



# Lithium Mining in Barroso, Northern Portugal

**Critical Factsheets on Mining Projects**

**This factsheet is part of a series of case studies on contested mining projects, developed by civil society organisations. The factsheets illustrate the structural problems associated with mining projects in Europe and beyond, with a view to integrate the experiences of front line communities in EU policies.**

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## 1. BASIC INFORMATION

Municipality:	Boticas, Portugal (parishes: Covas do Barroso; Couto de Dornelas)
Companies:	Savannah Resources Plc. (UK), Savannah Lithium Lda. (PT), Slipstream Resources Portugal Unipessoal, Lda (PT), AMG Critical Materials N.V. / AMG Lithium B.V. (NL/DE) with 16% ownership
Minerals:	Lithium (spodumene), feldspar, quartz
Mining technique:	Open-pit mine (projected for production in 2027)
Total concession:	593 hectares
Mining area:	70,6 hectares



## GENERAL DESCRIPTION

Savannah intends to transform an inactive feldspar and quartz mining concession into four open-pit lithium mines affecting a large area in the Barroso region. Barroso lies in the North of Portugal and is recognized by the UN-FAO as a Globally Important Agricultural Heritage Systems Site (GIAHS) of which there are only 11 in Europe, Barroso being the only one in Portugal. This means it is an agro-ecosystem inhabited by communities that live in an intricate relationship with their territory. It is characterized by rich biodiversity, invaluable cultures and landscapes, sustainably managed by small-scale (pastoral) farmers. The land, soil and water quality are vital for the rural agricultural economy. Lithium mining in this remarkable area would cause irreversible damage to the local ecosystem, but also to the cultural heritage and traditional way of living. For these reasons, but also due to the undemocratic conduct by the company and national government bodies, the local population and the local government vehemently reject the mining plans and have been actively resisting for the past seven years. There have been numerous breaches in terms of stakeholder consultation, transparency and access to information. Despite intense social engineering efforts, Savannah has not been able to gain social acceptance, evidenced by the national protests, local resistance and court cases against the company.



## 2. PERMITTING HISTORY & EIA STATUS

Initially, the project has been exempted from a Environmental Assessment due to an existing small-scale mining concession.<sup>1</sup> In 2006, SAIBRAIS, a Portuguese ceramics company, obtained a license for feldspar and quartz mining in an area of 120 hectares south of the village of Covas do Barroso. Over the course of 12 years barely any activity took place, with an affected area of less than 1 ha. In 2016, an addendum was made to the contract, extending the concession area to 542 hectares and adding lithium to the exploitation permit.

In 2017, Savannah Lithium signed a contract with the mining authority DGEG, obtaining the concession rights of Mina do Barroso. In June 2018, Savannah submitted a proposal for the expansion of the mine, aiming to increase the area to 680 hectares and operate 9 open pits. In June 2020, the proponent submitted an Environmental Impact Assessment (EIA), which was declared non-compliant twice by the Environmental Agency APA, in July and December 2020.



In April 2021, APA subjected the EIA for the expansion of the Mina do Barroso to a public consultation, with the proposal extending the concession to 593 hectares. This project was rejected by APA in June 2022, due to “very significant and irreversible negative impacts” of the project on the landscape, hydrology and ecosystems. However, APA's unfavorable ruling was not endorsed by DGEG, whose voting declaration evidenced lithium’s central role in the energy transition and decarbonization. The revised EIA was subjected to another public consultation in March and April 2023, with APA issuing a conditionally favorable Environmental Impact Statement (EIS) in May 2023. Apart from 169 minimization and compensation measures and 42 criteria to be presented with the execution compliance report (RECAPE), major conditions include a distinct Northern access road subject to a separate EIA and prohibiting water withdrawal from the Covas river. In September 2023, the Boticas Municipality and the Covas do Barroso Parish Council filed an administrative law suit, challenging the EIS issued by APA. In February 2024, the Portuguese Public Prosecutor issued an opinion on the proceeding, asking to annul the EIS due to legal infringements. In line with the lawsuit filed by the local authorities, the opinion evidences risks known to APA on the mining project endangering Barroso’s UN GIAHS classification and Portugal’s international commitments.

[1] Mining concession refers to an area allocated by a government or other body for the extraction of minerals.

### 3. PROJECT SUSTAINABILITY

In 2023, the UN Special Rapporteur on Human Rights and the Environment suggested that the Barroso Mine project may constitute a sacrifice zone incompatible with the human right to a healthy environment and that large resource extraction projects like Mina do Barroso may violate human rights in the name of the green transition.

In its 2023 EIS, APA considered that there is no compatibility of integrating the project into the territory and confirmed that the Mina do Barroso could jeopardize the World Agricultural Heritage (GIAHS) classification awarded to the region by the FAO-UN.

#### 3.1 SOCIO-ECONOMIC IMPACTS

The Barroso region is characterized by small-scale agriculture which depends on healthy soils and communally-owned and managed lands (baldios), which are an important tradition in Portugal. Due to land use change and other impacts, the mining project would put the livelihoods and food security of the local population at risk. Furthermore, the planned open cast mines are expected to be located close to the urban areas (the nearest homes will be 200 meters away from the concession area), possibly impacting the health and life quality of at least 1132 residents in the three parishes in close vicinity.

Since 2018, an atmosphere of intimidation and distrust has been created by the company. Even though the protests of the community have always been peaceful, Savannah has contracted 24/7 private security.<sup>2</sup> In the past year, the local population has felt Savannah's presence as becoming more intrusive and even aggressive, exacerbated by the Republican National Guard (GNR) patrol which was stationed daily in the village of Covas do Barroso from October 2023 to May 2024.<sup>3</sup>

Since 2021, the company has threatened locals with expropriation and is implementing land grabbing tactics. More importantly, besides private lands, over 71% of the mining concession area are common lands (baldios) which are granted a special status by the Portuguese Constitution.

[2] Villagers feel intimidated by the presence of private security guards whose background is unknown. They passed in front of people's houses at 3 am, they stopped people on mountain roads, creating an atmosphere of fear. The population resent being treated as criminals.

[3] The interventions of the GNR are considered invasive. They performed identification of individuals who were doing the blockades, trying to dissuade them by claiming someone would have to pay the price, all while carrying guns. They also fined people for not wearing seatbelts on mountain roads, for having dogs without a leash in mountain roads, conducted abusive police searches at dawn, and other overly repressive actions in a small mountain community.

In November 2023, after failing to persuade locals to sell or give access to their lands, Savannah tried to usurp communal lands to which they were denied access. In September 2024, without any public consent, the common land board and private land owners received notice that the company had initiated a process of administrative easement to enforce temporary access. In 2021 and in 2023, the Assembly of the Baldios, which consists of all the Covas residents, voted for court actions against the mining company. They have also voted against granting the mining company access to the baldios.

## 3.2 ENVIRONMENTAL IMPACTS

### *Biodiversity Loss*

The Barroso Mine project lies within a valuable nature area, home to critically endangered and vulnerable species, such as the Iberian wolf and the Freshwater Pearl Mussel or the Shining Macromia dragonfly. Furthermore, the planned mine would irreversibly impact and permanently destroy well-preserved river habitats, including rare forests that are vital for wildlife and healthy ecosystems.

### *Water Depletion and Contamination*

Per EIS, the mining activities will require up to 600,000 m<sup>3</sup> of water per year. Even though APA prohibited water extraction from the Covas river as initially proposed by Savannah, the environmental agency states that “the project continues to have significant impacts on groundwater and surface water resources”. Savannah will have to use water from local springs, thereby jeopardizing the water supply, which is already under pressure due to climate change. For the Tâmega river catchment basin, of which the Covas river is one of the main tributaries, there is a high risk of water deprivation, with available water remaining in the summer months estimated to exceed 100 times less than the global average.

Furthermore, according to Dr. Steven Emerman, the tailings storage facilities could suffer catastrophic failure in the case of extreme precipitation events, and could affect the entire Douro river basin, with impacts extending towards the Atlantic Ocean.



## Soil Degradation and Contamination

Mining activities in this nature area would negatively impact soil quality and irreversibly damage forest lands, consequently threatening the entire ecosystem. The government has not yet published regulations on soil remediation, which means there are no safeguards to hold the company responsible for any contamination.

## Greenhouse Gas Emissions & Climate Change Factors

In the revised 2023 EIA, Savannah estimates the annual carbon emissions of Mina do Barroso to peak at 33.7 kt CO<sub>2</sub>-eq for a yearly production target of 191 kt of spodumene concentrate, equivalent to 26 kt LCE at 5.5% Li<sub>2</sub>O. The estimated carbon emissions would, despite a municipal action plan for 40% emissions reduction until 2030, result in a sixfold increase of the 2020 carbon emissions of the Boticas Municipality. Despite the consideration of climate change factors being a key environmental footprint criterion of the Critical Raw Materials Act, the 2023 Environmental Impacts Statement does not mention such factors, a shortcoming that was also claimed in the opinion of the Portuguese Public Prosecutor issued in February 2024. Also the projects' landscape restoration plan is void of any references to climate factors.

## 3.3 STAKEHOLDER ENGAGEMENT

Rather than enabling meaningful engagement, Savannah Resources has made numerous attempts of social engineering (a term which refers to the continued socio-psychological manipulation of communities into performing actions or accepting actions they would not otherwise wish to) over the past years. The company contracted “de-escalation” and community consultants who have worked for oil major BP in the aftermath of the Deepwater Horizon disaster and for the Gemfields Montespuez ruby mine in Northern Mozambique, known for manifold cruelties and human-rights abuses. To discredit local and national opposition, Savannah has employed soft counter-insurgency tactics to disrupt rural social bonds and exploit the vulnerabilities of marginalized individuals. Furthermore, Savannah has made considerable efforts to influence public opinion. In 2021, the Portuguese media regulator ERC ruled against unlawful communication when paid promotional content in a local newspaper was published as an editorial piece.



Since 2021, Savannah Resources pressed unfounded criminal charges against local leaders), in an attempt to criminalize and silence opposition. Not only is such Strategic Litigation Against Public Participation (SLAPP) experienced as abusive by the individual victims, they are also in breach of EU rules to protect communities against such actions.

## Access to Information

In January 2021, the Galician Foundation Montescola formally requested access to all documents related to the Barroso Mine, including the EIA submitted by Savannah Resources. At the time, APA ignored this request, even though these documents were essential to prepare for a public consultation, given the technical nature of the environmental assessment of the project. In March 2021, the Portuguese Commission for Access to Administrative Documents (CADA), an independent administrative authority, issued a definitive opinion ordering the APA to provide the documents, concluding that “access to environmental information does not depend on the existence of a public consultation phase, nor is it limited by it.”

However, instead of fulfilling these demands, the APA released the EIA for public consultation on April 16, 2021. That same month, Montescola launched a judicial action against the Portuguese Ministry of the Environment for not providing access to documentation related to the EIA. In September 2023, the APA was ordered to pay up to 30.000€ in costs after failing to provide lawyers of the Covas do Barroso Parish Council access to the documentation related to the EIA. Continued obstruction of informed participation led to a judicial appeal with the Administrative Court of Lisbon, which was dismissed on procedural grounds.

Breaches regarding access to environmental information and public participation were also brought to the attention of the European Parliament and the UN Aarhus Convention Compliance Committee, which opened a case to examine potential non-compliance by Portugal.





In March 2023, another public consultation was launched regarding the reformulated EIA. The association United in Defence of Covas do Barroso (UDCB) communicated that the deadline was unfair and unreasonable. APA published 1776 documents for public consultation and stakeholders were given only 10 working days to react to the revised EIA, which is clearly insufficient to analyze the materials and develop a position. Moreover, the company was not able to provide clarification to important questions and comments. UDCB referred to the EU Directive 2011/92/UE concerning environmental assessment, which sets a minimum time-period of 30 days for public consultation. Furthermore, the Aarhus Convention states that access to environmental information and public participation is a right and the time given for public consultation should be sufficient to enable stakeholders to prepare and participate effectively in the decision-making process. Despite this, the APA refused to extend the consultation period. The Municipality of Boticas appealed and it was only afterwards, on April 3, 2023, that APA yielded to the Municipality of Boticas request to extend the public consultation period for an additional period of 10 days.





## 4. CITIZEN'S OPPOSITION AND LITIGATION

Because the Barroso communities are threatened with extensive socio-ecological impacts, most of the local population, as well as national and international environmental organizations reject the mining project as evidenced by the numerous protests at the national and local level that have taken place since 2018. In 2019, 4,654 citizens signed a petition to the Portuguese Parliament rejecting the potential impacts of the mining project and calling for the license to be revoked.

Besides civil society demonstrations, there has also been formal opposition by governance bodies. In December 2019, the Municipal Assembly of Boticas approved a motion against lithium mining in the municipality, because of "irreversible damage" to the landscape and livelihood of the populations. In September 2024, in the Portuguese Parliament, four political parties called for the immediate suspension of the project. The Mina do Barroso project has also been subject of various parliamentary debates at the Portuguese and European Parliaments.

Moreover, several litigations against the company are ongoing. In 2021, the Baldios common lands board initiated judicial actions to stop the usurpation of communal lands in the concession area.

In February 2022, Covas do Barroso Parish Council submitted a judicial action to the court of Mirandela, contesting the 2016 addendum which extends the concession area and adds lithium to the exploited minerals, changing the mining license far beyond what it had originally been granted for, without public consultation or Strategic Impact Assessment.





## 5. TECHNICAL FEASIBILITY

Savannah is not an experienced mining company, but rather a speculative investment firm. As a junior exploration company, their aim is to raise funds from investors and, eventually, sell part or all of the project to a larger company. Savannah does not have a track record in executing mining projects: in 2018, they sold their copper license in Oman, and, in 2021, they sold their Mozambique license to Rio Tinto. In other words, Savannah lacks the technical expertise and cannot guarantee that the mining operations are truly sustainable in the long-term.

Technical shortcomings of the initial EIA were examined at a special hearing of the European Parliament by the American hydrologist Dr. Steven Emerman in 2021. Emerman is a world-renowned specialist in tailing dams and hydrological impacts of mining, having analyzed projects in every continent. He considered the design of the tailings dam “highly experimental” and an example of “reckless creativity”, an evaluation that was reiterated for the revised project after a site visit in October 2024.

After Savannah the revised EIA 2023, Dr. Emerman evaluated it again, recommending that “the proposed Barroso lithium mine should be rejected without any further consideration.” One of the arguments was that “the filtered tailings storage facility would be excessively steep by industry standards and [that] there is no consideration of dam safety standards, including safe construction methods. (...) Due to the steep topography and the steepness of the slopes of the filtered tailings storage facility at the proposed Barroso Mine, with a tailings storage volume of 7.1 million m<sup>3</sup>, the facility would be 99 meters taller than would be predicted for its tailings storage volume, which is remarkably similar to the exceedance of the current technological limit based upon the mean annual precipitation.”

During the prospecting phase, in 2017/2018, an extensive drilling campaign took place on community-owned lands: 135 core drills were performed from 2017 to 2018, according to Savannah. Afterwards, the company failed to restore the affected lands as promised. In 2019, the Portuguese geologist Carlos Leal Gomes considered these works “dirty exploration” and “swarms of exploration drill holes” unprecedented in the country's mining history. The excessive drilling in areas of already known deposits was not justified by technical necessities, but motivated by an intention to push share prices through press releases. At the Lithium Business conference in Brazil, July 2024, the Portuguese geologist Dr. Alexandre Lima recommended that at least part of the Barroso project should be developed with underground galleries, as the proposed large open-pit operations are not socially accepted in Europe.



## 6. FINANCIAL FEASIBILITY

Although lithium exploitation has been discussed in Portugal at least since 2016, none of the respective projects could so far prove its economic viability, including the Mina do Barroso project. A Definitive Feasibility Study (DFS), the respective “decision to mine”, and resulting dates for production, initially scheduled for 2020, were frequently postponed. The company’s interim results report of October 2024 expects DFS only after the conclusion of a further exploration drilling campaign, with production postponed to 2027. Due to the volatility of the spodumene concentrate price, all operating hard-rock spodumene mines with similar characteristics as the Mina do Barroso lithium project, e.g. Wodgina or Mount Marion in Australia, have seen reduced production, major job cuts and development breaks during 2024, despite hosting lithium reserves with 10 to 30% higher Li<sub>2</sub>O concentrations. Of all Australian lithium mines, only Greenbushes remained profitable during 2024, with reserves of 42% higher lithium concentrations, a 18% superior spodumene concentration rate, a deposit of 22 times the size, and an annual spodumene concentrate output 7.5 times superior than estimated for the Mina do Barroso project.







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