

Sal de Vida Lithium Mining Project Argentina

Project Description &
Environmental and Social Summary

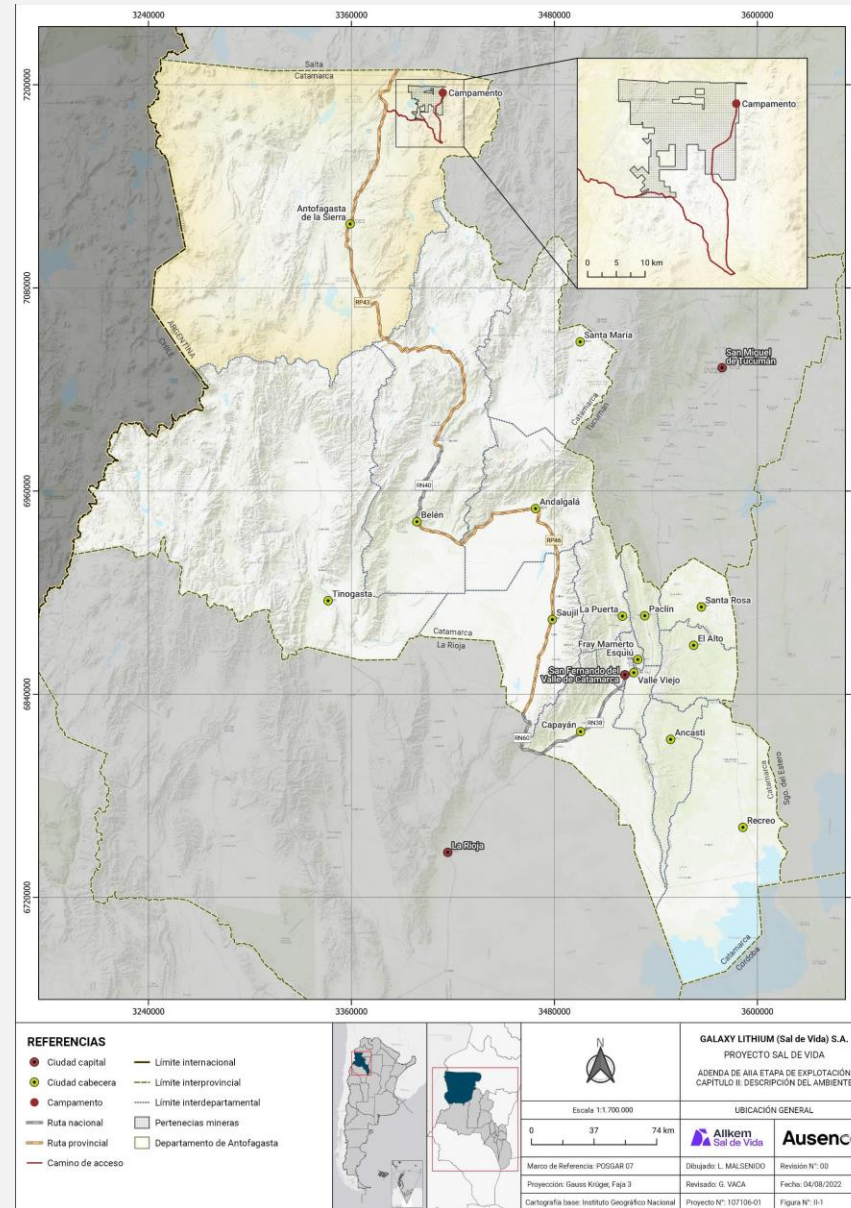
December 2023



Project Location

Catamarca Province, Argentina

The Sal de Vida Project (SdV) consists of the construction and operation of a lithium mining project in Salar del Hombre Muerto, located in the province of Catamarca, Argentina, 4,100 meters above sea level and approximately 90 km north of the departmental capital of Antofagasta de la Sierra. The Project will be operated by Galaxy Lithium (Sal de Vida) S.A, a subsidiary of the Allkem Limited group, the fifth-largest lithium producer worldwide.



El Salar del Hombre Muerto Catamarca Province

- The Salar (the second largest in Argentina) is in Argentina's Southern Puna, an arid ecoregion characterized by sparse herbaceous and shrubby vegetation with less than 300 millimeters of precipitation per year, low temperatures, and high solar radiation.
- Vegetation consists of scattered grasslands, low shrublands, and extensive arid plains.









Sal de Vida – Snapshot

Project Overview

- The Sal de Vida greenfield lithium project involves the construction and operation of a lithium carbonate (LCE) plant with a capacity of 15,000 tons per year (equivalent to 50% of Argentina's lithium production in 2022).
- The project will produce battery-grade lithium carbonate through an evaporation and processing operation for the battery and electric vehicles supply chain.
- The Sal de Vida deposit lies within the "Lithium Triangle," a region in the Andes that hosts ~60% of the world's identified lithium metal resources in near-surface brines. Sal de Vida uses brine extraction in its lithium production, the prevailing method used in the Lithium Triangle.

Lithium Market Overview

- Lithium is a critical mineral in the global transition to a low-carbon future as it is one of the best-suited metals for batteries. It's crucial for cathode production in lithium-ion batteries, particularly for electric vehicles, due to their high energy density and specific power.
- Australia and Chile stand out as the top producers of lithium, accounting for almost 77% of the global production in 2022. Global Lithium brine extraction is centered primarily in Chile (57%), Argentina (15%), and China (27%).
- Global lithium extraction has been steadily increasing. Wood Mackenzie forecasts a 6.2% annual growth in mine supply between 2023 and 2033 reaching a peak of 1.291 kt LCE by 2033. However, this won't meet rising global demand, resulting in a potential structural market deficit in the early 2030s.



Sal de Vida Project Facilities



The main components of the Project include a well field, together with its brine distribution system; solar evaporation concentration ponds; a lithium carbonate equivalent production plant; harvested salt stockpiles; and ancillary infrastructure (camp, administrative and support buildings).



Well Field



Evaporation Ponds



Ancillary Infrastructure

Sal de Vida – Development Impact

<p>Increase value-added production and exports</p>	<ul style="list-style-type: none"> Increased lithium exports contribute to improving productivity and boosting economic growth.
<p>Foster employment and on-the-job training</p>	<ul style="list-style-type: none"> During construction, the project is expected to create almost 1,000 temporary jobs. 70% of the workforce comes from local communities. Once operational, the project is expected to create 400 direct permanent jobs, of which 22% will be women. The lithium industry is characterized by high productivity and skilled labor, and the SdV project is expected to create high-paying jobs. The project will train an average of 140 workers per year.
<p>Contribute to domestic supply chain growth and renewable energy</p>	<ul style="list-style-type: none"> The project is expected to promote domestic purchases during the construction and operation phases. SdV will have a solar photovoltaic plant (PV Plant) of 15 MWac of installed capacity with an estimated annual production of 43210 MWh with 90% of exceedance probability

Sal de Vida – IDB Invest Additionality

Environmental and Social	<ul style="list-style-type: none">▪ Expansion of the company's E&S management system for the Project.▪ Enhancement of the project's E&S organizational capacity.▪ Development of a Water Studies Roadmap to assess and manage any potential impacts on water resources and ecosystem during the project life cycle.▪ Enhancement of the project's Stakeholder Engagement Plan in line with international best practices.
Technical assistance	<ul style="list-style-type: none">▪ Technical advisory services to develop a strategy to promote economic diversification among local communities, with a focus on women and indigenous communities.

2. Environmental and Social Considerations



El Salar del Hombre Muerto Biodiversity and Physical Aspects



The Project is located within the Key Biodiversity Area of the Salar del Hombre Muerto, which is also an important bird and biodiversity area. The typical fauna of this ecoregion includes mammals such as the vicuña, the Andean cat, the red fox, and birds such as flamingos. Some of these species are of conservation interest. There are also endemic plant and animal species



The Salar del Hombre Muerto is an endorheic basin (closed water system). The hydrology of the salt flat is regulated by Los Patos River which creates the delta and braided streams that filter into the Salar. This river system feeds into two lagoons and forms several wetlands (“vegas”).

Water Resources and Biodiversity

Allkem has prepared a “Water Studies Roadmap” (WSR) to assess connectivity across aquifers and surface water features and to manage any potential impacts on groundwater resources, the biota, and ecosystem services during the project life cycle. The results will be verified by an independent auditor and publicly disclosed annually.



Water Management

- No freshwater is or will be used in the Project. SDV will not extract fresh water directly from the Los Patos River or from any other superficial water body in the Salar del Hombre Muerto basin.
- SDV will extract brackish groundwater from the shallow aquifer near Rio Los Patos.
- The company has implemented a participatory water monitoring program.

Biodiversity

- Project infrastructure has been situated to avoid areas of biodiversity value, such as wetlands, vegetated areas and lagoons of the Salar del Hombre Muerto.

Water Participatory Monitoring

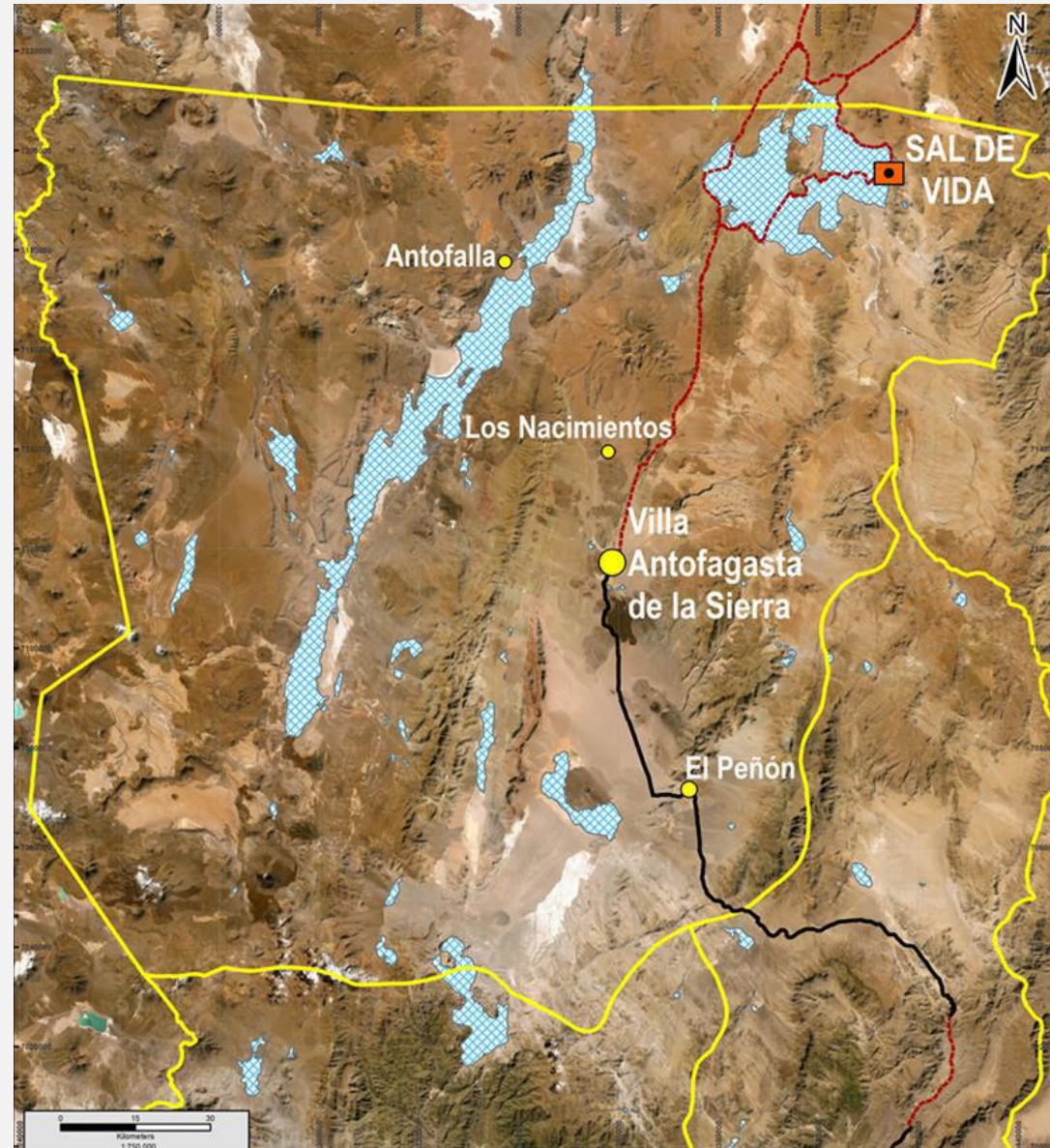
- Sal de Vida has implemented a **Participatory Environmental Monitoring Program** in which community representatives assist and participate in monitoring the environmental impacts of the project and its corresponding management and control measures.
- The program includes quarterly meetings to which institutional representatives of the Province and members of local communities are invited to address issues related to the availability and quality of water and to analyze the results of laboratory water samples.
- Allkem's Community and Social Performance policy declares its commitment to the United Nations Declaration on the Rights of Indigenous Peoples and International Labor Organization Convention 169 on Indigenous and Tribal Peoples, underscoring the importance of early participation, collaborative, transparent and culturally appropriate.
- The Environment, Health and Safety at Work Policy includes provisions on the efficient use of energy, water and land, the need for participatory environmental monitoring, the reduction of emissions, the minimization of the carbon footprint, and the rational use of water and biodiversity protection.



Communities near Sal de Vida

Communities in the indirect area of influence of the project (at distances greater than 150 km from the project site) include:

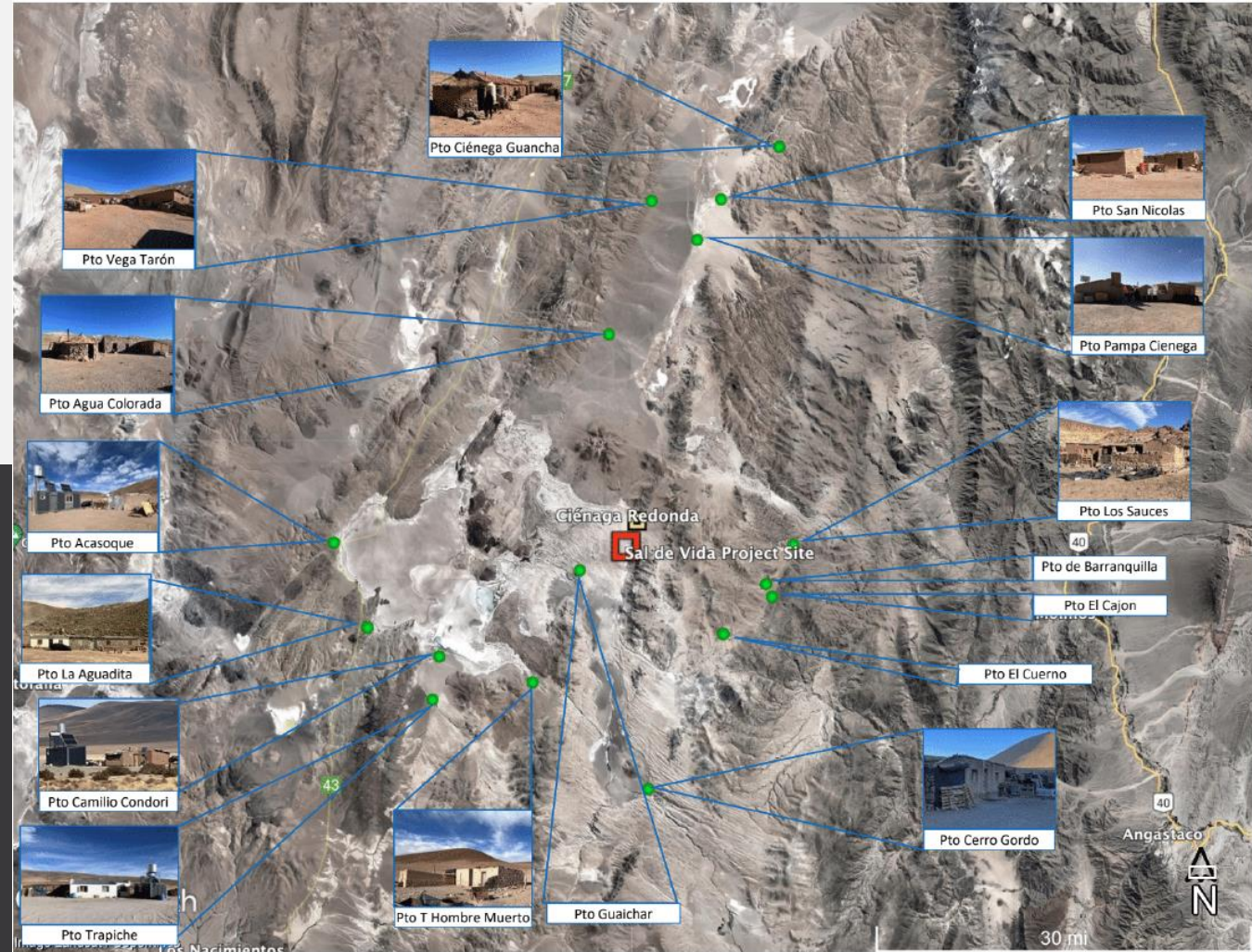
- Villa de Antofagasta
- Antofalla,
- El Peñón
- Cienega Redonda
- Los Nacimientos





Human Settlements in the Project Direct Area of Influence

The nearest human settlement to the Project site is Ciénaga Redonda, which is located almost 8km from the site and has approximately 30 inhabitants. There are also some scattered rural dwellings (puestos) within a 50 km radius of the Project. Between Ciénaga Redonda and the puestos, the estimated total population is 80 people.







**Sal de Vida
Lithium Mining Project**
Project-level Engagement

Allkem's Strong Community Relations & Investment Programs



- Health and Wellness Program: visits by medical professionals to all locations in Antofagasta de La Sierra.
- Community Agricultural Strengthening Program: support to community-based agricultural projects.
- Community visits and cultural events with information sharing on the SDV project updates and community programs.
- Capacity Building & Training Programs
- Partnership with the University of Catamarca with Lithium Brine Technology for training for local populations.
- Technical training for Installers of Off-Grid Photovoltaic Systems
- Awareness-raising activities on issues linked to human rights.
- Community infrastructure investment program
- Participatory Monitoring of Water Resource Management
- Grievance Mechanism Management

Adding Value

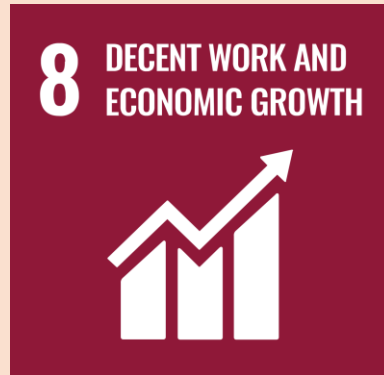


- **Fostering meaningful stakeholder Engagement** by establishing a safe space for two-way communication with stakeholders and culturally appropriate relationships with indigenous populations.
- **Strengthen existing income-generating activities** as part of the community investment plan for the long-term benefit of community members.
- **Indigenous People** inclusion in social investment programs.
- **Promoting Gender Equality** by providing inclusive and secure spaces for work and coexistence.

Alignment with Sustainable Development Goals



The Project will provide on-the-job training.



Contribution to economic growth and job generation.



Adoption of sustainable practices promoted through the environmental and social action plan.



Increase renewable energy generation.



Contribution to industry growth and sustainability.



The Project will foster exports.

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