanal, Mayorca and San Miguel were also awarded. To complicate matters even more, CVG, the government-owned regional corporation, was given authorization to award mining contracts under Decree 1.409 of January 1991 and Decree 3.281 of December 1993. Thus, by December of 1994, CVG had awarded 436 mining contracts in the entire state of Bolívar, amounting to approximately 1,283,882 hectares, a surface area about the size of the states of Carabobo and Aragua put together. This information is from an internal report by the Office of the Comptroller General of the Republic issued on 21 December 1994, National Council on Borders.

Among other identifiable plots awarded by CVG in the Icabarú area are those known as La Maricutana, Los Brasileros, Vikingo, Perro Loco, Carmon II, Jay 1 through 6, Tam 1 and 2, and Belarmino. Among the mining contracts awarded by CVG in the Surucún River basin are Migs 1 and 2, Stefanía, Isabel, Pamina, El Polaco I and II, Karina, Mirca, Warivén II, and Agrominera Paraitepuy de Betania. All of them are part of a separate set of mining concessions, each assigned a space defined as being approximately 5,000 hectares. The El Polaco mine, also covering 5,000 hectares, was exempt from the provision of Decree 1.742 of 1991 prohibiting mining activity in the upper Caroní River basin. For this reason, all these new mining concessions also bore the name "El Polaco." In June of 1995, the Solicitor General of the Republic<sup>18</sup> determined that Decree 1.409 of January 1991 and Decree 3.281 of December 1993, giving authority to CVG to award mining contracts, were legally flawed.<sup>19</sup> A year later, these Decrees were finally repealed. Nevertheless, the contracts were nevertheless ratified by Decree 1.384.

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<sup>18</sup> El Universal. 28 JUN 1995.

<sup>19</sup> Petit Da Costa, Jesús. (1995). Solicitor General of the Republic. Official Memorandum No. 006, 19 MAY 1995.

CVG's Registry of Mines shows that up until 1992, CVG and the Ministry of Energy and Mines (MEM) had awarded 90,000 hectares in the upper Caroní River basin, which were divided into 47 concessions, 16 of them with Authorization for Territorial Occupation, according to the Report by the Ministry of the Environment to the Commission on the Environment, dated 28 May 1996, Official Memorandum No. 87. By 1996, there were plans for 85 more concessions for a total of approximately 200,000 hectares.

Laws are enacted, but then Decrees and Resolutions are utilized to adapt them according to the convenience of questionable individuals, which is a practice that has been with us for decades. An example of this is Resolution 036 of March of 1995 of the MEM that states that the use of mercury in mining operations is prohibited, but also states that "if this is the only technique available for such purpose" then it is allowed. That same Resolution prohibited the use of hydraulic monitors, which emit pressurized water jets used in hydraulic mining, because of the magnitude of the damage they cause (Decree 1738) but allows them to be used in "sanctioned and non-sanctioned areas." In other words, everywhere, which is absolutely absurd.

Over time, because of the lack of vigilance, as well as widespread corruption among the civil and military authorities, mining operations has expanded along that corridor that connects Santa Elena de Uairén, El Polaco, El Paují, Icabarú, Los Caribes and other points, all inside the Protection Zone for the South of the State of Bolívar, which has been subjected to constant and intensive environmental impact, as is evident in the satellite imagery. This is where there is evidence of significant loss of shrub and forest cover, degradation of the ecosystems, diversion and alteration of riverbeds, modification of the topography, and an increase in sedimentation in the tributaries of the Icabarú and Cuquenán rivers, especially in the Icabarú, which is reflected in its murkiness and in the brownish color of its waters, as well as the contamination from the mercury used in the mining operations, among other environmental impacts.

By the early 1990's, some important environmental measures were being taken in the area but were of no consequence. On the one hand, Article 4 of Decree 1.742, published in Official Gazette 34.783 of 23 August 1991, establishes that "... mining operations are not permitted along the waterways in the areas known as El Infierno, La Gruta, along the Guanán, Uaiparú, Icabarú, Parupa, Eurupuchi, Barrialón, Chiguao, Karum, Paragua, Oris, Aza, and Erebarí rivers, along creeks and in *morichezo* palm grove swamps (*morichales*) on a permanent basis, or in the Basin of the upper Caroní and Paragua rivers." Meanwhile, Decree No. 2.311 of 5 June 1992 created the National Icabarú River Hydraulic Reserve, thus providing additional protection for 40,000 hectares of the upper Caroní River basin. However, real control and environmental stewardship were not sufficiently in earnest and the gold and diamond mining operations continued uninterrupted in the country's most strategically sensitive river basin.

In the year 1999, shortly after former Lieutenant Colonel Hugo Chávez had become president of the Republic, a new Law of Mines was created by means of Extraordinary

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<sup>20</sup> The *moriche* palm (*Mauritia Flexuosa*) is also known in English as the buriti palm.

Decree No. 295, published in Official Gazette No. 5.382 dated 5 September 1999, officially categorized as being a “Decree Having the Rank and Force of the Law of Mines.”<sup>21</sup> The Articles in the First and Second Section of Chapters I and II, of Title IV are dedicated to small-scale mining, mining associations and artisanal mining. In compliance with the requirements of the Ministry, authorizations for geological exploration and extraction thus became circumscribed by the laws, despite the fact they were given precarious titles. This legal framework, plus the rise in the international price of gold in the years that followed, led to the formalization of the plots held by small-scale miners in the Icabarú River basin as well as in almost all other mining areas in the state of Bolívar. This did not serve to improve the situation of environmental and socio-cultural impacts, the only difference being that, from this moment on, the Ministry of Mines and the Ministry of the Environment required accountability from the miners and wielded regulatory authority over them, as part of their administration of the environmental legislation.

Now then, starting in the fourth quarter of the year 2011, national mining policy took on a new turn, which generated, among other things, the accentuation of existing socio-environmental problems in areas having mining operations, and created conditions that led to an increase in insecurity. Needless to say, Icabarú was not spared. Decree No. 8.413, enacted on 23 August 2011 and published in Official Gazette No. 37.759 of 16 September 2011, was categorized as having the “Rank, Value and Force of an Organic Law that Reserves for the State Activities of Exploration and Extraction of Gold, as well as Those Connected and Ancillary to Same.” Under this law, the State reserves the rights to all activity pertaining to exploration, extraction, commercialization and any other connected or ancillary activity pertaining to gold mining activity. This meant that all concessions now reverted back to the Republic. Likewise, all related assets then became part of the public domain, an attribute of the State’s territorial sovereignty, which is therefore “inalienable, indispensable and devoid of any commercial attributes, as these are non-renewable and exhaustible natural resources, and furthermore of public utility.” Thus, from that moment on, the State became the owner of that economic sector, by means of its public institutions or state-owned enterprises or affiliates, and by way of joint private-public partnerships where the State has a 55% interest for purposes of control and participation. This must all be approved by the National Assembly and is to have a duration of 20 years. All companies not adhering to the Decree will have all their assets “transferred.” Meanwhile, for companies agreeing to participate as joint partners, the Law provided a process of adaptive migration that likewise applied to small-scale mining operations.<sup>22</sup> In particular, this norm affected small-scale miners, given that it repealed *ipso facto* previous authorizations for extraction, thus forcing them to become partners with the State, provided that this percentage of participation was maintained. In other words, they were to get 45%, a condition that they did not accept.

The most evident result of this policy was a substantial increase in illegal mining activity, with large mining companies abandoning their operations in the state of Bolívar

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<sup>21</sup> Attributed to the National Executive, acting in accordance with Enabling Legislation.

<sup>22</sup> [http://guayanaweb.ucab.edu.ve/revistas-informes-ciepv.html?page=2&file=tl\\_files/ciepv/files/informes/Competitividad%20en%20el%20Sector%20Minero%20en%20el%20Estado%20Bolivar.pdf](http://guayanaweb.ucab.edu.ve/revistas-informes-ciepv.html?page=2&file=tl_files/ciepv/files/informes/Competitividad%20en%20el%20Sector%20Minero%20en%20el%20Estado%20Bolivar.pdf) Accessed on 17 FEB 2020.

and the rest of the country. They preferred to transfer their investments to other countries due to the absence of legal guarantees in Venezuela. This withdrawal did not mean that the mine workers would be leaving the mining areas. On the contrary, they stayed working at the mines, but the new context was one of anarchy and legal uncertainties, which resulted in even more personal insecurity in the years that followed, given that there was a loss in access to law enforcement institutions. The criminal underworld began to take advantage of these conditions of institutional anarchy in these geographically isolated settings that predominate in the state of Bolívar, especially in the case of criminal gang leaders, known as *pranes*,<sup>23</sup> that operate from inside the prisons. All of this takes place in the context of the high price of gold, which continues to rise as of this date, and which attracts settlers from other regions in Venezuela, as well as from neighboring countries, into the gold mining areas.

Months later, in the year 2011, some of the Articles of Decree No. 8.413 were modified by way of Extraordinary Decree No. 8.683, published in Official Gazette No. 6.0663 of 15 December 2011, containing the “Partial Reform of the Decree with the Rank, Value and Force of an Organic Law that Reserves for the State Activities of Exploration and Extraction of Gold, as well as Those Connected and Ancillary to Same.” Specifically, there was a change in Articles 13, 14 and 15, in reference to the abrogation of concessions and granting new authorizations for the exercise of small-scale mining and awarding gold exploration and extraction contracts, with terms ranging from 90 to 180 days, the latter pertaining to small-scale miners, renewable for an equal period of time. Likewise, Article 19 introduced a change in method of payment, whereby the respective Ministries needed to be paid in kind, namely in gold. Likewise, Articles 26 and 27 were modified. This generated protests in the mining towns.<sup>24</sup>

In the year 2014, with Nicolás Maduro now at the helm, the government tried to revert this situation by means of variances in the norms by proclaiming Extraordinary Decree No. 1.395,<sup>25</sup> published in Official Gazette No. 6.150, dated 18 November 2014, which enacted the “Organic Law that Reserves for the State Gold Exploration and Extraction Activities, as well as Those Connected and Ancillary to Same,” which served to repeal the previous norm pertaining to the same purpose. This law keeps the same aspects contained in Decree No. 8.413, but includes plans for the Strategic Alliance (Article 9) that allows miners to organize under different kinds of associations in order to conduct mining operations on a small scale. According to some authors,<sup>26</sup> this helped the miners

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<sup>23</sup> <https://www.insightcrime.org/investigations/the-devolution-of-state-power-the-pranes/> In English. Accessed on 11 MAY 2020.

<sup>24</sup> According to an anonymous witness that was working for a mining company in the state of Bolívar, in the years 2011 and 2012, there were several demonstrations in the municipal districts of El Callao, Piar, Sifontes, Roscio and Gran Sabana protesting against the new mining legislation. The mining leaders maintained that it had nothing to do with the nationalization of gold and the gold industry, but rather a government strategy to surrender the mining areas to Chinese companies, as had occurred at the Las Cristinas mine, which was transferred overnight to Citic Group, a Chinese state-owned enterprise.

<sup>25</sup> The contents of the Decree may be read at <http://extwprlegs1.fao.org/docs/pdf/ven147734.pdf> Accessed on 15 FEB 2020.

<sup>26</sup> [http://guayanaweb.ucab.edu.ve/revistas-informes-ciepv.html?page=2&file=tl\\_files/ciepv/files/informes/Competitividad%20en%20el%20Sector%20Minero%20en%20el%20Estado%20Bolivar.pdf](http://guayanaweb.ucab.edu.ve/revistas-informes-ciepv.html?page=2&file=tl_files/ciepv/files/informes/Competitividad%20en%20el%20Sector%20Minero%20en%20el%20Estado%20Bolivar.pdf) Accessed on 17 FEB 2020

that had initially been working legally, but were later found to be working illegally by virtue of Decree No. 8.413, to resume their initially legal role, even though the issue of the heavy tax burden imposed by the Law was never resolved. It is worth mentioning that Article 17 of this Decree establishes the foundations for the creation of the so-called Mining Brigades as a new way for private, non-corporate, individuals to conduct small-scale mining operations. Decree No. 1.395 raised fines for legal infractions from 400 to 2,000 tax units (*unidades tributarias*).<sup>27</sup> Furthermore, this Law makes it mandatory to sell all the gold that is produced to the Central Bank of Venezuela exclusively. This entire legal framework had its repercussions in the state of Bolívar's mining areas, including those around Icabarú, and had the effect of exacerbating the predominance of illegal mining that had already been impacting the environment and the local communities.

Subsequently, and already at the early stages of the creation of the so-called Orinoco Mining Arc, Decree No. 2.165 was enacted and published in Official Gazette No. 40.819 on 30 December 2015, establishing "with the Rank, Value and Force of an Organic Law that Reserves for the State Activities of Exploration and Extraction pertaining to Gold and other strategic minerals," thus giving the Office of the President of the Republic authority to create private-public partnerships and other attributions never before contemplated. In addition to gold, the Decree brings into the picture so-called "strategic minerals" that are yet to be defined in other decrees, as is the case with coltan, the mineral that contains niobium and tantalum, as well as diamonds, silver and copper. This decree had the effect of repealing Decree No. 1.395.

Decree No. 2.248, published in Official Gazette No. 40.855 on 24 February 2016, established the "Zone for the National Strategic Development of the Orinoco Mining Arc, and authorized the Maduro regime to give this economic activity *carte blanche* without the State or Venezuelan society being prepared to exercise due control and cope with the environmental and social consequences that this entails. This "Mining Arc" project, whose purpose seems to be to obtain short-term financial gains by extracting mining deposits drawing high international prices, has set its eyes on the Icabarú area. As a matter of fact, the government's own propaganda apparatus deliberately avoids mentioning the fact that the Icabarú block is officially part of the greater Orinoco Mining Arc project, the intention being to steer attention exclusively toward the northern part of the Arc, adjacent to the Orinoco River. From the very moment this plan to promote mining activities was officially announced, significant numbers of workers began to migrate into the upper Caroní River basin, with people coming from all over the nation's territory to become part of the gold mining workforce. This was in addition to the preexisting small-scale mining operations, all of which has exacerbated the socio-environmental impact. Furthermore, these individuals are occupying and exerting pressure on a space that has been zoned as Sector VII, belonging to the Pemón indigenous people, who had succeeded in having the State give them recognition in the year 2013 by way of the title of collective property, even though this did not include the rehabilitation required by the Law of Indigenous Peoples and Communities. This zone has not been subject to any land planning or regulation of mining activities, to be administered by the pertinent institutions that are supposed to

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<sup>27</sup> Tax unit (*unidad tributaria*) is a stable accounting unit devised by the government to compensate for the ever-deteriorating value of the bolívar, Venezuela's national currency.

participate in implementing projects such as this. Meanwhile, the Orinoco Mining Arc project does not include the legally obligatory Strategic Environmental Evaluation. What has happened instead is a rise in violent activities that are part of the struggle for control of this mining territory. Participating in this violence are criminal groups led by *pranes* and pro-government paramilitary groups (armed civilian “collectives”), plus State security forces such as the General Office of Military Counterintelligence (DGCIM).<sup>28</sup> This situation has changed somewhat during this past year. At this moment, the generalized opinion among the inhabitants of the mining areas in the state of Bolívar is that the rule of the *pranato*,<sup>29</sup> which was also referred to as the “syndicate,” is now being displaced by a new player, known as the “system,” which is none other than an armed organization consisting of the members of the Colombian ELN guerrilla force, operating under an outsourcing<sup>30</sup> agreement intended to serve the regime, an arrangement coordinated by Justo Noguera, the current governor of the state of Bolívar. This displacement may explain the upsurge in armed confrontations in the mining areas of the state of Bolívar. It would seem that this process of displacement is not over yet, and as part of this war among irregular groups, one needs to consider the plight of the Pemón miners, and of the Pemón communities in general, who find themselves trapped inside this struggle, and who have their own agendas, which vary according to the views they hold regarding mining activities. One of the more recent massacres occurred on 22 November 2019, resulting in the deaths of eight people, at the heart of the Pemón’s Icabarú territory.<sup>31</sup>

For more information about this situation, particularly the most recent report (2020) about Canaima National Park, recommend that you read the reports and bulletins from [SOSOrinoco](#).

#### 4. Conclusion

- Mining activity along the Icabarú corridor is a contradiction, given the strategic importance of this river basin for Venezuela’s economy and other activities.
- Mining activity has gone from being disperse and small-scale, conducted by adventurers and local inhabitants, to being an anarchic focus of mining activity that is of utmost importance to the criminal network that has taken over the entire world of mining in Venezuela during the last 20 years.
- There is an urgency for the implementation of a new policy that would define a coherent land use and management plan for the Icabarú River basin and the entire upper Caroní River, and which would serve the country’s general interests, guarantee the workings of the electric power generated by the Guri Dam, and put an end to the anarchy and violence, and to the socio-environmental destruction.

<sup>28</sup> <http://transparencia.org.ve/romortal/>

<sup>29</sup> The *pranato* refers the criminal gang whose leader, known as a *pran*, rules from inside a prison.

<sup>30</sup> <https://www.significados.com/outsourcing/>

<sup>31</sup> <https://www.hrw.org/es/news/2020/02/04/venezuela-violentos-abusos-en-minas-de-oro-ilegales>

Accessed on 19 FEB 2020.

- Canaima National Park, a World Heritage Site, will never be safe as long as the focus of perturbation along the Santa Elena de Uairén to Icabarú corridor persists and remains uncontrolled and unabated.
- The current and potential value of mining activity along the Santa Elena de Uairén to Icabarú corridor does not measure up to the value of its river basin for the Caroní hydroelectric system, and therefore for the economy and everyday life in Venezuela.