



Universidade do Minho

Mina do Barroso Project

Economic Impacts and Development

Summary, Relevance and Recommendations

Report carried out to:

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A. Framework

1. *Savannah Lithium, Lda.* hired The University of Minho to carry out an independent study on the economic impacts of the project and its context in the local, national, and even European economies. The main objectives of the study are to determine the economic consequences of the project, to discuss ways of appropriating the impacts and to propose models for sharing benefits that may be the object of future implementation, based on the best international practices in this matter.

This is an independent study on the economic impacts of the Mina do Barroso Project and the possible benefit sharing models.

2. For several decades, lithium has been used in several industrial activities - manufacture of medicines, ceramics, glass, synthetic rubber, and lubricants and in the production of aluminum, aerospace and nuclear materials. Since the beginning of the 2000s, the importance of lithium ion batteries has grown significantly due to their incorporation into batteries for all types of electronic and electrical devices, and more recently, with their massive use in private and collective electric vehicles. In 2019, 65% of global lithium production was used in battery manufacturing.

In 2019, 65% of global lithium production went to the manufacture of batteries. Forecasts indicate that global demand for lithium-ion batteries will increase twelve-fold between 2018 and 2028, from 145 GWh to 1,700 GWh, with annual growth of over 30%.

3. Lithium ion batteries occupy a central position in the new energy paradigm, based on renewable energies. The consolidation of a low-carbon economy requires a greater proportion of renewable energies in the energy mix and the widespread use of these energies. Forecasts indicate that worldwide demand for lithium-ion batteries will multiply twelve-fold between 2018 and 2028, from 145 GWh to 1,700 GWh, with annual growth of over 30%.

4. The strong increase in demand for lithium batteries is linked to the expansion of batteries for mobility purposes. In 2025, the number of electric vehicles in circulation on a global scale is expected to be between 40 and 70 million, in 2035 between 100 and 200 million, and in 2040 between 400 and 500 million. It is estimated that in 2040 the number of commercial electric vehicles will be approximately 40 million. In 2018, 2 million electric vehicles were sold worldwide; forecasts point to annual sales of 10 million in 2025, 28 million in 2030 and 56 million in 2040. Another potential source of demand for rechargeable batteries will be energy storage. Annual electricity storage in 2050 is expected to increase at least ten times over 2015.

It is expected that in 2025 the number of electric vehicles in circulation, on a global scale, will be between 40 and 70 million, in 2035 between 100 and 200 million, and in 2040 between 400 and 500 million.

5. Currently, European battery production represents only 3% of the world total. Asia, with 85% of the market, and the United States dominate global production. Recently, the European Union, to break its dependence in this crucial area for its security and competitiveness, has been promoting a set of initiatives involving public and private entities.

The European Union has set a strategic objective to have control over the entire battery production chain.

In 2017, the European Commission promoted the creation of the European Battery Alliance, whose main purpose is to build in Europe an ecosystem that encompasses the entire battery production value chain: mining and processing, materials for batteries, production of cells and battery systems, as well as their use and recycling.

6. European dependence on raw materials to feed the battery value chain is even more significant. Of the main component, lithium, in Europe, only 800 tons (t) are produced annually, all of them in Portugal. In 2018, world production of lithium reached 85,000 tons. The main producers are Australia (51,000t, 60%) and Chile (16,000t, 18.8%), followed by China (8,000t, 9.4%) and Argentina (6,200t, 7.3 %).

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7. The largest known reserves of lithium in European territories are found in Portugal. Although the 60,000t of existing reserves in the country (0.4% of world reserves) are insufficient to meet the demand for lithium derivatives for the production of batteries in Europe, they are very relevant in reducing Europe's dependence on other regions of the globe and increasing the security of Europe's supply chain.

8. For these reasons, projects for the exploration of litiniferous pegmatites in Europe are of a strategic nature. In Portugal, the project that is currently at a more advanced stage in terms of licensing is that of Mina do Barroso in the municipality of Boticas, promoted by Savannah Lithium, Lda. This company is a wholly owned subsidiary of Savannah Resources Plc (Savannah), a company listed on the London AIM (London Stock Exchange) stock exchange, focused on the prospection and development of mining assets in several countries around the world.

The Mina do Barroso Savannah's project is crucial for Portugal to take advantage of the opportunities created by this emerging sector.

9. The Mina do Barroso project is the largest conventional lithium (spodumene) exploration project in Western Europe. It includes the extraction of around 1,300,000 tons / year of litiniferous pegmatite for the production of spodumene concentrate, in a 594 ha concession area, over a period of 11 years. It is estimated that the average annual production will reach at least 175,000 tons of spodumene concentrate (at 6% Li₂O).

10. The strategic relevance of the project for Portugal is indisputable. The exploitation of the litiniferous pegmatites of the Barroso project and the corresponding production of spodumene concentrate puts the country in a privileged position to activate activities located downstream in the battery value chain and, even, in the new electric mobility value chain. These include the construction of a refinery for the production of lithium derivatives, the construction of a factory for cells and battery systems and, potentially, the location of a factory for the production of

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electric cars, or small production units for other electric vehicles.

11. Integrating several phases of this value chain could have a profound transforming effect on the Portuguese economy and on the structure of its exports. Therefore, Portugal must take advantage of the European Union's incentives to create a global battery production ecosystem within the framework of the renewed EU Industrial Policy Strategy. Given the availability of litiniferous resources in the country, one of the main objectives of the Portuguese Government, in the context of the battery value chain in Europe, is the construction of a large battery factory in Portugal.

Integrate the various stages of the value chain would have a profound transformative effect on the Portuguese economy and on the structure of its exports.

B. Economic Impacts and Development

12. Regardless of whether or not to adopt benefit-sharing programs and mechanisms, an investment project in the field of extractive industry generates significant economic impacts in terms of production, added value and employment. To quantify the macroeconomic impacts of the Barroso Mine project, a measurement exercise based on the input-output methodology (I-O) was carried out. In short, this methodology consists of a set of techniques whose main objective is to characterize the productive structure of a given economy, based on the relationships between the various sectors or branches of activity.

13. The I-O matrices used in the evaluation come from the I-O matrix system for the Portuguese economy in 2015. The investment information was provided by the promoting company according to the "Scoping Study for Mina do Barroso Lithium Project" finalized in June 2018. The remaining data needed to carry out the evaluation were taken from several secondary sources.

14. The initial investment in the project is 98.1 million euros. The construction of the mine is expected to employ around 300 workers. When the mine is in full operation, the direct employment associated with the project will be around 120 workers, to which 71 to 122 will be added from an entity to be subcontracted to support the operation of the mine. The estimated revenue over the time horizon of the operation will be 1,420 million euros. The project's EBITDA, over the concession horizon, is estimated to be 738 million euros (on average 62 million euros per year) and the net present value of 327 million euros, before taxes, and 221 million euros after taxes.

The initial investment is 98.1 million euros and the employment associated with construction will be 300 workers. In the operation or direct employment phase (company and subordinate entity) there will be, on average, 215 workers.

15. The results of the I-O model indicate that the Barroso project will result in an increase in the Gross Output ('GO') of 168 million euros in the investment phase, and by around 90 million euros per year, in the operation phase. The project's contribution to the formation of GDP is 65 million euros in the investment phase, and almost 34 million euros per year in the operation phase.

In the construction phase, the project will have an estimated total impact (direct and indirect) of 168 M € in GO and 65 M € in GDP and will give rise to 2,800 jobs (equivalent annual employment).

16. The impact on employment is 2,800 jobs (equivalent annual duration - d.a.e.) in the investment phase, and almost 1,500 d.a.e. in the operation phase. It is expected that for each direct job created on the project, 5.9 indirect jobs will be generated, either through the multiplier effects in other sectors, or through the search for goods and services necessary to ensure the operation of the mine.

In the operation phase, the project will have an estimated annual impact (direct and indirect) of 90 M € in GO and 34 M € in GDP and will give rise to 1,500 jobs (equivalent annual employment).

17. The project also foresees that 86% of the production is destined for export, which corresponds to an average annual value of 110.2 million euros. This volume of exports represents 20.1% of the average annual value of Portuguese exports of metallic ores and other products from the extractive industries, over the past fifteen years. Thus, it is expected that the project will give a strong impetus to national exports of this type of products.

The project's annual impact on exports during the operation phase may exceed 110 M €.

18. In order to maximize these impacts locally, it is necessary to adopt measures at a local scale, which prevent the positive effects of the project from being exported to other territories, through spillover effects. The relevance of impacts on activity and employment at the local level will depend on the ability of local economic agents to appropriate them. This circumstance is especially important in a territory characterized by a sharp demographic decline and an increasingly ageing population, a fragile and poorly qualified production structure and a high dependence on State transfers.

The relevance of the impacts on activity and employment at the local level will depend on the capacity of ownership of the same by the local economic agents.

19. For this purpose, an inclusive and sustainable productive development model should be adopted, in which the development strategy promotes the creation of productive links upstream and downstream in the value chain and the acquisition of goods and services locally, the complexification of the local productive structure and the implementation of projects that increase the incorporation of added value to the natural resources being extracted. The implementation of this strategy should allow the generation of higher quality jobs, reinforce the productive structure and generate income locally and, if the regulation is adequate, reduce environmental impacts and minimize social impacts in the community. This approach is compatible with the local development strategy, based on endogenous capital and territorial identity, which has been implicitly assumed in the Barroso territory.

An inclusive and sustainable productive development model should be adopted, in which the development strategy promotes the creation of productive links upstream and downstream in the value chain and the acquisition of goods and services locally, the complexification of the local productive structure and the implementation of projects that increase the incorporation of added value to the natural resources that are the object of extraction.

20. In Portugal, the valorization of geological and mining natural resources has been systematically included in the spatial planning instruments, namely in the National Program for the Territorial Policy. In its 2019 review, the relevance of these resources and the role of extractive industries in the economy and territorial development is underlined. At the regional level, namely in the Alto Tâmega sub-region, in the most recent strategic guidance documents, it is assumed that the development of the extractive cluster, and especially of projects related to lithium exploration, is an aspect of great importance in the next years.

21. The attribution of the so-called Social License to Operate (SLO) must occur within the scope of the identification and management of economic and environmental impacts. This license is a kind of non-formal authorization that local communities grant to extractive companies. The Social License to Operate allows companies to avoid potential conflicts, usually at high costs, and reduce their exposure to social risks and, simultaneously, increase the legitimacy of their operations.

The Social License to Operate allows companies to avoid potential conflicts, usually at high costs, and reduce their exposure to social risks and, at the same time, increase the legitimacy of their operations.

22. In order to guarantee the Social License to Operate and also within the scope of its Corporate Social Responsibility (CSR), the promoting company must be available to implement benefit sharing mechanisms with the community and the local government, aimed at improving distribution of the results of the project. The purpose of these sharing mechanisms is to ensure that a significant part of the economic benefits are in the region where the income is generated.

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23. Community Development Funds (CDF) are considered the best practice in terms of benefit sharing among the various stakeholders involved in an extractive project. The main objective of these funds is to make the wealth created by exploitation permanent and, therefore, to have a source of financial resources to support current and future regional development. These mechanisms make it possible to guarantee that the communities obtain benefits during and after the operating life of the project.

24. The resources managed by the Community Development Funds should be used to improve services or as alternative investment programs to those that already exist. Attempts should be made to harmonize interventions financed by the CDF with initiatives financed with public resources, avoiding duplication and promoting complementarities. The functions of the fund and the local government must be clearly defined to avoid redundancies and seek synergies. In order to improve the effectiveness of CDF-financed interventions, budget management and fund expenditures must be linked to local and regional development plans that are in place at all times.

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C. Relevance

C1. Mina do Barroso project is of great importance for the Portuguese economy:

- i. Due to the impact it may have on the added value (437 million euros) and Portuguese exports (1,212 million euros), during the project's entire working phase;
- ii. Due to the knock-on effect it may have on supply sectors of the extractive industry. The total direct and indirect impact on the value of gross output in related sectors is 1,161 million euros;
- iii. For the stimulus it may give to activities located downstream from the mineral extraction activity, for the transformation purposes;
- iv. Because it will be able to boost research and development and innovation activities, both in sectors located upstream and downstream, in the value chains associated with the ores being exploited;
- v. Because it will be able to promote professional training programs, qualification of human resources and acquisition of skills specific to the sector;
- vi. Due to the impetus it may give to the development of other phases of the battery value chain, namely the conversion of the mineral into lithium carbonate and lithium hydroxide and, even, in the long term, to the manufacture of batteries, and consequently to the generation of national added value;
- vii. Due to its capacity to generate public revenues, via taxes, especially on company profits and wages (IRC: 16 million euros / year; IRS: 2.3 million euros / year), security contributions (1.2 million euros / year), royalties (3.6 million euros / year) and miscellaneous fees;
- viii. For its demonstrative effect in the extractive industry. The project may serve as an incentive to develop other initiatives in the field of extractive industries for the exploration of the same or other ores and be used as good practice in the context of the country.

C2. Mina do Barroso project has a great importance for the European economy:

- i. Because it will allow partial completion of the battery value chain considered as strategic by the European Commission;
- ii. Because it will guarantee, at least partially, the security of supply to the European battery manufacturing industry, reducing dependence on countries outside the Union and reducing geopolitical risks and those associated with possible changes in trade policies and significant exchange rate changes;

- iii. Because it ensures high levels of sustainability, given that it is subject to Community legislation in this matter and to the regulation of a State of the Union. Ensuring the supply of mined minerals using sustainable mining practices is one of the European Union's priorities within the scope of sectors dependent on raw materials;
- iv. Because it can encourage investments in the extractive industries in Europe, which make it possible to take advantage of the high potential of unexploited resources that still exists in several countries of the Union;
- v. Because having great interest from a European point of view, by contributing to completing one of the phases of the battery value chain, it can be used, if properly implemented, as good practice for the sector in other contexts, inside and outside Europe.

C3. Mina do Barroso project is of great importance to the local economy:

- i. Because it has a high potential for job creation, both in the investment phase (2,800 d.a.e. jobs) and in the operation phase (1,500 d.a.e.), a significant part of which will correspond to jobs created locally. The jobs created during the operation phase will have a strong impact in terms of fixing and attracting the active population;
- ii. Because the type of jobs to be created requires skills that are easy to learn, which facilitate the integration of local workers (from the municipality of Boticas or the surrounding region). The company estimates an annual investment in continuous training, per employee, of around 5,000 euros, during the operation of the mine. About 10% of the staff to be hired must have higher education;
- iii. Because the major dam construction projects in the region are about to be completed. The labor released by these works can easily be relocated in the Barroso mine project, with virtually no integration effort;
- iv. Because it can contribute to boost local companies with the capacity to become service providers for the extractive company. Of the 100 largest companies in the municipalities of Boticas, Montalegre and Ribeira de Pena, half belong to sectors of activity related to the needs of the construction and operation of the extractive project. These companies may be potential suppliers of services, equipment and consumables to the extractive company.
- v. Because it will allow income generation locally via wages and services, local taxes and other types of company transfers.
- vi. Because part of the income from wages and profits from service providers will generate multiplier effects in other sectors at the local level. The degree of income appropriation locally will depend on the capacity of the local economic and commercial structure to complex and qualify its offer. Of the 100 largest companies in the municipalities of Boticas, Montalegre and Ribeira de Pena, around 70 will be able to supply goods and services to meet the needs of the workforce to be hired;

- vii. It is also expected to have a positive impact on the construction and renovation of the residential building; this impact will be relevant for the construction industry, the construction materials trade and the domestic equipment trade;
- viii. Because if the degree of ownership is relatively high and materializes in the increase of the offer through organic means or through the opening of new companies, the volume of business in the municipality will tend to increase; this dynamic will produce increases in employment and tax collection and expand business and consumer surpluses, essentially via diversification of supply and increase in variety;
- ix. Because the generation of jobs and income locally, whether in the project, in related activities or in activities boosted by additional income, will allow to establish and attract population and, therefore, generate demand for public services, guaranteeing minimum operating scales, which reduce the risk of closing due to demand deficit. This argument is also valid for certain types of private services, which need minimal scales to guarantee their viability;
- x. Because the operation of the mine will require the reinforcement of infrastructures, especially roads, and the improvement of some equipment for the benefit of the project, but which will ultimately benefit the local community in terms of accessibility and internal mobility;
- xi. Because tax revenues collected locally can finance public policies to support the local population and improve infrastructure and equipment in the municipality. These resources can also be used to activate incentive measures for the establishment of workers in the area, especially those directly and indirectly linked to the project, and for the return of the population from the municipality, namely young people, who, for different reasons, left the city nearby, the coast or even the foreigner;
- xii. Because the increase in the young population associated with the development of the project and the eventual implementation of public policies to attract workers and encourage return may contribute to the increase in the birth rate and, therefore, these two effects in a combined way may lead to a population rejuvenation that neutralizes the current demographic decline and limits the closure of public or private services;
- xiii. Because it will be able to feed a Community Development Fund, which, in turn, will be able to finance measures to build capacity and increase skills with medium and long term reach.

D. Recommendations

In view of its economic and social impacts at different scales, the project should be operationalized quickly, particularly in the current recessive context associated with the pandemic caused by COVID-19. To these impacts are added strategic considerations for Europe and Portugal. The environmental impacts are outside the scope of this report, however the preliminary results of the Environmental Impact Study indicate that the negative impacts of the project do not seem to be very significant and clearly at the local level, and that the planned mitigation measures are to mitigate or neutralize some of them.

D1. To the Portuguese Government:

- i. Respecting the legislation in force, speed up the deadlines for the necessary authorizations and licenses to get the project started. If in fact the government considers that this project and the exploitation of pegmatites for the production of lithium concentrate is a priority for the country, it should improve the sector's regulation and authorization procedures, given that the exploitation of this resource it should happen in a window of opportunity that will not remain open indefinitely. The emergence and technological maturation of alternative batteries to lithium-ion batteries, based on sodium, potassium or fluorine, or even organic material, and the increased competitiveness of other technologies, such as hydrogen fuel cells, can undermine the lithium supremacy in battery manufacture, especially for mobility purposes;
- ii. Promote the diversification of the economy, encouraging the development of extractive industries in the country to better take advantage of the potential of available resources. The transformation of the extractive industries in the last two decades currently makes this type of activity safer and more sustainable.
- iii. Seek and support investments that complement those of the extractive industries in order to complete the value chains, sectorise the economy and incorporate more production of ores into the national gross output;
- iv. Streamline investment in R&D and innovation in projects related to the extractive sector and activities located upstream and downstream in related value chains;
- v. Foster dialogue between the stakeholders involved, promoting the convergence of interests between companies and local administration and the hinterland community, in order to favor the implementation and development of the project;
- vi. Introduce legislative changes or simply take steps to improve the sharing of project benefits between national and local levels. In this regard, it is suggested to balance the sharing of royalties between the central administration and the local administration and to ensure that the social (and tax) headquarters of extractive companies are located in the municipalities in which they operate;

- vi. Facilitate the creation of vehicles to support local development, such as Community Development Funds, financed by the extractive company and managed by a foundation. The administration of the foundation must include representatives of the local community, the local administration and independent experts and, eventually, some representative of the state and the company, who will occupy a marginal position in the same.

D2. To the Community Institutions

(European Commission, European Parliament and European Investment Bank):

- i. Discuss with the Portuguese Government and the local administration the strategic importance of the Mina do Barroso project to complete the battery value chain in Europe;
- ii. Launch a communication campaign that highlights the relevance that the use of mineral resources has for the European economy and industry;
- iii. Approve legislation in the European Parliament on the development and regulation of extractive industries in Europe, in order to promote the sustainable use of resources, protect local communities, encourage benefit sharing and increase legal certainty for extractive companies;
- iv. Monitor the development of projects associated with the exploitation of litiniferous pegmatites in Portugal, as well as other projects for the exploitation of resources in which Europe is deficient and which may jeopardize the proper functioning of its value chains;
- v. Promote projects in the scope of extractive industries, namely those dedicated to the exploitation of litiniferous pegmatites, through the Financial Instruments of the European Investment Bank and the European Fund for Strategic Investments, justifying the availability of these mechanisms in the contribution of these projects to the transition for a low carbon economy;
- vi. Continue to support the development of a business and institutional ecosystem around the battery value chain and promote its extension to most of the Union's territory;
- vii. Assist the development of activities in the battery value chain in Portugal, downstream from the ore exploration linked to the project. Obtaining complementarities is essential to increase the added value and multiply the impact of the project.

D3. To the Municipality:

- i. Grant the necessary licenses for the project to start operating. If the local administration considers that the project has added value at a local scale, it has to provide information to the affected communities and explain the advantages and disadvantages of it, as well as create a state of opinion that favors its development. It is about contributing for the project to acquire a Social License to Operate that facilitates the coexistence between all the parties involved;
- ii. Support the company to hire services and labor locally. The identification of potential local

or regional suppliers and the establishment of preliminary contacts, as well as the granting of support to the local hiring of workers, are essential to generate, in the long term, multiplier effects in the local economy;

- iii. Facilitate the location of suppliers of goods and services of the extractive company in the municipality and support the emergence and consolidation of local companies that may come to integrate their supply and service chains;
- iv. Promote spaces for dialogue and consultation between the company and the local community to generate empathy and resolve differences, in order to reduce the impact of potential externalities and eliminate latent conflicts between the parties;
- v. Design programs to support local entrepreneurship and the creation of new businesses, with public-private financing, which allow to fill market gaps in local areas and diversify the sectorial structure of the municipality;
- vi. Together with the extractive company, try to attract investments from related industries to the municipality or region, in order to take advantage of the synergies derived from the clustering of activities and generate added value and employment;
- vii. Make good use of the additional public revenue associated with the project, channeling it to: i) the development of public policies for the generation of well-being and income distribution, which improve the quality of life of the resident population; and, ii) for the adoption of measures to reduce contextual costs and create a business-friendly environment;
- viii. Ensure that the resources that the company will channel to support local development, within the scope of its Social License to Operate and its Corporate Social Responsibility, are partially dedicated to financing initiatives that promote structural change.

D4. To the Company:

- i. Deepen the links with the community and the local government to guarantee the Social License to Operate, responding to concerns arising from the execution of the project and trying to satisfy the needs that are being identified;
- ii. Speed up preparations to start construction of the mine and start-up. Guarantee the financing of all phases of the project, prepare investment in capital goods and organize the provision of services for the purposes of construction and operation;
- iii. Define a strategy for contracting service providers, favoring local companies (from the municipality and the surrounding region) and devising support mechanisms that allow them to increase their capacity and qualify their services;

- iv. Establish an action plan for hiring local workers (from the municipality and the surrounding region), accompanied by a training plan to ensure the acquisition of the necessary skills to ensure the correct operation of the mine;
- v. Make resources available to carry out periodic improvement works on infrastructures and equipment that will be intensively used during the operation phase and, consequently, will experience high levels of wear and tear;
- vi. Comply scrupulously with the application regulations in all domains and, if possible, in some of them exceed the levels of compliance and introduce innovative procedures and policies that can be disseminated as examples of good practices;
- vii. Encourage the establishment of mechanisms to monitor and follow up the project's operation and, in general, the company's activity, with the participation of local stakeholders, and be available to make adjustments to practices, behaviors and forms of operation;
- viii. Implement a policy of transparency, in which relevant and timely information is made available to the community and to all stakeholders with an interest in the company's operation;
- ix. Set the company's registered office in the municipality to ensure that the tax revenues revert, at least partially, in the municipality;
- x. Create incentives for workers to establish their residence in the municipality;
- xi. In the long term, to promote, together with the local administration, the attraction of investments from related industries to enhance complementarities and generate added value and employment;
- xii. Provide an annual financial amount (around 500,000 euros per year), as a concept of Social License to Operate and Corporate Social Responsibility, to constitute a Community Development Fund. The fund should be managed by a foundation in the administration of which the community and the local government should be the majority. To ensure the alignment of its performance with local and regional priorities in terms of development, the Foundation's Presidency may be exercised by the Presidency of the local authority;
- xiii. Although the fund may support operational public policies of a recurring nature, its main purpose should be to finance sectoral and transversal policies that promote structural change in the territory. These initiatives, with a medium and long-term horizon, should focus on territorial capacity building, institutional densification and qualification, the increase in human capital and the skills portfolio, the improvement of infrastructural and equipment endowments and constitution of investment support instruments (guarantees and risk capital). The ultimate objective of these interventions is that the local economy reduces its dependence on the project, so that, once completed, it has a sufficiently robust and competitive economic structure, which ensures that the cessation of extractive activity will not have significant impacts on the territory.

- xiv. In view of the best international practices in the area of benefit sharing, a set of preliminary programs / interventions is proposed, organized into several thematic vectors:

Vector I Mitigation and improvement

Program of housing rehabilitation
Program of housing improvement

Vector II Sharing

Program of taking advantage of installed capacity, underutilized or discontinuous use and sharing of services with the local community – health, firefighters, transport, and training

Vector III Transparency

Information and Listening forums
Program of mine visits and pedagogical initiatives related to the company's activity

Vector IV Social Responsibility

Program of Rehabilitation and maintenance of equipment and services
Program for support to the neediest families
Program to promote leisure time activities
Program to incentivise birth
Scholarship program for displaced students
Program to support cultural programming

Vector V Sustainability

Program to improve environmental heritage
Program to improve built heritage
Program to promote local purchasing and valorization of the local products

Vector VI Infrastructural Empowerment

Program for upgrading and building capacity of the road network
Program for improving and increasing the supply of infrastructure and equipment

Vector VII Business Empowerment

Club of local suppliers of goods and services
R&D+i Unit – Research, Development and Innovation
Program of Entrepreneurship
Program of rural tourism development
Program of development of agriculture and livestock for Barrosã and other indigenous breeds