RioTinto

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Report

Rincon Disclosure Summary

Rev0 – September 2025

The Disclosure Summary, prepared for the mining activities planned for the Project (hereinafter, the Project) of Rincon Mining Pty Limited (hereinafter, RINCON), was developed to:

- Provide an updated Project Description.
- Summarize the work completed to align the 2024 Environmental and Social Impact Assessment (ESIA) report, with International Finance Corporation (IFC) Performance Standards (PSs).
- Present their respective summaries.

It is assumed that the reader of this document has read the April 2024 ESIA, which is disclosed in the IFC website, s submitted to Salta's Mining Authority on 14th April 2024 and approved on 26th August 2025 under DIA Resolution No. 101/2025.

The Project consists of the construction and subsequent operation of a plant with a production capacity of 50 thousand tonnes per annum (Ktpa) of lithium carbonate (Li_2CO_3), battery grade, organized in two production trains of 25Ktpa each. The production of this plant will be added to that of the 3Ktpa commercial demonstration plant in operation since May 2025 (approved under resolution 009/2023), resulting in a total production of 53Ktpa of battery grade lithium carbonate, once both Projects are in full operation (estimated by 2029/2030).

Where this document references documents disclosed on the IFC website, only a very summarized version of the results is provided herein. Deliverables prepared to align with IFC PSs that are not disclosed on the IFC website are described in more detail throughout this document.

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List of Acronyms

Acronym	Definition
%	percent
>	greater than
~	approximately
º	degrees
<	less than
14C	carbon 14
3H	tritium
AADT	Average annual daily traffic
AF	Associated Facility
ANSTO	Australian Nuclear Science and Technology Organisation
AoI	Area of Influence
AOO	Area of Occupancy
APS	Adult protective services
ARI	Acute respiratory infections
AWMP	Adaptive Water Management Plan
AZE	Alliance Zero Extinction
BAP	Biodiversity Action Plan
BFB	Basic Food Basket
BMEP	Biodiversity Monitoring and Evaluation Plan
BMP	Biodiversity Management Plan
Bo	boron
$CaCO_3$	calcium carbonate
CAPEX	capital expenses
CH	Critical Habitat
CHA	Critical Habitat Assessment
CHMP	Cultural Heritage Management Plan
CIA	Cumulative Impact Assessment
CIX	continuous ion exchange
CLAE	Economic Activities Classifier
cm	centimetres
CMIP6	Coupled Model Intercomparison Project Phase 6
CNAD	Chilean National Demining Commission
CO_2	carbon dioxide
COEDU	UCASAL Educational Guidance Center
COFEMIN	Consejo Federal de Minería
CONAF	Corporación Nacional Forestal
CR	Critically Endangered
Cr III	trivalent chromium
Cr IV	hexavalent chromium
CSP	Community and Social Performance
DEM	Digital Elevation Model

Acronym	Definition
DIA	Declaración de Impacto Ambiental
DLE	direct lithium extraction
DNA	deoxyribonucleic acid
DNV	Salta Highway Administration
DPV	Department of Public Works
EAAA	Environmentally Appropriate Area of Assessment
EAP	Economically Active Population
EHS	Environmental, Health, and Safety
EIA	Evaluación de Impacto Ambiental
EIS	Environmental Impact Statement
EITI	Extractive Industries Transparency Initiative
ERM	Environmental Services Management
EMEs	Extreme Microbial Ecosystems
EMP	Environmental Management Plan
EN	Endangered
E&S	Environmental and Social
ESE	east-southeast
ESIA	Environmental and Social Impact Assessment
ESM	Energy Source Mineral
ESMP	Environmental and Social Management Plan
ESR	Ecosystem Services Review
FCAB	Ferrocarril de Antofagasta a Bolivia
FONPLATA	Plata Basin Financial Development Fund
FPIC	Free, Prior, and Informed Consent
FS	Feasibility Study
FWSF	Filtered Waste Storage Facility
g	grams
GBIF	Global Biodiversity Information Facility
GHG	greenhouse gas
GIS	Geographical Information Systems
GVM	gross vehicle mass
H2	second half
H_2SO_4	sulphuric acid
ha	hectares
HCl	hydrochloric acid
HCO_3	bicarbonate
HPRO/NF	High-Pressure Reverses Osmosis and Nano-Filtration
IBAT	Integrated Biodiversity Assessment Tool
IBA	Important Bird Area
ICMM	International Council on Mining and Metals
IDB	Inter-American Development Bank
IFC	International Finance Corporation
IIA	Informe de Impacto Ambiental

Acronym	Definition
ILO	International Labour Organisation
INAI	National Institute of Indigenous Affairs
INDEC	Instituto Nacional de Estadística y Censos
INIQUI-CONICET	Instituto de Investigaciones para la Industria Química-Consejo Nacional de Investigaciones Científicas y Técnicas
IPP	Indigenous Peoples Plan
IUCN	International Union for Conservation of Nature
IX	ion exchange
KBA	Key Biodiversity Area
kV	kilovolt
km	kilometres
km^2	square kilometres
Ktpa	thousand tonnes per annum
L	litre
LAgS	Laboratory of Water and Soils
LC	Least Concern
LCE	lithium carbonate equivalent
Li	lithium
Li_2CO_3	lithium carbonate
LiCl	lithium chloride
LiOH	lithium hydroxide
L/min	litres/minute
L/s	litres/second
Li/L	lithium/litre
LoM	life of mine
m	metres
m^2	square metres
m^3	cubic metres
m^3/d	cubic metres per day
m^3/h	cubic metres per hour
masl	metres above sea level
mbgl	metres below ground level
Mg/Ca	magnesium/calcium
mg/l	milligrams/litre
mm	millimetres
MODFLOW-USG	Modular Finite-Difference Flow Model-Unstructured Grid
Mt	million tonnes
NaOH	sodium hydroxide
Na_2CO_3	sodium carbonate
NC	not answered
NG	Net Gain
NH4	ammonium
NNL	No Net Loss
NO2	nitrite
NOA	Northwest Argentine Region

Acronym	Definition
NPA	National Protected Area
NPV	net present value
NT	Near Threatened
NW	northwest
OPEX	operating expenses
PFAs	Points and Flexible Areas
PFS	Pre-Feasibility Study
PHC	Primary Health Care
PO_4^{3-}	Orthophosphate
ppm	parts per million
PSs	Performance Standards
Q1	Quarter 1
Q2	Quarter 2
Q3	Quarter 3
Q4	Quarter 4
R3000	Rincon 3000 Facility
RCIA	Rapid Cumulative Impact Assessment
REMSA	Recursos Energéticos y Mineros de Salta, S.A.
RINCON	Rincon Mining Pty Limited
RFP	Rincon Full Potential Project
RO	reverse osmosis
RR	Rincon Rapid Plant
S	South
SA	South America
SBDF	Spent Brine Disposal Facility
SBL	Schlumberger
SC	sodium carbonate
SCG	Social Capital Group
SE	southeast
SEP	Stakeholder Engagement Plan
SIACAM	Sistema de Información Abierta a la Comunidad sobre la Actividad Minera
SMB	simulated moving bed
STE y SS	National Directorate of Labor Studies and Statistics
SWOT	Strengths, Weaknesses, Opportunities, and Threats
SX	solvent extraction
t	tonnes
TBB	Total Basic Basket
TDS	total dissolved solids
TKN	Total Kjeldahl Nitrogen
TOC	Total organic carbon
tpa	tonnes per annum
TRL	technology readiness level
t/year	tonnes per year

Acronym	Definition
UAV	unmanned aerial vehicle
UCASAL	Catholic University of Salta
UNDRIP	United Nations Declaration on the Rights of Indigenous Peoples
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNICEF	United Nations Children's Fund
µS/cm	micro siemens per centimetre
USGS	United States Geological Survey
UV	ultraviolet
VEC	Valued Environmental Component
VU	Vulnerable
W	West
WBCSD	World Business Council for Sustainable Development
WDPA	World Database on Protected Areas
WNW	west-northwest
WRI	World Resources Institute

1 Introduction

This Disclosure Summary is prepared for the mining activities planned for the Project by Rincon Mining Pty Limited (RINCON). This document was prepared to provide an update on the project description and the key activities undertaken to align the project with International Finance Corporation (IFC) requirements and Performance Standards (PSs)—and it must be read in conjunction with the documents disclosed on the IFC website, particularly the Environmental and Social Impact Assessment (ESIA) submitted for regulatory approval in April 2024.

1.1 Background

Rio Tinto acquired the Project (herein referred as the Project) in March 2022 and is the holder of mining concessions for the extraction of lithium granted by the mining court of the Province of Salta. The Project has developed over several years:

- In 2019, Resolution 05/2019 approved the Project for lithium brine extraction and the production of 25 thousand tonnes per year (Ktpa) of lithium carbonate. To refine process modifications, a Pilot Plant Project was later approved under Resolution 071/2020.

- In December 2022, an Addendum to the Pilot Plant Project ESIA was submitted. Its purpose was to adapt existing facilities to operate a 3Ktpa commercial demonstration plant, known as the Rincon 3000 (R3000) Plant.

- In April 2024, an IIA (Informe de Impacto Ambiental)—or ESIA—for the Rincon Full Potential Project (RFP) Commercial Plant was submitted to Salta's Mining Authority for local permitting. The RFP involves the construction and operation of a plant with a production capacity of 50Ktpa of battery-grade lithium carbonate, divided into two production trains of 25Ktpa each.

- Once operational, the output from the RFP will be combined with the 3Ktpa from the RR Plant, resulting in a total production capacity of 53Ktpa of battery-grade lithium carbonate.

The 2024 ESIA is based on in-depth baseline studies and extensive stakeholder consultation but was not developed with the intent to fully comply with the requirements of the IFC PSs on Environmental and Social Sustainability (IFC, 2012) and the World Bank Group Environmental, Health, and Safety Guidelines for Mining (EHS Guidelines, 2007).

This Disclosure Summary has been prepared to present:

- An updated description of the Project, based on the Feasibility Study (FS) (the 2024 ESIA was based on the Pre-Feasibility Study (PFS)).

- Concise summaries of the work completed to align with the IFC PSs, including updated baseline data, critical habitat assessment, impact assessments, Free, Prior and Informed Consent (FPIC) process, the latest groundwater numerical model predictions.

- The outcomes of the public consultation process.

- The environmental and social management and monitoring plans.

- The evaluation of the conceptual feasibility of mitigation activities for potential impacts; and others.

Where this document references materials disclosed on the IFC website, for example the Stakeholder Management Plan, only brief summaries of the results are included. In contrast, work carried out to align with IFC PSs that are not publicly disclosed on the IFC website, for example the Critical Habitat Assessment (CHA), are described in greater detail in this document.

Below is the list of documents disclosed on the IFC website:

- Project Disclosure Summary.
- Stakeholder Engagement Plan (communities and puesteros)—in Spanish.
- Supplemental Social Baseline (puesteros)—in Spanish.
- Preliminary Social Impact Assessment (Puesteros)—in Spanish.
- Preliminary Puesteros Management Plan—in Spanish.
- Assessment of Brine and Water Resources.
- Critical Habitat Assessment.
- Project Execution Environmental Management Plan.
- Updated Conceptual Closure Plan.
- Environmental and Social Impact Assessment (ESIA, 2024)—in Spanish.
- Responses to the 2024 ESIA Comments—in Spanish.

1.2 Location and Mineral Resources

The Project is located in the Province of Salta, approximately 270 kilometres (km) west of the provincial capital, the city of Salta. The nearest town, San Antonio de los Cobres, lies about 110km from the site. The Project's coordinates are 24°01'13.3" South (S) and 67°02'16.3" West (W).

Situated at an elevation of approximately 3,725 metres above sea level (masl), the site lies within the Puna region of Salta. Access from the city of Salta is via National Route No. (RN) 51, followed by mining trails leading directly to the site.

The Project's mineral resources are estimated as follows:

- Measured Resources: 1.57million tonnes (Mt) of lithium carbonate equivalent (LCE).
- Indicated Resources: 7.85Mt LCE.
- Inferred Resources: approximately 2.29Mt LCE.
- Proven + Probable Mineral Reserves: 2.07Mt LCE, supporting a Projected life of mine (LoM) of 40 years.

Figure 1 illustrates the Project's location and access routes.

1.3 Project Description

The Project is described in detail in Chapter 3 of the 2024 ESIA. The following overview is provided for context which also includes updates in the design, when applicable.

Battery-grade lithium carbonate will be produced through a DLE process using adsorption columns. This method employs a specialized resin that selectively captures lithium chloride (LiCl) from the brine.

Fresh brine will be extracted from a wellfield consisting of 139 wells installed through the LoM (initial wellfield will consist of 12 wells for the first 8-10 years) and transported via pipeline to the processing plant, where it will be stored in dedicated tanks.

The lithium extraction process requires a range of inputs, including:

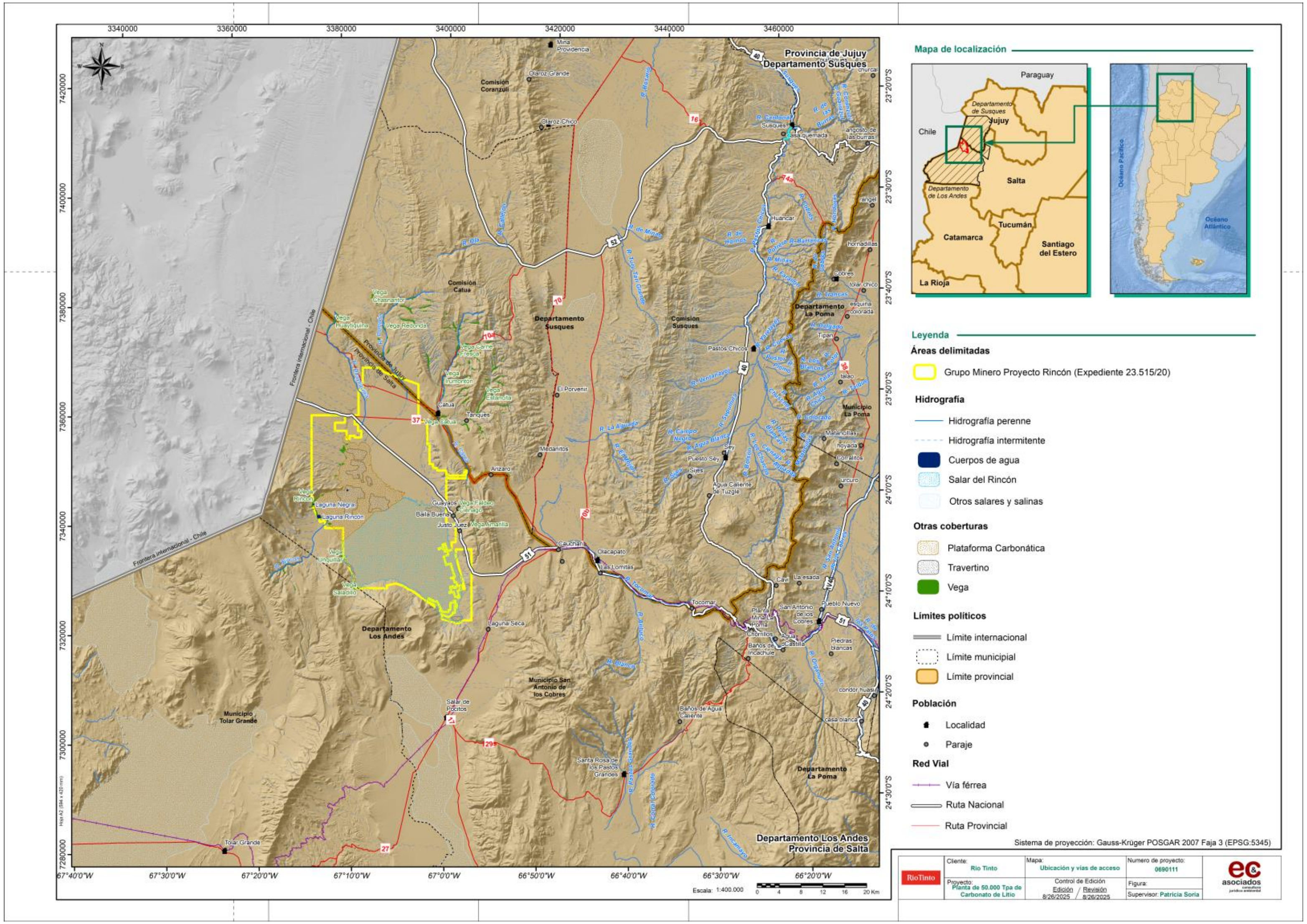


Figure 1: Project location map

- Chemical reagents: sodium carbonate, sodium hydroxide, hydrochloric acid, and sulfuric acid.
- Process additives: coagulants, flocculants, and anti-scalants.
- Utilities: steam, water, electricity, and compressed air.

Reagent consumption (only those that changed from the 2024 ESIA to current) are shown in Table 1.

Table 1. Reagent and raw water consumption

Reagent	**Unit**	**2024 ESIA**	**New**
Sulphuric Acid (H_2SO_4)	Ktpa (100% basis)	10.04	18.60
Hydrochloric acid (HCl)	Ktpa (100% basis)	1.32	1.03
Sodium hydroxide (NaOH)	Ktpa (100% basis)	4.71	3.70
Sodium Carbonate (Na_2CO_3)	Ktpa (100% basis)	47.55	45.32
Raw water	GL/a	3.52	1.77

The primary waste streams generated by the process include spent brine and solid residues filtered from the process plant, as shown in Table 2. Table 2 indicates the average volumes and chemical concentration comparison between the brine and the spent brine to be disposed in the SBDF. To support the overall operation, the Project includes the development of the following facilities (note: facilities already constructed are indicated by asterisk):

- Process plant (50Ktpa).
- Spent brine disposal facility (SBDF).
- Filtered Waste Storage Facility (FWSF).
- Brine wellfield.
- Raw water wellfield.
- Administrative, controls, and laboratory buildings.
- Vehicle maintenance building* and storage warehouse.
- Roads and parking areas.
- Pipelines and ducts.
- Camps and auxiliary components. 900-bed capacity camp* (additional construction of the 1500-bed camp underway).
- Main electrical substation and transmission line poles.
- Sewage treatment plants (4 of 7 in place).
- Drinking water treatment plants (reverse osmosis). Partially Installed, additional capacity to be installed as part of 1500-bed camp expansion.
- Airstrip.*
- Components related to the R3000 plant.*
- Legacy components (ponds) associated with the R3000 plant* (under assessment for dismantling).
- Topsoil deposit.* All topsoil deposits are being deployed in the border of the intervened areas (strips are being put aside the construction sites).
- Quarries.
- Temporary construction facilities.

Table 2. Raw and spent brine stream summary

Stream Number		**1100_001**	**1900_014**
Stream Name	**Unit**	**Raw Brine from Salar**	**Liquid Effluent to Disposal**
Total mass	kg/h	2,032,230	2,274,705
Solids	kg/h	-	-
Liquids	kg/h	2,032,230	2,274,705
Gases	kg/h	-	-
% Solids	%	-	-
Total flow	L/h	1,628,015.6	1,863,090.7
Solids	L/h	-	-
Liquids	L/h	1,628,015.6	1,863,090.7
Gases	L/h	-	-
Density	kg/m^3	1,248	1,221
Liquids B	kg/h	1,173.799	1,176.226
Liquids Ca	kg/h	1,066.350	1,087.972
Liquids Cl	kg/h	302,662.293	302,824.437
Liquids Fe	kg/h	-	0.147
Liquids K	kg/h	13,318.796	13,321.923
Liquids Li	kg/h	672.370	41.687
Liquids Mg	kg/h	7,368.399	7,378.166
Liquids Na	kg/h	178,857.086	181,855.724
Liquids CO_3	kg/h	-	-
Liquids HCO_3	kg/h	273.507	71.040
Liquids SO_4	kg/h	15,417.308	17,997.723
Liquids B	mg/L	721.000	631.330
Liquids Ca	mg/L	655.000	583.961
Liquids Cl	mg/L	185,908.713	162,538.752
Liquids Fe	mg/L	-	0.079
Liquids K	mg/L	8,181.000	7,150.443
Liquids Li	mg/L	413.000	22.375
Liquids Mg	mg/L	4,526.000	3,960.176
Liquids Na	mg/L	109,862.019	97,609.700
Liquids CO_3	mg/L	-	-
Liquids HCO_3	mg/L	168.000	38.130
Liquids SO_4	mg/L	9,470.000	9,660.143
Liquids OH	mg/L	603.717	37.407
Liquids H_2O	kg/h	1,505,634.470	1,743,308.300
Liquids CO_2	kg/h	-	72.659
Liquids $CaCl_2$	kg/h	2,952.937	3,012.813
Liquids $Ca(HCO_3)^2$	kg/h	-	0.000
Liquids $FeCl_3$	kg/h	-	0.427
Liquids H_3BO_3	kg/h	5,820.153	6,664.024
Liquids KCl	kg/h	25,395.824	25,401.787
Liquids LiCl	kg/h	4,106.681	254.616
Liquids $MgCl_2$	kg/h	28,864.539	28,902.802
Liquids $NaB(OH)_4$	kg/h	1,471.200	104.319

Stream Number		1100_001	1900_014
Stream Name	**Unit**	**Raw Brine from Salar**	**Liquid Effluent to Disposal**
Liquids Na_2SO_4	kg/h	22,796.670	26,610.047
Liquids NaCl	kg/h	434,810.753	440,273.184
Liquids $NaHCO_3$	kg/h	376.558	97.806
Liquids Sodium Thiosulphate	kg/h	-	1.186
Liquids Antiscalant	kg/h	-	0.673
Liquids H_2O	g/L	924.828	935.708
Liquids CO_2	mg/L	-	38.999
Liquids $CaCl_2$	mg/L	1,813.826	1,617.105
Liquids $Ca(HCO_3)^2$	mg/L	-	0.000
Liquids $FeCl_3$	mg/L	-	0.229
Liquids H_3BO_3	mg/L	3,574.998	3,576.865
Liquids KCl	mg/L	15,599.251	13,634.219
Liquids LiCl	mg/L	2,522.507	136.663
Liquids $MgCl_2$	mg/L	17,729.890	15,513.363
Liquids $NaB(OH)_4$	mg/L	903.677	55.992
Liquids Na_2SO_4	mg/L	14,002.734	14,282.744
Liquids NaCl	mg/L	267,080.206	236,313.339
Liquids $NaHCO_3$	mg/L	231.299	52.497
Liquids Antiscalant	mg/L	-	0.361

At peak activity, approximately 2,300 workers will be on site, with a total roster of over 4,200 personnel on roster excluding the crew to operate the R3000 plant.

The Project will extend across the mining properties and easements described in Table 3, covering a total of 86,781.5 hectares (ha); however, the physical Project footprint is 3,300ha.

Table 3. Properties including the mining Project

Name	Surface (ha)	Type
Grupo Minero Proyecto Rincon	80,032	Grupo Minero
Mina Américo	2,873	Mina
La Costera III	1,782	Mina
Servidumbre	150	Serv. p/camp
Servidumbre	10	Serv. p/camp
Servidumbre	1,494	Serv. p/camp/piletas
Servidumbre de Agua	288	Serv. p/Agua
Servidumbre Faldeo Ciénago	0.8	Serv. p/Agua
Servidumbre Traza Gasoducto	49	Serv. p/Gasoducto
Servidumbre Laguna Seca	50	Serv. p/Infraestructura
Servidumbre Cauchari	25	Serv. p/Camp/agua
Servidumbre Huaytiquina	4	Serv. p/Agua
Servidumbre	18	Serv. p/camp
Servidumbre	5.7	Serv. Salmueroducto
Total	**86,781.5**	

1.4 Associated Facilities Assessment

In March 2025, RINCON submitted a technical memorandum evaluating the classification of Project components in relation to supporting infrastructure (ERM, 2025a). The objective was to determine whether any Project infrastructure should be considered an associated facility (AF) as defined by the IFC PSs.

According to IFC PS1, paragraph 8, associated facilities are defined as: "*Facilities that are not funded as part of the Project and that would not have been constructed or expanded if the Project did not exist, and without which the Project would not be viable.*"

The memorandum applied this definition to assess whether any supporting assets meet the criteria for classification as associated facilities. The flow diagram / decision tree shown in Figure 2 was used to assess whether Project components may be considered AF.

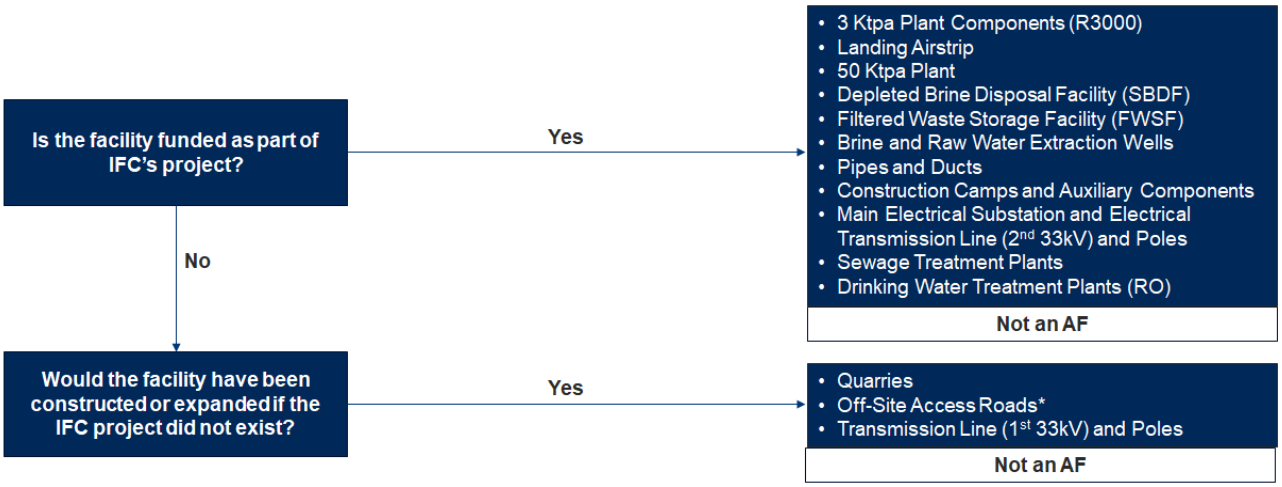


Figure 2: Associated Facilities determination

The following assets are not founded by the Project and are therefore not considered Project components:

- Quarries.
- Off-site access roads.
- Transmission line (first 33 kilovolt (kV) and poles.

The lack of dual dependency was confirmed on the basis of:

- The quarries are treated as a Project component and are included in the 2024 ESIA but are not funded nor operated by the Project.
- With regards to off-site access roads, there are no expansion works planned. The Project will only use and maintain the roads.
- Regarding the transmission line, the condition of dual dependency is not met, as there are alternative lines the Project could use instead and still be viable (the Inter Andes 345kV line).

1.5 Alternatives Analysis

1.5.1 Previous Work

The analysis of Project alternatives is a critical component of the environmental impact assessment process. The 2024 ESIA evaluated a range of technically feasible and economically viable alternatives for the Project. This alternatives assessment focused on the Project's main components and was conducted to ensure that environmental and social considerations were integrated into decision-making. The analysis is detailed in the 2024 ESIA, Chapter 3: Project Description with the following alternative analysis described in detail in the ESIA:

1. Location of the Process Plant relative to components.
2. Location and optimization of the raw water wellfield.
3. Location and optimization of the brine wellfield.
4. Location of the SBDF.
5. Location of the FWDF.

Additionally, to align the Project with IFC PSs, the following alternative analysis were completed.

1.5.2 Alternative Process Analysis, Resource and Raw Water Use and Optimisation

Previous versions of the Project focused on alternative flowsheets for processing the raw brine including:

- Initial process based on traditional brine concentration ponds. A 1.5Ktpa plant was operated from 2011 to 2014 but yielded poor recoveries and high operating costs due to the high magnesium content of the brine relative to lithium.

- A direct extraction process was developed with Australian Nuclear Science and Technology Organisation (ANSTO) based on lithium phosphate precipitation, phosphate recycling, and on-site reagent generation. A “demonstration” plant was built in 2016 and operated for a year. The plant had low operating expenses (OPEX) but high capital expenses (CAPEX) and a complex flowsheet with a significant number of recycle streams.

- In 2019, a global search was conducted to evaluate a number of DLE alternate technologies:

  – Liquid-Liquid extraction—with a company called Adionics who have developed a process based on a selective and thermally regenerated salt absorbent: Flionex®.

  – InCor process—involving lithium extraction using Iron Phosphate.

  – Li Solvent Extraction (SX)—with a company called Tenova.

  – Li Ion Exchange (IX)—with a company called Lilac.

  – Li Adsorption—using alumina-based sorbents.

- The adsorption process with an adsorbent from a company called Axion was identified as the most economic and simplest. Alternate adsorbents considered were Sunresin and Energy Source Mineral (ESM). Laboratory test work was completed by vendors and results internally evaluated. A larger scale pilot plant was built and operated in 2020 to confirm this technology. Since then, the adsorption resin market has evolved with new resins showing much improved performance than Axion.

1.5.2.1. Technology Comparison

A detailed review of alternative processing routes was completed including an assessment around the technology readiness level (TRL) for commercial implementation, as shown in Table 4.

The analysis of the options considered are shown in Table 5.

Table 4. TRL definitions per the Australian Defense Science and Technology Group

TRL 1	Basic Research: Initial scientific research has been conducted. Principles are qualitatively postulated and observed. Focus is on new discovery rather than applications.
TRL 2	Applied Research: Initial practical applications are identified. Potential of material or process to solve a problem, satisfy a need, or find application is confirmed.
TRL 3	Critical Function or Proof of Concept Established: Applied research advances and early-stage development beings. Studies and laboratory measurements validate analytical predictions of separate elements of technology.
TRL 5	Laboratory Testing of Integrated/Semi-Integrated System: System component and/or process validation is achieved in a relevant environment.
TRL 6	Prototype System Verified: System/process prototype demonstration in an operational environment (beta prototype system level).
TRL 7	Integrated Pilot System Demonstrated: System/process prototype demonstration in an operational environment (integrated pilot system level).
TRL 8	System Incorporated in Commercial Design: Actual system/process completed and qualified through test and demonstration (pre-commercial demonstration).
TRL 9	System Proven and Ready for Full Commercial Deployment: Actual system proven through successful operations in operating environment, and ready for full commercial deployment.

Table 5. Summary of alternative technologies considered in comparison to RINCON flowsheet

Technology	Description, Pros/Cons	Recovery	Fresh Water	Reagents	Power	Waste	TRL
Pond Process	• Use of traditional evaporation methods to generate lithium carbonate is feasible but due to the high magnesium content of the brine compared to the lithium, lithium recoveries are much lower, and reagent consumptions are significantly higher. This results in a lower resource utilisation and a higher operating cost.	Lower	Lower (approx. 1/3 adsorption)	Higher	Lower	Higher	9
Ion Exchange resin, for example, Lilac	• Lithium titanate beads are used to make ion exchange resins which selectively load lithium. Stripping is caused by lowering pH using acid. Neutral to alkaline pH is required for loading, which necessitates adding equimolar amounts of sodium hydroxide (NaOH). • Resins can be washed with water without unloading the lithium, so freshwater requirements are much lower. Potentially the resins can be washed "cleaner" making downstream units simpler than with adsorbents. • Reagent costs and logistic issues are significant, with acid and base costs in the order of $1000/t LCE. It is noted that these costs and logistics issues could be avoided by the use of electrolysis to generate acid and base. However, initial indications are that the capital and operating cost of the electrolysis plants result in a similar overall net present value (NPV) to purchasing reagents, so current electrolysis systems are not likely to markedly improve economics, and they increase technical risk (though they do alleviate logistics concerns) • Lilac is one of the more advanced companies, with existing resin production facilities and existing pilot plants. • Resin life is a risk which Lilac claims is solved, but this remains to be verified.	Similar	Lower (approx. 1/2 adsorption)	Higher (NaOH + hydrogen chloride (HCl))	Lower	Similar (depending if any pretreatment is required)	8

Technology	Description, Pros/Cons	Recovery	Fresh Water	Reagents	Power	Waste	TRL
Solvent extraction, for example EnergyX or Tenova Bateman	• Lithium selective solvent extraction systems are in some ways similar to lithium selective ion exchange systems, except current SX reagents also load magnesium/calcium (Mg/Ca). Thus, they need divalent removal, either through Adsorption (as per EnergyX) or chemical/membrane pretreatment (as per Tenvoa Bateman). The Li SX also requires acid and base (like ion exchange) which similarly costs in the order of $1000/litre (L). While the SX doesn't require much water, the pre-treatment (membranes or adsorption) will require water, though potentially less than straight adsorption (without SX). It is claimed that the SX product concentration can be up to 70 grams (g) lithium/litre (Li/L), which would simplify downstream processing markedly. pH control should be easier than in the ion exchange system (mixed tanks rather than fixed bed plug flow columns). • Reagent losses (e.g., dissolution in the aqueous or entrained in the aqueous phase) and crud formation are also a processing and environmental risk. • The TRL of this technology is lower than ion exchange resins and adsorbents, as less piloting has been done.	Similar	Lower, but variable	Higher (NaOH + HCl)	Lower	Similar (depending if any pretreatment is required)	7
Solvent extraction based on temperature, e.g., Adionics	• Adionics proposed a solvent extraction process using its proprietary Flionex solvent. Lithium bearing brine is clarified then contacted with the solvent to preferentially dissolve lithium. The depleted brine is separated from the solvent and remaining traces of solvent are destructively removed before disposal back to the Salar. The lithium rich solvent is then stripped using heat and recovered water to produce the product brine for further processing and the solvent recycled to contactor. the removal of the downstream Brine Treatment process and associated chemical consumption and processing. The produced brine is also more concentrated than the base case adsorption eluate reducing the size of the reverse osmosis (RO) concentration required. • A final Ion Exchange treatment and removal step for residual of Boron (Bo), Potassium (K), and Mg has been retained as a safeguard to maintain product quality. Adionics estimated water use of approximately 40 cubic metres (m^3)/t LCE.	Similar	Lower (approx. ½-⅔ adsorption)	Higher	Higher	Similar (depending if any pretreatment is required)	7

Technology	Description, Pros/Cons	Recovery	Fresh Water	Reagents	Power	Waste	TRL
Crown Ether ion exchange systems, e.g. IBC	• Effectively a more advanced form of Ion Exchange resin, with higher selectivity, but with also requires a proprietary acid is used and a thus a proprietary electrolysis system is used to recover the acid and convert the Li to LiOH. • Downsides are that costs are not clear, and potentially expensive. Technical risk is arguably higher, as in addition to the crown ether ion exchange system, it will require the electrolysis systems to operate on well. Currently being piloted near Maricunga, but overall results have not been published.	Similar	Low	High (still requires NaOH, but generates acid)	Similar	Similar (depending if any pretreatment is required)	6-8
Li-selective electrodialysis, e.g., ElectraLith	• Uses a membrane which allows Li ions to pass but doesn't allow other cations to pass. This is placed in electro-dialysis cells and potentially allows for high concentration and purification. The TRL of this technology is lower than ion exchange resins and adsorbents, as it is still in laboratory testing phase.	Not known	Lower	Similar	Higher	Lower	4
Posco	• A flowsheet based on phosphate precipitation of an intermediate. While it is not fully understood, it is thought to be worse than the process the Project previously piloted, in that the recovery of the phosphate in the Posco system is reportedly less effective.	Lower	Lower	Higher	Similar	Higher	8-9
Geolith	• Appears to be an ion exchange placed on a woven material rather than in a bead. Low TRL with similar concerns of other IX processes of higher chemical consumptions.	Similar	Lower	Higher	Lower	Similar (depending if any pretreatment is required)	5-6
XtraLit	• Li selective ion exchange material, made from oxides of lithium, manganese (III), manganese (IV), and aluminium. Reagent costs and logistic issues are significant, with acid and base costs in the order of $1000/t LCE. Low TRL.	Similar	Lower	Higher	Lower	Similar (depending if any pretreatment is required)	5-6

Based on this analysis, none of the alternate flowsheets appeared to be more attractive than using RINCON's current flowsheet.

In some analysis, brine from the Salar is also counted in the water use, and under these metrics the water consumption for DLE processes will drop below pond processes as there is seepage from spent brine facilities back into the Salar, unlike ponds which are lined to prevent this, and the recoveries are higher meaning less brine is required to achieve the same production of lithium.

1.5.2.2. DLE Flowsheet Trade-Off

A number of trade-off studies have been completed during the PFS and FS to improve the performance of the Adsorbent based flowsheet. The key optimisations from this work include:

- Adsorbent selection – the assessment of alumina-based sorbents from alternative suppliers has identified a number of potential candidates. Improvements over the original sorbent the flowsheet was developed on include:
  - Higher Li capacities – less sorbent required and higher Li concentration in the eluate.
  - Higher selectivity – reduce selectivity for impurities and hence less reagents required in the downstream processing to remove. This is an area where continual improvement is likely from suppliers in the future and will continue to be assessed.
  - Higher homogeneity of product – control of the adsorption process is easier than ponds and will result in a more consistent product output that is easier for downstream processing.
- Operating parameters – with each adsorbent the operating parameters have been optimised such as:
  - Flow rate – traded off to improve Li recovery, sorbent volume and impurity carry-over.
  - Temperature – operating temperatures selected to minimise additional energy inputs for brine heating.
  - Flow direction – to minimise mixing and carry-over between different steps in the adsorption cycle.
- Equipment selection – initial process developed on a multi column module system. Alternatives equipment, such as a Simulated Moving Bed (SMB) and Continuous Ion Exchange (CIX) have been identified to improve cycle efficiency and resin utilisation. The use of these types of equipment can also facilitate improved operating configurations – see next point.
- Operating configuration – the operating sequence, including the destination of streams from different parts of the cycle can also be optimised to reduce the amount of fresh water required as well as used to increase the Li concentrations, increase recoveries and decrease impurities.
- Downstream process selection – Following the adsorption circuit, additional improvements have been made to the flowsheet to minimise the additional reagents required for producing lithium carbonate. The most significant improvement in this space is the incorporation of Nanofiltration (NF), which can preferentially reject divalent cations and anions ($Ca^{2}+$, $Mg^{2}+$ and SO_4^{-2}) which significantly reduces the amount of caustic soda required and subsequent waste solids regeneration.
- Water quality – raw water which is unsuitable for drinking or fresh water standards (conductivities ~ 4,000 µS/cm and potentially higher during the LoM) is treated through a water treatment plant to generate the water used in the process. Work has been completed with vendors to optimise this design.
- Water recovery – A significant portion of the water required comes from recycling in the process, over 80 percent (%) of the total water consumption is recovered and reused to minimise the raw water requirements.

1.5.2.3. Technology Packages

Rio Tinto worked closely with a number of adsorption column vendors during the FS as part of the technology packages procurement. This close engagement has enabled vendors to conduct test work on real brine samples to help optimise their designs and provide a level of performance guarantees for the adsorption section of the plant. This approach has resulted in significant reductions in water consumption (greater than (>) 50%) and impurity levels compared to the baseline values submitted in the 2024 ESIA documentation.

Close collaboration with technology vendors for membrane equipment has also resulted in an improved performance of the nanofiltration plant which will reject more impurities and require even lower reagent inputs of caustic soda than previously envisaged at a lower power consumption.

Technology package providers have also been able to offer innovative solutions for the lithium refining section with guarantees of close to zero makeup of CO_2. The vendors have also confirmed that the energy recovery circuits are optimal.

The reduction in water requirements through the different phases of the Project is shown in Table 6.

Table 6. Reduction in water use across Project phases

Project Phase	Requirement (m^3 raw water / t LCE)	Comments
End of PFS	~ 150	
ESIA Submission	~ 140	New adsorbent and minor process optimisation.
End of FS	~ 70	Incorporation of vendor technology package information and process optimisation.

- Rincon Project Raw Water Demand - Raw water abstraction associated with the operational “base case” ranges up to an annual average of 120L/s (although there is a maximum 140L/s instantaneous abstraction rate) and for the operational “upper sensitivity case” ranges up to an annual average of 178L/s (with a maximum 210L/s instantaneous abstraction rate) from the Catua Alluvial Fan (ERM, 2025c).

- Rincon Basin Wide Recharge – Annual average recharge to the entire Rincon Basin is estimated as 1,190L/s, which equates to 16.5% of the total volumetric precipitation across the basin (Montgomery & Associates, 2025).

Therefore, in terms of the operational “base case”, the annual average raw water usage vs. recharge – the calculation is 120L/s of 1,190L/s = ~10% of total recharge.

1.5.3 Plant Footprint

In addition to the advancements made to in adsorbent performance, the Project has worked hard to reduce the footprint of the site on the Salar. From the end of the PFS the Project has:

- Shortened the initial piping distance from the brine field to the plant. Reductions in well numbers may result from the improved adsorption recoveries yet to be incorporated into the design pending FS numerical model predictions.

- Reduced plant footprint by 60% - current estimate is ~ 120,000 square metres (m^2). This change has been achieved by more efficient layout of facilities to improve process flows, stacking of equipment (particularly in the adsorption and High-Pressure Reverses Osmosis and Nano-Filtration (HPRO/NF) areas) to reduce footprint and incorporation of specific vendor data. Work will continue in the basic engineering phase to optimise this.

- With the inclusion of the nanofiltration the FWSF footprint has reduced by 5/6, therefore only 1 of the 6 cells presented in the 2024 ESIA will be required during the LoM.

- The SBDF has maintained the same footprint, but less frequent expansions are expected as the result of the improved recoveries (less brine feed) and lower raw water consumptions in the adsorption area.

- Significant improvements have been made to reduce the water consumption rate, to levels closer to alternative technologies, as well as reducing the footprint impact on the Salar, and will continue. The adsorption DLE technology selected by RINCON to develop the asset has been preferred as it:
  - Has higher Lithium recoveries and hence greater resource utilisation.
  - Has higher product homogeneity, hence preferred by the battery makers.
  - Uses less chemicals compared to other processes.
  - Generates less waste compared to other processes.

1.5.4 Re-Injection as a Means of Managing Spent Brine

RINCON has evaluated the potential option to utilise re-injection as a means of managing significant volumes of spent brine and avoid / minimise the risk of potential environmental impacts. The main potential benefits of spent brine re-injection would be:

- Reduction in environmental impacts by minimising brine/groundwater level drawdown in areas adjacent of sensitive receptors, e.g., Laguna Rincon, Vega Unquillar, and Ojos de Agua.
- Reduction in the size and /or number of lifts of the SBDF.
- Returning the brine back to where it initially came from (although without the lithium).
- Maintenance of brine levels, saturated aquifer thickness and confined aquifer pressures (and potentially reducing risk/impact of subsidence and groundwater drawdown).
- Generation of hydraulic barriers to prevent/minimise fresh water and brine mixing.

The main potential constraints for brine re-injection would be:

- Potential for dilution of lithium brine resources by recirculation of spent brine and consequential reduction of LoM.
- Environmental impacts including surface flooding of saline water within the re-injection area, inflow of brine into the brine/freshwater mixing zone, activation of existing faults and/or fracturing of sediments.
- Engineering and operational challenges associated with long term brine reinjection wells/wellfield.
- Capital and operating costs.
- Limited hydrogeological understanding to confirm this option as a base case for total spent brine management.
- Additional assessment requirements including long-term reinjection trial(s).
- Requirement to obtain permit for reinjection as informally expressed by local regulatory agencies due to the risk of resource dilution mostly.

1.5.4.1. Re-Injection Field Trial Program

Preliminary injection/infiltration trials have been completed at three sites around the margin of the Salar, in the vicinity of some of the vegas and Laguna Rincon. The preliminary reinjection/infiltration trials were completed using fresh water. The results suggested that a small volume of water could be injected into the underlying strata and resulted in water level rises being observed not only in the injection well but also in observation wells located radially 2 metres (m) from the injection well.

On a larger scale, the primary potential re-injection target for the Project would be the unconfined halite and/or confined black sand deposits which exist in the vicinity of Salar nucleus. The rocks which surround

the Salar nucleus are likely to have freshwater resources and, as such, are not considered a viable brine re-injection target.

Larger scale black sand re-injection trials are currently planned to investigate the potential viability of injecting larger volumes of spent brine into the confined black sand units which exist at depth across much of the Salar nucleus.

1.5.4.2. Re-Injection Field Trial Findings

The preliminary re-injection/infiltration trials suggest that localised re-injection or infiltration is likely to be a feasible way of managing small volumes of spent brine (or raw water) and potentially mitigating the impact of lithium brine abstraction on small scale surface water bodies and/or water dependent sensitive ecosystems at the margins of the Salar. However, larger scale re-injection of spent brine aimed at managing large volumes of spent brine, reducing the size of the SBDF and potentially mitigating larger scale impacts (for example on the Laguna Rincon) requires further investigation.

1.5.4.3. Re-Injection Constraints

Currently the brine/groundwater level across the Salar is very close to surface (nominally <0.5m) and as such there is very little unconfined storage (specific yield) available in the shallow sequences (e.g., halite) which could receive injected spent brine in the early years of operations, and only once a cone of depression has formed would sufficient storage be available, however, by then the SBDF would have already been constructed and in operation.

As mentioned previously, black sand re-injection trials are planned for the second half (H2) 2025 to investigate the potential viability of injecting spend brine into the confined black sand units. However, the lower hydraulic conductivities of the black sands and the fact that re-injection would be utilizing confined storage (rather the unconfined storage/specific yield) will constrain the viability and potential effectiveness of re-injection into the black sands prior to the proposed lithium brine abstraction from these sediments.

1.5.4.4. Groundwater Modelling

Groundwater modelling was undertaken during the PFS to assess the potential feasibility of spent brine management and the potential effectiveness of spent brine re-injection in reducing groundwater levels drawdown across the Project area. Three different spent brine re-injection scenarios were evaluated:

- Scenario A: Spent brine re-injection into shallow sediments around SBDF:
  - Re-injection of spent brine directly into shallow sediments around the SBDF.
  - 20 injection wells at 86,400 cubic metres per day (m^3/d) (50 litres/second (L/s) per well).
  - Balance of spent brine (79,800m^3/day) disposed to the SBDF.
- Scenario B: Spent brine re-injection into deeper black sands around SBDF
  - Re-injection of spent brine directly into deeper black sands around the SBDF.
  - 20 injection wells at 86,400m^3/d (50L/s per well).
  - Balance of spent brine (79,800m^3/day) disposed to SBDF.
- Scenario C: Spent brine re-injection into deeper black sands around Salar margin:
  - Re-injection of spent brine directly into deeper black sands within the Salar.
  - 10 injection wells at 86,400m^3/d (100L/s per well) located in the western and eastern areas of the Salar.
  - Balance of spent brine (79,800m^3/day) disposed to SBDF.

The modelled brine re-injection well locations, along with the lithium brine abstraction wells, freshwater abstraction wells and the SBDF area, are shown in Figure 3.

The simulated groundwater level drawdowns for Scenario A (SBDF area shallow sediments) and Scenario B (SBDF area black sands) are shown in Figure 4.

The simulated groundwater level drawdowns for Scenario C (Salar margins) are shown in Figure 5 (with the image on left showing the actual predicted drawdown and the image on the right illustrating the difference in drawdown relative to the no re-injection base case).

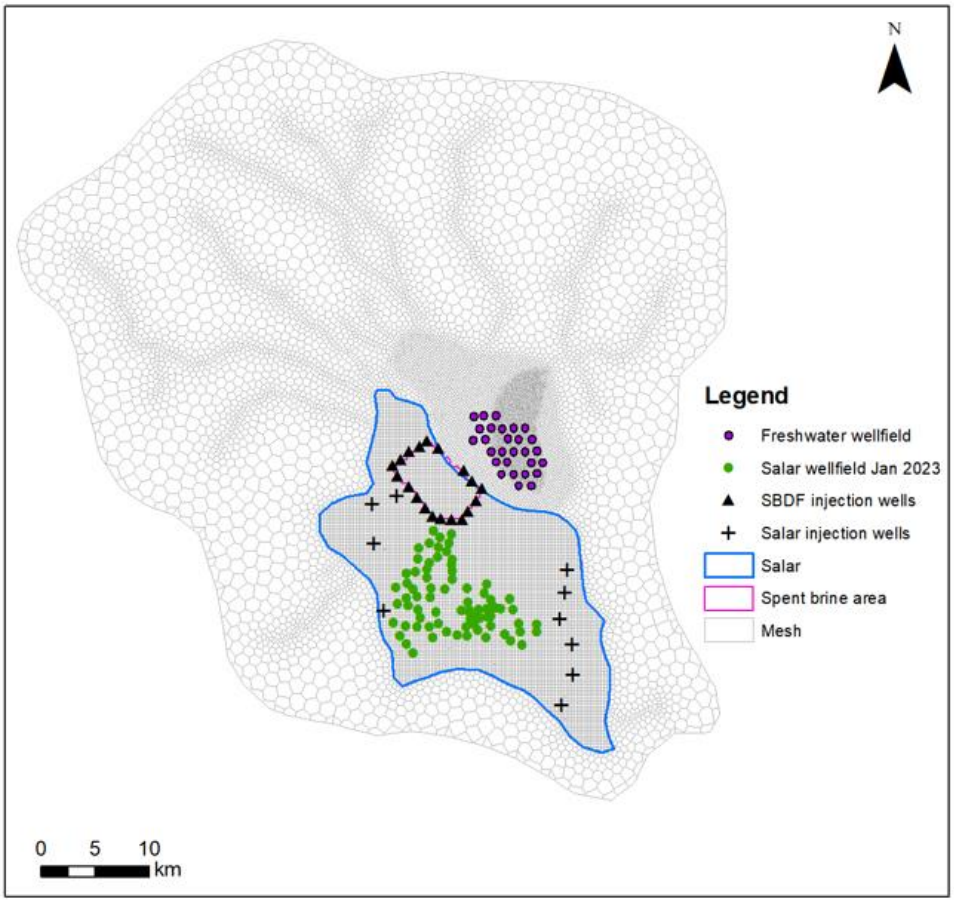


Figure 3: Brine Re-injection well locations

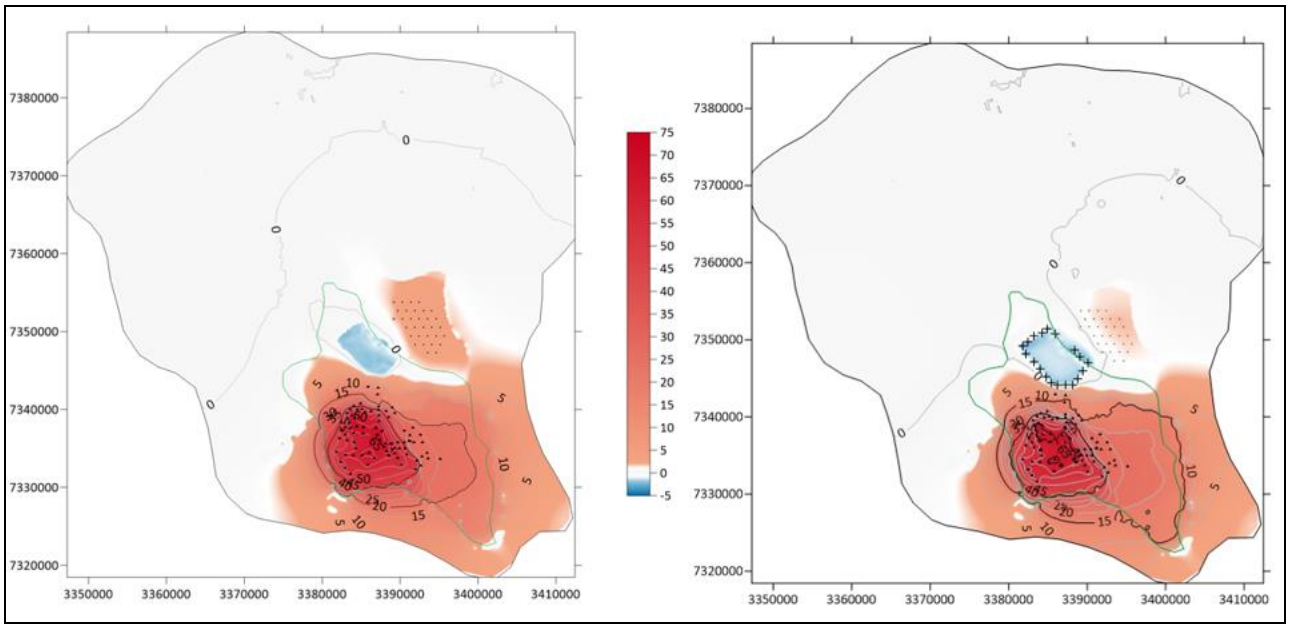


Figure 4: Re-injection SBDF area - predicted drawdown (m):
Scenario A shallow (left) & Scenario B deep (right)

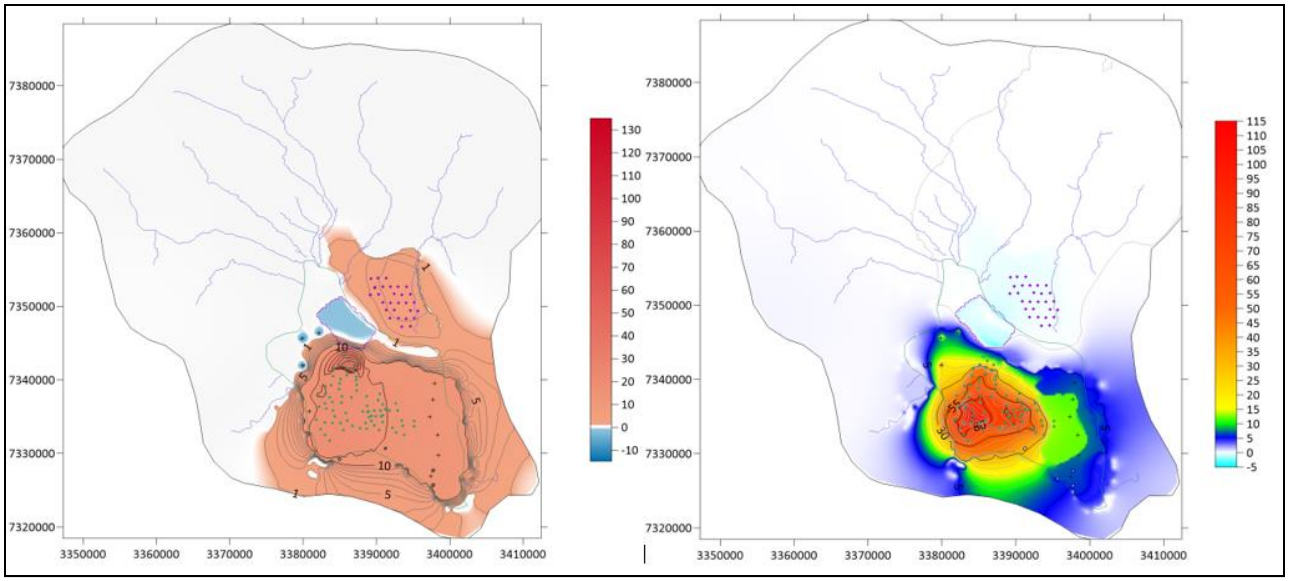


Figure 5: Re-injection in the Salar area: predicted drawdown (m) (left) & difference in drawdown (m) (right)

The key groundwater model findings were as follows:

- Scenario A - Shallow re-injection in the SBDF area leads to a very similar drawdown profile to the no re-injection base case scenario (all spent brine discharged to SBDF), as the limiting factor is the ability of the infiltrating spent brine to move laterally away from infiltration/injection area. Although, selection of alternative (further away) halite injection well locations (especially where unsaturated) would likely increase re-injection rates/volumes.

- Scenario B - Deep re-injection in the SBDF area leads to similar drawdown in the Salar area (when compared to base case) but significantly reduces the predicted drawdown in the raw water wellfield area.

- Scenario C - Re-injection into the Salar (in the scenario modelled) leads to similar drawdown in the raw water wellfield area (when compared to the base case scenario) but significantly reduces the predicted drawdown in the Salar area. The Salar drawdown was predicted to reduce from >90m to a maximum of

approximately 20m, although the mounding of water in the three injection wells in the northwest suggests that it is unlikely to be able to inject these volumes in this locality.

Scenario C is an extreme re-injection scenario, resulting in predicted surface flooding and significant reduction in Salar drawdown which may also lead to significant impact on lithium grades. However, it does illustrate that potential benefit that reinjection may have in reducing groundwater level drawdown. Although significant additional work is required to further assess spent brine reinjection, including field trials, as well as assessment of different lithologies, different saturated thicknesses, proximity to brine/raw water abstractions and sequencing.

In summary, the preliminary groundwater modelling completed in early 2023 suggested that re-injection in the early mine life would result in surface flooding (as the brine levels are already very close to ground level and there is only limited void space to accept the re-injected water). However, modelling suggested that later in the mine life, once lithium brine abstraction has caused a significant drawdown in the brine level, spent brine re-injection could be feasible (although significant risk of lithium resource dilution exists).

More recently in July 2025, Schlumberger (SBL) built a numerical model with the purpose of assessing the complete reinjection of spent brine, and the results indicate that reinjection of 100% of the spent brine is possible, however brine dilution will reduce the life of mine by approximately 5-8 years. Once the reinjection trials of the black sands are completed, SBL will reconcile the model and reassess the reinjection strategy.

1.5.4.5. Conclusions

Spent brine re-injection is unlikely to be a viable option in the early mine life, primarily as the brine level is currently very close to ground level. Although the findings of the planned deeper black sand re-injection trials are required to confirm if re-injection into the black sands may be a viable option later in the mine life. Spent brine re-injection later in the mine life may provide the opportunity to reduce the number of SBDF embankment raises (currently 3 lifts plus starter embankment), although it should be noted that significant re-injection wellfield infrastructure would be required (comprising numerous wells and pipelines). This spent brine re-injection could potentially be used to locally reduce brine/groundwater level drawdowns and as such mitigate potential impact. However, spent brine re-injection also has the potential to dilute the lithium resource and if not managed correctly could lead to surface flooding with saline water which could detrimentally impact the freshwater dependent ecosystems present within the Rincon Basin.

At this stage, effective management of significant volumes of spent brine via re-injection is not deemed a feasible option for the early Project. However, further re-injection field trials and the potential opportunity for later mine life re-injection will continue to be explored to assess whether spent brine reinjection may be incorporated into the Project at some point in the future which will require consultation with communities and approval from the regulators.

Small volume reinjection trials were completed close to Laguna Rincon and Vega Unquillar and described in detail in the Assessment of Brine and Water Resources document (Rio Tinto, September 2025).

1.6 National and Provincial Permitting Process and April 2024 ESIA

1.6.1 Governance of Mineral Resources in Argentina

Argentina’s mining sector operates within a federal constitutional structure, where both national and provincial governments play distinct but complementary roles.

Following the 1994 constitutional reform, the ownership of natural resources—including mineral deposits—was formally transferred to the provinces. This means that each province has full authority over the resources located within its territory, including the power to regulate access, development, and environmental oversight.

At the federal level, the Secretariat of Mining, under the Ministry of Economy, is responsible for:

- Formulating national mining policy, including sustainability and investment strategies.
- Promoting foreign and domestic investment in the mining sector.

- Ensuring transparency and accountability, including through participation in international initiatives such as the Extractive Industries Transparency Initiative (EITI) and the national Sistema de Información Abierta a la Comunidad sobre la Actividad Minera (SIACAM)—Argentina's Open Community Data Platform on Mining Activity.

- Coordinating with provinces through the Consejo Federal de Minería (COFEMIN)—Argentina's Federal Mining Council to align national and provincial priorities.

At the provincial level, each province has its own mining authority, typically under the provincial executive branch, although in Salta, it falls under the judicial branch. These authorities are responsible for the direct administration and regulation of mining activities, including:

- Issuing and revoking permits for exploration and extraction.

- Conducting environmental assessments and audits and enforcing compliance with provincial environmental laws.

- Collecting royalties and other non-fiscal contributions related to mining operations.

- Implementing provincial mining procedural laws, which vary by jurisdiction and define the specific steps and timelines for permitting.

This decentralized model allows provinces to tailor their regulatory frameworks to local conditions and priorities, while still operating within the broader national legal and policy context.

1.6.2 Environmental Impact Assessments

Environmental regulation in Argentina is based on a dual system of national minimum standards and provincial implementation. The key legal instruments include:

- General Environmental Law No. 25.675, November 2022[1].

- Law No. 24.585, 1995, amended the Mining Code in 2022[2] to include environmental protection provisions specific to mining.

Under this framework:

- The IIA (Informe de Impacto Ambiental)—or ESIA—is the core technical document required as part of the Evaluación de Impacto Ambiental (EIA) process. It is a mandatory prerequisite for obtaining environmental approval for mining and other high-impact Projects.

- The IIA is a comprehensive report prepared by the Project proponent (either public or private) that:

  – Describes the proposed Project in detail.

  – Analyses its potential environmental and social impacts.

  – Proposes mitigation, prevention, and compensation measures.

  – Includes a Plan de Gestión Ambiental (Environmental Management Plan).

  – It is the central document used by the competent environmental authority to evaluate whether a Project is environmentally viable.

[1] https://ampeid.org/documents/argentina/law-no-25675---general-environmental-law/

[2] https://www.iea.org/policies/15989-law-24585-by-which-the-mining-code-is-amended-to-incorporate-environmental-provisions

The IIA undergoes a technical, scientific, and legal review, culminating in the issuance of the DIA—or Environmental Impact Statement (EIS)—as the official resolution issued by the competent environmental authority that determines whether a proposed mining Project is environmentally viable. The DIA either:

- Approves the Project with specific environmental conditions and mitigation measures, or
- Rejects the Project if the impacts are deemed unacceptable or insufficiently mitigated.

The DIA includes enforceable conditions such as:

- Mitigation measures.
- Environmental monitoring and reporting.
- Community engagement.
- Emergency response plans.
- Closure and post-closure commitments.

Mining operations cannot commence until the DIA is formally approved. The DIA is typically valid for a period of two years, after which it must be renewed with updated environmental performance data.

1.6.3 April 2024 ESIA

In April 2024, the IIA for the Rincon 50Ktpa Project was submitted by RINCON, a subsidiary of Rio Tinto. The structure of the IIA follows the provisions of Law No. 24.585 referring to Environmental Impacts in Mining Activity, specifically its Annex III, which outlines the minimum content requirements. In addition, it includes additional sections to the legal content which the technical team judged to be of well-founded importance under the environmental, social, and internal standards of environmental and social responsibility of the Rio Tinto company.

This document also presents subchapters of ecosystem services (as part of the Description of the Environment Chapter), cumulative impacts (as part of the Description of Environmental Impacts Chapter), and the Closure Plan, presented within the Management Plans Chapter.

On 28 March 2025, the Ministry of Energy and Mining of the Province of Salta issued 65 observaciónes (technical and environmental comments) on the 2024 ESIA as part of the environmental permitting process.

In response RINCON prepared a detailed response document addressing the items raised and provided technical clarifications relevant to each of the points observed. The response to each point was made consciously and encompassing the information of greater reliability at the time of preparation of the document. The document, entitled Respuesta a Observaciónes, Informe de Impacto Ambiental, Proyecto 50Ktpa-Expte. 23.515, Salar del Rincon-Departamento Los Andes, Provincia de Salta, Rev.00, Mayo 2025.

On 26th August 2025, the Ministry of Energy and Mining of the Province of Salta approved the ESIA via the Resolution 101/25, which lists 102 obligations / conditions, which the Project will be working to define a working plan to ensure all conditions are met within prescribed timelines. It is important to clarify that the Project is dynamic and obtaining new information leads to the updating of the different components analysed. From this point of view, the company has issued its commitment to maintain and share the different data obtained with the relevant authority in a timely manner and when appropriate.

1.7 DIAs Received to Date

In Argentina, the DIA is a mandatory document that assesses the potential effects of a Project on the environment before its execution. The DIA is preventive and seeks to identify, predict and mitigate negative environmental impacts. The DIA is issued by the competent environmental authority and is part of a broader environmental management process. The DIA, together with the environmental management plan, constitutes the environmental license, which authorizes the Project and establishes the conditions for its execution.

To date, RINCON has received DIAs for the following Project components:

- DIA Resolution No. 192/22, Spent Brine Disposal Facility. Salta Mining Authority, 28 November 2022.
- DIA Resolution No. 198/22, Airstrip. Salta Mining Authority, 14 December 2022.
- DIA Resolution No. 062/23, Camp Stage 2. Salta Mining Authority, 26 April 2023.
- DIA Resolution No. 111/23, Infrastructure. Salta Mining Authority, 25 April 2023.
- DIA Resolution No. 009/23, Rincon 3000. Salta Mining Authority, 28 December 2023.
- DIA Resolution No. 13/24, Camp 400. Salta Mining Authority, 27 February 2024.
- DIA Resolution No. 98/24, Camp 1,500. Salta Mining Authority, 25 October 2024.
- DIA Resolution No. 40/24, Power Line. Salta Mining Authority, 2 March 2025.
- DIA Resolution No. 095-25, Cantera Rococo. Salta Mining Authority, 6 August 2025.
- DIA Resolution No. 096-25, Cantera Sapito. Salta Mining Authority, 6 August 2025.
- DIA Resolution No. 101/2025. Salta Mining Authority, Rincon 50Ktpa. 25 August 2025.

1.8 Permits and Compliance Management Systems

A matrix for identifying legal and other permitting requirements was last updated in March 2025 (Rio Tinto, EC-ARG-0754-HS-FRM-0004). This document summarizes: 1) the general national and provincial legal requirements; and 2) the requirements for each DIA received to date.

- Documents to be submitted to the authority prior to the start, or “X” number of days after the approval of the EIS (with “X” being defined by DIA conditions).
- Presentations to be made during the execution of the Project.
- Procedures for authorizations and notification of changes.
- Measures for Internal fulfillment.
- Inspections/audits by the Authority.
- Methods for communication to third parties without going through the Authority.
- Environmental and safety measures that does not involve submitting a report.
- Regulatory compliance without recurring delivery to the Authority.
- Regulatory compliance with occasional and/or recurring presentation to the Authority.
- Permits and registrations for other organisations.
- Permits for the 2nd 33kV transmission line and the right to abstract water.
- Declarative informative information provided by the Secretariat.
- Documents and actions to be performed during the closure stage.

RINCON undertakes audits against these requirements and documents compliance and observations.

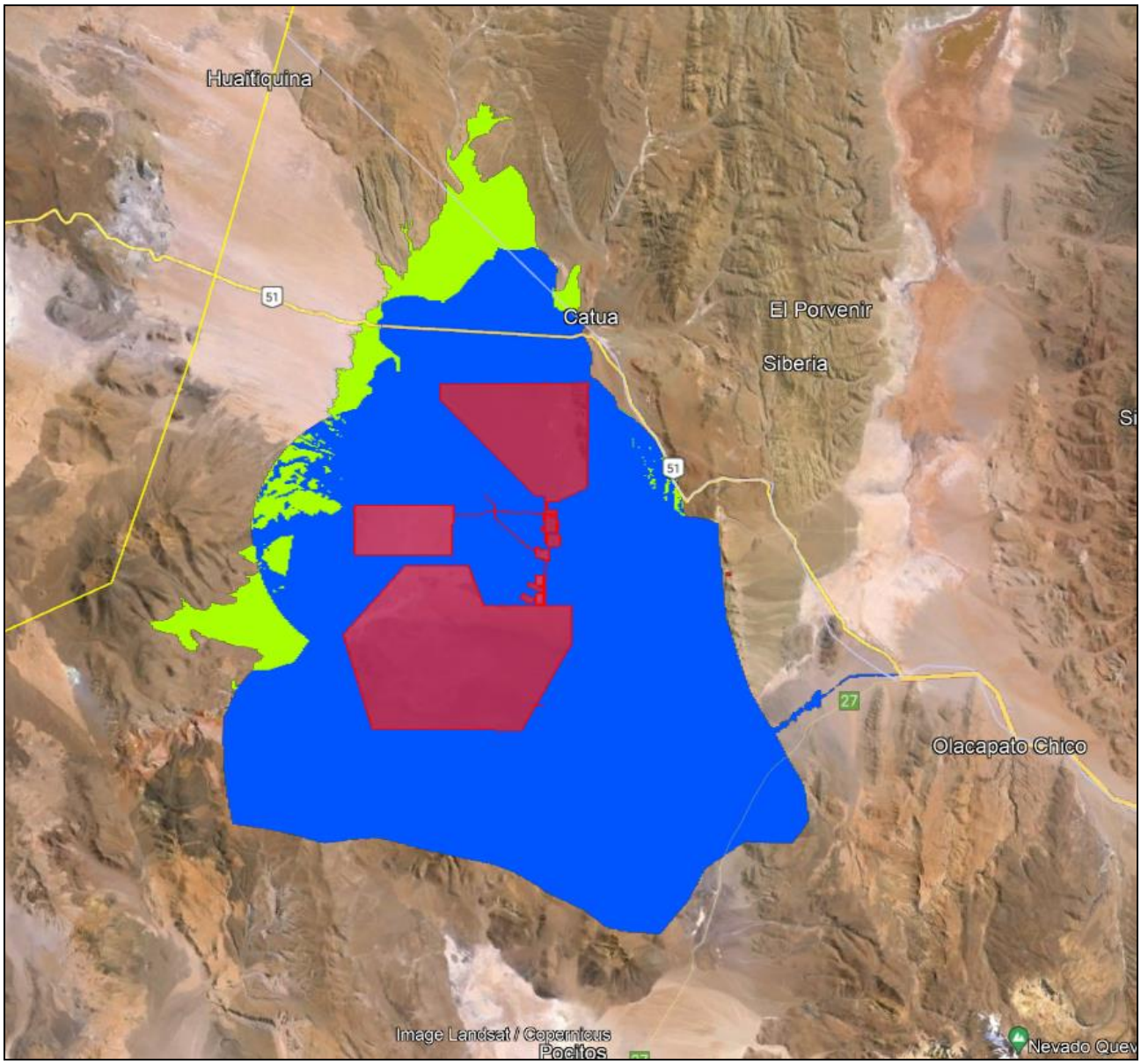
2 Areas of Influence

2.1 Concession and Use of Land

The Project file number, details of legal representation, legal address declared in the court file, geographical location, coordinates of the mining property, and basic information and coordinates for each of the polygons that make up the property of RINCON are presented in the 2024 ESIA.

2.2 Direct and Indirect Environmental Areas of Influence Update

The Direct and Indirect Area of Influence (AoI) has been updated to reflect the need to align it against IFC PSs, as presented in Figure 6.



Maroon – Operational Area.
Blue – Direct Environmental AoI.
Green – Indirect Environmental AoI (the green spots inside the blue area are related to noise modelling shadow zones).

Figure 6: Direct and Indirect Environmental AoI

- The Direct Environmental AoI was defined by overlaying the modelled groundwater drawdown, air quality and noise impacts to determine the exact area where impacts were identified; thus, defining the Direct AoI of the Project.

- The Indirect Environmental AoI was defined in recognition of the geological units where brine or raw water will be extracted, i.e., the sedimentary layers of the Salar de Rincon and the Catua Alluvial Fan. The Indirect Environmental AoI, then, was determined to include the mapped extent of these units as they would be most likely to have indirect but not yet identified impacts.

While the entirety of the Rincon Basin was studied under the 2024 ESIA --- part of which extends into Chile (refer to Section 3.1 Transboundary Effects) --- it is important not to confuse the AoI with the study area. The latter term designates entire sector that is directly related to the construction and operation of the Project, as well as the geographical limit determined by the hills around the Salar Rincon as it is considered a closed system where environmental relationships are restricted, and the geographical area that may experience the direct and indirect effects of the Project.

The Direct Social AoI (refers to the immediate and tangible social groups or individuals that are actively and clearly affected by the Project).and Indirect Social AoI (refers to secondary effects that influence people or social groups less directly, often through broader societal changes) for the Project comprise the parajes, puestos, and localidades presented in Table 7 and shown in Figure 7.

Table 7. Communities in the Direct and Indirect Social AoIs

Province/Department	**Territorial Units**	**Direct AoI**	**Indirect AoI**
Salta, Department of the Andes	Olacapato	X	
	Estación Salar de Pocitos	X	
	San Antonio de Los Cobres		X
Jujuy, Department of Susques	Catua	X	
Salta and Jujuy Provinces	Scattered populations	X	

Source: EC & Asociados, April 2024.

Scattered populations include the following puestos and places:

- Jachi/La Playa puesto, La Esquina puesto, Peña Alta puesto, and other areas used as a corral for animals and a drinking fountain (CP01).

- Talismán Mine (OP02).

- Bernarda Condorí puestos (OP01).

- Tres Ojitos puesto (RAPP01).

- Laguna Seca quarry (PP06).

- Justo Juez and Bailabuena puestos (OP06).

- Vega Grande and Morro Bola puestos (PP02).

- Tocomar puesto (OP04).

- Pte. Sarmiento puesto (OP03).

- Pascuala Casimiro Guayar 1 puesto (OP07).

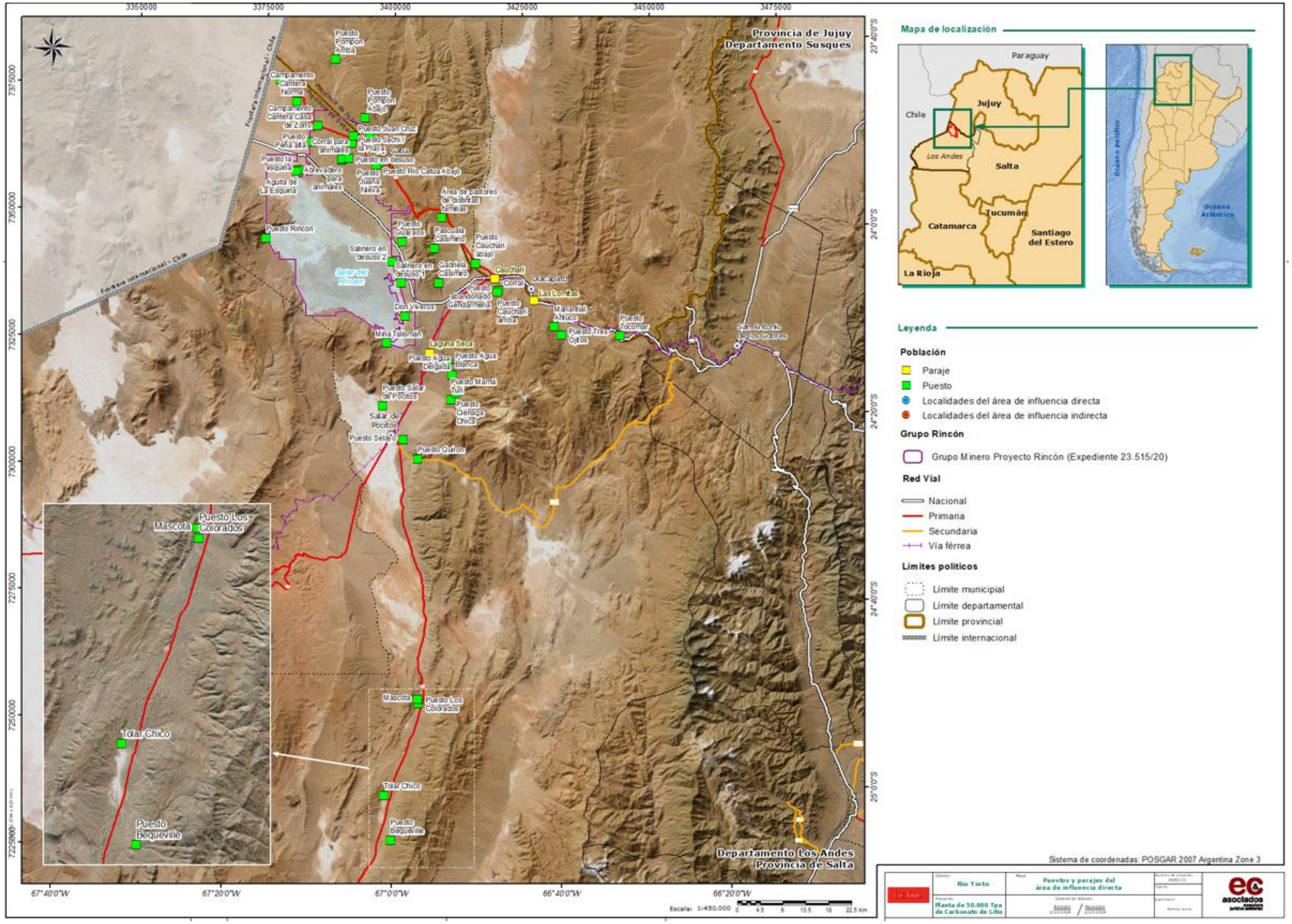


Figure 7: Parajes, puestos, and localidades in the Direct and Indirect Social AoIs

3 Updated Baseline

3.1 Transboundary Effects

3.1.1 Chile Transboundary Effects: Cross-Boundary Project's Influence Assessment (ERM 2025b)

A transboundary assessment was completed to evaluate the Project's potential cross-boundary influence.

The early baseline studies primarily concentrated on the Argentinian portion of the basin, where the Project will be developed and where the potential for environmental and social impacts is highest. Access to the Chilean sector has been limited due to political, logistical, and health and safety constraints.

The assessment updated and expanded analysis that incorporates environmental, political, social, and logistical variables across the transboundary zone. Much of the data was obtained from secondary sources and satellite imagery, providing a broader understanding of potential Project impacts beyond the immediate operational area.

The assessment offers a technically grounded, basin-scale perspective, integrating both primary and secondary data to ensure a comprehensive understanding of the region's environmental and social dynamics—within and beyond Argentinian territory—as summarised in the following sections.

3.1.2 Environmental Aspects—Considerations about Regional and Transboundary Characteristics

The Project is situated within the Rincon Basin, which spans a total area of 2,662km², with 86% (2,291km²) located in Argentina and 14% (371km²) in Chile. The basin features mountainous terrain ranging from 3,718masl at the centre of the Salar to 5,580masl in the western highlands. It is characterized by an endorheic drainage system, composed of intermittent and ephemeral streams shaped by the region's high altitude, low precipitation, and elevated evapotranspiration rates.

3.1.2.1. Geological and Hydrological Context of the Rincon Basin

The Salar del Rincon Basin is located in the Puna Altiplano region of the Central Andes, an area shaped by the most recent phases of Andean orogeny (neotectonics). These tectonic processes have led to the formation of endorheic basins, where extensive salars have developed due to the accumulation of evaporitic facies. Hydrologically, these basins exhibit a centripetal drainage pattern, characterized by a scarcity of perennial watercourses resulting from low precipitation, high infiltration rates, and intense evaporation, as described in the basic water balance information (Montgomery & Associates, 2025) below:

- Average annual rainfall across the Rincon basin is estimated at 86.8mm/yr (~7,170L/s).
- Average snow precipitation across the Rincon basin is estimated at 4mm/yr, of which 0.6 mm/yr is snowmelt.
- Total available precipitation across the Rincon basin is therefore 87.4mm/yr (~7,220L/s).
- Literature reports that infiltration ranges from 5% to 20% of precipitation for semi-arid to arid basins (Hogan and others, 2004); therefore, accordingly the estimated precipitation based recharge to the Rincon basin is estimated to range between approximately 360L/s and 1,440L/s.
- The application of the DGA-DIHA PUC (2009) method on the Rincon basin result in a total annual recharge ranging between 710L/s and 1,370L/s.
- Evaporation across the Rincon basin is estimated as 1,020L/s (low evaporation scenario), 1,500L/s (medium evaporation scenario) and 1,980L/s (high evaporation scenario).
- Considering the dynamic equilibrium in the salt flat, methodologically implemented through the intersection of both estimates, the range adopted for the annual average recharge of the main aquifers of the Rincon basin is between 1,020L/s and 1,370L/s (with the lower evaporation scenario setting the lower bound and the largest recharge of the DGA-DIHA PUC method setting the upper bound).

- Studies completed to date recommend adoption of the middle (average) value of this range as the Rincon basin main aquifer annual recharge value, which corresponds to 1,190L/s (equating to 16.5% of total volumetric precipitation).

3.1.2.2. Basin Morphology and Extent

The basin's depocenter is morphologically bounded by:

- East: Sierra de Guayaos, composed of Ordovician sedimentary rocks.
- West: Miocene volcanic formations of Cerro Rincon and an extensive ignimbrite field.
- South: Miocene-aged volcanoes Tul-Tul, Del Medio, and Pocitos.
- North: A prominent alluvial fan formed from sediments originating in the Catua, Pompón, and Huaytiquina sub-basins.

Using ALOS-PALSAR Digital Elevation Model[3] (DEM, 12.5m resolution), the drainage areas of the main basin and its sub-basins have been delineated in Figure 8.

3.1.2.3. Environmental Characteristics by Sector

The Argentinian sector of the basin hosts the greatest diversity of landforms, ecosystems, and hydrological features, including the Salar del Rincon and associated environments such as streams, lagoons, and vegas[4]. In contrast, the Chilean sector is defined by elevated topography typical of basin margins, with limited water availability. Satellite analysis has confirmed the absence of surface watercourses and the dominance of ignimbrite deposits, which restrict the development of significant aquifer systems.

In contrast, the Chilean sector of the basin features an elevated topography typical of a basin margin. There, the geological, morphological, and hydrological characteristics define an environment with scarce water resources. Detailed satellite analysis has identified the absence of surface watercourses and a predominance of ignimbrite deposits, which hinder the development of significant aquifer units.

3.1.2.4. Topographical Analysis

The DEM enabled a detailed assessment of the Rincon Basin’s topography, as shown in Figure 9. Elevation across the basin ranges from 3,660masl at the centre of the Salar to 5,580masl in the western highlands—where the basin extends into Chilean territory.

An analysis of the average elevation in the Chilean sector revealed a mean altitude of 4,413masl, approximately 695m higher than the Project's productive zone. This significant elevation difference suggests that the Chilean portion of the basin is unlikely to be directly affected by Project activities in the Salar, as its higher position naturally limits hydrological connectivity and potential impact pathways.

Additionally, the relationship between geomorphology and hydrology in this elevated terrain reinforces the area's low environmental sensitivity. As previously noted, the Chilean sector is dominated by ignimbrite deposits and lacks significant surface water bodies. These geological conditions, combined with limited soil permeability, inhibit groundwater recharge and aquifer development—further supporting the conclusion that this area presents a low risk of environmental impact from Project operations.

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[3] https://forum.earthdata.nasa.gov/viewtopic.php?t=5589

[4] Vegas: Local name for mountain wetlands. These are areas permanently or temporarily flooded or saturated by surface water or groundwater at a frequency and duration sufficient to support vegetation adapted to saturated soil conditions (Mitsch & Gosselink, 2007; Keddy, 2010).

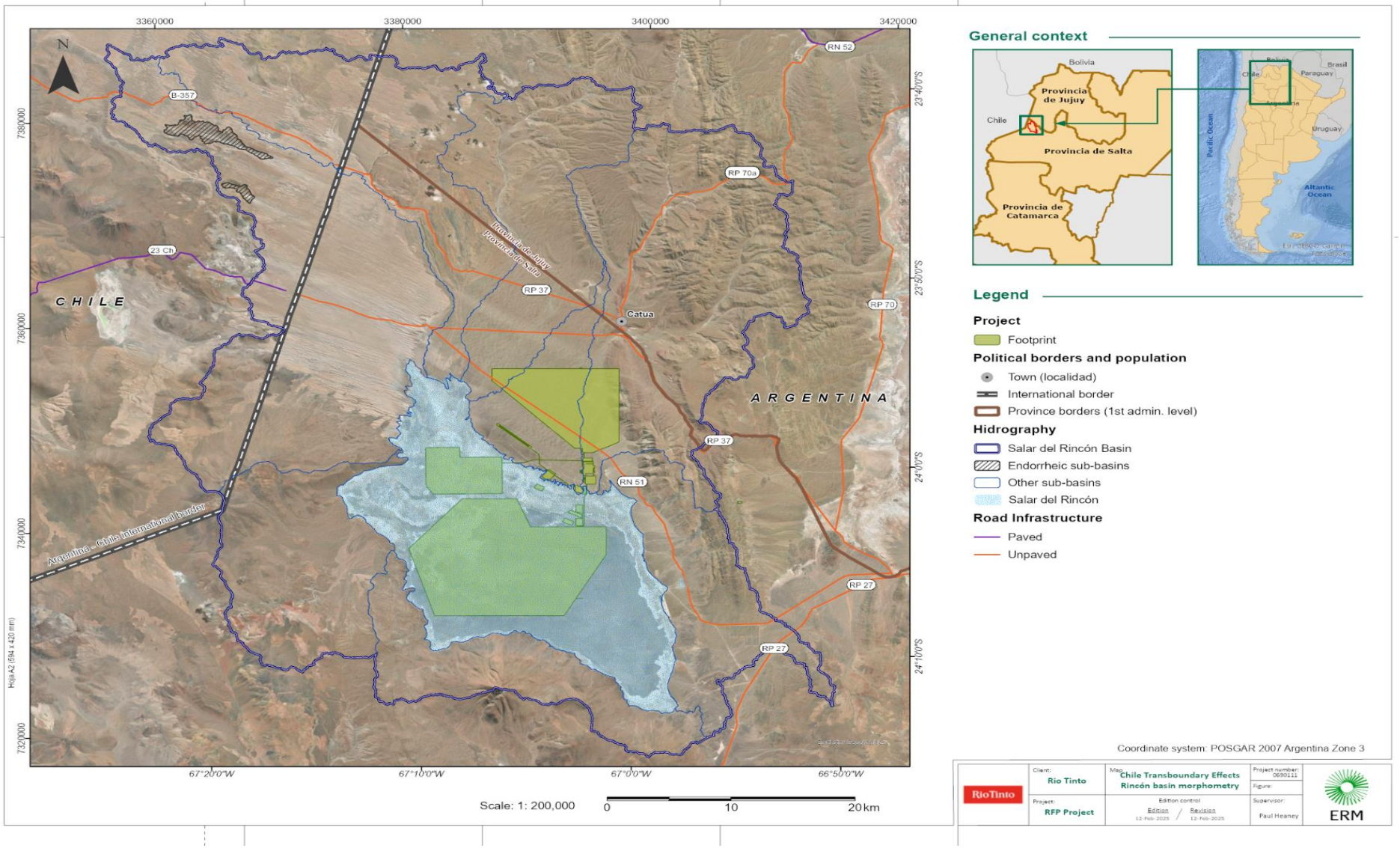

Figure 8: Salar del Rincon Basin boundaries

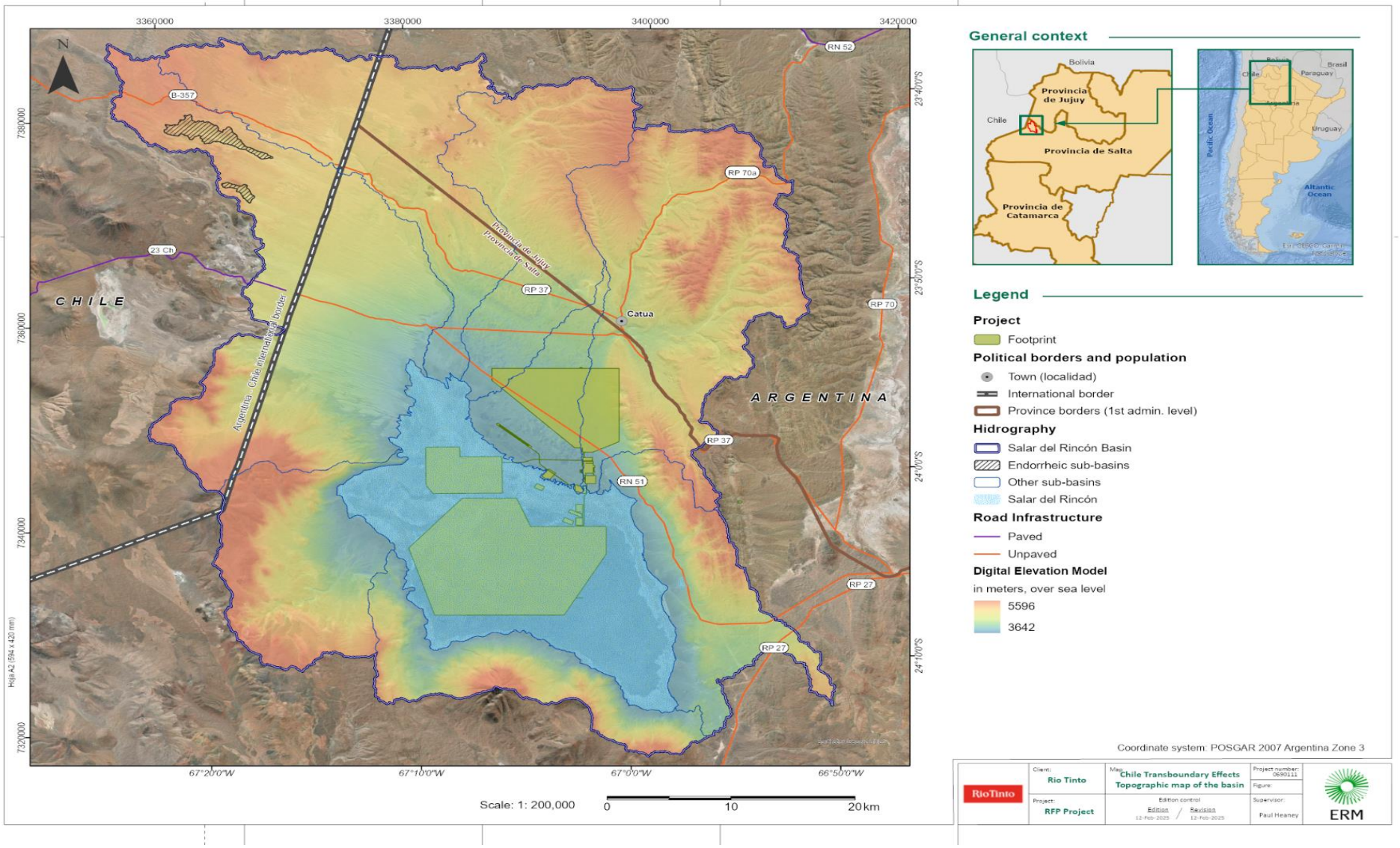

Figure 9: Topographic map of the Rincon Basin

3.1.2.5. Recharge and Surface Hydrology

The Puna region is characterized by an arid, high-altitude climate, marked by extreme diurnal temperature variations and low annual precipitation. Average yearly rainfall is typically less than 120 millimetres (mm), with the majority occurring during the austral summer months of January and February, driven by the South American Monsoon System, as shown in Figure 10 and Figure 11. This monsoonal influence plays a critical role in shaping the seasonal distribution of precipitation across tropical South America, including the Puna plateau (Grimm & Vera, 2005).

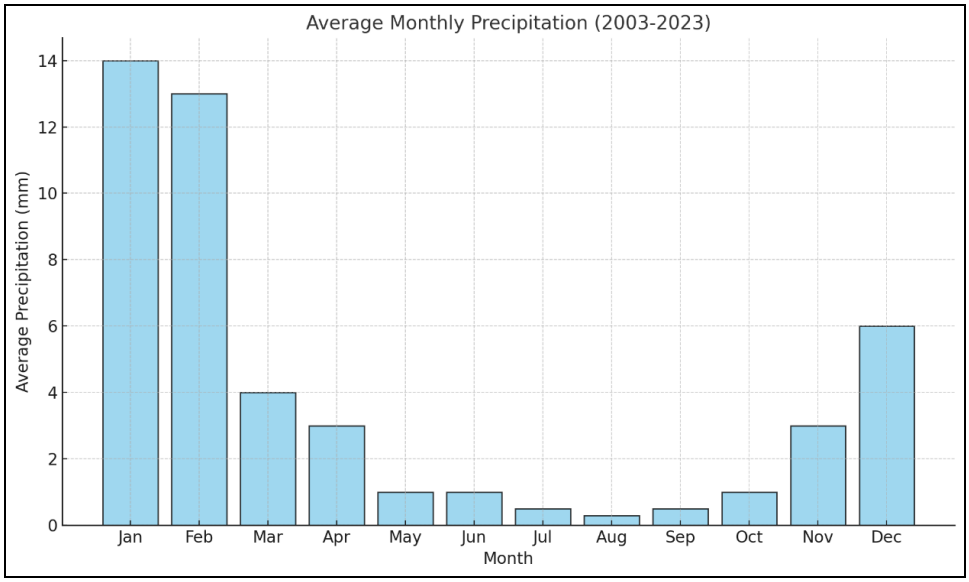

Figure 10: Average monthly precipitation in the Rincon Basin

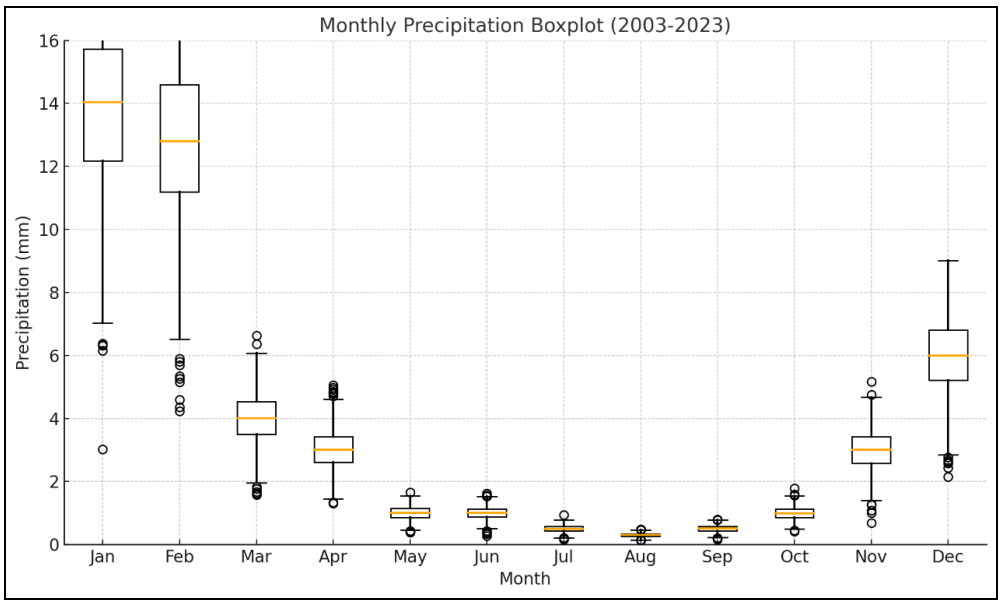

Figure 11: Monthly precipitation boxplot

The data used to generate these charts were sourced from the ERA5-Land Reanalysis Dataset[5], which provides high-resolution climate and meteorological information. With a spatial resolution of approximately 9km (0.1°), ERA5-Land is well-suited for detailed regional-scale analyses.

[5] https://www.ecmwf.int/en/era5-land.

To enhance local accuracy and representativeness, the dataset was refined through bilinear interpolation, calibrated using observed precipitation records from the meteorological station at the Project site. This calibration process aligns the reanalysis data more closely with actual on-site conditions, improving the reliability of the results.

The analysis of precipitation data—presented through monthly averages (Figure 10) and boxplots (Figure 11)—reveals marked seasonal variability in rainfall patterns across the Rincon Basin. The highest precipitation levels occur during January and February, coinciding with the peak of the South American monsoon, while the remainder of the year experiences minimal rainfall.

These patterns are influenced by localized convective storm events, which tend to be spatially heterogeneous and are often confined to specific sub-basins within the region. This leads to an uneven distribution of rainfall, both temporally and geographically. Furthermore, recharge dynamics are highly sporadic and unpredictable, driven by the irregular nature of these storm events and the arid climatic conditions, which limit infiltration and sustained aquifer replenishment.

3.1.2.6. Surface Water Features and High-Altitude Wetlands

Surface water bodies in the Rincon Basin are primarily confined to the central Salar area and its margins, where springs give rise to high-altitude wetlands, locally known as vegas. These vegas are typically associated with seasonal or perennial watercourses, which exhibit variable flow rates throughout the year.

Vegas play a critical ecological and socio-cultural role, supporting regional biodiversity and serving as vital resources for traditional livelihoods, including livestock grazing by local Indigenous communities. Their hydrological dynamics are influenced by a combination of precipitation, snowmelt, and aquifer discharge, making them highly sensitive to climate variability and anthropogenic pressures.

In most cases, watercourses infiltrate before reaching the Salar’s discharge zone due to the high permeability of riverbed sediments. While some segments of perennial flow exist, the majority of watercourses are intermittent or ephemeral, underscoring the limited availability of permanent surface water resources in the region (Figure 12).

3.1.2.7. Hydrological Characteristics of the Ignimbrite Sub-Basin

The ignimbrite sub-basin faces significant limitations in terms of surface water availability. While it is considered a recharge zone due to the fractured nature of its ignimbrite rocks—which allow for some degree of infiltration—the limited precipitation in the area contributes only marginally to the overall hydrogeological system of the Salar. This contrasts with more effective recharge zones, such as the alluvial fans to the north (Huaytiquina, Pompón, and Catua) and the Guayaos Highlands to the west.

Although infiltration in the ignimbrite zone supports subsurface water balance, it does little to sustain surface water resources. As a result, water availability for both biodiversity and human use is minimal, reinforcing the area's classification as hydrologically constrained and of low environmental sensitivity in terms of surface water dynamics.

3.1.2.8. Physical Analysis of the Border Sector

Two sub-basins within the Rincon Basin extend their headwaters westward into Chilean territory: 1) the Huaytiquina sub-basin in the northwest; and 2) the Ignimbrite sub-basin directly to its south. A comprehensive analysis of the geology, geomorphology, and hydrology of this border region confirms the continuity of geological units across the international boundary, as well as the presence of incipient closed basins formed through ongoing Andean tectonic activity.

These findings underscore the transboundary nature of the basin’s physical systems and highlight the importance of integrated basin-scale assessments when evaluating environmental and hydrological dynamics.

Volcanic Geology and Hydrogeological Implications in the Northwestern Sector

The northwestern sector of the basin is characterised by extensive volcanic lava flows and effusive mantles, with prominent features including the Atana ignimbrite and the Jama volcanic complex (Figure 13). In this region, the Atana ignimbrite is composed of two superimposed units:

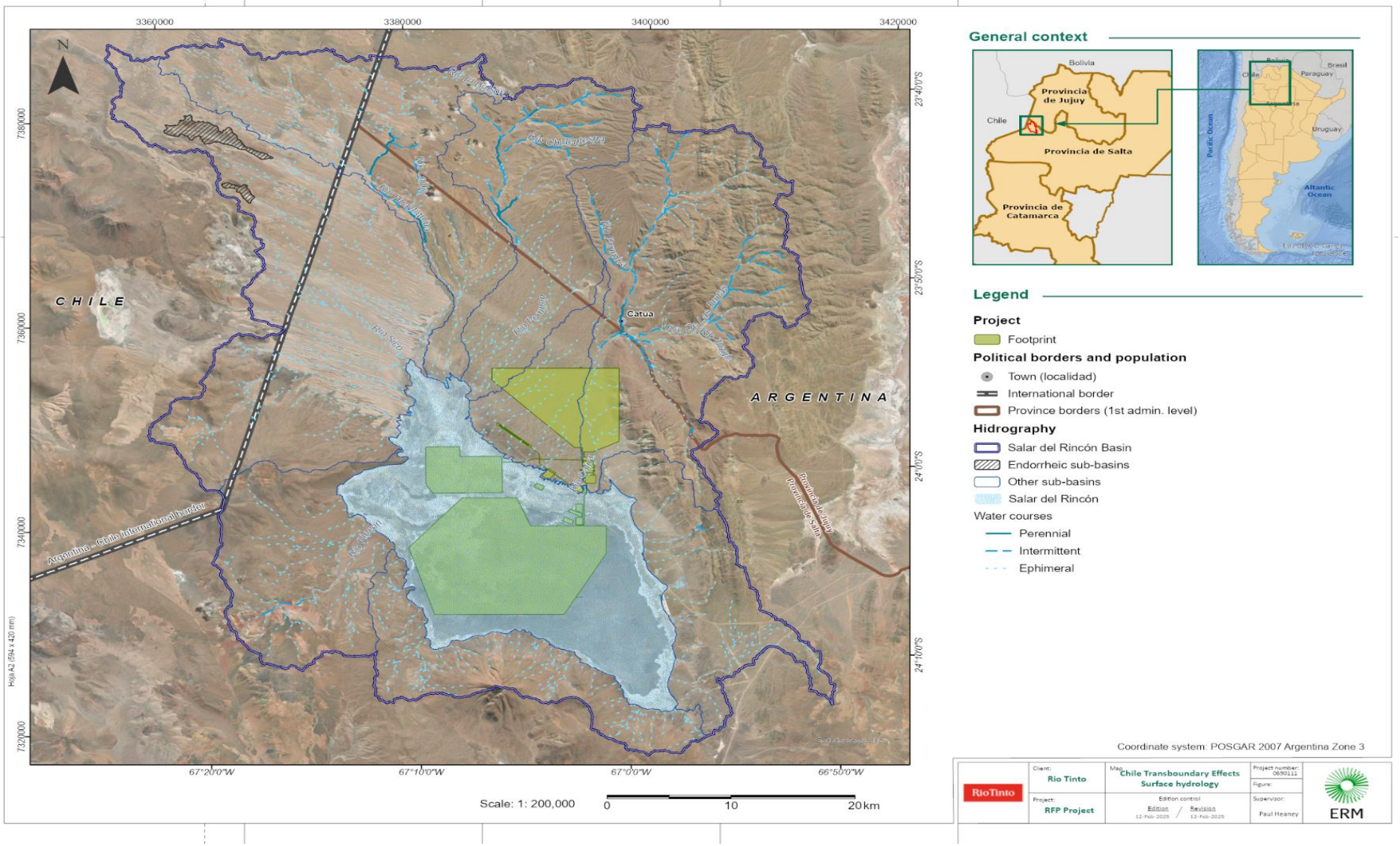

Figure 12: Hydrographic map of the Rincon Basin

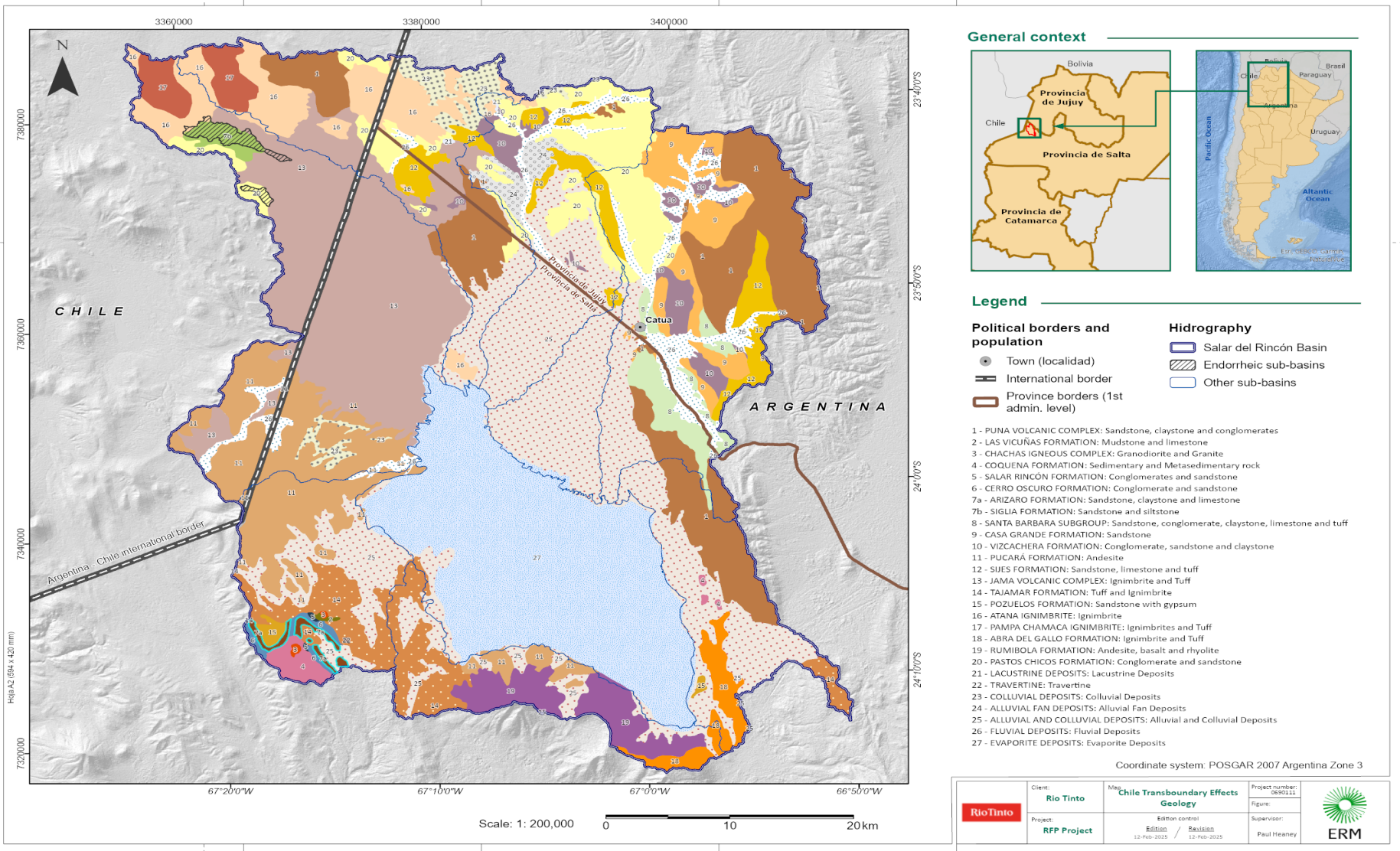

Figure 13: Geologic map of the Rincon Basin

The lower unit is reddish in colour and contains abundant pumice, volcanic clasts, Ordovician sedimentary fragments, and phenocrysts of quartz and biotite.

The upper unit is greyish white, consisting of lithic fragments of Ordovician rocks, pumice, biotite, and quartz, all embedded in a vitreous matrix.

These two ignimbrite layers are separated by a 0.5m-thick pyroclastic surge deposit. The origin of these deposits is linked to the La Pacana Caldera in Chile, with an estimated age of 4 to 4.5 million years (Pliocene).

The Jama volcanic complex, composed primarily of andesites and dacites, is associated with Upper Miocene volcanism in the Northern Puna. These volcanic deposits, formed by pyroclastic flows, exhibit a massive and compact structure, resulting in low primary permeability. However, tectonic activity in the region has induced fracturing, which imparts secondary porosity to the rock mass. These fractures can facilitate vertical infiltration of precipitation, potentially recharging underlying sedimentary units—though only in areas where deep faulting extends through the entire volcanic sequence.

As a result, the infiltration and water retention capacity in this sector is significantly lower than in areas dominated by sedimentary formations, such as alluvial fans. This geological context limits the hydrogeological contribution of the northwestern sector to the broader basin system.

Geomorphological Characteristics of the Volcanic Landscape
The landscape in this sector is defined by gentle slopes formed through the accumulation of thick lava flows and pyroclastic deposits, which blanket the terrain in extensive mantle-like formations. The volcanic structures exhibit clear evidence of mass-wasting processes and fluvial erosion, contributing to the dynamic reshaping of the terrain.

Distinct tabular plateaux and erosional ramps are present, sculpted by both vertical incision and headward erosion. These features often display block detachments along their slopes and fronts, leaving behind remnant pedestal rocks that mark the progressive retreat of the landscape. This geomorphological configuration reflects the interplay between volcanic deposition, tectonic uplift, and erosional forces over time.

3.1.2.9. Hydrology

The fluvial dynamics in this sector have developed over volcanic and pyroclastic deposits, resulting in a parallel drainage pattern predominantly oriented in a northwest-southeast (NW–SE) direction. This region encompasses two key sub-basins: the Huaytiquina sub-basin to the northwest and the Ignimbrite sub-basin to the south.

Huaytiquina Sub-Basin (Northern Chilean Sector)
In the Chilean portion of the Huaytiquina sub-basin, linear drainage channels are incised into ignimbrite deposits. However, perennial surface watercourses are absent, and existing streams are intermittent or ephemeral. Approximately 7km from the international border, small vegas (high-altitude wetlands) have been identified (Figure 14). These vegas are located 40km from the Project's productive area and at an elevation of over 4,400masl, roughly 700m higher than the Salar, reducing the likelihood of hydrological connectivity with the Project area. For visualization purposes, polygons have been used to delineate their areas of influence; however, it is important to note that these polygons do not represent actual water or vegetation cover. In fact, the vegas exhibit limited spectral response and minimal water flow, indicating low ecological activity.

Ignimbrite Sub-Basin
The northern sector of the Ignimbrite sub-basin exhibits a parallel drainage pattern oriented west-northwest to east-southeast (WNW–ESE), structurally controlled by fractures within ignimbrite deposits. Similar to the Huaytiquina sub-basin, these drainage channels are intermittent or ephemeral. Two additional vegas have been identified 6km and 8km from the international border, situated 35km from the Project's productive area at elevations of approximately 4,300masl—about 600m higher than the Salar.

A detailed analysis of the largest vega revealed its location within a topographic depression, likely formed by neo tectonic activity. This depression constitutes a small, elongated closed basin (endorheic) oriented NW–SE, with no surface hydrological connection to the broader Rincon Basin.

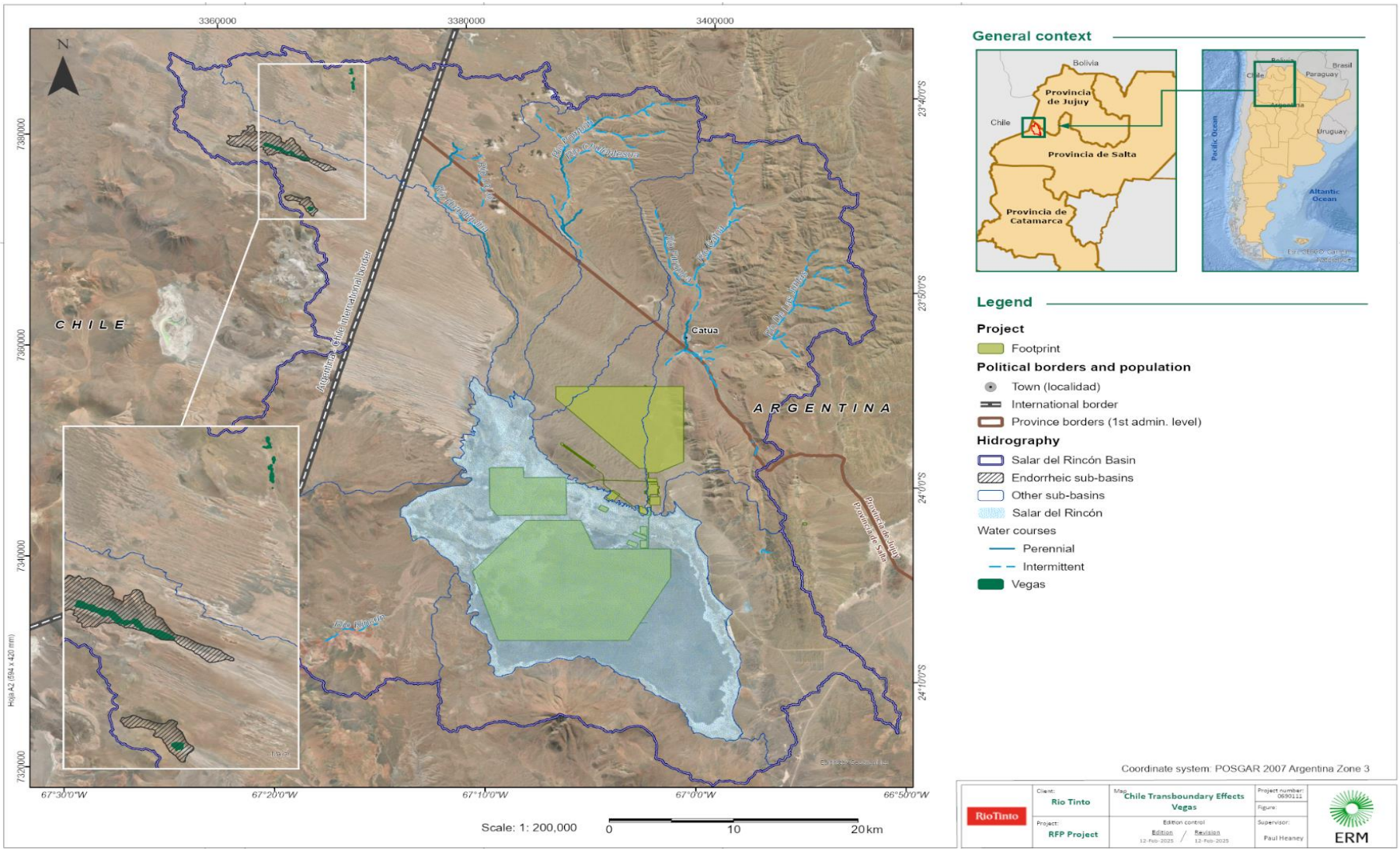

Figure 14: Location of vegas in the Chilean territory

Southern Ignimbrite Sub-Basin
Further south, the Ignimbrite sub-basin extends along the northern and northwestern slopes of Cerro Rincon, where drainage is poorly defined and characterized by divergent, ephemeral channels. No perennial surface water bodies are present in this area, reinforcing the sector's classification as hydrologically limited.

3.1.3 Biodiversity Aspects

3.1.3.1. Protected and Ecologically Sensitive Areas in the Rincon Basin

The Rincon Basin overlaps with three legally protected areas and two internationally recognized conservation sites (Important Bird Area (IBA) / Key Biodiversity Area (KBA)) within Argentina:

- Los Andes Provincial Reserve (Salta).
- Altoandina de la Chinchilla Reserve (Jujuy), which also includes the Lagunas de Vilama and Pululos IBA/KBA.
- Olaroz-Cauchari Provincial Reserve (Jujuy), also designated as an IBA.

The Project's operational area partially overlaps with the Los Andes Reserve, and its wellfield is located near one of the basin's key biodiversity hotspots: the Rincon Lagoon and Vega. This area supports approximately 72 fauna species across various taxonomic groups and 34 flora species (data obtained from the October 2024 and March 2025 monitoring as part of the Environmental Management Plan – DIA No. 9/23 – Rincon Litio R3000), with particular importance for aquatic birdlife, including three species of flamingos:

- Andean Flamingo (*Phoenicoparrus andinus*).
- Puna Flamingo (*Phoenicoparrus jamesi*).
- Chilean Flamingo (*Phoenicopterus chilensis*).

Additionally, the reserve contains extremophile habitats, particularly along the western margin of Rincon Lagoon and in the "Ojos de Agua" (spring-fed pools) located west of the Salar.

Other ecologically important habitats within the Argentine portion of the basin include:

- Catua Vega.
- Huaytiquina Vega.
- Pompón Vega.
- Bailabuena Stream.
- Ignimbrites Canyon (eastern edge of the ignimbrite plateau).

These areas are critical for maintaining regional biodiversity and are considered in the Project's environmental planning and impact assessments.

3.1.3.2. Environmental and Hydrogeological Characteristics of the Ignimbrite Border Region

The ignimbrite border region holds hydrogeological significance due to its role as a recharge zone, where fractured ignimbrite formations allow for limited infiltration. However, the plateau areas overlying the ignimbrite exhibit very low water availability, restricting their ecological and hydrological contribution.

To better understand the region's ecological characteristics, Environmental Resources Management (ERM) commissioned Dynamik (2025) to conduct a vegetation and soil cover assessment across the Rincon Basin. The study involved drone-based surveys and ground-truthing through vegetation parcels. Results revealed that the area is dominated by rocky terrain and zonal vegetation, which is adapted to poor organic soils, high altitudes, and regional climatic and edaphic conditions. The identified vegetation units include:

- Shrub Steppe.
- Mixed Steppe.
- Grass Steppe.

These units are characterized by low species diversity and sparse vegetative cover.

In terms of fauna, the survey recorded the presence of *Liolaemus* lizards in the northern section of the ignimbrite zone, near the Huaytiquina River. Further assessment of these species is currently ongoing.

3.1.3.3. Protected Areas in Chilean Territory

There are no legally protected or internationally recognised conservation areas overlapping the Chilean portion of the Rincon Basin. The nearest protected area is the Flamencos National Reserve, which also holds IBA/KBA status. It is located approximately 34km from the basin and 75km from the Project's operational area (see Figure 15).

3.1.3.4. Extension of the Direct AoI

During the preparation of the 2024 ESIA, the impact of this Project has been evaluated considering various aspects. Potential effects on air quality, generated noise, and the groundwater drawdown due to pumping have been analysed and modelled (Figure 16). Following this analysis, the Direct AoI for the Project's operational lifespan has been defined. Each model is periodically updated with new data obtained from the monitoring program, allowing adjustments to the estimates as additional information becomes available.

In particular, the hydrogeological modelling helps estimate the distance at which the groundwater could be disturbed at the periphery of the productive area. As shown in the figure, the affected area of the groundwater levels extends to the edge of the basin only in the eastern sector. As per the results, no significant groundwater level disturbances were identified in the western sector, particularly in the Chilean part of the basin.

3.1.4 Social Aspects

3.1.4.1. Social Background and Transboundary Social Interactions

As part of the social baseline for the Project, surveys conducted in 2024 and 2025 across the Salar del Rincon Basin —covering the Department of Los Andes (Salta) and Department of Susques (Jujuy)— identified a total of 57 puestos (traditional pastoral stations used by indigenous people), of which 49 are active and used for transhumance (act of moving livestock from one grazing area to another), while 8 are abandoned (Rio Tinto, Supplemental Social Baseline (Puesteros), September 2025).

During the fieldwork, puestero families were consulted regarding their grazing routes, secondary puestos, and locations of water intake for both human and livestock consumption. All recorded points are located within Argentine territory, as shown in Figure 17.

Among the active puestos, the ones closest to the Chilean border include La Esquina, Peña Alta, La Playa 1/Jachi, and La Playa 2 (CP01). These are situated approximately 11km to 14km from the international boundary. One abandoned puesto, Puesto Huaytiquina (CP02), lies just 3km from the border, but there are no records of ongoing traditional activities in its vicinity.

As a complement to the field visits carried out in the Argentine extension of the Salar del Rincon Basin, a review of the basin was carried out from satellite images in its Chilean extension. In this evaluation, no structures were recorded that could be identified as transhumance puestos, corrals, or similar buildings that indicate traces of grazing activity. From the border, the closest construction is in the Salar el Laco (which corresponds to another neighbouring basin), located 17km in a straight line to the west, from Paso de Sico, and approximately 45km from the Project. This structure corresponds to an abandoned salt mine. No grazing activities are recorded.

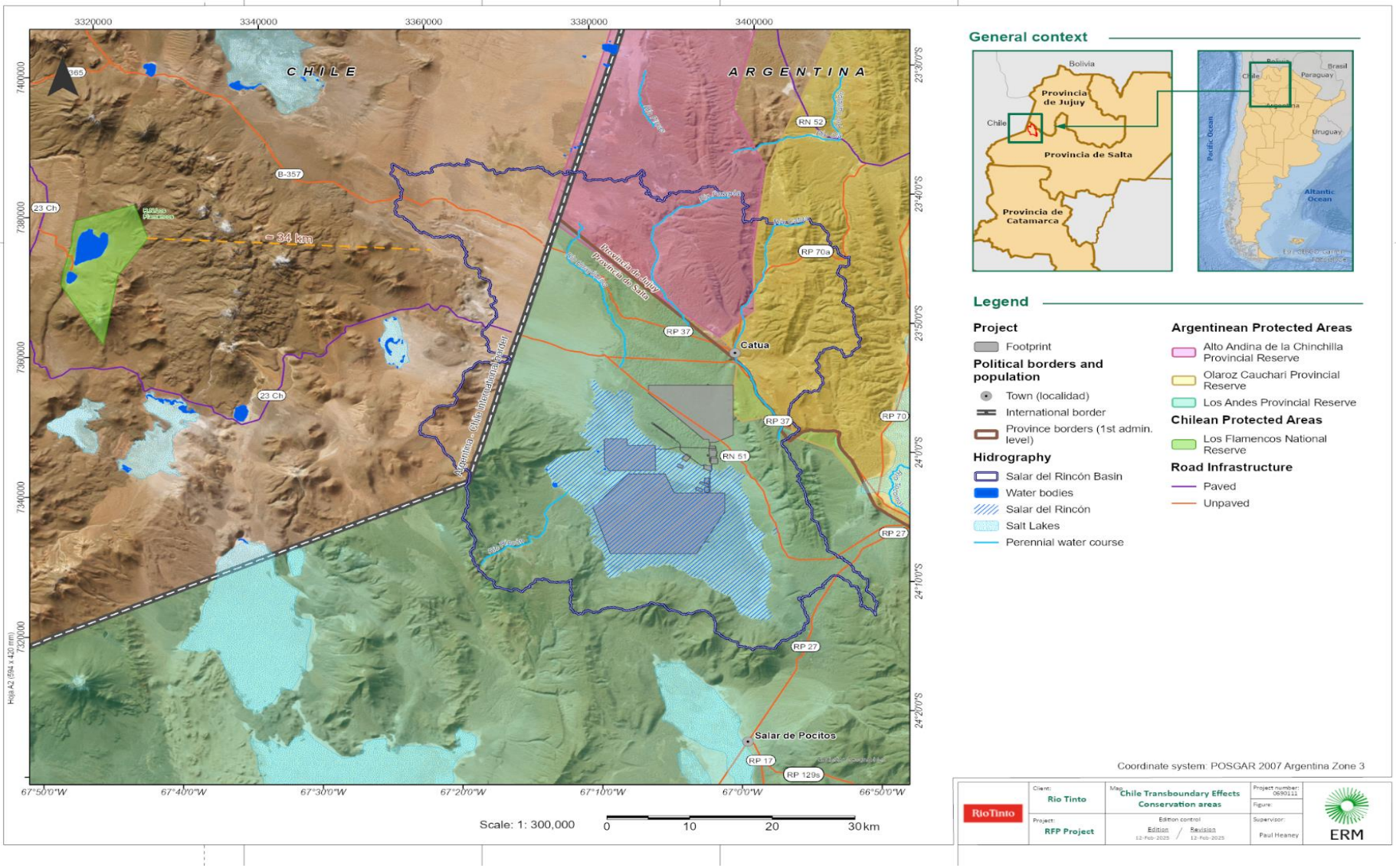

Figure 15: Nearest protected areas in Argentinean and Chilean sectors of the Rincon Bas

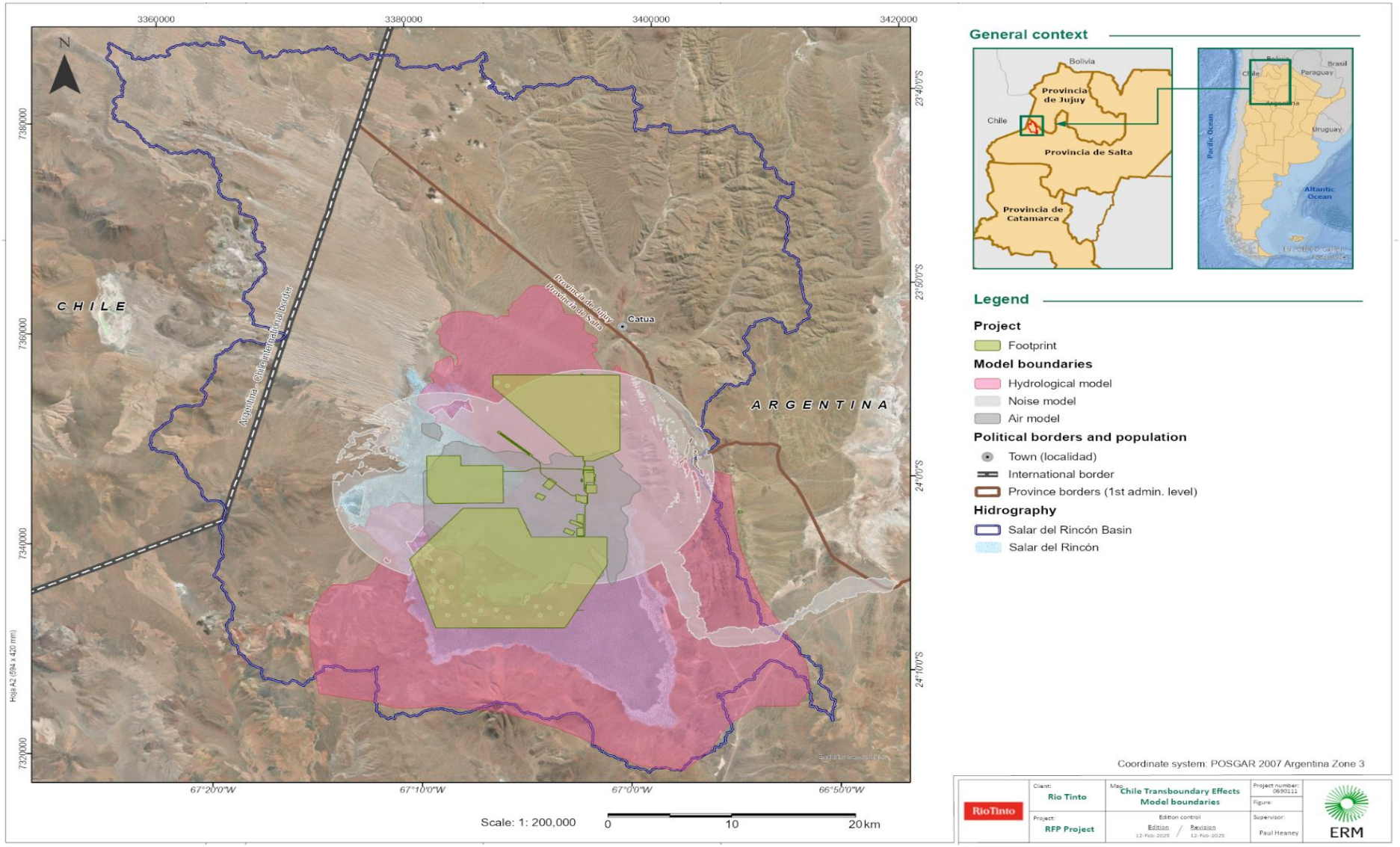

Figure 16: Hydrological, noise, and air model boundaries

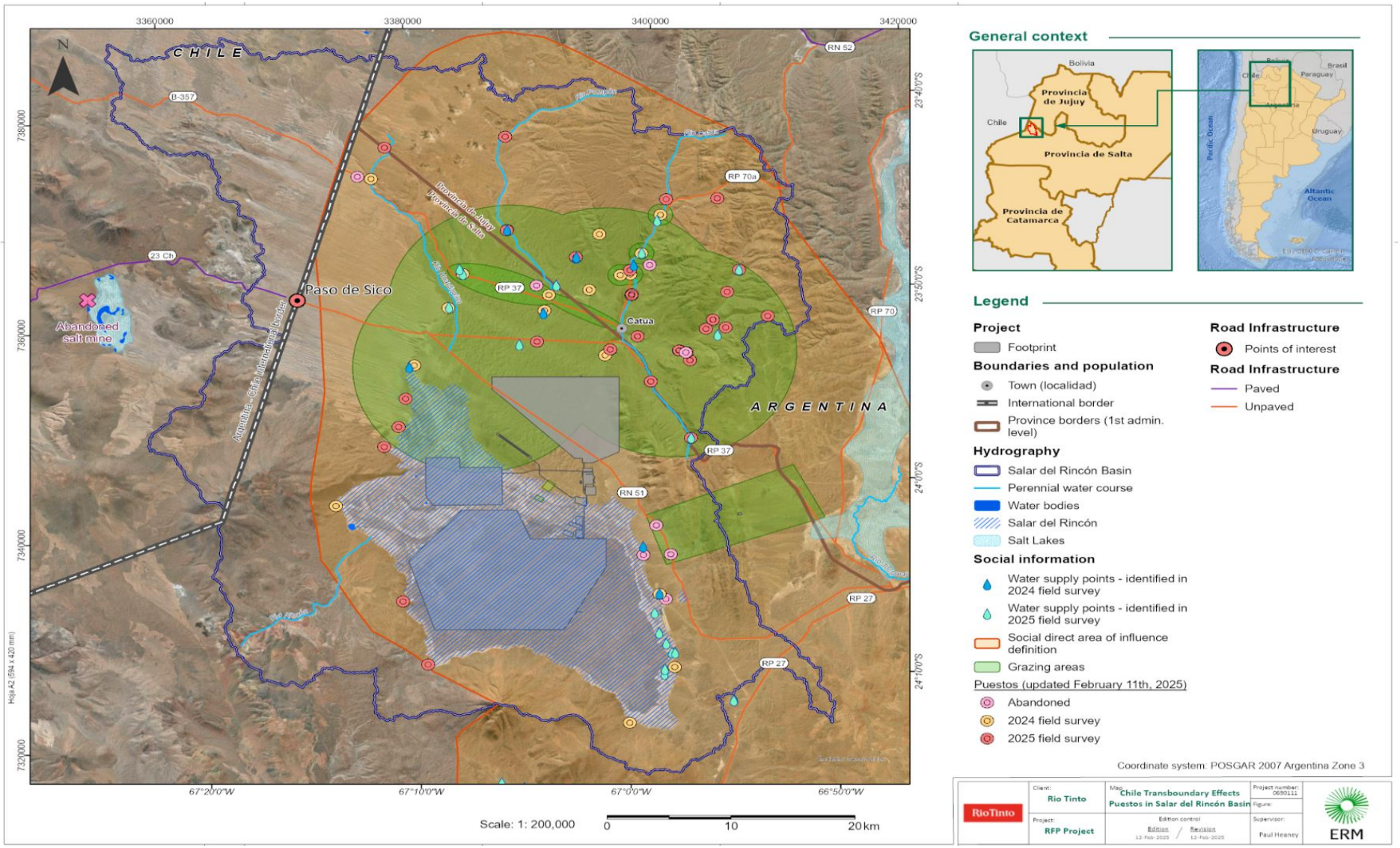

Figure 17: Puestos, grazing areas, and water intakes in the Salar del Rincon Basin

Additionally, public reports were consulted in the Chilean Government's Environmental Assessment System[6] on mining Projects located in the San Pedro de Atacama commune, El Loa Province, Antofagasta region in Chile, with the intention of inquiring about the rural population in the Salar del Rincon Basin (Figure 18). The system was deepened in the El Laco Project, the closest mining venture to the study area according to the National Mining Society of Chile, in charge of the union of Codelco and SQM. In the reports consulted, it is mentioned that there is no evidence of people in this region near the border. The nearest population centre following the route to the west is Socaire, 120km from Paso de Sico on Route No. 23.

3.1.4.2. Social Background and Transboundary Dynamics

The communities and inhabitants of the Salar del Rincon Basin identify primarily with the Atacama and Kolla Indigenous peoples—both of which have historically been transboundary ethnic groups. Over time, however, their cultural practices, territorial use, and perceptions of the international border have evolved, influenced by shifting political, economic, and environmental conditions.

Recent studies on transhumance and mobility patterns in the basin reveal that cross-border grazing is no longer practiced. While historical accounts and ethnographic literature confirm that these communities once moved freely across the Argentine–Chilean border, current conditions have significantly restricted such movements. One of the primary deterrents is the increased militarization of the border, which includes customs controls and the lingering threat of landmines in certain areas (Molina Otarola 2008[7], 2011[8]).

This situation stems from historical tensions in the region. In 1978, amid escalating disputes between Chile and its neighbours—Argentina, Bolivia, and Peru—the Chilean government implemented a defensive strategy that included the deployment of landmines along its borders. According to the Chilean National Demining Commission[9] (CNAD), a total of 199 minefields were established across Chile's borders, with 137,717 anti-personnel and anti-vehicle mines recorded in the Arica and Parinacota Region, and 29,822 mines in the Antofagasta Region.

Although Chile declared the completion of its demining campaign in 2020 under the Ottawa Convention on the Prohibition of Anti-Personnel Mines[10] (1997), incidents continue to occur. Notably, in 2023, a mine explosion in the Arica region injured six military personnel, underscoring the ongoing risks in certain areas. Over the past four decades, Chile has reported approximately 200 casualties related to landmines or unexploded ordnance.

Given these conditions, the absence of current cross-border grazing is not only a reflection of changing cultural practices but also a response to real and perceived risks associated with transboundary movement.

3.1.4.3. Transboundary Social Dynamics and Current Livelihood Practices

Beyond the lingering risks associated with unexploded ordnance, historical incidents—such as the detention of muleteers and caravanners, the confiscation and destruction of goods, and even the elimination of transported livestock—have significantly disrupted traditional exchange routes across the Argentine–Chilean border. These events, documented in police records from both countries and preserved in the collective memory of communities in the Puna and Salar de Atacama, have contributed to the decline of transhumance practices in the region (Morales, 2018).

This historical context aligns with findings from interviews conducted during the Project's field surveys, which confirm that cross-border grazing no longer occurs. While strong familial and compadrazgo ties persist between Catua puesteros and Chilean communities, there is no evidence of current livestock movement across the border. According to the Cacique (Chief) of Catua, cross-border transhumance ceased in the 1960s, and was only practiced sporadically by earlier generations.

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[6] Inicio | SEA Chile

[7] Molina Otarola. La gran minería y los derechos indígenas en el norte de Chile. 2008.

[8] Molina Otarola. The other muleteers traders of the valleys, the highlands and the Atacama desert. December 2011.

[9] https://www.gichd.org/publications-resources/organisations/chilean-national-demining-commission-416/

[10] https://www.armscontrol.org/factsheets/ottawa-convention-glance.

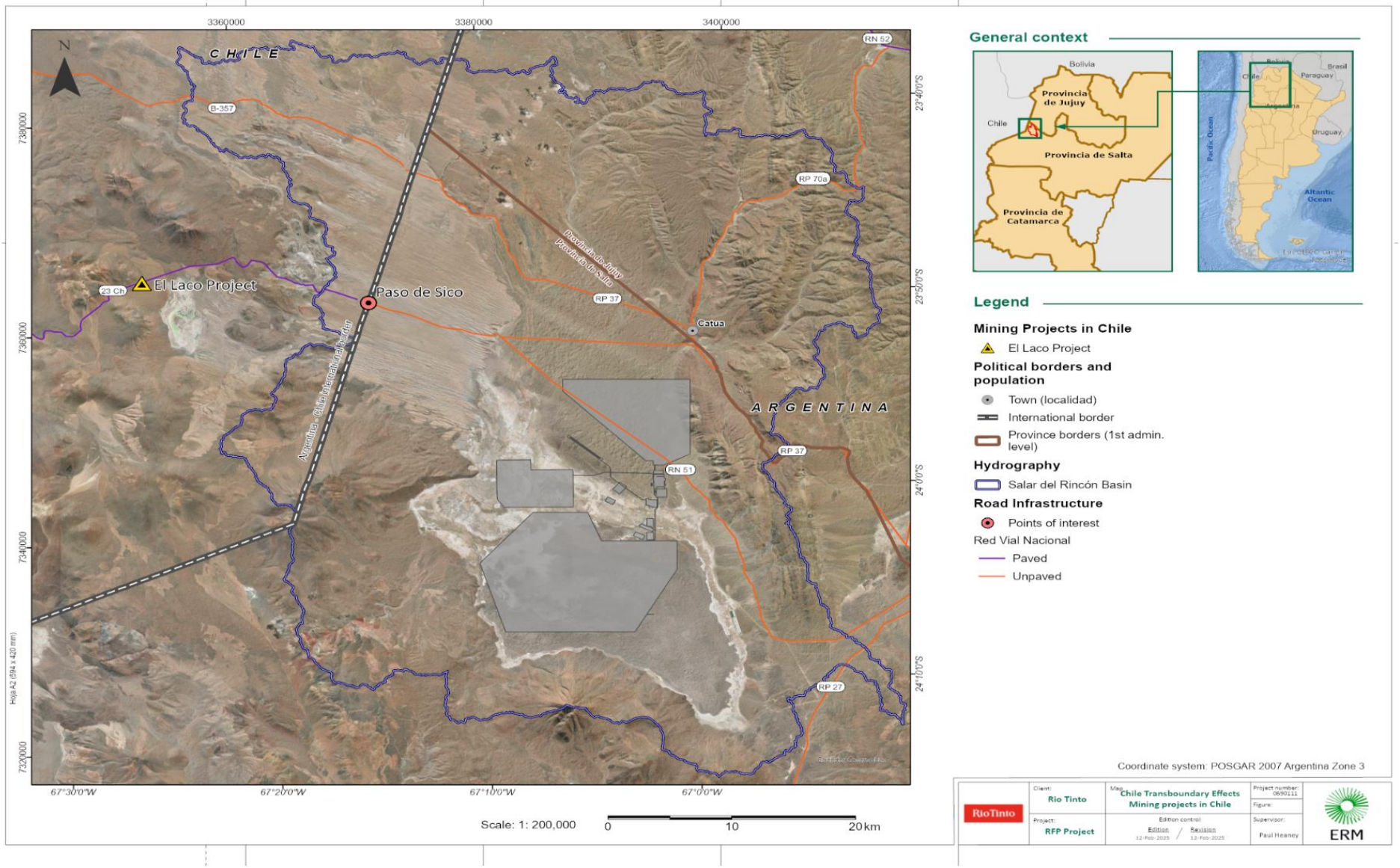


Figure 18: Mining projects in Chile

Today, cross-border interactions are primarily limited to bartering, a practice that was interrupted in the 1990s but revived in the 2000s and continues today. Puesteros recall that in the 1980s, Chilean traders would travel to Catua by donkey, later transitioning to motor vehicles in the mid-1990s. Goods such as chañar, algarroba, and corn were commonly exchanged, although these were often subject to customs restrictions. The Huaytiquina Pass was historically used due to the absence of Gendarmerie control, but today, barter goods are transported via the Jama or Sico Passes.

In terms of livestock production within the Argentine portion of the Salar del Rincon Basin, it remains subsistence-based, with small-scale sales of meat and wool in local markets such as Catua (e.g., by a puesto (CP01).

Given the desertic nature of the region and the lack of infrastructure on the Chilean side—aside from Route No. 23 from San Pedro de Atacama—there is no evidence of transhumant grazing or other traditional land uses in the Chilean portion of the basin. This conclusion is supported by testimonies from residents of the closest puestos to the border, who confirm the absence of economic activity or territorial use that could be affected by the Project.

3.1.4.4. Historical and Political Context

Argentina and Chile share a 5,308km border, historically marked by territorial disputes, particularly over sovereignty in remote Andean regions. One of the most notable conflicts occurred in the 1970s, centred around the Beagle Channel, which led to heightened military tensions and the placement of landmines along several border areas by Chilean forces.

Although the conflict was eventually resolved through diplomatic efforts, and most explosives were dismantled, anti-personnel mines remain in certain northern sectors of the border, primarily within Chilean territory. These remnants pose ongoing risks, particularly in areas surrounding key border crossings such as Jama, Socompa, and Huaytiquina, where minefields are still present, some marked with warning signage (Figure 19).

Figure 19: Minefield warning sign in the Chilean sector of the Huaytiquina border crossing

As a result, any monitoring or surveying activities conducted outside established routes within Chilean territory involve significant risks to personnel safety, due to the potential presence of unexploded ordnance and restricted access zones. These conditions must be carefully considered in the planning and execution of any fieldwork or environmental assessments in the transboundary region.

3.1.4.5. Transboundary Project Interactions – Transport and Logistics

The Project has evaluated potential transboundary impacts through a multidisciplinary assessment, identifying transportation and logistics as the most significant variable with potential cross-border

implications. Other Project components—such as noise, air quality, and hydrological impacts—were determined to be localized within Argentine territory, with no measurable effects extending into Chile.

The FS, completed in September 2024, analysed the supply chain logistics for both LC exports and sodium carbonate (SC) imports, which together account for approximately 80% of the Project's total transport volume. The study evaluated multiple operational scenarios, including routes to both Atlantic and Pacific ports, and considered combinations of road and rail transport.

Logistics Strategy Overview
The selected strategy involves a 50/50 split of LC exports and SC imports between Atlantic and Pacific corridors:

- Argentine Corridor:
  - 100% of LC and 56% of SC transported via 52-ton gross vehicle mass (GVM) trucks.
  - Remaining 44% of SC transported via a road-rail combination.
- Chilean Corridor:
  - 100% of LC and SC transported via 45-ton GVM trucks.

Chilean Infrastructure Advantages
The Chilean side of the Andes offers superior road infrastructure, largely due to the long-standing presence of the mining industry in northern Chile. Key highways such as Route 5 (Pan-American Highway), Route 23, and Route 27 (Ministerio de Obras Públicas de Chile, Dirección de Vialidad[11], 2024) exemplify this high standard.

These roads feature:

- High-quality pavement, reducing vehicle wear and improving safety in adverse weather.
- Optimized geometry (slopes, curves, widths) for heavy transport.
- Reduced dust emissions, minimizing environmental and community impacts compared to unpaved roads.

Rail Transport Considerations

- Chile’s rail network connects northern ports like Antofagasta and Mejillones to the mountain rail system in Argentina, offering a potential integrated transport solution. While the FS considers rail as a long-term option, it notes that Argentine rail infrastructure requires significant refurbishment, which would depend on public investment.
- As a result, the preferred short-term solution is 100% road transport, due to its flexibility and immediate availability.
- In the long term, the Project envisions leveraging the Ferrocarril de Antofagasta a Bolivia (FCAB) as the primary rail corridor, linking Chilean ports with mining operations across the region.

Figure 20 provides an overview of the Chilean transportation infrastructure, highlighting potential routes from the Project site to Pacific ports.

[11] https://vialidad.mop.gob.cl/

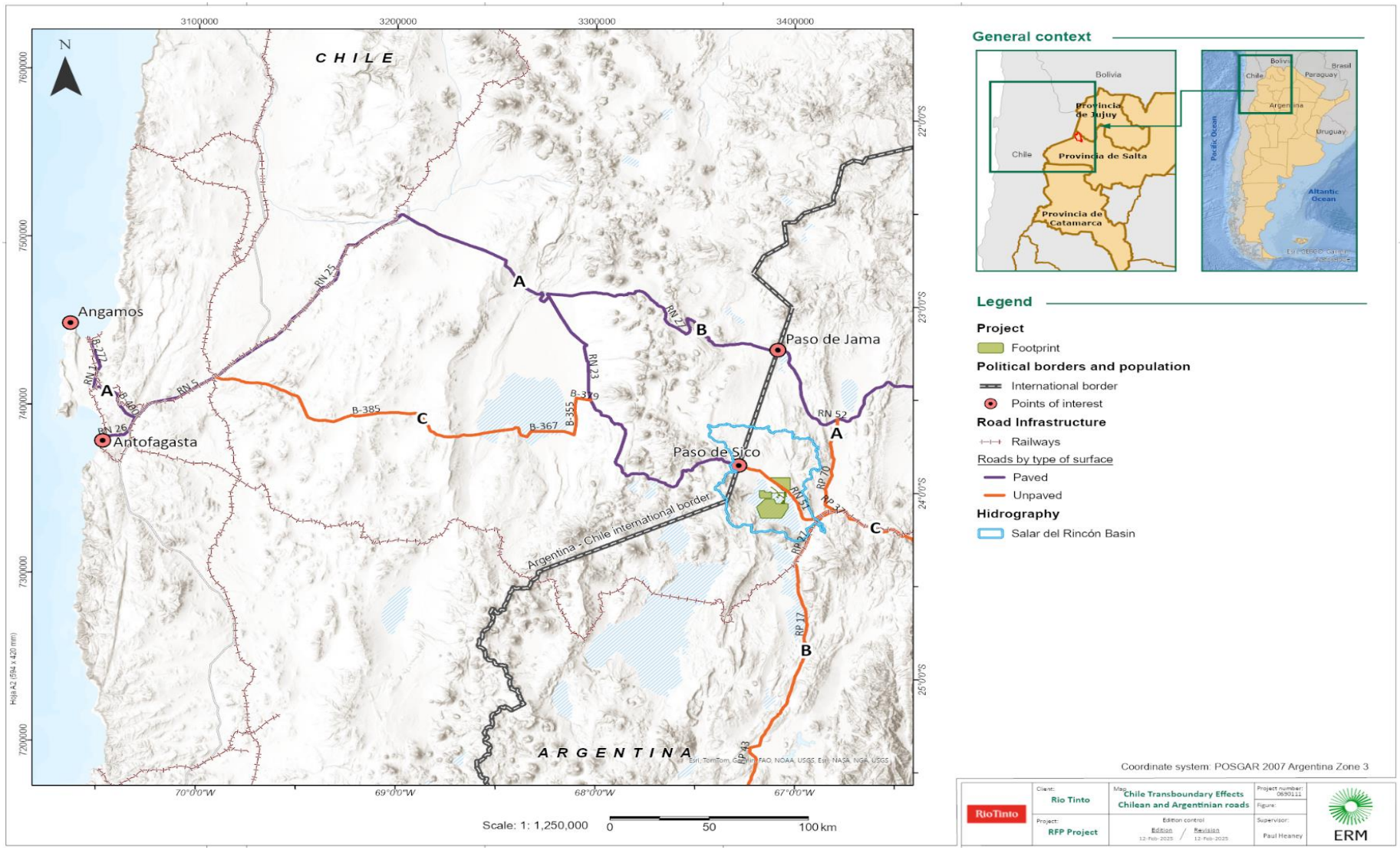


Figure 20: Cross border transportation infrastructure

Transport Volumes and Traffic Intensity
Workers will be transported to and from the Project by bus.

Table 8 presents an updated estimate of the logistics requirements for the Project, based on an annual LC production of 53,000Ktpa. The calculations assume a 50/50 split of LC export volumes and a 56% / 44% division of SC import volumes between Argentina and Chile, respectively. However, it is worth noting that this estimate was based on split rate assumptions, and it may vary year-by-year.

Table 8. Logistic requirements of the Project

Material	Annual Volume (t)	Argentina (t)	Chile (t)	Argentina Daily volume (t/day)	Chile Daily volume (t/day)
Lithium Carbonate	53,000	26,500 (50%)	26,500 (50%)	72.6	72.6
Sodium Carbonate	100,912	56,510.7 (56%)	44,401.3 (44%)	154.8	121.6

Transport estimates are based on the use of:

- 52t GVM trucks for operations within Argentina.
- 45t GVM trucks for operations within Chile.

Daily transport volumes were derived by distributing the annual figures evenly across 365 days, and the number of trucks per day was calculated based on truck capacity and the respective share of transported material per country.

The need for trucks is set out in Table 9.

Table 9. Number of daily trucks per type of bulk material (rounded up)

Country	LC (trucks per day)	SC (trucks per day)
Argentina	4	6
Chile	4	6

Estimated daily traffic flow for the Construction Phase is provided in Table 10, the daily traffic flow for the Operation Phase is provided in Table 11, and the total number of vehicles entering and leaving the Project is provided in Table 12.

3.1.5 Conclusions: Environmental and Social Summary of the Chilean Transboundary Effects

3.1.5.1. Physical and Hydrogeological Context

The region is predominantly composed of volcanic formations, especially ignimbrites, resulting from pyroclastic flows and the welding of volcanic ash and sediments. As part of the Andean orogenic system, the area has been shaped by neo tectonic activity, which has imposed a distinct WNW–ESE structural trend. This structural control influences both surface drainage patterns and infiltration dynamics, contributing to the area's role as a recharge zone for the regional aquifer. However, due to low precipitation and the limited porosity of the volcanic substrate, the recharge capacity of this zone is significantly lower than that of the alluvial fans to the north and northeast of the Salar de Rincon.

3.1.5.2. Surface Water Features in the Cross-Border Region

A detailed satellite and geomorphometric analysis identified a single, isolated vega in the extreme northwestern portion of the watershed. This vega lies within a small, endorheic sub-basin, likely formed by neo tectonic uplift and hydrologically disconnected from the main Rincon Basin—though potential subsurface connectivity cannot be ruled out. Moreover, their remote location—ranging from 35km to 40km from the Project's productive area—and high elevation (600m–700m above the Salar) further reduce the likelihood of any direct or indirect impact from Project operations.

Table 10. Number of daily vehicles during the Construction Phase

Type of vehicle	Q1 2026	Q2 2026	Q3 2026	Q4 2026	Q1 2027	Q2 2027	Q3 2027	Q4 2027	Q1 2028	Q2 2028	Q3 2028	Q4 2028	Q1 2029	Q2 2029	Q3 2029	Q4 2029
Construct -ion trucks	4	9	5	5	5	9	5	5	4	4	2	2	2	2	2	2
Buses*	8	6	4	2	2	2	2	2	2	2	2	2	2	2	2	2
LVs**	4	5	4	4	4	5	4	4	4	3	3	3	3	3	3	3

* Monday to Friday
** Escort services

Table 11. Number of daily reagents / products during the Operation Phase (from 2029)

Product	RFP Quantity (Ktpa)	Trucks/Day	Packaging Type
Lithium Carbonate (LC)	50	2.4*	0.65t FIBC's
Sodium Carbonate (SC)	95.2	4.6	Bulk Solid
Sulfuric Acid (SA)	21	1.8	Bulk Liquid
Sodium Hydroxide (SH)	9.4	0.8	1.3t FIBC's
Hydrochloric Acid (HA)	8	0.7	Bulk Liquid

* Volume is included in the SC transport quantities due to backloading.

Table 12. Total number of vehicles entering/leaving the Project on daily averages

Type of vehicle	Q1 2026	Q2 2026	Q3 2026	Q4 2026	Q1 2027	Q2 2027	Q3 2027	Q4 2027	Q1 2028	Q2 2028	Q3 2028	Q4 2028	Q1 2029	Q2 2029	Q3 2029	Q4 2029
Ops trucks							4	4	4	4	4	8	8	8	8	8
Construction trucks	4	9	5	5	5	9	5	5	4	4	2	2	2	2	2	2
Buses*	8	6	4	2	2	2	2	2	2	2	2	2	2	2	2	2
LVs**	4	5	4	4	4	5	4	4	4	3	3	3	3	3	3	3
TOTAL	**16**	**20**	**13**	**11**	**11**	**16**	**15**	**15**	**14**	**13**	**11**	**15**	**15**	**15**	**15**	**15**

* Monday to Friday
** Escort services

Recent fieldwork by Dynamik (2025) confirmed that the ignimbrite plateau is dominated by rocky terrain and sparse steppe vegetation, classified as “zonal” vegetation—adapted to climatic and edaphic conditions, rather than water availability. In contrast, azonal vegetation (e.g., vegas) is directly dependent on moisture and serves as a biodiversity hotspot. The presence of steppe vegetation and the identification of a unique vega represent new findings, refining earlier characterizations of the area as a barren desert. Nonetheless, due to its extremely limited water resources, the zone is considered to have low ecological sensitivity compared to other parts of the basin—both located within closed basins that are hydrologically isolated from the broader Rincon Basin.

3.1.5.3. Fauna Movement and Flora Sensitivity in the Cross-Border Region

Regarding faunal behaviour and potential cross-boundary movements, it is well-documented that flamingos undertake short-range migrations between neighboring Andean watersheds and wetlands, including movements across high-altitude mountain ranges and international borders (Jahn et al.[12], 2023; Caziani et al., 2007[13]). However, there is no specific evidence of flamingo migration within the Rincon Basin or its adjacent watersheds, including the Chilean sector assessed in this study. Nonetheless, the presence of flamingos within the Project’s AoI confirms their ecological relevance in the basin and warrants their consideration in impact assessments.

In terms of flora, vegas vegetation is entirely dependent on high soil moisture levels, sustained by surface runoff from snowmelt and precipitation, or aquifer discharge. Within the Chilean sector of the Rincon Basin, a single vega was identified in the northwesternmost portion, located within a small, isolated watershed outside the main Rincon catchment. Additionally, a few smaller vegas were observed in the upper zone of the Huaytiquina sub-basin, which partially extends into Chile.

Given the significant elevation differences (600m – 700m above the Salar) and distances (35km–40km from the Project’s operational area), no direct or indirect impacts from Project activities are anticipated in these areas. Consequently, the likelihood of biodiversity impacts in the western Rincon Basin and Chilean sector is considered minimal.

3.1.5.4. Modelled Noise and Air Quality

Additionally, the boundaries of the modelled noise and air quality zones are also entirely confined within Argentine territory, as shown on the map. These boundaries do not intersect with the international border, ensuring that any predicted direct impacts remain exclusively within Argentina.

The modelled impact zones maintain a significant distance from the international boundary with Chile. The attenuation of noise and air emissions over distance, coupled with the inherent dispersion mechanisms modelled in regulatory frameworks, minimizes the likelihood of transboundary effects.

The indirect impacts in the area are primarily linked to the transportation of goods required for operations. These impacts are limited in scope and manageable through measures such as traffic management, emission controls, and infrastructure improvements.

Finally, in respect to potential accumulation of impacts, no significant cumulative impacts were identified extending towards Chile when considering baseline conditions, Project-specific emissions, and the natural attenuation of pollutants. The Project’s footprint and its associated activities remain localized within the hydrological and air-shed systems of the Argentine side.

3.1.5.5. Transhumance, Settlements, or Economic Activity

Based on a comprehensive review of field surveys, secondary sources, interviews with local inhabitants, and satellite imagery, there is no evidence of transhumance, settlements, or economic activity in the Chilean portion of the Salar del Rincon Basin that could be impacted by the Project. The only indirect impacts—

[12] Jahn et al. Highly variable movements by Andean Flamingos (Phoenicoparrus andinus): implications for conservation and management, 2023.

[13] Caziani et al. Seasonal Distribution, Abundance, and Nesting of Puna, Andean, and Chilean Flamingos, 2007.

related to transport logistics—are limited in scope and are mitigated by the high standard of Chilean infrastructure.

In addition, RINCON has a control framework for logistics operations, which addresses not only procedural but also engineering control requirements to mitigate these risks. Training is planned for all drivers serving the project, with internal certification in the form of a Rio Tinto Driver's License for the Project. This includes road safety training sessions, consultation spaces, and support for transportation contractors at the Training Center. Further, each transportation company employee receives critical risk management training. The centralized escort company is trained and responsible for managing incidents during transportation or stops.

Therefore, ongoing monitoring efforts will remain focused on the Argentine sector, where the Project's operational footprint is located.

3.1.5.6. Advantages of Using Chile as a Logistics Hub for the Project

The use of Chilean infrastructure for the Project's logistics operations offers several strategic, environmental, and social benefits, particularly for the transport of LC and SC.

Logistical Advantages

- Superior Road Infrastructure: Chile's road network, developed to support its robust mining sector, offers well-maintained, paved roads with optimized geometry (slopes, curves, widths), enabling safer, faster, and more efficient transport. This reduces vehicle wear, minimizes delays, and lowers maintenance costs.

- Multimodal Transport Potential: The integration of the FCAB provides a future-ready multimodal option, enhancing flexibility and resilience in the supply chain.

- Reduced Operational Risks: Paved roads significantly reduce dust emissions, improve drivability in adverse weather, and minimize accident risks, especially important in remote, high-altitude environments.

Environmental and Social Benefits

- Lower Emissions: Shorter distances to Chilean Pacific ports—compared to Atlantic routes—result in reduced fuel consumption and lower greenhouse gas (GHG) emissions per ton transported. This is especially beneficial for exports to Asian markets, which are geographically closer to Chilean ports.

- Dust Mitigation: The use of paved roads helps minimize particulate emissions, a critical factor in arid and semi-arid regions like the Puna, where dust can impact both ecosystems and local communities.

- Community Perception and Safety: The reduction in the number of stops (limited to 1–2 per trip) helps address community concerns about security. According to 2024 community consultations, residents associate frequent stops and unfamiliar vehicles with potential criminal activity. Streamlined logistics help build trust and reduce perceived risks. Regarding this point, RINCON conducted a route study where safe stops were identified along the various routes. In addition, RINCON contracted an escort service with the primary purpose of monitoring and auditing transportation companies during trips.

- This is part of the procedure, which also establishes stop times: 15 minutes every two hours of travel and 30 minutes for lunch.

A multidisciplinary team of biologists, geologists, and sociologists concluded that the only potential transboundary impact from the Project relates to transportation activities. ERM conducted a detailed review of the logistics plan, which confirmed that:

- Chilean road infrastructure is superior to that in Argentina, offering paved, well-maintained routes with optimized geometry.

- This results in lower CO_2 and dust emissions, fewer accidents, shorter transport times, and reduced social impacts, including improved community perception and reduced exposure to risks such as noise, dust, and disease transmission.

3.1.5.7. Historical, Political, and Social Dynamics

Historically, the transboundary region was inhabited by Atacameño and Kolla Indigenous peoples, whose livelihoods were based on transhumant herding of llamas and goats. However, the militarization of the border during the 1978 conflict between Argentina and Chile, including the placement of landmines, disrupted traditional mobility and contributed to the isolation of communities on both sides.

Recent household surveys conducted by Social Capital Group (SCG, 2024–2025) confirmed that cross-border transhumance no longer occurs. While family ties between Catua puesteros and Chilean communities (particularly in the Salar de Atacama, ~140km away) persist, current interactions are limited to commerce and bartering, especially the exchange of industrial goods and food. The COVID-19 pandemic further reinforced this isolation, effectively ending any remaining transhumant practices.

3.2 Water Resources

Details of previously completed, ongoing and proposed future water related studies are detailed in the Assessment of Brine & Water Resources document (ERM 2025c). An Adaptive Water Management Plan (ERM 2025d) has been developed for the Project (refer to Section 6.1.5).

The Project is situated in a geologically complex, closed basin system centred around a Salar, surrounded by alluvial fans, colluvial deposits, and low-permeability bedrock. Groundwater recharge is balanced by evaporation, making the basin's water resources highly sensitive to climate and human activity. Lithium-rich brines within the Salar are hosted in varied hydrogeological units, while raw water for processing is proposed to be sourced from the adjacent Catua Alluvial Fan. This fan features permeable sand, and gravel layers and supports a low-salinity water lens above deeper brines. Wellfields will be developed in both the Salar and the Catua Alluvial Fan to extract brine and water, with spent brine managed via surface disposal in the northwestern interzone.

Hydraulic connectivity between surface features and deeper brine systems may be limited by low-permeability clay layers, especially along the western Salar margin. The surrounding bedrock has minimal permeability, with groundwater flow restricted to fault zones and weathered areas.

Extensive brine and water assessments have been conducted across the Rincon Basin to support the Project's development. These efforts aimed to:

- Improve understanding of the basin's climate, hydrology, geology, and hydrogeology.
- Quantify lithium resources and design a brine wellfield to meet Project needs.
- Evaluate and define a sustainable raw (industrial) water supply, primarily from the Catua Alluvial Fan, while considering alternative sources.
- Investigate hydraulic interactions between the Salar brines and surrounding lower-salinity sediments.
- Assess potential environmental impacts from combined brine and water extraction.

These studies were carried out through a phased approach—including a PFS, FS, and ESIA—supported by a robust dataset of over 150 wells, pumping tests, and long-term monitoring. A conceptual and numerical groundwater model was developed following international best practices, providing a strong technical foundation for sustainable resource management throughout the Project's lifecycle.

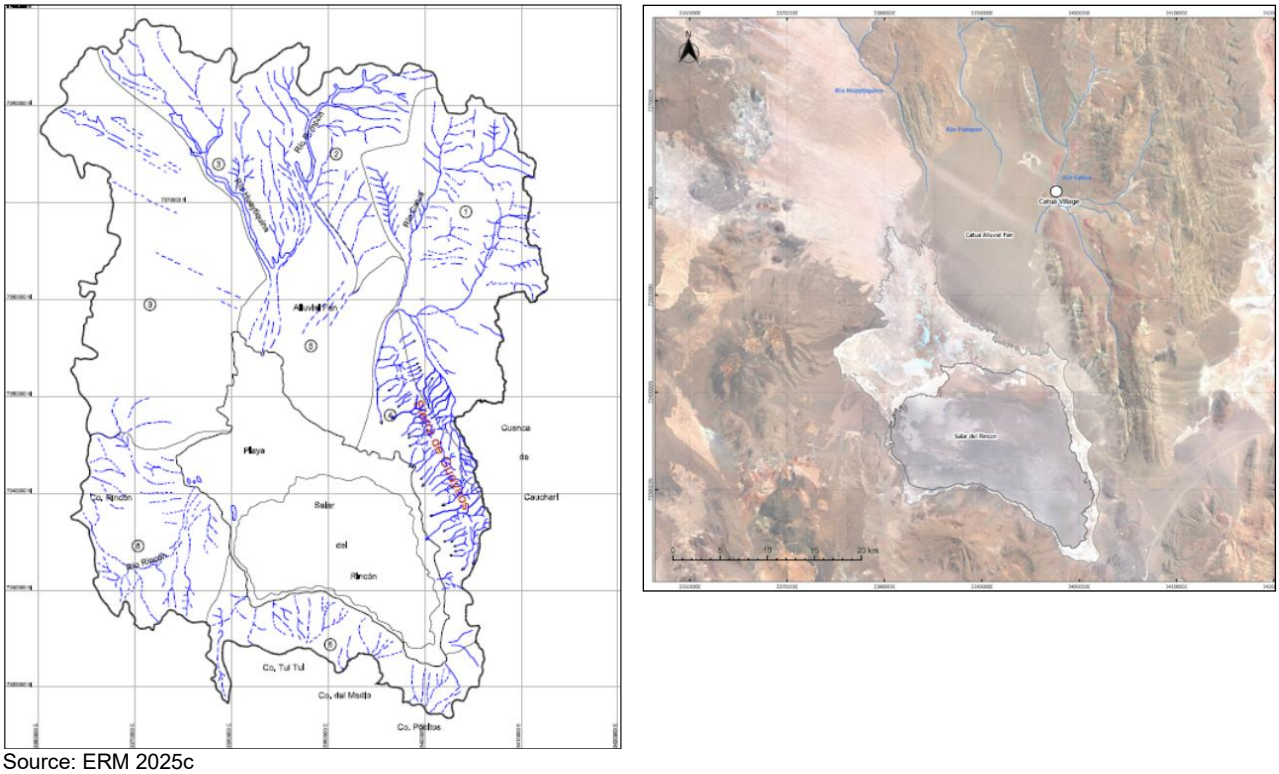
3.2.1 Previous Work

The previous baseline for hydrology and hydrogeology is presented in Chapter 2 of the 2024 ESIA, Section 2.A: Physical and Biotic Environment.

3.2.2 Assessment of Brine and Raw Water Resources

The following sections present an executive summary and references the Assessment of Brine & Water Resources document (ERM 2025c). The Rincon Basin comprises a closed drainage basin that is drained by eight different sub-catchments; there are three main streams, the Huaytiquina, Pompón and Catua streams

in the northern part of the basin which flow either across or adjacent to the Catua Alluvial Fan as shown in Figure 21.



Source: ERM 2025c

Figure 21: Sub-catchments and main streams draining to the Catua Alluvial Fan (SRK, 2015)

The surface water features in the Rincon Basin are summarized in Table 13.

Table 13. Surface water features in the Rincon Basin

Feature Type	Description
Main Rivers	Huaytiquina, Pompón, and Catua Rivers flow through the northern catchment.
Eastern Mountain Springs and Vegas	Pena Guayaos, Vega Faldeo Cienago, Vega Amarilla—perched water bodies isolated from Salar brines.
Western Margin Vegas	Vega Rincon, Vega Unquillar, Vega Saladillo — located at the interface of colluvial/alluvial sediments and the Salar.
Rincon Lagoon	Perennial water body along the western margin of the Salar nucleus with high ecological value.
Ojos de Agua	Two vertical water shafts (~30m and ~5m deep) on the western margin of the proposed SBDF. Host extremophile bacteria and are considered critical biodiversity features. Subject to ongoing monitoring and research.

The locations of the key vegas, lagoons, and Ojos de Agua are shown in Figure 22.

The Salar hosts lithium-rich brine aquifers composed of a halitic core (salt pan), saline mudflat / playa, fine-grained clastic sediments, and travertine, which exceeds 300m thickness in places.

Clay lenses are prevalent near northern margin and beneath western wetlands/lagoons, suggesting (partial to complete) hydraulic isolation from deeper brines, which is also supported by chemistry, water levels and artesian response of some monitoring wells in the vicinity of the lagoon.

The Catua Alluvial Fan is key for industrial water supply, representing unconsolidated sand, gravel, silts, and clays up to 160m thick. Groundwater flow occurs mainly through pore spaces.

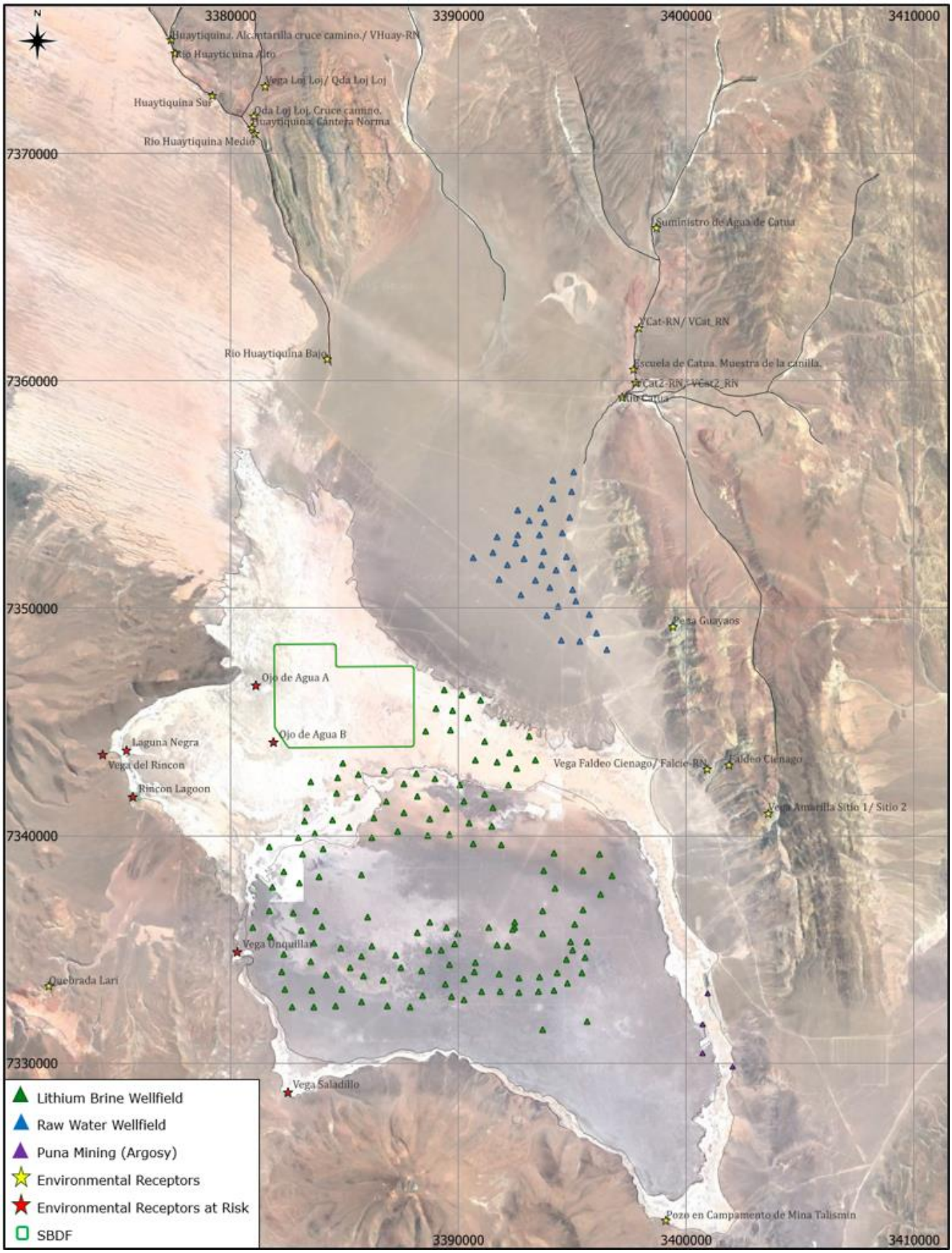


Figure 22: Location of vegas, lagoons, and Ojos de Agua

Groundwater monitoring has been undertaken since 2012. Water levels range from 50 metres below ground level (mbgl) (south) to 150mbgl (north), with rainfall, runoff, streamflow and lateral inflows as recharge sources. Discharge is through evaporation, spring flows, seepage, and inflow to the Salar, with flow direction north to south, following surface topography. A freshwater lens exists above the brine in the Catua Alluvial Fan aquifer, with a thickness up to 35m in the proposed raw water wellfield area.

3.2.2.1. Hydrological Setting

The Rincon Basin is a closed endorheic drainage system with no external outflow. It is assumed that groundwater recharge is approximately equal to evaporation losses, resulting in a near-steady state where basin-wide groundwater storage remains relatively constant over time.

A conceptual water balance for the Rincon Basin was undertaken in 2021 and was updated in 2025 (Montgomery & Associates, 2025). Based on the estimated total volumetric precipitation of 7,220L/s and estimated outflow of 1,020L/s to 1,370L/s, the watershed conceptually has 6,200L/s to 5,850L/s of additional input that is a combination of either being: 1) evaporated or sublimated from land surface or the vadose zone before it can infiltrate and become a part of the main aquifer recharge (i.e., does not become an inflow to the aquifer); or 2) infiltrates and is evaporated from the aquifer elsewhere in the basin. The additional 6,200L/s to 5,850L/s input was not evaluated to distinguish between these two conditions.

On-going climate and water monitoring (including isotope studies), will greatly assist with furthering the understanding of the flow mechanisms operating across the Rincon Basin, will increase confidence in recharge estimates and will facilitate subsequent updates of the water balance.

3.2.2.2. Water Studies

The key water related activities associated with the Project include:

- The abstraction of lithium bearing brines from the Salar.
- The abstraction of raw water from the Catua Alluvial Fan.
- The infiltration of spent brine from the SBDF.

These activities have the potential to influence brine and water flows, levels and quality within the Rincon Basin. These changes in the groundwater environment have the potential to impact surface water features (e.g., streams, springs, lagoons, etc.), vegas (e.g., wetlands), puesteros aljibe (e.g., hand dug wells), and the Ojos de Agua which exist within the Rincon Basin, which in turn has the potential to impact the biodiversity and local communities that interact with these features.

A significant number of investigations and studies have been completed to develop an in-depth understanding of the water environment within the Project area. In addition, there are ongoing and future work programs focused on advancing the hydrogeological understanding of the Rincon Basin, with a particular focus on furthering the understanding of the brine and water resources of the Rincon Basin, reducing the risk of impact associated with the Project's influence on the water environment and increasing the certainty of model predictions.

Details of previously completed, ongoing and proposed future water related studies are detailed in the Assessment of Brine & Water Resources document (ERM 2025c). An Adaptive Water Management Plan (ERM 2025d) has been developed for the Project.

3.2.2.3. Re-Injection Trials

The re-injection of spent brine represents one of the key opportunities for the Project. Re-injection of spent brine provides potential opportunities to:

1. Optimise spent brine management throughout the life of operations.
2. Reduce the SBDF footprint.
3. Mitigate groundwater level drawdowns at key environmental receptors, caused by the proposed raw water and lithium brine abstractions.

Re-injection trials have been completed, and further re-injection trials are planned to explore the potential three opportunities detailed above, as well as to advance our understanding of the hydrogeological environment and the degree of hydraulic connectivity between different units within the Project area.

The preliminary shallow re-injection/infiltration trials indicated that a continuous rate of water injection was feasible (at rates of approximately 4 to 8 litres/minute (L/min) and that the water introduced increased water levels in monitoring piezometers located within a 2m radius of the injection piezometers. The preliminary shallow re-injection/infiltration trials suggest that re-injection in these key environmentally sensitive areas may be a viable option to mitigate any groundwater level drawdown which could occur in these specific areas in the future due to the abstraction of lithium brine from the underlying Salar sediments.

A series of deeper re-injection trials are currently being planned, involving the injection of brine into the black sand units within the Salar nucleus. The objective of the proposed trial is to further investigate the feasibility of reinjection and to assess whether the deeper black sand unit might be a suitable receptor of re-injected spent brine.

3.2.2.4. Isotope Monitoring

Three phases of isotope sampling and analysis have been completed to advance the hydrogeological understanding of the Rincon Basin, particularly with respect to:

- Water origins.
- Recharge mechanisms.
- Groundwater flow paths.
- Groundwater flow mechanisms.
- Groundwater travel times.
- Assist with identifying potential areas with optimal raw water supply potential within the Catua Alluvial Fan aquifer.

The isotope sampling and analysis program indicate that:

- The Carbon 14 (14C) results suggest old water (generally >1,000 years old) throughout the Rincon Basin, however, it seems that the 14C results are being influenced by the existence very old carbon derived from the dissolution of carbonate bedrock. The 3H (tritium) results are not affected by the bedrock geology and suggest relatively recent water (<70 years old) in many of the samples collected. The 3H younger water conclusion is supported by the analysis of the broader surface water and groundwater chemistry data available.
- Modern recharge (<70 years old) is entering the Catua Fan from the catchments to the north (i.e. the Huaytiquina, Pompon and Catua drainage catchments). There are various distinct groupings of similar water types across the fan, there is evidence of mixing of these distinct water types and evidence of increased evaporation toward the south and southeast of the Catua Fan and into the Interzone.
- The Rincon Lagoon is receiving modern water inflows (10-70 years old) from the alluvial sediments and shallow groundwater system directly to the west of the lagoon.
- The spring feeding the Vega Rincon is characterised by much older water (>70 years old), than that feeding the Ricon Lagoon (10-70 years old), suggesting a longer flow path, although the water is not very mineralised (with total dissolved solids (TDS) generally less than 200mg/l) suggesting a localised source.
- The deep groundwater in the vicinity of the Rincon Lagoon (L0024D) appears to be significantly older (60-70 years old) than the water both feeding and within the Rincon Lagoon (10-70 years), but still relatively recent.

- The Salar is receiving modern recharge, based on the isotope results from PZ9 (<10 years old) in the northern Salar nucleus and L062RM (10-70 years old) in the southeast of the Salar nucleus. The source of this modern water is uncertain, and further assessment is required to confirm the origin, but it may be linked to shallow groundwater inflows from the margin of the Salar once these modern inflows extend beyond the clay horizons which exist around the margins of the Salar.

The scope and extent of any future isotope sampling and analysis will be determined following review and final interpretation of the two 2024 sampling campaign results, with future sampling campaigns possibly targeting Q4 2025 (summer) and winter 2026 (Q2/Q3).

3.2.2.5. Vegas and Lagoons

Significant studies have been conducted to develop a better understanding of the interactions between these shallow surface water features and both the shallow freshwater and deeper brine groundwater systems. The vegas and lagoons depend on a delicate balance of groundwater inflows, which are essential for maintaining soil moisture and supporting specialized vegetation communities. These ecosystems typically form at the interface between colluvial or alluvial sediments and the edge of the Salar, where shallow subsurface flow emerges at the surface, often influenced by low-permeability clay layers.

3.2.2.6. Vegetation

Vegetation mapping completed to date has identified the main vegetation units in the Salar Rincon Basin supported by a flora survey completed in March 2025. On-going studies are being completed to enhance the understanding of the relationship between the vegetation and groundwater. The main vegetation units identified in the basin are shown in Figure 23.

3.2.2.7. Ojos de Agua (Extremophile Microbial Ecosystems)

The Ojos de Agua are natural surface depressions within the carbonate platform northwest of the Salar nucleus, where brine reaches the surface and creates unique physicochemical conditions. These conditions support extremophile microbial ecosystem (EME) communities, making the Ojos de Agua important biodiversity hotspots and conservation priorities.

A targeted monitoring program has been implemented, including seasonal sampling and microbiological analysis in collaboration with INIQUI-UNSa-CONICET. To assess the resilience of these microbial ecosystems, an on-site laboratory was established. The study is on-going, and microcosms are being used as study units. Microcosms containing brine and microbial mats are being exposed to simulated disturbances like effluent addition, turbidity, drying, and flooding.

The disturbed samples will ultimately be sent to the Water and Soil Laboratory (LAgS), INIQUI – CONICET-UNSa in the city of Salta. The results will be analysed to propose appropriate mitigation measures and a monitoring plan tailored to the responses of the in-situ microbial community.

The Ojos de Agua identified with the Project area are shown in Figure 24.

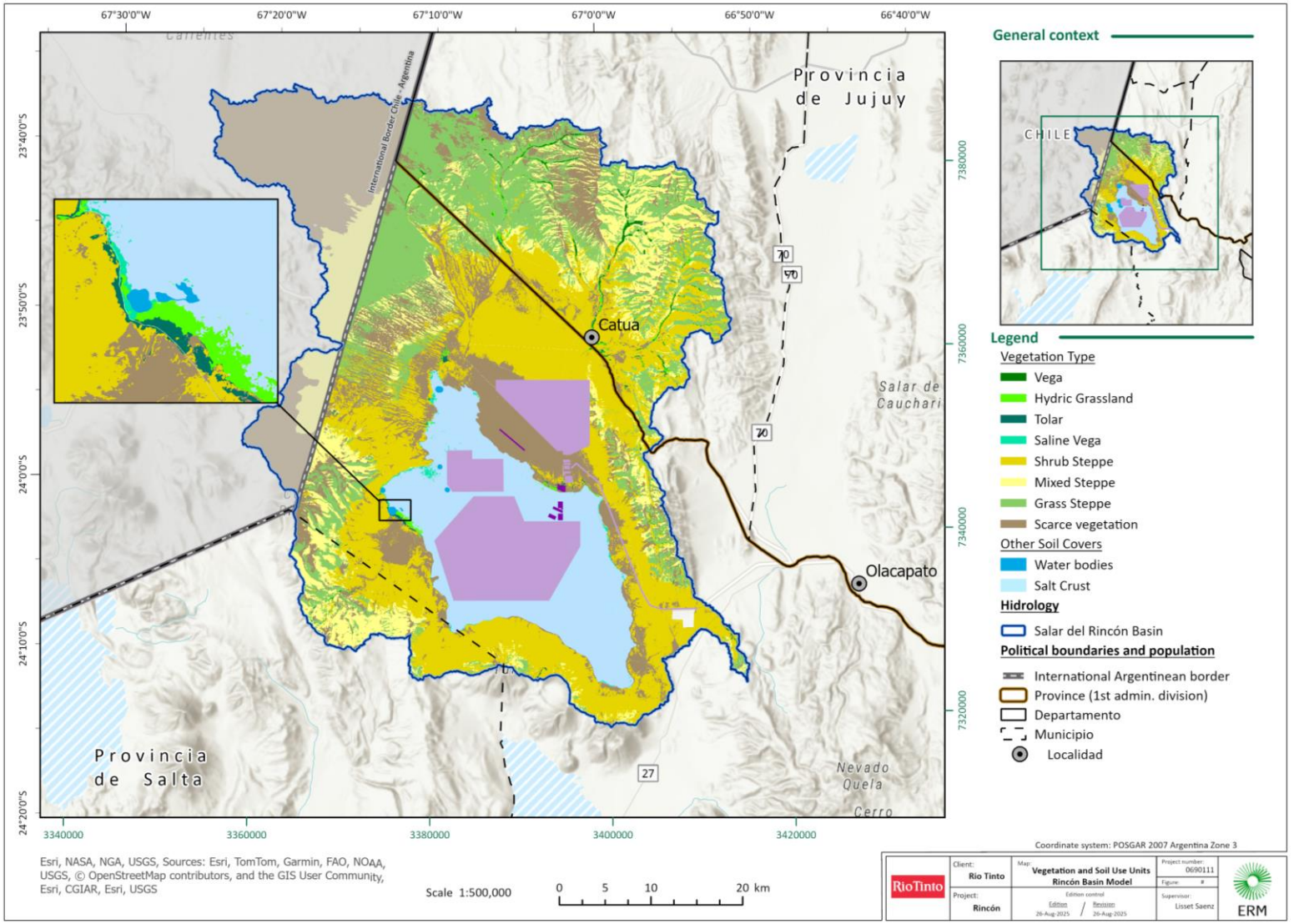


Figure 23: Main vegetation units in Rincon B

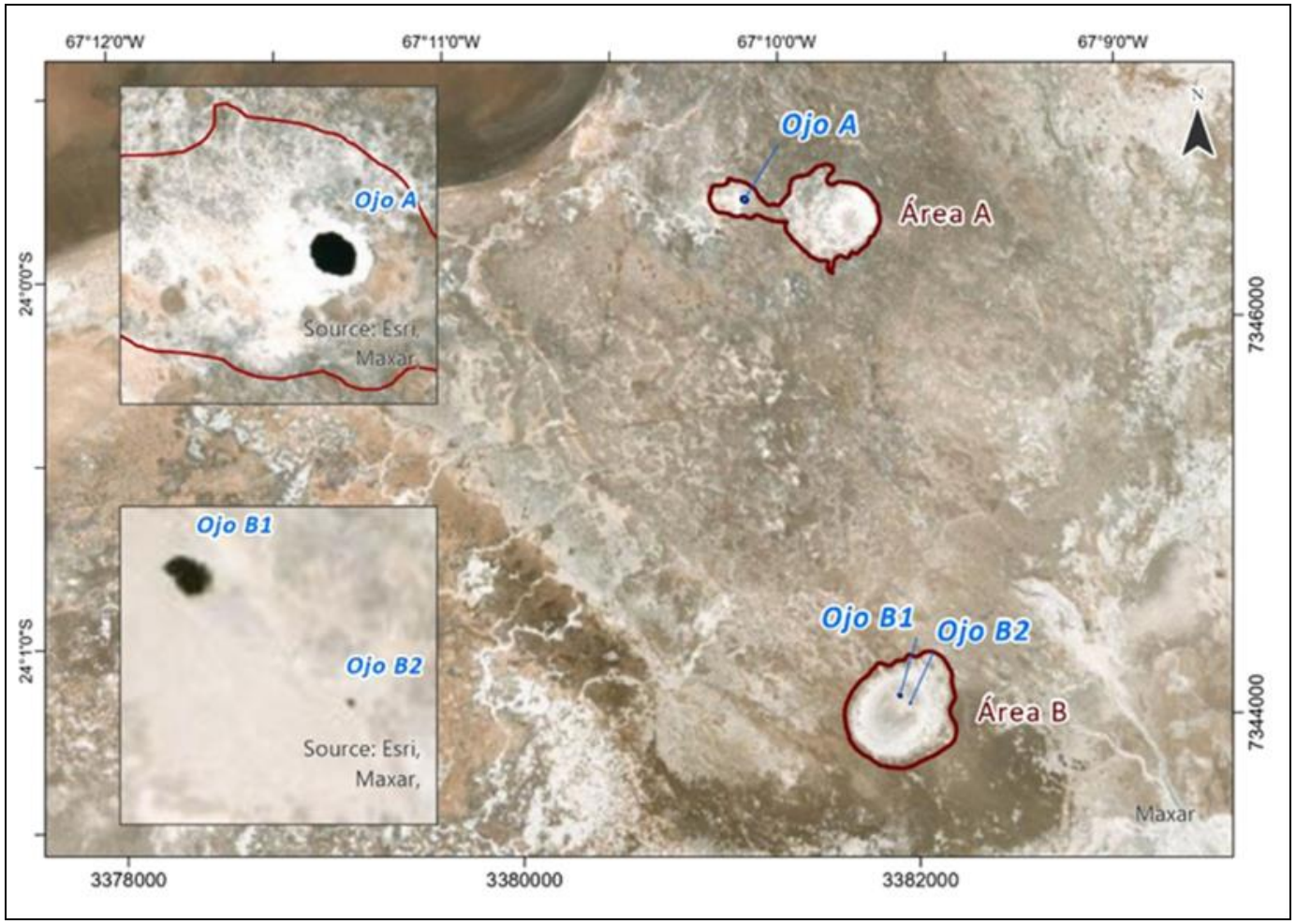


Figure 24: Location of Ojos de Agua[14]

[14] Condition 21 of Resolution 101/25 requires the distance from the SBDF to the Ojos de Agua to be increased from 250m to 700m.

3.2.2.8. Bathymetric Surveys

A comprehensive topographic and bathymetric survey was carried out around Laguna Rincon and Laguna Negra. Staff gauges were installed in both lagoons to monitor water levels throughout the hydrological year. These gauges were placed at sufficient depth to accommodate seasonal fluctuations and were topographically levelled to provide a consistent reference relative to mean sea level.

The survey included detailed topographic mapping of the lagoon perimeters and bathymetric measurements within the water bodies. The resulting contour maps offer valuable data for analysing the hydrodynamic behaviour of the lagoon systems and will support future environmental and hydrological assessments.

3.2.2.9. Conceptual Eco-Hydrological Model

A Conceptual Eco-Hydrological Model was developed to build a robust understanding of the origins and hydrogeologic settings of the Rincon Lagoon, the Rincon Unquillar and Saladillo Vegas, and Ojos de Agua.

The model is designed to predict the potential impacts of brine and water abstraction on these sensitive wetland environments. It helps define ecological thresholds and supports adaptive management strategies, aligning with international environmental standards such as IFC PS6. The model categorizes eco-hydrogeological zones based on vegetation dependence on groundwater: zones where plants access the water table directly (phreatophytic), zones influenced by capillary rise or ponding, and zones affected by seasonal surface runoff. These classifications are supported by field data, including shallow piezometer installations, soil moisture studies, and floristic monitoring.

Rincon Lagoon

An essential focus of the studies and monitoring efforts conducted to date at Rincon Lagoon has been to develop a comprehensive conceptual understanding of the lagoon's origin and its hydrogeological context within the surrounding wetland system. Particular emphasis has been placed on assessing the potential hydraulic connectivity between the lagoon and the underlying lithium-bearing brine aquifers, as well as evaluating the ecological sensitivity of the broader setting. The key findings are as follows:

- The water balance suggests that Rincon Lagoon is sustained primarily by groundwater inflow, which offsets the significant evaporative losses, with precipitation playing a very much secondary role. These findings confirm the lagoon's hydrogeological dependency and support its classification as predominantly a groundwater-fed lagoon.

- A shallow low permeable layer (or layers) was encountered in every hole drilled, except for the hole furthest from the Salar margin and furthest into the alluvial fan.

- The salinity of the shallow groundwater increases as you move from the alluvial fan towards the Rincon Lagoon.

- The water quality between lithological units at different depths (separated by low permeability layers) is quite different, suggesting hydraulic disconnection between units at different depths.

- Artesian groundwater conditions were encountered beneath the shallow clay layer at two locations adjacent to the Rincon Lagoon, suggesting vertically upward hydraulic gradients, groundwater confinement and hydraulic disconnection at these locations.

- The drilling and monitoring results to date suggest that the Rincon Lagoon may be hydraulically disconnected from the deeper brine units by a series of low-permeability clay layers.

This conceptualisation supports the classification of Rincon Lagoon as a shallow, groundwater-fed lagoon and associated wetland (vega) system hydraulically isolated from the Salar's deep brine aquifer. A three-dimensional conceptual diagram for the Rincon Lagoon area showing groundwater flow from the alluvial fan to the lagoon and surrounding vegas, recharge originating from precipitation and snowmelt in the highlands (with water moving through local flow systems) and clay layers acting as confining units separating shallow water system from the deeper underlying brines is shown in Figure 25.

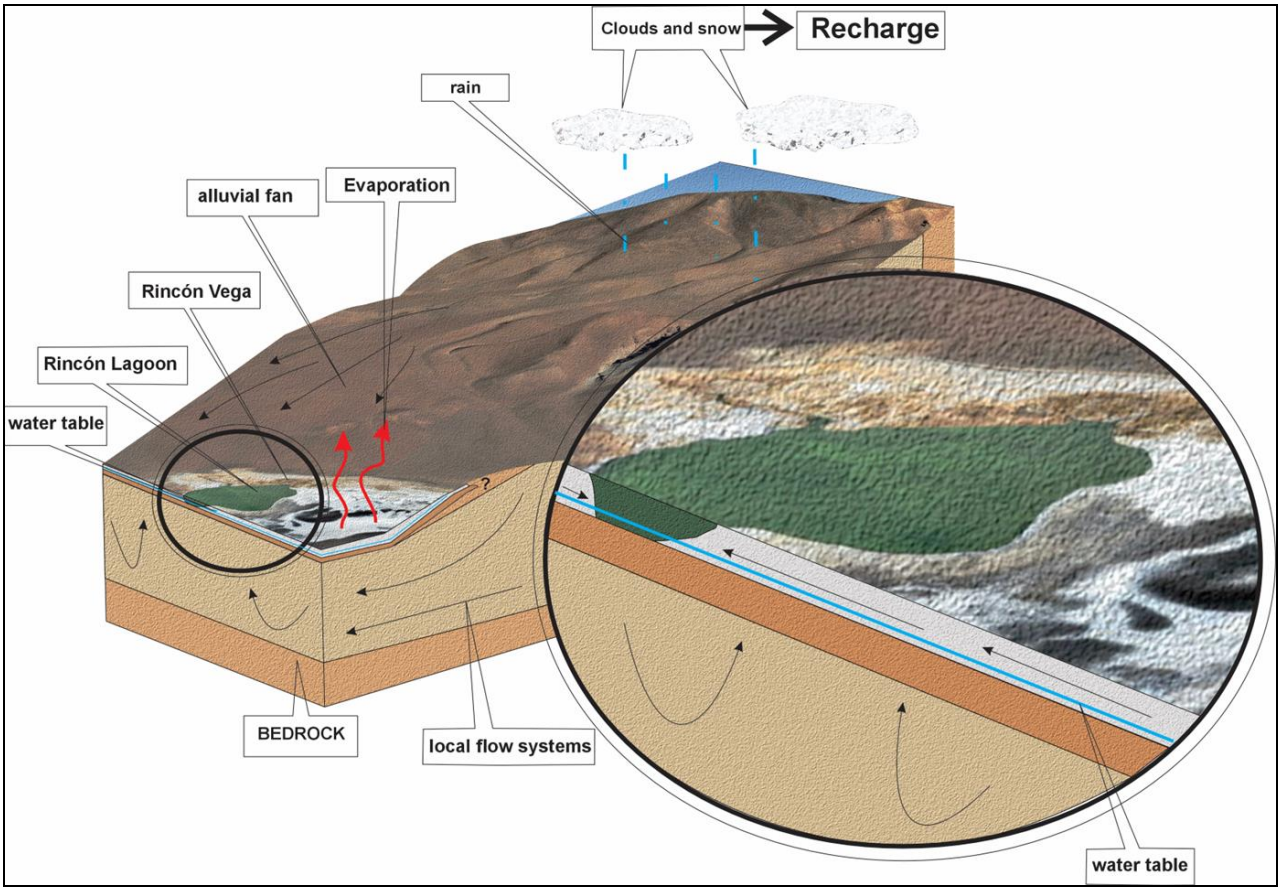


Figure 25: Conceptual hydrogeological model of Rincon Lagoon area

Vega Rincon

A key focus of the studies and monitoring completed to date at the Vega Rincon has been to build a robust conceptual understanding of the origin and hydrogeological setting of the Vega Rincon area, including both the perennial spring which feeds the vega, the surrounding wetland (vega) environment and the ephemeral lagoon (Laguna Negra) which forms on the margin of the Salar. A particular focus has been on evaluating the potential hydraulic connectivity between the wetland area and the underlying lithium bearing brine aquifers, and on evaluating the ecological sensitivity of the setting. The key findings are as follows:

- A shallow low permeable layer (or layers) was encountered in every hole drilled.
- Fresh water drains to the vega from a spring located midway up the slope immediately to the west of the wetland area.
- The drilling and monitoring results to date suggest that the Vega Rincon may be hydraulically disconnected from the deeper brine units by a series of low-permeability clay layers.

This conceptualization supports the classification of Vega Rincon as a shallow, groundwater-fed spring and associated wetland (vega) system hydraulically isolated from the Salar's deep brine aquifer. A three-dimensional conceptual diagram for the Vega Rincon area showing groundwater flow from the colluvial sediments to the vega, recharge originating from precipitation and snowmelt in the highlands (with water moving through local flow systems) and clay layers acting as confining units separating shallow water system from the deeper underlying brines is shown in Figure 26.

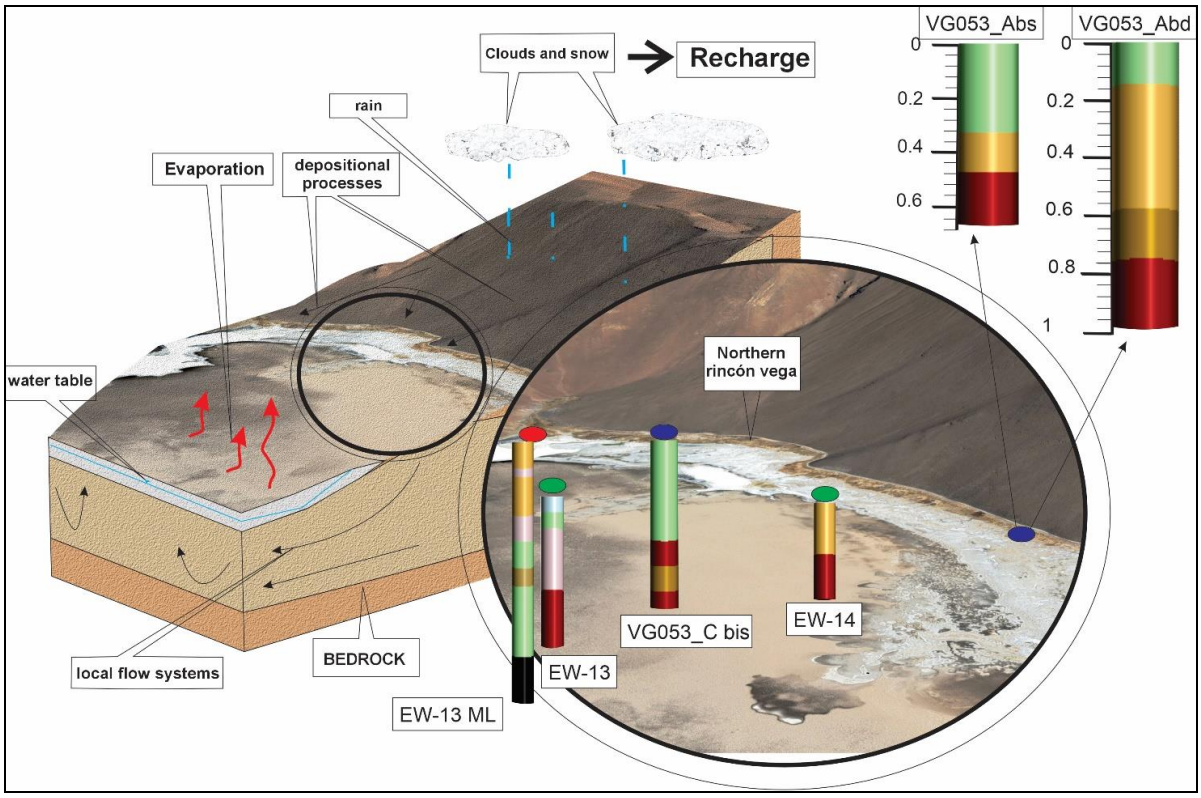


Figure 26: Conceptual hydrogeological model of Vega Rincon area

Vega Unquillar

A key focus of the studies and monitoring completed to date at the Vega Unquillar has been to build a robust conceptual understanding of the origin and hydrogeological setting of the Vega Unquillar area, including both the discrete water seepage and the more diffuse water fed surrounding wetland (vega) environment at the margin of the Salar. A temporary lagoon also forms on the edge of the Salar at this location. A particular focus has been on evaluating the potential hydraulic connectivity between the wetland area and the underlying lithium bearing brine aquifers, and on evaluating the ecological sensitivity of the setting. The key findings are as follows:

- Groundwater analysed below a shallow clay layer measured electrical conductivity measurements exceeding 200,000µS/cm, indicating the presence of highly saline groundwater below the clay zone in this well. If the shallow clay layer extends to the immediate area of the Vega Unquillar, it may act as a barrier that promotes near-surface water accumulation (sustaining vega conditions by limiting vertical infiltration) and isolates the shallow water system from the deeper lithium hosting brines.

- The discrete water seepage at the Vega Unquillar has a TDS of generally 1,000 to 2,000 parts per million (ppm), indicating fresh to brackish water.

This conceptualization supports the classification of Vega Unquillar as a shallow, groundwater-fed wetland (vega) system hydraulically isolated from the Salar's deep brine aquifer. A three-dimensional conceptual diagram for the Vega Unquillar area showing groundwater flow from the colluvial sediments to the vega, recharge originating from precipitation and snowmelt in the highlands (with water moving through local flow systems) and clay layers acting as confining units separating shallow water system from the deeper underlying brines is shown in Figure 27.

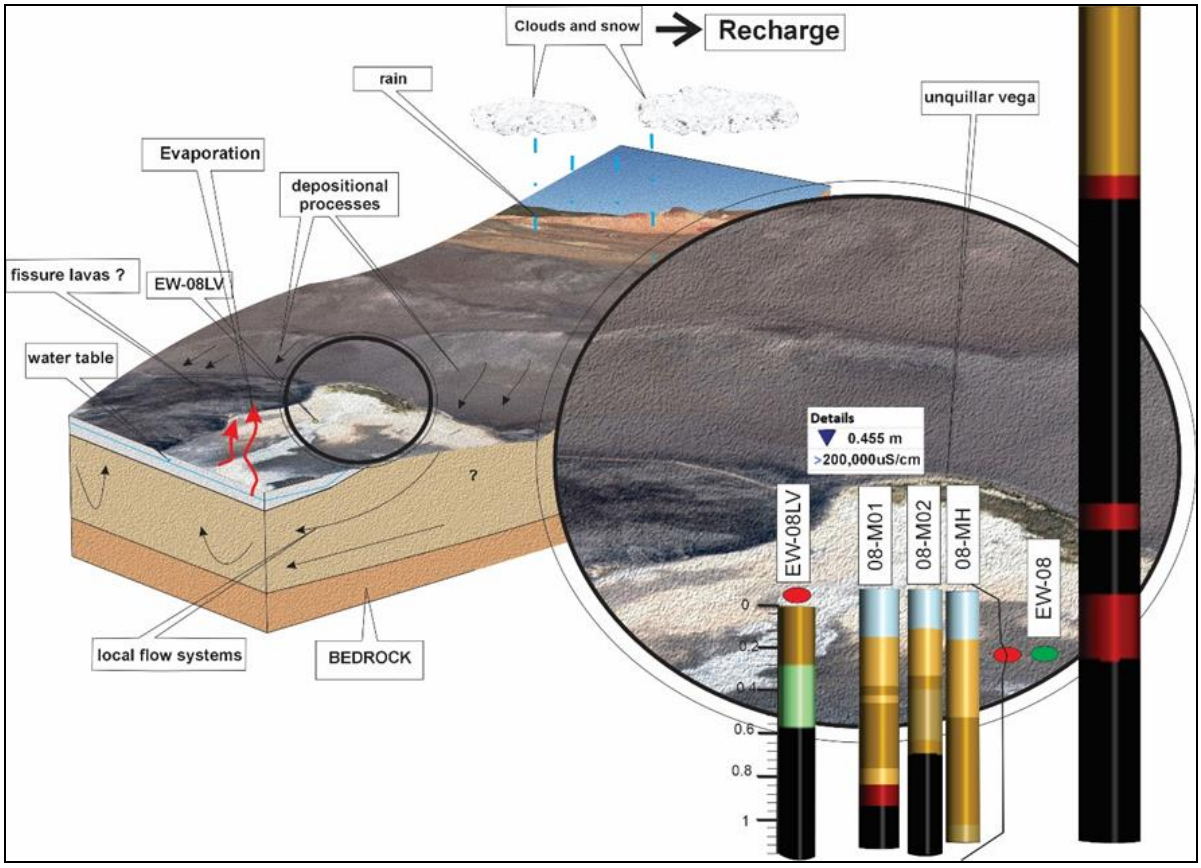


Figure 27: Conceptual hydrogeological model of Vega Unquillar area

Vega Saladillo

The work completed to date has focussed on building a conceptual understanding of the origin and hydrogeological setting of the Vega Saladillo area, including both the discrete water seepage and the more diffuse water fed surrounding wetland (vega) environment at the margin of the Salar. A conceptual water balance for the Vega Saladillo was estimated based on a contributing catchment area. The key findings are as follows:

- The difference between the inflow and outflow yields is a slightly positive water balance per year.
- This result suggests that, under current conditions (excluding direct evaporation or additional losses) that Vega Saladillo could be marginally sustained hydrologically if at least one third of the recharge generated in its small catchment reaches the active vega zone.
- Unlike the other vegas, Vega Saladillo is not associated with an alluvial-colluvial system but rather originates from shallow groundwater flows which appear at the break of slope and appear to be derived from the bedrock.
- Shallow clay layers were encountered. If the shallow clay layers extend to the immediate area of the Vega Saladillo, then they may act as a barrier that promotes near-surface water accumulation (sustaining vega conditions by limiting vertical infiltration) and isolates the shallow water system from the deeper lithium hosting brines.

This conceptualization supports the classification of Vega Saladillo as a shallow, bedrock sourced groundwater-fed wetland (vega) system hydraulically isolated from the Salar's deep brine aquifer. A three-dimensional conceptual diagram for the Vega Saladillo area showing groundwater flow to the vega, recharge originating from precipitation and snowmelt in the highlands (with water moving through local flow systems) and clay layers acting as confining units separating shallow water system from the deeper underlying brines is shown in Figure 28.

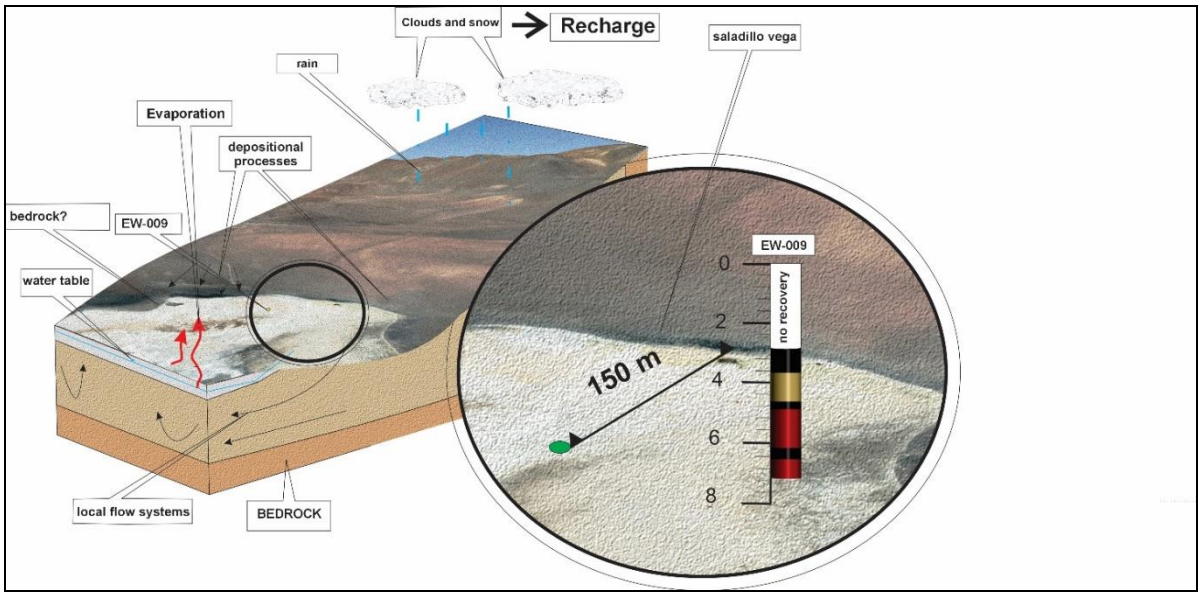


Figure 28: Conceptual hydrogeological model of Vega Saladillo area

Ojos de Agua

EMEs found in Salar del Rincon, including microbial mats, microbialites and biofilms, are shaped by the region's hypersaline conditions, high UV radiation, extreme aridity, large temperature variations and low atmospheric pressure. These systems interact with water chemistry and sediments, playing a key role in nutrient cycles and ecosystem structure. Understanding their distribution helps assess how changes in groundwater, evaporation or brine levels could affect the ecosystem.

A key focus of the studies and monitoring completed to date at the Ojos de Agua has been to build a robust conceptual understanding of the ecological setting of the Ojos de Agua. A particular focus has been on ecological sensitivity of the setting. To date there have been no specific hydrogeological campaigns carried out for the Ojos de Agua. The current understanding of the geometry of the Ojos de Agua, based on field measurements, is shown in Figure 29. Both the Ojos de Agua comprise steep-sided, cylindrical depressions in the carbonate platform with substantial depths. Ojo de Agua A has a surface diameter of approximately 35m and is approximately 25m in depth. Ojo de Agua B has a surface diameter of approximately 15m and is approximately 15m in depth.

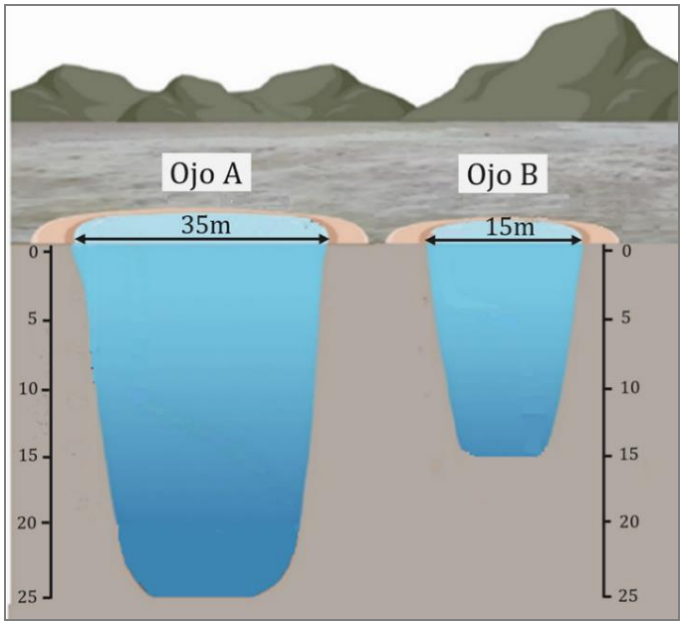


Figure 29: Schematic geometry of Ojos de Agua A & Ojos de Agua B

These geomorphological characteristics promote the vertical stratification of physico-chemical properties within the water column, a phenomenon that was assessed through depth-profile sampling across three monitoring campaigns. The deep, enclosed profile of these features enables the accumulation of geochemically distinct water masses at depth. The current data and assessments completed (including the vertical chemical profiles, variability metrics, statistical results, multivariate clustering and geophysical survey data) suggests that:

- The upper portion of the water column in the Ojos de Agua varies the most seasonally (influenced by surface conditions) and that the lower portion of the water column shows significantly less variation, suggesting a degree of stratification within the water column and a potential degree of hydraulic disconnection between the deep water within the Ojos de Agua and the surrounding brines.

- The upper 10m of water within the Ojos de Agua is most responsive to environmental fluctuations and is already subject to significant variation in a range of different parameters. This upper water zone is the area where the EMEs are most abundant.

- The fact that water characteristics of this zone already vary significantly suggests that the EMEs have a degree of resilience to changing water temperature and quality. This upper zone is potentially the zone most likely to be influenced by potential water level variations which may be caused by the Project activities.

The ongoing EMEs resilience testing will confirm the degree of variability in the water characteristics that the EME can tolerate but it is a positive outcome that the EMEs can tolerate that natural water variability.

On-Going and Future Updates to the Conceptual Eco-Hydrological Model
It is proposed that the eco-hydrological model will be enhanced through the following additional activities:

- Isotope studies to better define groundwater flow paths.

- Additional geophysical surveys around key environmental receptors.

- Expansion of the shallow monitoring network, including installation of automated instrumentation.

- Analysis and identification of ecohydrological thresholds for sensitive species (establishment of critical soil moisture levels required for the survival of key vegetation species, ensuring ecosystem stability.

- Definition of groundwater thresholds and development of warning and action strategies.

- Detailed specifically focused numerical groundwater modelling of key environmental receptors, coupled with ecological variables.

- Scenario analysis of climate change impacts on high Andean wetlands.

Important: Condition 21 of Resolution 101/25 requires increasing the distance between the SBDF and the Ojos de Agua, from 250m to 700m. This design modification will be implemented by SRK (Engineer of Record), and the numerical groundwater model will be updated by Montgomery & Associates by November 2025 to assess any variations in predicted groundwater drawdown resulting from this design change.

3.3 Critical & Natural Habitat

3.3.1 Previous Work

As presented in Chapter 2 of 2024 ESIA, Section 2.A: Physical and Biotic Environment, and summarized in Section 2.1.3 of this Disclosure Summary, the Project is located within the Sustainable Use Zone - Special Management Zone - Salar Sector of the "*Reserva Provincial de Fauna Los Andes*". Situated in the Reserva Provincial de Fauna Los Andes are the following national protected and important international conservation areas:

- The "*Zona de Reserva de la Vicuña*".

- The "*Reserva Provincial Altoandina de la Chinchilla*", also recognised as a KBA and IBA called "*Sistema de Lagunas de Vilama-Pululos*".

- The "*Reserva Provincial de Fauna y Flora Olaroz - Cauchari*", KBA and IBA.

The Project footprint will not overlap these areas. The Direct Environmental AoI overlaps 6.41 ha of the *Reserva Provincial de Fauna y Flora Olaroz – Cauchari*, while the AII overlaps 31.01 ha of the Reserva Provincial Altoandina de la Chinchilla and 3.18 ha of *Reserva Provincial de Fauna y Flora Olaroz – Cauchari.*

As shown in Table 14, the "*Reserva Provincial de Fauna Los Andes*" represents biotic and abiotic conservation values which are relevant and/or presumed to have special value, particularly for local communities. These, therefore, must be considered for the implementation of the Project. It also houses extremophile communities of organisms that exhibit exceptional adaptations to thrive in extreme environmental conditions. These organisms often represent ancient life forms of significant ecological importance, thereby warranting consideration for conservation purposes.

Table 14. Reserva Provincial de Fauna Los Andes – biotic and abiotic conservation values

Biotic Conservation Values	**Abiotic Conservation Values**
✓ Wetlands ✓ High Andean Flamingos ✓ Camelids ✓ Andean Cat ✓ Chinchilla ✓ Stromatolites ✓ Suri/Choique (South American Ostrich) ✓ Tola (Flowering Plant) ✓ Yareta (Cushion Plant) ✓ Flora for Local Use (Medicinal, Aromatic, Fuel, Ritual and Tourism) ✓ Condor ✓ Andean Frog ✓ High Mountain Area ✓ Vegas ✓ Ojos de Mar (Water Bodies – Tourist Attraction) ✓ Conservation of Churqui (Ornamental Tree) ✓ Conservation of Cacti ✓ Conservation of Quirquinchos (Armadillo) ✓ Management and Conservation of Río San Antonio	✓ Watersheds ✓ Confined Fresh Waters (Underground and on Mountain Peaks) ✓ Soil and Mineral Resources ✓ Devil's Desert, Los Colorados and Siete Curvas (Tourist Sites) ✓ Salar/Salar Hot Springs ✓ Volcanoes and Mountains (Aracar Volcano, Guanaquero Volcano, Socompa Volcano, Salim Volcano and Incahuasi Volcano) ✓ Santa María Lagoon ✓ Community Water Conservation ✓ Landscape Conservation (Earthworks) ✓ Preserve the Landscape ✓ Andean Landscape ✓ Quebrada del Agua Station – Agua La Virgen. ✓ Vegas ✓ Chuqulaqui - Caipe ✓ Callacao Salar (Llullaillaco) ✓ Chascha Spring ✓ El Arenal and Cueva del Oso (Tourist Sites)

Source: Reserva Provincial de Fauna Los Andes Management Plan[15]

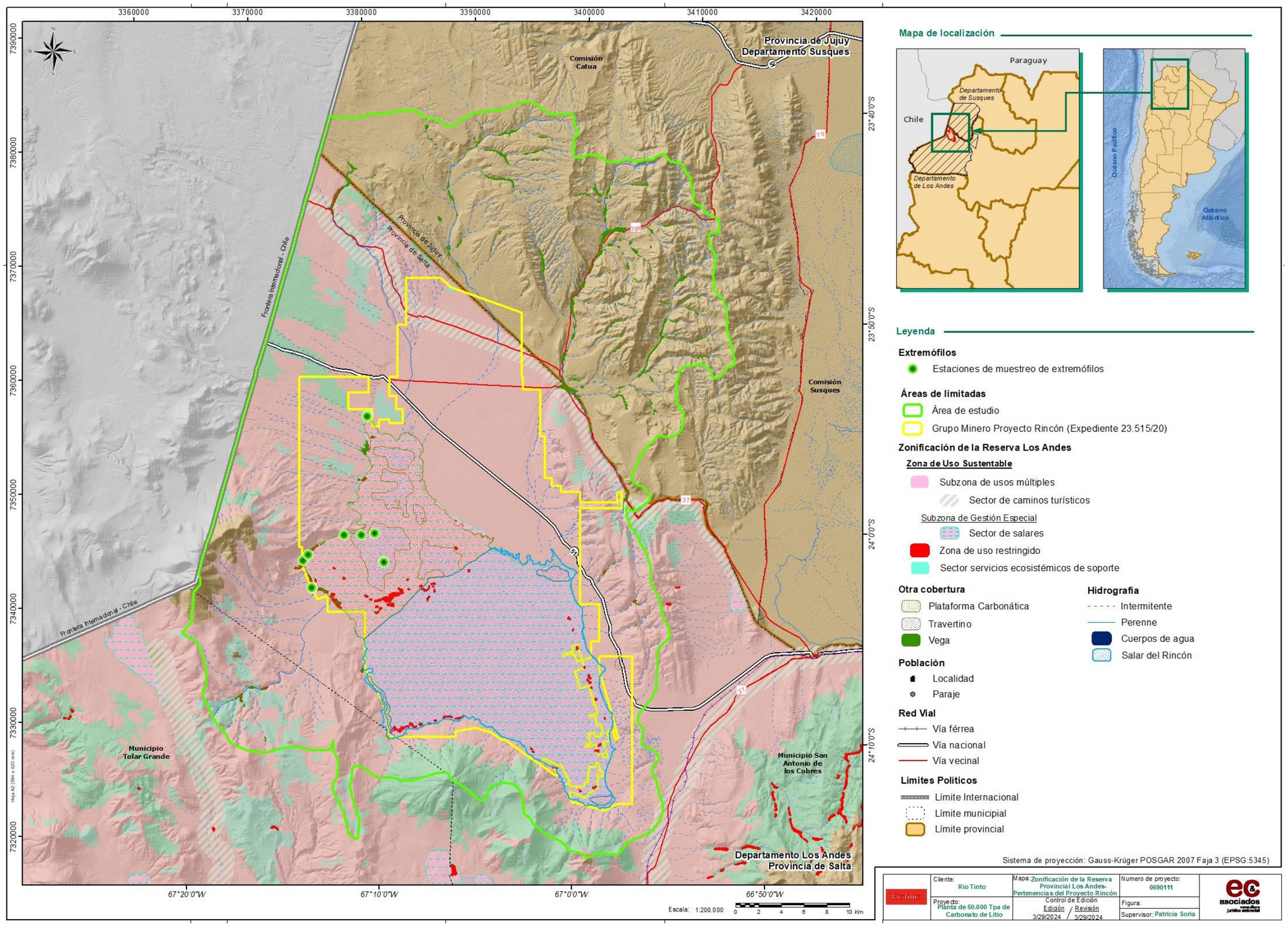
[15] Plan Integral de Manejo y Desarrollo de la Reserva Natural de Uso Múltiple Los Andes Refugio Provincial de Vida Silvestre Laguna Socompa y Refugio Provincial de Vida Silvestre Ojos de Mar de Tólar Grande (Reserva Provincial de Fauna Los Andes Management Plan), Resolución 48/18, 2017.

For the management of the reserve, zoning was proposed following the criteria of SIPAP Law 7107, according to the scheme presented in Table 15. The map of the Reserve's zoning, taking into account the Project's mining properties, is shown in Figure 30.

Table 15. Reserva Provincial de Fauna Los Andes zoning scheme

Zoning	Objective	Project Context
Sustainable Use Zone	In this area, all types of activities are permitted, but with restrictions to ensure the implementation of sustainable practices and reduce undesirable effects on the area's conservation values. It is divided into three sub-zones, with delimited sectors: • Urban and Industrial Infrastructure Sub-Zone: – Dispersed Urban and Rural Sector. – Industrial Sector. • Special Management Sub-Zone: – Plant Communities Sector. – Altas Cumbres Sector. – Salares Sector. – • Multiple Use Sub-Zone.	The Project is part of the Sustainable Use Zone, a Special Management sub-zone - Salares Sector. Therefore, the corresponding management guidelines must be taken into account for the implementation of the Project.
Core or Intangible Zone	The objective of this zone is to protect highly vulnerable biodiversity elements, such as endemic species, rare ecosystems, and endangered species, in order to comply with national and international commitments to the conservation of biodiversity and genetic resources, tourism, health, and other areas. This zone is the most restrictive, limited only to scientific and environmental education activities. There is no cartographic representation due to a lack of information in some cases, particularly regarding the presence of endangered species and sites with extremophile environments, and in other cases due to the mobility of the elements to be mapped, such as flamingo nesting sites. In this sense, the field delimitation of some of these areas is subject to future studies that may better determine the location of these species.	In the context of the Project, a survey of extremophile ecosystems was conducted in the Salar del Rincon to determine their presence and current status. This survey consisted of eight sites in the Salar del Rincon, where water, sediment, and microbial mat samples (extremophile ecosystems) were extracted; the physical and chemical parameters of the sampled wetlands were recorded; the morphological and structural characteristics of the microbial mats were characterized; and a microbiological study of the water samples and microbial mats was conducted. This work is initial in nature, and further studies are needed to determine the area of extension of the extremophile ecosystems. The survey report is attached in Annex 2.a.35 of the 2024 ESIA. The establishment of Project facilities is not planned in areas where extremophile ecosystems have been surveyed.
Restricted Use Area	Only limited activities that do not cause significant environmental impacts, such as traditional livestock farming or tourism, are permitted. It is divided into five sectors: • Tourist Attractions Sector. • Wildlife Refuges Sector. • Archaeological Sites Sector. • Vegas Sector. • Sector Spaces for Natural Processes.	The establishment of Project facilities is not planned in the Restricted Use Area.

Source: 2024 ESIA



Source: 2024 ESIA

Figure 30: Zoning Map for the Reserva Provincial de Fauna Los Andes

Five environmental units were considered where 8 habitats for fauna were identified:

- Rincon vegas and lagoons.
- Catua vega.
- Pompón vegas.
- Huaytiquina vegas.
- Northern complementary streams.
- Balbuena Gorge.
- Southern complementary streams.
- Ignimbrites canyons.

3.3.2 Critical Habitat Assessment

A Critical Habitat Assessment (CHA, ERM[16] 2025e) has been developed in alignment with IFC PS6 (IFC, 2012) and its accompanying Guidance Note 6 (IFC[17], 2019). The purpose of the CHA is to evaluate the presence of Critical Habitat (CH) within the Project area based on the presence of endangered, endemic, migratory, or ecologically significant species and ecosystems. As part of the assessment, habitats within an ecologically relevant area surrounding the Project have been classified as Natural Habitat, Modified Habitat, or Critical Habitat, in accordance with IFC criteria. The CHA process involved desktop reviews, field surveys, and expert analysis to confirm whether biodiversity features met Critical Habitat thresholds.

Key objectives include:

- Identifying and mapping Natural and Critical Habitats within the Project's AoI.
- Evaluating the Project's alignment with IFC PS6 requirements.
- Recommending next steps to ensure compliance, including achieving No Net Loss (NNL) for Natural Habitat and Net Gain (NG) for Critical Habitat.

Four and possibly five Critical Biodiversity Values have been identified as triggering Criterion 2, including:

- *Liolaemus multicolour*.
- *Liolaemus porosus*.
- *Liolaemus scrocchii*.
- *Liolaemus* sp. AC (if shown to be a distinct species).
- *Liolaemus* sp. A and *Liolaemus* sp. C (if shown to be taxonomically distinct from *Liolaemus* sp. AC).
- EMEs have been recognized as Critical Biodiversity values under Criterion 2, Criterion 4, and Criterion 5.

[16] ERM 2025e. Critical Habitat Assessment. September 2025.

[17] International Finance Corporation's Guidance Note 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources. 2019.

The Project footprint overlaps with *Liolaemus multicolour* and *Liolaemus* sp. AC (or only A); while the Project's Direct AoI also overlaps with *Liolaemus scrocchi*. *Liolaemus porosus* is found only in the Indirect AoI. EMEs are found within the Direct and Indirect AoI but not in the Project footprint (Table 16). *Liolaemus* sp. AC, A, and C have not currently had assessment of conservation status under either the IUCN Red List or Argentinian conservation frameworks; extremophile bacteria, likewise, have not had conservation status assessed as part of the IUCN Red List, but have been identified as a conservation priority under Argentinean regulations.

There are no specific Argentinean regulations on EMEs, however the "*Plan Integral de Manejo de Desarrollo de la Reserva Natural de Fauna Silvestre Los Andes, Refugio Provincial de Vida Silvestre Laguna Socompa y Refugio Provincial de Vida Silvestre Ojos de Mar de Tolar Grande"* (Resolución 48/18) which is under Salta Province legislation, considers the EMEs as emblematic environments and they are under an untouchable zone, in which only scientific research and environmental education activities are allowed. EMEs, therefore, are considered as Critical Habitat of the National Reserve.

Refer to the full Critical Habitat Assessment report (ERM 2025e).

3.3.3 Ecosystem Services

3.3.3.1. Previous Work

Previous work is presented in in Chapter 2 of 2024 ESIA, Section 2.C: Ecosystem Services.

3.3.3.2. Update to Ecosystem Services Assessment

An Ecosystem Services Assessment (Evaluación de Servicios Ecosistémicos, ERM 2025f) has been developed in alignment with IFC PS6 (IFC, 2012) and its accompanying Guidance Note 6 (IFC[18], 2019). The objectives of the assessment were to identify and avoid, minimize, or offset impacts on ecosystem services, understand community dependency on these services, and integrate this knowledge into project design and management through a robust Environmental and Social Management System (ESMS). The following provides a high level summary of the ecosystem services identification, categorisation, baseline and prioritisation, and the spatial boundaries for the assessment.

Ecosystem services are defined as the benefits that people obtain from ecosystems (Alcamo[19] et al., 2003). According to the definition of the World Resources Institute (WRI), these can be direct or indirect and consist of all natural products and processes that contribute to human well-being, as well as the personal and social enjoyment derived from nature. Benefits include basic living materials, such as:

- Food, livelihoods, and income.
- Health, related to a clean environment that provides good hygiene and living conditions.
- Safety, as per security of access to natural resources and low risk for natural disasters.
- Social cohesion, such as the absence of conflict and a sense of belonging.

Ecosystem services are grouped into four main categories based on the benefits that people obtain from them:

- Provisioning services: These are the tangible products obtained directly from nature. They include food, fresh water, timber, fibres, medicinal plants, and other natural resources essential for human subsistence.

[18] International Finance Corporation's Guidance Note 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources. 2019.

[19] Alcamo J. et al (2003). Millennium Ecosystem Assessment: Ecosystems and human well-being: a framework for assessment. José Sarukhán, National Autonomous University of Mexico, Mexico.

Table 16. Summary of Critical Habitat triggering biodiversity values recorded within the Project AoI and footprint

Biodiversity values	IUCN Red List categorization	Argentinian legislation status	Criterion					Present in the Direct AoI	Present in the Indirect AoI	Present in the Project footprint	Number recorded in the Direct AoI	Number recorded in the Indirect AoI	Commentary
			1	2	3	4	5						
Liolaemus multicolour	LC	Endemic	N	Y	N	N	N	Y	Y	Y	62 individuals	37 individuals	
Liolaemus porosus	LC	Endemic	N	Y	N	N	N	N	N	N	0	0	
Liolaemus scrocchii	LC	Endemic	N	Y	N	N	N	Y	Y	N	5 individuals	3 individuals	
Liolaemus sp. AC	Unknown	Unknown	N	Y	N	N	N	Y	Y	Y	130 individuals	30 individuals	Taxonomic status pending
Liolaemus sp. A (pending confirmation)	Unknown	Unknown	N	Y	N	N	N	Y	Y	Y	93 individuals	28 individuals	Taxonomic status pending
Liolaemus sp. C (pending confirmation)	Unknown	Unknown	N	Y	N	N	N	Y	Y	N	37 individuals	2 individuals	Taxonomic status pending
Extremophile Microbial Ecosystems	Unknown	Recognized as emblematic environments by RNFSLA*	N	Y	N	Y	Y	Y	Y	N	8 sites	4 sites	

Note: N = No, Y = Yes. *RNFSLA = Reserva Natural de Fauna Silvestre Los Andes

- Regulating services: These are the benefits derived from the ecological processes that helps regulate nature. These include climate regulation, disease control, erosion prevention, water availability regulation, pollination, and protection against natural phenomena such as floods or landslides.

- Cultural services: These are the non-material benefits that people obtain from ecosystems through spiritual, recreational, aesthetic, educational, and symbolic experiences. They include leisure, cultural identity to a region or place, ritual practices in natural areas or related to natural phenomena, and the scenic value of a landscape.

- Supporting services: These are the fundamental ecological processes that sustain ecosystem functions and allow the other three types of services to exist. These include nutrient cycling, soil formation, primary production, and energy flows.

The assessment identifies and evaluates the ecosystem services provided by local environments to both human communities and nature, focusing on the impacts and risks posed by the Project's activities. It aligns with IFC PS6, which emphasizes biodiversity conservation and sustainable resource use, and applies the Ecosystem Services Review[20] (ESR) methodology from the WRI and WBCSD, ensuring international best practice. Three key ecosystems are studied:

- Steppe.

- Highland Wetlands.

- Salar.

These ecosystems support the livelihoods and cultural practices of rural communities in Catua, Olacapato, and Estación Salar de Pocitos. The analysis is based on prior environmental and social studies, geographic data, and other secondary sources.

The objective of the assessment Identify and evaluate impacts associated with the Project activities and risks to ecosystem services present in the study area and establish mitigation measures following the IFC guidelines in IFC PS6. Specifically, the assessment:

- Identifies and analyses natural resources and their use: Determines the natural resources present in the study area, their supply zones, and how local populations utilize or exploit them, following WRI methodology.

- Classifies and prioritises ecosystem services: Categorises services into Type I or Type II, assesses their importance to local communities, and prioritises those most critical to human well-being based on their significance and potential for substitution.

- Assesses impacts and proposes mitigation: Evaluates current and potential risks to ecosystem services from Project activities and develops mitigation and management measures incorporating stakeholder input.

The study area for the ecosystem services assessment is shown in Figure 31. To delimit the study area, the following criteria were considered:

- The area likely to be impacted by the Project and by RINCON's owned, operated, or directly managed activities and facilities that are components of the Project.

- The preliminary identification of risks or impacts related to ecosystem services during the Construction, Operation, Closure, and Post-Closure phases.

[20] World Resources Institute. (2012). The Corporate Ecosystem Services Review Guidelines for Identifying Business Risks & Opportunities Arising from Ecosystem Change.

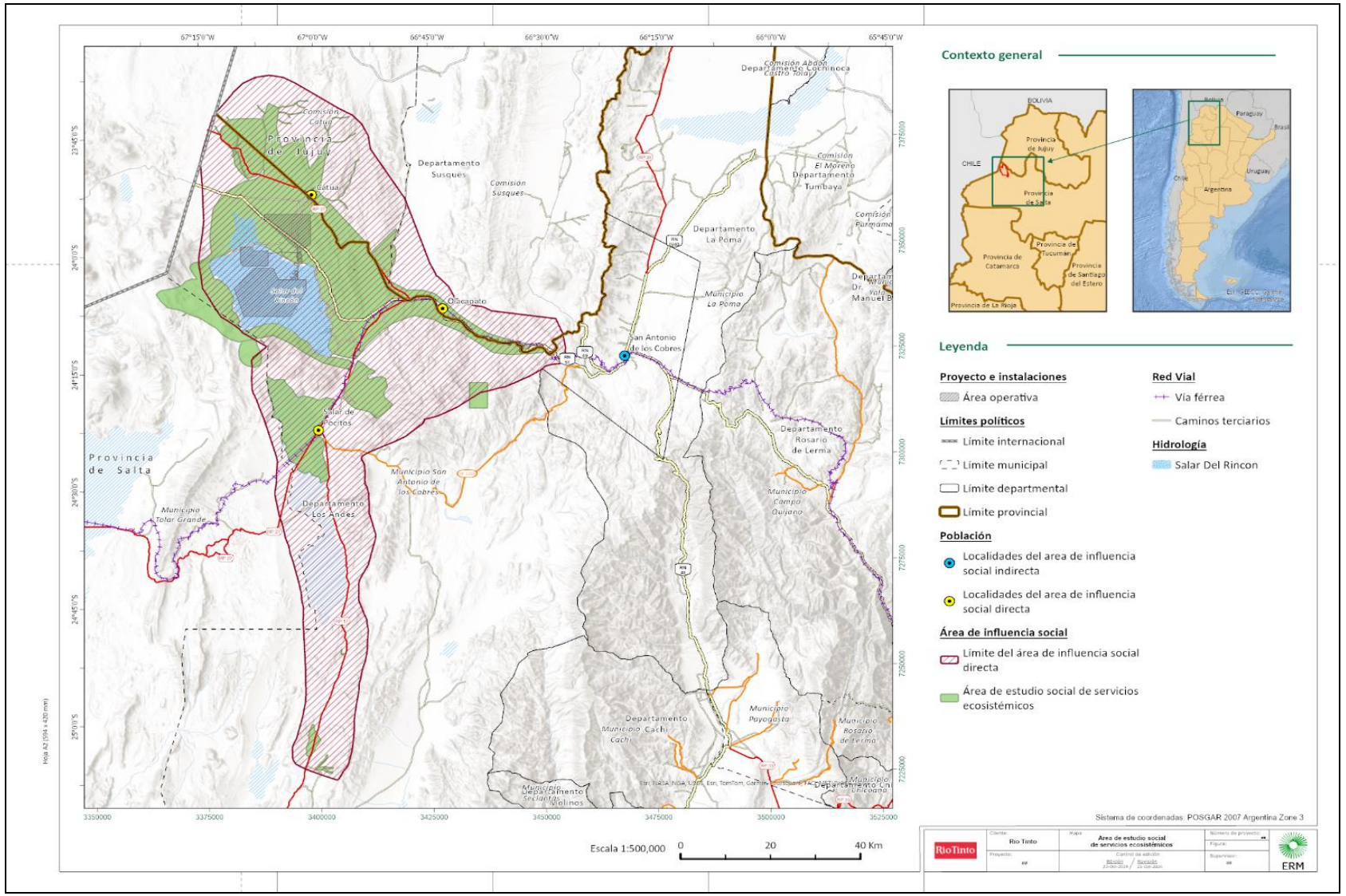


Figure 31. Study area for ecosystem services assessment

- The areas of use of ecosystem services, identified in preliminary studies that include grazing areas, water sources, firewood and medicinal plant harvesting zones, recreational and tourism sites, as well as sites of cultural and sacred value, on which communities depend for their livelihoods.

The methodology developed by the WRI (Guide to Integrating Ecosystem Services into Impact Assessment, 2013) has been selected as a working model, focused on determining the degree of dependence of human communities on each ecosystem service present in a territory:

- Ecosystem services identification.
- Prioritisation of ecosystem services.
- Definition of the physical location of ecosystem services.
- Dependency on ecosystem services.
- Measures to control impacts on ecosystem services.

This methodology has been adapted for the context of this research on the effects and impacts that have already occurred, are occurring, or may occur on ecosystem services in the Project's Social AoI, both due to the Project's activities and other factors unrelated to the Project (i.e., other anthropogenic factors such as the activities of the local population or environmental factors).

Ecosystem Services Identification
A preliminary list of ecosystem services that could be affected by the Project's activities was developed based on secondary information from socio-environmental studies previously conducted for the Project[21]. This was intended to establish an initial characterisation of the types of ecosystem services present and their use in the municipality of Catua (Jujuy Province) and the towns of Olacapato and Estación Salar de Pocitos (Salta Province)—the communities in the Direct Social AoI.

Based on the analysis of available information, methodological tools were established for collecting the complementary information required for the identification and evaluation of the ecosystem services used by the communities. The survey was conducted by SCG between November 2024 and April 2025 as part of a supplementary socioeconomic baseline study, and included questions suggested by ERM to obtain more detailed information related to ecosystem services.

RINCON and SCG facilitated community validation of the supplemental social baseline data through an Open House format[22], held in the towns of Estación Salar de Pocitos (March 26, 2025), Catua (April 9 and 10, 2025), and Olacapato (April 29, 2025). RINCON was responsible for issuing invitations, ensuring the representation of puesteros, the indigenous and non-indigenous population, community leaders, former leaders, and residents with traditional knowledge of the territory—both men and women—and individuals with deep knowledge of traditional practices such as animal husbandry, medicinal plant use, and other culturally significant activities, as shown in Figure 32.

Catua was the town with the highest level of participation, with a total of 46 people participating in the two-day workshop: 16 on the first day, focused on puesteros, and 30 on the second day, open to the general community. In Olacapato, 14 people participated in an open session. A single meeting was also held at Estación Salar de Pocitos, with 15 people in attendance. All three validation meetings have records of participants registration.

[21] In 2022 and 2024, ERM conducted field surveys through interviews in urban and rural areas within the Project's AoI, as part of the development of the 2024 ESIA. While these surveys were not specifically designed for the study of ecosystem services, they provided useful data related to the provision and use of ecosystem services.
[22] The open house format is used to facilitate access to relevant information for a wide audience. It employs a commonly used location (in this case, a neighborhood centre or community office) where community members can meet, exchange information, and speak with staff knowledgeable about the topics to be discussed.

Figure 32: Ecosystem services workshop in Catua, Jujuy

Regarding gender composition, of the 60 registered individuals between Catua and Olacapato, 42 were women and 18 were men, representing 70% of the female population. This predominance is observed in both localities: in Catua, women represented 67%, and in Olacapato, 79%. This broad participation of women is especially relevant, as it reflects the active role they are taking in the continuation or redefinition of traditional productive activities and in the integration with new economic and social dynamics in the region.

During the participatory workshops, the following was discussed:

- Identification of the predominant ecosystems and associated ecosystem services.
- The community members' use of these services, the benefits they obtain from them in their daily lives, and their perceptions of the current problems they face were directly recorded.
- Resource maps were developed by community members, collectively constructed by participants at the puestos during the last survey, using the talking map methodology.

This information was then digitised and validated in subsequent workshops, which allowed for the addition of new data and correction of omissions in the results. As a continuation of this process, a workshop is planned for October 2025 to validate the prioritisation of ecosystem services, as well as the identified impacts and risks. A second workshop is also contemplated to validate the ecosystem services mitigation measures to be incorporated into an Ecosystem Services Management Plan. These workshops will be planned jointly with RINCON's CSP team.

Ecosystems are defined as dynamic complexes of animal and plant communities interacting with each other and with inert components, forming functional units in the landscape (Odum[23], 1971; Ricklefs[24], 2001; Margalef[25], 1991). In the Puna ecoregion, highly heterogeneous environments coexist, enabling the emergence of distinctive ecosystems. The ecosystems identified for the Salar de Rincon Basin are shown in Table 17 and summarised below.

Table 17. Approximate surface area in km^2 of each identified ecosystem

Ecosystem	**Surface (km^2)**
Steppe	565
High Altitude Wetlands	14
Salt Flat	268

[23] Odum, E.P. (2006). Fundamentals of Ecology (5th ed.). Thomson Brooks/Cole.
[24] Ricklefs, R. E. (2001). The Economy of Nature (5th ed.). W. H. Freeman and Company.
[25] Margalef, R. (1991). Ecological systems theory. Omega Publishing.

Steppe

The Puna ecoregion is characterised by large expanses of steppe, vegetation with a high percentage of bare soil that develops in areas with limiting factors such as temperature and soil conditions (Figure 33). Several types of steppe are recognised in the Salar de Rincon Basin: Shrub Steppe, Grass Steppe, and Mixed Steppe.

Figure 33: Atriplex imbricata steppe

- Shrub Steppe: made up of generally scattered clumps of several dominant shrub species. The species that dominate Steppe ecosystems are *Aloysia deserticola* (rica rica), *Adesmia horrida* (añagua), *Atriplex imbricata* (cachiyuyo), *Artemisia copa* (copa copa), and *Parastrephia lucida* (tola). Other species may also appear as companions: *Senecio viridis* (mocoraca), *Senecio filaginoides* (mocoraca blanca), and *Adesmia erinacea* (añagua).

- Grass Steppe: consists of herbaceous plants of the *Festuca* or *Pappostipa* genera and can appear in higher altitude areas.

- Mixed Steppe: vegetation where the dominance is shared by shrubs and grasses, generally recognized as transitional sectors. Among the outstanding terrestrial fauna of the area, the camelids *Vicugna vicugna* (vicuña) predominate, *Lama guanicoe* (guanaco) to a lesser extent, and *Lama glama* (llama, domestic animal) that graze on certain herbaceous and shrub species of the region. Rodents also make up an important component of the environment: *Ctenomys opimus* (tuco tuco or *oculto*) is a species that abounds in the steppe environment, with active and inactive burrows recorded throughout the terrain. In addition, rodent species of the genera *Eligmodontia*, *Phillotys*, and *Akodon* can be found. Among the carnivores that dominate the environment, the species *Lycalopex culpaeus* (red fox) is mentioned as an opportunistic predator that preys on rodents and *Puma concolour* (puma) is the top predator and controls camelid populations. Smaller felines belonging to the *Leopardus* genus may also appear, frequenting rocky areas.

The shrubby steppes of the Puna are also home to a large number of birds. Among them, *Rhea pennata* (suri), the only flightless bird present in the region and characteristic of steppe environments. Other passerine birds can also be recognised, such as the Puno woodpecker (*Geositta punensis*), the common yellowthroat (*Geospizopsis plebejus*), and the olive-finch (*Sicalis olivascens*).

Another important component of the Shrub Steppe are the lizards of the genus *Liolaemus*.

High Altitude Wetlands

One variety of high altitude wetlands is the bofedale, which consists of vegetal structures that grow in semi-globose cushions mixed with turfgrass species (Ahumada & Faúndez, 2009). The other, and most widespread physiognomy is the vega, where the vegetation extends like a creeping lawn, also presenting some herbs with greater growth. The most characteristic species are *Zameiocirpus atacamensis* and *Oxichloë andina*, occasionally accompanied by the grasses *Festuca* sp. and *Deyeuxia* sp. In the higher elevations of the basin, streams are formed that feed the salt flat located downstream, and include Vega Catua, Vega Huaitiquina (Figure 34), Vega Faldeo Ciénago (Figure 35), among others.

Figure 34: Vega Huaitiquina

Figure 35: Vega Faldeo Ciénago

The vegas and wetlands host mammals that utilise the water and vegetation resources these areas provide. Both the herbivores and carnivores mentioned above hydrate in the vegas and wetlands, so these areas play a key role in the survival of the various mammal populations.

Birds also use meadows and wetlands as resting and feeding sites. These habitats are home to species such as *Oressochen melanoptera* (guayata), *Thinocorus* sp. and *Attagis gayi* (snipe), *Phegornis mitchelli* (red-bellied plover), *Tinamotis pentlandii* (Puna partridge), *Gallinago andina* (Andean snipe), and *Calidris bairdii* (unicolored sandpiper). These are often the ecosystems that host the greatest diversity of birds in the region and are of great importance to their assemblages.

Adjacent to the Salar de Rincon, bodies of water associated with the dynamics of the salt flat are generated, such as the Laguna Rincon (Figure 36), Vega Rincon, Vega Unquillar and Vega Saladillo (Figure 37). These systems have a physiognomy that combines floodplain structures with hydric grasslands. The characteristic vegetation found in the salt flat's edge sectors is Juncus balticus, forming grasslands along with *Deyeuxia eminens* and *Festuca argentinensis*. Along with the grasslands, the presence of *Lycium humile* and *Distichlis humilis*, along with *Zameiocirpus atacamensis*, was evident in some sectors.

Figure 36: Rincon Lagoon

Figure 37: Vega Saladillo

In areas bordering the salt flats, but far from the explicit presence of water, dense thickets of the shrub *Parastrephia lucida* are recognized. In the sectors closest to the salt crust, the species *Frankenia triandra*, *Lycium humile*, and *Distichlis humilis* were recorded, with varying dominance depending on the site (Figure 38).

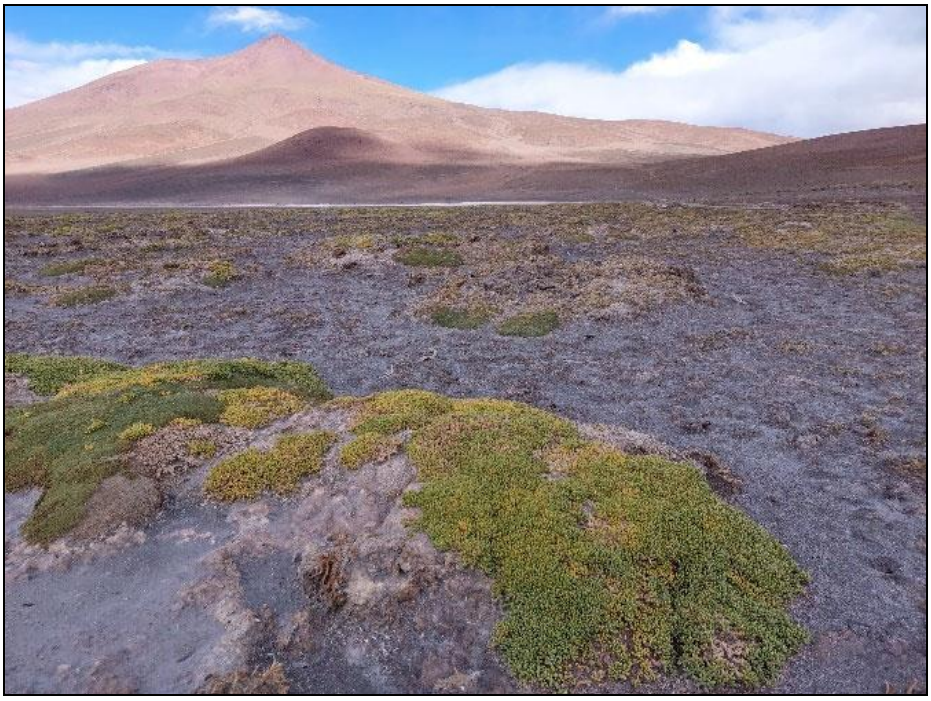


Figure 38: Vegetation on the edge of the Salar

Laguna Rincon and its surrounding vegetated areas provide important feeding and resting sites for migratory flying birds. Important flamingo species, *Phoenicopterus chilensis* (Southern flamingo), *Phoenicoparrus andinus* (Andean flamingo), and *Phoenicoparrus jamesi* (Puna flamingo), were recorded in these water bodies. Nests of *Fulica cornuta* (Horned coot) were also detected. The limnological communities make Laguna Rincon an important water body, as they act as a food resource for the aforementioned bird

populations (mainly algae and crustaceans). The presence of *Rhinella spinulosa* (Puna toad) is notable, developing in Vega Rincon, recording adult and juvenile forms.

Salar

The Salar de Rincon is a site that exhibits certain environmental variations compared to the steppe and wetland ecosystems. The soil characteristics make vegetation growth impossible, and therefore the presence of fauna is very scarce, almost non-existent, although there may be passageways or biological corridors used by species. Despite the site's inhabitability, certain sectors within the salt flat have been identified that differ from this general norm and have associated vegetation due to upwellings that facilitate the development of plant forms. This is how small wetlands are formed in areas of the salt flats that can be recognized as important sites.

In the centre of the salt flat are two bodies of water, each measuring between 12m and 30m in diameter and 15m to 25m deep. Both are semicircular and have steep walls. These bodies of water are called Ojos de Agua (Figure 39). Inside, the physicochemical conditions give rise to a hypersaline environment that limits the existence of life forms to a few organisms (bacteria, archaebacteria, algae, and crustaceans) that have been able to adapt and which together form EMEs. There are other sites in the bodies surrounding the Salar de Rincon that have the presence of EMEs, where extreme salinity conditions make the existence of these microorganisms possible.

Figure 39: Ojos de Agua in the Salar

The environmental importance of EMEs lies in their role as carbon sinks and in various biogeochemical cycles. Furthermore, their application in various fields of research gives them great value for scientific knowledge.

Categorisation of Ecosystem Services

The ecosystem services on which the Project has a significant influence, can be of two (2) categories:

- Type I: Those that, when impacted, can generate adverse effects in the affected communities.
- Type II: Those that the Project directly depends for its operation.

Categorisation was executed sequentially: first Type I services, then Type II services. In both cases, WRI methodological criteria were applied, assessing importance and substitutability:

Importance: The importance of each ecosystem service to its beneficiaries was assessed by assigning values from Essential to Low, based on: 1) Intensity (frequency) of use; 2) Type of use of the ecosystem service and the territorial scale of its use; 3) Cultural and/or historical relevance; and 4) Degree of dependency, i.e., contribution of ecosystem services to the economy, health, diet, and resource supply relative to the totality of the aspect assessed. Values of importance were assigned as described in Table 18.

Table 18. Importance values

Values of Importance	Description
Essential	Critical to the survival and well-being of human populations and ecosystems. Without these services, ecosystems and human life would be severely compromised.
High	Those services that contribute significantly to human health, economic activities, and ecological stability. Their alteration can generate significant economic and ecological impacts.
Moderate	They are valuable, but not critical to survival or immediate functioning. The service contributes to overall well-being and economic diversity but are not as crucial as those in the Essential or High categories.
Low	Those that, while beneficial, would have a minimal impact on human well-being and ecosystem health compared to other services. Although they still contribute to the service, their absence would not have significant adverse effects.

Substitutability[26]: The ecosystem service is rated by assigning values from Highest to Lowest. Substitutability is understood as the availability of alternatives for each ecosystem services and indicates the extent to which beneficiaries may be affected if the service's availability decreases. The categorisation of ecosystem service substitutability was carried out according to the following: 1) The existence of alternatives, including natural and artificial substitutes; 2) Access, cost, and sustainability of potential alternatives; and Preference/appetite for alternative services, as well as the cultural appropriateness of such alternative services. Substitutability values were used as described in Table 19.

Table 19. Substitutability values

Substitutability		
High	**Moderate**	**Low**
There are many alternatives to replace the ecosystem service.	There are some replacement alternatives.	There are very few or almost no alternatives to replace the ecosystem service.

All Type II priority services (i.e., those on which the Project depends) are included in the assessment, especially since several of them are also services used by individuals or the community. The determination of the importance and substitutability of the ecosystem service was made based on available information, including environmental impact studies and secondary information. Within this framework of analysis, a total of 17 ecosystem services were identified that are relevant to the Project's AoI.

Table 20 provides a list of ecosystem services identified in the study area, along with their definition, beneficiaries, and the category assigned according to their connection to the Project.

[26] Potential to substitute the impacted ecosystem service.

Table 20. Categorisation of ecosystem services in the study area

Ecosystem service	Ecosystem	Definition	Beneficiaries	Category	Comment
Provisioning services					
Provision of clean and abundant water	High altitude wetlands	Water as an ecosystem service in the Salar del Rincon region is essential for human, animal, and plant life in an environment of marked water scarcity. Its availability sustains traditional practices such as livestock farming and subsistence farming, and its value transcends the material, being central to the Andean worldview as a symbol of life and a sacred element. Although its quality is perceived as good by the population, there are challenges related to seasonal availability, pressure on sources, and the potential impact of productive activities. This service is provided primarily by high-altitude wetlands—flood plains, bofedales, and lagoons—and is accessed through various strategies, including catchments, wells, and storage.	Rural population of the communities of Catua, Olacapato and Estación Salar de Pocitos	**Type I** **Type II**	Water in the Salta Puna region represents a critical ecosystem service for both local communities and the Project's operations, justifying its simultaneous classification as Type I and Type II. Its daily use is essential for human consumption, pastoral activity, and industrial production, with a high level of dependence in all cases.
Provision of natural pastures	Steppe High altitude wetlands	The ecosystem service of natural grazing refers to the provision of food for livestock in high Andean ecosystems, such as meadows and steppes, which supports subsistence domestic livestock farming practiced by local communities. This ecosystem service is essential for the raising of llamas, sheep, and goats based on seasonal grazing availability, ensuring subsistence, the generation of supplementary income, barter, and the production of textile handicrafts. It is deeply linked to cultural practices and ancestral knowledge such as transhumance, shearing, and spinning, passed down from generation to generation.	Dispersed rural population of Catua, Olacapato and Estación Salar de Pocitos	**Type I**	This ecosystem service directly supports subsistence livestock farming. The widespread, daily natural grazing across multiple ecological zones, through transhumant strategies, allows for efficient land management throughout the year. The Project could impact the availability of this ecosystem service in some areas of the salt flat basin.
Vicuñas	Steppe High altitude wetlands	As grazers, vicuñas help regulate the growth of high-altitude grasslands in the Puna region. Their selective grazing promotes plant diversity and prevents overgrowth, which supports the health of the entire ecosystem. By maintaining grassland structure, vicuñas indirectly support other species that depend on these habitats, contributing to overall ecosystem resilience[27] (Chloe, 2024). Indigenous communities in Salta and Jujuy and the broader Andean region engage in traditional “chaku” practices—capturing, shearing, and releasing vicuñas. This provides a sustainable source of income through the sale of their highly valuable wool, which can fetch $450–550 per kg on the international market[28] (Environment Ministry’s Biodiversity Secretariat, 2019).	Dispersed rural population of Catua, Olacapato and Estación Salar de Pocitos	**Type I**	This ecosystem service supports a sustainable source of income and cultural identity of the communities in the study area. The irreplaceability of this service and its connection to local culture justify its priority for the beneficiaries. The Project could impact this service in some areas where its activities overlap with grazing lands.
Salt	Salar	The artisanal extraction of salt for human consumption in the Salar del Rincon was a traditional activity carried out by local families. It consisted of manually collecting crystallized salt from the surface for later sale as table salt. This practice, based on knowledge passed down through generations, was part of the subsistence strategies of rural Puno.	Salt producers from the Olacapato community	**Type I**	Although this practice was significant in the past, no recent activity has been recorded today, according to recent surveys and reports. Factors such as generational change, migration to urban centers, and the expansion of large-scale mining activities have contributed to its disappearance, reflecting a transformation in subsistence strategies and the progressive abandonment of this ecosystem service.
Plants for medicinal plants and ceremonial uses	Steppe High altitude wetlands	The use of plants by communities throughout the Andean region is a traditional practice, especially in the study area, with their uses and properties passed down from generation to generation. The plants are used for medicinal, ceremonial/cultural, food, and, to a lesser extent, perfumery/cleansing purposes.	Communities of Catua, Olacapato and Estación Salar de Pocitos	**Type I**	The use of medicinal and ritual plants in the Salta Puna constitutes a Type I ecosystem service, as its impact would have direct consequences on the well-being, health, and cultural identity of local communities. During the construction phase of the project components, the removal of vegetation

[27] Chloe (December 2024). Observing the Rare Vicuña Herds in Argentina’s High Altitude Puna.
[28] Environment Ministry (August 2019). Conservation and sustainable use of wild vicuña in Andean communities.

Ecosystem service	Ecosystem	Definition	Beneficiaries	Category	Comment
					cover could reach priority species for this type of use in the communities.
Firewood for domestic use	Steppe	In the communities of the Salta Puna—such as Catua, Salar de Pocitos, and various rural puestos near the Salar de Rincon — firewood is a strategic resource for daily life, primarily as a source of thermal energy for cooking and heating rural homes. In this region's harsh climate, characterized by extreme temperature ranges and sub-zero temperatures for much of the year, access to heat is a key condition for survival and well-being.	Dispersed rural population of Catua and Olacapato	**Type I**	The use of firewood as fuel is essential for subsistence, as it is one of the primary means of heating and cooking for the region's dispersed rural population. During the construction phase of the project components, the removal of vegetation cover could reach priority species for this type of use in the communities.
Construction materials	Steppe	This ecosystem service provision refers to the availability and utilization of natural resources such as soil, stone, straw, wood, and clay, used locally for the construction of homes, corrals, fences, and other structures.	Dispersed rural population of Catua, Olacapato and Estación Salar de Pocitos	**Type I**	This service is classified as Type I because the project could affect its availability or access by local communities, especially to plant materials. Natural building materials, such as stones, straw, mud, and adobe, remain essential to the population, whether as a primary resource or as a complement to industrial materials. Their use continues for cultural reasons, as well as their accessibility and suitability to the local climatic conditions.
Semi-precious stones	Steppe	The region offers minerals suitable for stoning, such as onyx, travertine, opal, and obsidian. Onyx in particular stands out for its quality and the chromatic variety it presents in this area. Despite this, its production has historically been erratic. According to recent records, no extraction was reported during 2020 and 2022, while in 2021 only 84 tons were recorded.	Producers of the Estación Salar de Pocitos	**-**	The extraction of onyx and other minerals such as opal and obsidian in the region is not classified as a Type I or Type II service, as their use is not directly affected by the project and does not represent a relevant component in terms of livelihood for the beneficiaries.
Products derived from wildlife for food, medicinal, and ceremonial use	Steppe High altitude wetlands	It encompasses the use of wild animals, as well as their parts and byproducts, for food, medicinal, and ceremonial purposes. In the Salta Puna, these practices are part of the cultural heritage and subsistence system of communities. Among the most frequently mentioned species are the suri, the vicuña, the armadillo, the puma, as well as less common ones such as the partridge, the quevo, the duck, and the viscacha.	Communities of Catua, Olacapato and Estación Salar de Pocitos	**-**	This ecosystem service, while having cultural, spiritual, and symbolic links, in addition to its practical function, is not widespread in the territory nor has it been identified as a priority.
Cultural services					
Sites of spiritual and sacred value	High altitude wetlands, steppe, Salar	In the Salta Puna, one of the most significant cultural ecosystem services is spiritual enrichment, manifested through an Andean worldview that recognizes nature as a collection of living beings with spiritual agency. This connection is embodied in rituals and respect for sacred sites such as apachetas, mountains (apus), and symbolic places like Abuelo de Piedra or Huancar. In addition, water has a strong symbolic and spiritual significance in the Andean worldview, where it is considered a sacred element. The region has limited water availability, with no viable or sustainable large-scale alternatives, which increases its irreplaceability.	Communities of Catua, Olacapato and Estación Salar de Pocitos	**-**	No potential impacts have been identified on the specific water-related sacred sites documented in the baseline, including apachetas, apus, Abuelo de Piedra, and Huancar.
Recreation and tourism sites	High altitude wetlands, steppe, Salar	Through high-mountain activities such as climbing Quewar Volcano, and the daily use of natural spaces with social value, such as hot springs, lagoons, and community gathering places. Although tourism development is still in its infancy, there are valuable experiences such as community-based tourism proposals, mountaineering training, and potential recreational destinations identified by the communities themselves.	Communities of Catua, Ola capato and Estación Salar de Pocitos	**-**	No potential impacts of the project on this SE have been identified.
Sites of scientific interest	EMEs of the Salar del Rincon Basin.	Sites with unique ecosystem, biological, and evolutionary characteristics are of scientific interest for research, since knowledge of these sites could lead to advances in biotechnology development, agriculture, pharmacology, the cosmetics industry, astrobiology, and the search for enzymes and bioactive compounds for industrial and	Scientific community	**Type I**	The importance of these sites lies in the vast amount of information that can be obtained from their research, and in the potential for applied uses of this information. The Project could impact the EMEs through the infiltration of effluents such as spent brine and reverse osmosis reject water. This would lead

Ecosystem service	Ecosystem	Definition	Beneficiaries	Category	Comment
		medical applications.			to an alteration in the chemical composition of the salt flats' water, affecting critical factors such as salinity (and therefore conductivity), pH, nutrient availability, and the presence of metals/metalloids or chemical compounds that could be toxic or lethal (by their mere presence or relative to their concentration) to microbial communities.
Supporting services					
Primary productivity	High altitude wetlands	Generally speaking, primary productivity is the rate at which autotrophic organisms produce organic matter. In the case of the Salar de Rincon Basin, the most important primary producers are plants, which introduce energy into the system through flows and the remaining trophic links (herbivorous and carnivorous consumers).	Communities of Catua, Olacapato and Estación Salar de Pocitos	-	Any effects on the primary productivity of ecosystems do not directly affect the beneficiaries. Their role as a supporting service lies in maintaining ecosystems. It could also not affect the project's operations.
Nutrient cycling	Salar	Low decomposition rates allow carbon and other elements to be stored as organic matter for long periods, delaying their circulation and serving as a natural reservoir. The presence of microorganisms in soils or bodies of water can play a crucial role in the cycling of certain elements such as nitrogen or sulphur.	Communities of Catua, Olacapato and Estación Salar de Pocitos	-	Any effects on nutrient cycling do not directly affect the beneficiaries. Their role as a supporting service lies in maintaining ecosystems. It could also not affect the project's operations.
Regulating services					
Water regulation	High altitude wetlands	The vegetation associated with meadows and bofedales has characteristics that regulate water flow. By creating a porous organic matrix in rock environments, they help regulate water velocity and generate more consistent flows.	Communities of Catua, Olacapato and Estación Salar de Pocitos	-	Water regulation is an important service, as it ensures proper water flow throughout the various surface water bodies. One possible impact on this service would be changes in water availability during the dry season. However, it has been reported that communities use other forms of supply when water is naturally scarce in the environment.
Carbon fixation	High altitude wetlands Salt Flats (Eyes of Water)	The wetlands formed by meadows and bofedales in the Puna region constitute one of the most important carbon reservoirs in the high mountains. The soils of the meadow areas have a very high organic matter content, and in poorly drained areas, there are often high levels of sodium carbonates and chlorides, in addition to the presence of calcium and lithium as predominant cations.	Communities of Catua, Olacapato and Estación Salar de Pocitos	-	Any effects on carbon sequestration do not directly affect the beneficiaries. Their role as a supporting service lies in maintaining ecosystems. It would also not affect the Project's operations. Furthermore, it is a service that can be compensated.
Prevention of soil erosion	Steppe High altitude wetlands	Vegetation cover helps prevent and/or mitigate erosion, as it increases the hydraulic resistance of the soil by increasing the stability of the soil aggregates. This provides greater protection against the impact of rain, increases infiltration capacity, and slows runoff.	Communities of Catua, Olacapato and Estación Salar de Pocitos	-	Any effects on carbon sequestration do not directly affect the beneficiaries. Their role as a supporting service lies in maintaining ecosystems. It would also not affect the Project's operations.

Baseline and Prioritisation of Identified Ecosystem Services
ERM completed a baseline analysis of the ecosystem services relevant to the Project's AoI. This baseline, in its entirety, is presented in the Ecosystem Services Assessment document (Evaluación de Servicios Ecosistémicos, ERM, 2025f).

The importance and substitutability categories were combined to determine the priority of the ecosystem services. Those with high or critical ratings were considered priority ecosystem services. The methodology includes four priority levels: Critical, High, Moderate, and Low, as described in Table 21. It is noted that some ecosystem services would not be directly affected by the Project or have viable alternatives but were identified within the study area and validated as relevant by stakeholders in the various fieldwork instances of the previous studies.

Table 21. Determining the priority of ecosystem services

Importance* of the ecosystem service for the beneficiaries	**Substitutability**** of the service		
	High (Many alternatives)	**Moderate** (Some alternatives)	**Low** (Few or no alternatives)
Essential	High	Critical	Critical
High	Moderate	High	Critical
Moderate	Low	Moderate	High
Low	Low	Low	Moderate

* Importance was assessed based on intensity of use, scope of use, expressed cultural and historical importance, and degree of dependence.
** Substitutability. It is assessed based on the existence of alternatives, access, cost, and sustainability of possible alternatives, and the preference for alternative services.

The defined methodological framework establishes a total of seven priority ecosystem services included in the scope of this Type I and Type II assessment, as presented in Table 22.

Table 22.Types of ecosystem services and priority

Category	**Ecosystem Service**	**Priority**
Provisioning	Provision of clean and abundant water	Critical
Provisioning	Provision of natural pastures	Critical
Provisioning	Vicuñas	Critical
Provisioning	Firewood for domestic use	Critical
Provisioning	Extraction of plants for medicinal and ceremonial uses	Moderate
Provisioning	Construction materials	Low
Cultural	Sites of scientific interest	Moderate

Spatial Boundaries for the Assessment
For mapping the spatial boundaries of priority ecosystem services, the following was used: 1) Information regarding areas of economic activity of the inhabitants identified in previous investigations; 2) Information obtained in the Open House meetings during the supplemental socioeconomic baseline; and 3) Outcomes of the talking maps and household surveys conducted as part of the supplemental socioeconomic baseline. Based on these inputs, priority ecosystem services use areas that could be affected by Project activities were identified and georeferenced, allowing the spatial scope of this assessment to be established as the Salar del Rincon watershed and the puestos located along the roads planned for use, as shown in Figure 40.

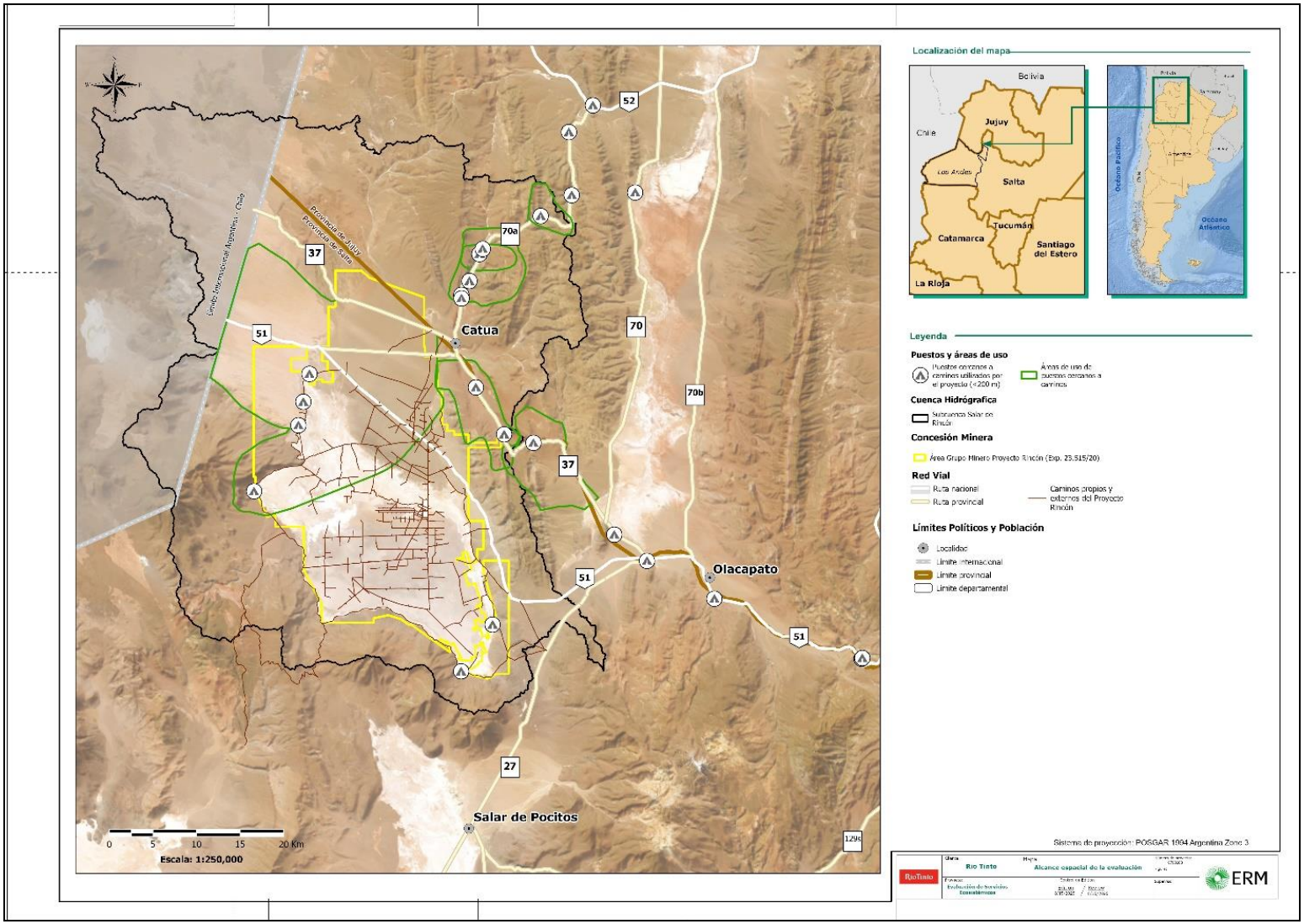


Figure 40: Spatial scope of the assessment

3.4 Social Baseline

3.4.1 Previous Work

The previous social baseline for the Project is presented in Chapter 2 of the 2024 ESIA. The objectives of the social baseline were to:

- Obtain sufficient factual information including use of the territory by the of communities, culture, socio-economic characteristics and living conditions, to consolidate a social baseline to design management plans to address short-, medium-, and long-term impacts caused by the Project.

- Obtain sufficient information about possible perceptions, interests and expectations of the communities regarding mining activity and specifically the Project, so that they can be considered in the identification and analysis of the potential impacts and development of the Project.

- Have social baseline that allows RINCON to measure its positive and negative impacts and can be used as a reference for applying metrics during the operation stage to understand impacts over time.

The 2024 ESIA socioeconomic baseline identified vulnerable social sectors in the Direct and Indirect Social AoIs (i.e., Olacapato, Estación Salar de Pocitos, Catua, and San Antonio de Los Cobres), including indigenous communities Kollas El Desierto, Atacama, Comunidad Quewar-Etnia Kolla, Comunidad Aborigen Kolla del Estación Salar de Pocitos, Comunidad Aborigen Coquena Catu –Pueblo Atacama, Collas Unidos, and Kollas Peña Alta. The Project also sought to collect socioeconomic data from puesteros in the SAoI, however, only a subset of puesteros were previously interviewed, which was flagged as a gap against IFC PSs. Therefore, a supplemental socioeconomic baseline for the puesteros was undertaken.

3.4.2 Supplemental Socioeconomic Baseline

This summary presents the findings from a complementary social baseline study conducted between October 2024 and May 2025 (Rio Tinto, Supplemental Socioeconomic Baseline (Puesteros), September 2025). The study aimed to update and systematize social data to assess potential project-related social impacts and risks, aligned with Rio Tinto's corporate standards and IFC PSs.

Fieldwork included interviews and site visits to rural settlements (puestos) in Olacapato, Estación Salar de Pocitos, and Catua, engaging with residents who live, work, or use natural resources in the Project's Direct AoI. The study focused on:

- Social baseline data for dispersed rural populations and indigenous communities.

- Use of ecosystem services, land use, and resource dependence.

- Identification and validation of water sources with local stakeholders.

The collected data was georeferenced and validated through community meetings, where preliminary results were shared with puesteros and local authorities.

3.4.2.1. Regional Context

The Project is located in the Puna region of Salta, Argentina, within the Los Andes Department, and near communities such as Catua (Jujuy), Olacapato, and Estación Salar de Pocitos (Salta). The area is traditionally inhabited by Indigenous groups, primarily the Kolla and Atacama peoples, whose identities have evolved in recent decades toward greater self-determination and political recognition.

Historically, the region has supported a low-density, livestock-based lifestyle centred on llama and goat herding, with seasonal mobility and dispersed rural settlements (puestos). However, recent economic developments—particularly lithium mining—have transformed the region, leading to infrastructure improvements, job creation, and return migration to previously depopulated towns.

These changes have energized local economies and increased opportunities for Indigenous communities but also introduced competition with traditional livelihoods and contributed to the decline of dispersed pastoral lifestyles. Cultural impacts include reduced transmission of traditional knowledge and practices, with social challenges now more concentrated in populated centres where former rural residents have relocated.

3.4.2.2. Catua

Coquena Catua Indigenous Community

The Coquena Catua Indigenous Community, officially recognized in 2002, governs through community assemblies and is represented by a communal delegate or cacique. The community also participates in municipal elections to manage urban development and public services. It is part of the Atacama Network, a regional organization that engages with mining companies and coordinates benefit-sharing agreements.

The community's territory spans approximately 150,227ha, granted as communal property in 2007. It includes urban areas, grazing lands, sacred sites, and public spaces. Land use in rural areas is family-based and passed down through informal agreements, with boundaries marked by natural features rather than formal records.

Cultural identity is rooted in Atacama traditions, especially pastoral practices and rituals like La Señalada and the Challada, which honour Pachamama. While many residents identify strongly with their indigenous heritage, identity transformation is occurring, particularly among younger generations who may view their Atacama roots more as tradition than active identity.

Catua Puestos

In Catua, 94 rural puestos were identified within the communal territory of the Catua Indigenous Community or belonging to community families. These are distributed among 36 families, some of whom own multiple puestos. Of the total, 64 puestos (68.1%) are currently in use—45 continuously and 19 seasonally or occasionally—while 11 are completely unused, as shown in Table 23.

Table 23. Number of puestos and corrals in Catua according to usage status reported by their puesteros

Catua	**No.**	**Current Use**	**Seasonal**	**Unused**
No. of puestos identified	94	45 (47.9%)	19 (20.2%)	20 (31.9%)
Use of the grazing area of the puesto	94	67 (71.3%)	16 (17.0%)	11 (11.7%)
Urban corrals	20	16	2	2
Rural corrals	3	3	-	-

Source: SCG. Own elaboration 2025

Land use in the Catua region reflects complex territorial dynamics involving multiple indigenous communities. While most puestos belong to families within the Catua Indigenous Community, several are located outside its officially recognized communal property—some within the Quewar Community territory in Salta. Conversely, a few families from Olacapato maintain grazing areas within Catua's boundaries.

Some puestos are situated in overlapping territories due to unresolved boundary disputes between Jujuy and Salta Provinces. Others lie outside the Rincon Basin, in the Cauchari Basin, and are not directly linked to the Project area. Additionally, several unused puestos were reported by community members, reflecting changing land use patterns and generational shifts.

The use of land by puesteros from one community recognised for use by another community does not generate conflicts between puesteros and communities—but rather, reflects the dynamics of a territory in which even the communities themselves do not know the boundaries of the territories assigned to them for use. In fact, the territories assigned for use by the communities of Olacapato and Estación Salar de Pocitos partially overlap with each other.

Economic Activities

Livestock farming has traditionally been the main economic and cultural activity in Catua, particularly the raising of llamas, goats, and sheep. Wool from these animals plays a key role in family economies and cultural preservation, supporting practices like shearing, processing, bartering, and rituals honouring Pachamama.

Since the 1970s, mining has become increasingly important, and Catua has historically served as a transit point for muleteers transporting livestock to Chile via the Huaytiquina Pass.

Livestock farming remains vital, though it is affected by seasonal grazing availability, which depends on rainfall. In dry periods, families often purchase feed or corn to sustain their herds.

Areas of Use and Grazing
Livestock farming in Catua is traditionally based on an extensive, family-run system of raising llamas, sheep, and goats across diverse grazing areas. These animals provide essential resources—meat, wool, leather—and support cultural practices such as textile-making and rituals honouring Pachamama.

Families define and respect historical boundaries of their puestos and areas of use, which include grazing zones, water sources, and places for gathering natural materials. These boundaries are informally marked and passed down through generations, with no formal fencing but clear communal understanding.

Participatory mapping confirmed that many areas of use extend beyond the formal boundaries of the Catua Indigenous Community, including highland slopes and ravines. Some families also use communal grazing areas near the town.

While livestock farming remains culturally significant, it is no longer the primary income source for most families, having been largely replaced by employment in mining, services, and commerce. Nonetheless, it continues to shape the social and cultural organization of the community.

Access and Use of Water Sources
Water access in Catua's puestos relies primarily on natural sources such as vegas, springs, rivers, rainwater, and hand-dug wells. These sources are used for both human and animal consumption due to their generally good quality, though some contain high arsenic levels and are unsuitable.

Not all puestos have direct water access; some rely on piped water in urban areas or transport jugs from town, especially during dry seasons. Infrastructure for water storage and distribution is limited, and seasonal variability—particularly between October and December—can reduce water availability.

Despite informal boundaries between puestos, water sources are often shared among families. While livestock watering depends on natural sources, some puesteros have installed drinking troughs. Overall, water availability is a challenge due to climate variability, lack of infrastructure, and occasional freezing or reduced flow in wells.

3.4.2.3. Olacapato

Kolla Quewar Community of Olacapato
Olacapato, with an estimated population of 263 in 2022, is predominantly composed of members of the Kolla Quewar Indigenous Community (about 90%). The community was officially recognized by the National Institute of Indigenous Affairs (INAI) in 2023, granting it legal status and enabling formal engagement with mining companies and government agencies.

The community is politically organized around a communal assembly led by a cacique and also has municipal representation. Grazing lands are inherited and managed collectively, integrating cultural, spiritual, and ecological values. The territory includes urban and rural areas, sacred sites, and spiritual landmarks such as apachetas (a cairn or pile of stones traditionally built along mountain paths) and oratories.

While Spanish is the primary language, indigenous terms from Quechua, Aymara, and Kunza are still used, reflecting a dynamic cultural identity rooted in tradition, community participation, and environmental stewardship.

Olacapato Puestos
In Olacapato, 38 rural puestos were identified. Of these, 26 (68.4%) are active—21 in regular use and 5 used seasonally or occasionally. The remaining 12 (31.6%) are unused, often due to the passing of elder puesteros. However, even unused or uninhabitable puestos may still have surrounding grazing areas in use.

When considering grazing activity, 32 of the 38 puestos (84.2%) are currently used at least seasonally, while only 6 are entirely inactive, as shown in Table 24.

Table 24. Number of puestos and corrals in Olacapato according to usage status reported by their puesteros

Olacapato	No.	Current Use	Seasonal	Unused
No. of puestos identified	38	21 (55.3%)	5 (13.2%)	12 (31.6%)
Use of the grazing area of the puesto	38	31 (81.6%)	1 (2.6%)	6 (15.8%)
Urban corrals	3	3	-	-
Rural corrals	1	-	1	-

Source: SGC Own elaboration 2025

In Olacapato, three urban corrals were identified near or within the town, used for grazing animals in nearby band areas. These corrals belong to two families: one that abandoned the rural puesto Tolarcito due to old age, and another whose puestero maintains a small house and corral in town, along with an additional corral on the outskirts.

Economic Activities
Olacapato's economy is a mix of traditional livestock farming and modern commercial and service activities linked to mining. Families raise llamas, goats, and sheep primarily for subsistence, producing meat, wool, and leather. Wool is used in traditional textiles like ponchos and blankets, occasionally sold locally or at regional fairs.

Grazing occurs in high-altitude areas adapted to the harsh Puna climate. However, livestock numbers have declined, and commercialization is limited due to labour shortages and lack of buyers.

Mining-related services—such as lodging, restaurants, transportation, and repair shops—now play a significant role in the local economy. Salt extraction continues near the Salar, while onyx mining has ceased.

Areas of Use and Grazing
Olacapato's traditional livestock system is based on extensive, seasonal grazing of llamas, sheep, and goats across diverse terrains—vegas, hillsides, and ravines—adapted to the harsh climate of the Puna. Grazing areas are inherited and respected among families, with no land disputes reported. Vegetation varies seasonally, with high-quality plants like malva and iyicuma available in summer, and hardy shrubs like añawa and rica rica used in winter.

Grazing is managed through rotational systems and family cooperation, maintaining traditional knowledge and practices. Puesteros face challenges such as reduced grazing areas, water scarcity, and limited institutional support. Supplementary feed is often required during dry months.

Three main groups of puesteros are identified based on location:

- Near Olacapato and Tocomar (e.g., Apeadero Sarmiento, Tres Ojitos).
- Near the Cauchari salar, including families from both Olacapato and Catua.
- Within the Rincon Basin, including families from Olacapato and Catua with overlapping use areas.

Overall, grazing remains vital for subsistence and cultural continuity, reflecting a deep understanding of the local environment and sustainable land use practices.

Access and Use of Water Sources
Olacapato relies on natural water sources—primarily springs on the slopes of the Quewar volcano—which feed vegas used for both human and animal consumption. These vegas act as natural groundwater reservoirs and are essential for grazing livestock such as llamas, goats, and sheep.

Water is also accessed through hand-dug wells and rainwater collection. Key vegas near puestos include Cauchari, Cemetery, La Aguadita, and El Verde. Some puestos, like Apeadero Sarmiento, use nearby infrastructure (e.g., an old railway station) as a water source.

While water sources are generally reliable, seasonal challenges exist. In winter, vegas may freeze, and in recent years, some have begun to dry up, requiring excavation to access water. Despite these challenges, water sources are not typically shared with other community members.

3.4.2.4. Estación Salar de Pocitos

Kolla Indigenous Community of Estación Salar de Pocitos

Estación Salar de Pocitos had an estimated population of 126 in 2022, with 60% identifying as members of the Kolla Indigenous Community, 15% as Atacama, and 25% not identifying as indigenous. The Kolla Community was officially recognized in 2009, enabling formal engagement with public institutions and mining companies.

The community is organized around democratic assemblies and led by a cacique and a community president. Land use is based on inherited family agreements, with boundaries marked by natural features. While most land tenure is informal, it is socially recognized and respected. A territorial survey conducted by INAI in 2018 officially defined the community's area of traditional occupation.

Social life is centred around family ties and communal spaces like the Neighbourhood Centre, sports field, and plaza. A communal grazing area (Pocitos Vega) is available for those without private fields.

Indigenous identity in the community is dynamic and varies by personal experience, family heritage, and organizational affiliation. While most identify as Kolla, some align with the Atacama Raíces Andinas organization, and others do not identify with any indigenous group. This diversity has led to tensions around representation and identity within the locality.

Puestos of Estación Salar de Pocitos

In Estación Salar de Pocitos, 21 rural puestos were identified. Of these, 8 have continuously used dwellings, 5 are used seasonally or occasionally, and 5 are unused. However, housing inactivity does not necessarily mean the surrounding grazing areas are unused.

In total, 17 of the 21 puestos are actively used for grazing—13 permanently and 4 seasonally—while only 4 are entirely inactive. Community validation confirmed no additional puestos or corrals beyond those listed in Table 25.

Table 25. Number of puestos and corrals in Estación Salar de Pocitos according to usage status reported by their puesteros

Olacapato	No.	Current Use	Seasonal	Unused
No. of puestos identified	21	8	5	8
Use of the grazing area of the puesto	21	13	4	4
Urban corrals	2	1	-	1
Rural corrals	0	-	-	-

Source: SGC Own elaboration 2025

In Estación Salar de Pocitos, three distinct groups of puestos were identified:

- Near-town puestos – This group includes 10 puestos currently in use or used seasonally, such as Agua Delgada, Agua Blanca, Ciénaga Chica, Mama Turi, Vega Grande, Morro Bola, and Selayo, along with unused ones like Quirón, Casa de Hueso, and Quironcolo.

- Southern puestos – Located 50–80km south of the town along Provincial Route 17. Three puestos (Los Colorados, Mascota, Abra Colorada) are within the Estación Salar de Pocitos basin, while two puestos (Tolar Chico and Bequeville) are in the Salar de Tolar Chico watershed.

- Raíces Andinas group – Claimed by a community member affiliated with the Raíces Andinas organization. These six puestos (Unquillar, Saladillo, Abra Saladillo, Agua de León, Macón, Olajaca) are currently uninhabited and unused. This group also includes two urban corrals.

Economic Activities
Estación Salar de Pocitos has experienced significant economic transformation, primarily driven by lithium mining. This has led to the growth of local commerce and services, including restaurants, lodging, laundries, and workshops, alongside improved infrastructure such as electricity, a school, health centre, and community spaces.

While traditional animal husbandry persists, it is no longer the main source of income. Livestock farming is mostly sustained by elders and occurs at rural puestos and one urban corral. Due to reduced rainfall and declining interest among younger generations, livestock numbers have decreased.

Animal products like meat, charqui (dried meat), and cheese are used for family consumption and occasionally sold, especially during festive seasons. These sales help cover household expenses, though Salaried employment in mining and related services remains the primary income source.

Areas of Use and Grazing
In Estación Salar de Pocitos, grazing activities are concentrated entirely within the Estación Salar de Pocitos watershed. No local puesteros were found to operate in the Salar de Rincon area, though a few external puesteros from Catua and Olacapato use areas within Pocitos' formal territory.

Three main groups of grazing families were identified:

- Near-town families with puestos and corrals close to the urban centre.

- Southern families grazing in isolated areas along Provincial Route 27, some within the Estación Salar de Pocitos basin and others in adjacent watersheds.

- External users from other communities.

Grazing is based on traditional knowledge passed down through generations, involving rotational use of vegas and grazing areas, predator protection, and seasonal adaptation. The main grazing zones are located in the northern and northeastern parts of the basin, near hills and ravines fed by springs from Nevado Quewar. Despite its cultural importance, grazing has declined due to mining-related employment opportunities, especially among younger generations. However, it remains vital for preserving community traditions and ancestral land stewardship.

Access and Use of Water Sources
In Estación Salar de Pocitos, water access for human and animal consumption relies on natural sources such as springs, and rivers, supplemented by hand-dug wells and bottled water. Livestock—mainly llamas, sheep, and goats—drink from vegas near the puestos, with rotational grazing helping to prevent overuse of water sources.

Seasonal variations affect water availability: winter freezing helps maintain flow, while summer heat reduces it through evaporation. Despite generally good water quality, some areas have reported reduced flow. Infrastructure for water storage and distribution is limited, posing challenges for consistent access.

All water sources used by puesteros are located within the Estación Salar de Pocitos basin; none draw from the Salar de Rincon area.

3.4.2.5. Raíces Andinas Organisation

Raíces Andinas is an indigenous organization founded in 2002 to reclaim the ancestry and cultural heritage of the Atacama people in the Argentine Puna. Initially supported by 43 members across several localities, its influence declined as most affiliates joined newly recognized Kolla communities around 2009, which gained legal status and territorial recognition through INAI.

Today, Raíces Andinas lacks legal status, formal membership, and recognition from government entities or other indigenous communities. It is primarily represented by a single founding member from Estación Salar

de Pocitos, whose leadership is not widely accepted locally. The organization is viewed as a loose network of dispersed families with historical ties, but without institutional structure or defined territory.

3.4.2.6. Main Findings

Identified Puestos and Family Units

A total of 153 rural puestos were identified across the communities of Catua (94), Olacapato (38), and Estación Salar de Pocitos (21). Of these, 143 were geolocated using GPS or satellite imagery, and detailed data sheets were collected for 92 through on-site visits. The remaining puestos were confirmed as unused, abandoned, or outside the study area.

Additionally, 25 urban corrals were identified—20 in Catua, 3 in Olacapato, and 2 in Estación Salar de Pocitos—with 22 currently in use, either seasonally or occasionally. Four rural corrals were also recorded, with two in use, one used occasionally, and one unused.

The study also documented 24 mineral extraction sites and mining camps, mostly inactive or abandoned, previously used for artisanal salt, onyx, borates, and other minerals.

Table 26 summarises the total number of identified puestos, urban and rural corrals, and quarries in each of the localities within the study area.

Table 26. Total Number of identified puestos, corrals, and quarries by locality

Summary	Catua	Olacapato	Estación Salar de Pocitos	Total
Puestos	94	38	21	153
Urban corrals	20	3	2	25
Rural corrals	3	1	-	4
Quarries	11	10	3	24

Source: SGC Own elaboration 2025

The study identified 55 families owning active puestos and/or urban or rural corrals across Catua, Olacapato, and Estación Salar de Pocitos. Most are located in Catua (37 families), followed by Olacapato (12) and Estación Salar de Pocitos (6). Some families (7), mainly from Catua, have permanently moved to town and now only maintain urban corrals, continuing to raise animals using communal grazing areas, as shown in Table 27.

Table 27. Total number of families owning active puestos and corrals by locality*

Summary	Catua	Olacapato	Estación Salar de Pocitos	Total
Families who own puestos and/or active rural corrals	27	10	5	42
Families who own puestos and/or active urban corrals	4	1	-	5
Families who only own puestos and/or active urban corrals	6	1	1	8
Total of families who own puestos or active corrals	37	12	6	55

*Active puestos or corrals are those currently in use, seasonal, or occasional. This does not include those that are unused. Source: SGC Own elaboration 2025

Communities and Puesteros Using the AoI of the Project

The grazing areas and puestos overlapping or adjacent to the Project facilities primarily belong to families from the Catua Indigenous Community, with some from the Quewar Kolla Community of Olacapato. These areas, although outside Catua's communal property in Jujuy, are formally recognized by INAI as traditional use areas of the Olacapato and partially the Estación Salar de Pocitos Kolla communities. No puesteros from Estación Salar de Pocitos currently use the Salar de Rincon area.

Three main groups of families may be impacted by the Project:

- Families with puestos directly within or adjacent to Project facilities (e.g., raw water wells, access roads, airstrip, worker camp). These include:
  - Puestos in Vallecito, La Playa, La Esquina, Peña Alta, Casa del Zorro, Achi, Mojones, Laguna, Rincon.
  - Other nearby puestos: Curuto, Morro Blanco, Pompón, Peña Negra, Talismán, Justo Juez, Baila Buena.
- Families with urban corrals using the communal grazing area around Catua, which overlaps with Project infrastructure (e.g., concrete plant). This includes 10 families with various combinations of urban corrals and rural puestos.
- Families along RP 37 and RN 51, potentially affected by increased traffic. These include:
  - From Catua: El Tólar, El Romero, Arizaro, Descansadero, Moradito, La Cueva, El Abra.
  - From Olacapato: Corral Grande, Medanitos, Cauchari, Casa de Madera, Tres Ojitos, and Tocomar.

Grazing in these areas is deeply tied to traditional knowledge and seasonal adaptation, and the Project's development poses potential impacts to land use, access, and cultural practices.

Access and Use of Water
Water access in rural puestos of Catua, Estación Salar de Pocitos, and surrounding areas is precarious and highly dependent on natural sources like springs, lagoons, and seasonal rivers. The location of puestos is often determined by proximity to these sources. In areas without nearby water (e.g., Peña Alta, La Esquina), families must transport water from towns, incurring high costs and effort—especially during dry seasons—impacting livestock profitability.

Infrastructure for water storage is limited, with few puestos having tanks or troughs, making them vulnerable to climatic and economic challenges. Water availability is seasonal and variable, requiring families to adapt by seeking distant sources, relocating livestock, or sharing water points, which increases pressure on resources.

This situation is worsened in densely populated puestos or those lacking storage, making daily water management critical. The instability of water supply affects planning and sustainability of llama, sheep, and goat husbandry.

There are also growing concerns about water quality and sustainability, with some residents noting a decline in water levels and suspecting mining activities as a contributing factor. The lack of historical data makes it hard to confirm causes. A local Catua representative advised that that there is a new area of the village that was constructed in an area slightly downstream to the "centre" of Catua. Reportedly, this area is experimenting water shortages, not because there is not enough water, but because there is a water pressure issue, and the infrastructure was not designed to accommodate this situation. This may be informing part of the "perception" of growing concerns with respect to water quantity that was noted in the updated social baseline.

In response, communities are calling for greater accountability from companies and are interested in participatory environmental monitoring, which helps them access information and influence territorial management. RINCON has long considered installing a flow meter at the Catua intake, and plan to install the flow meter as an ongoing monitoring practice in Catua in the near future.

Utilisation of Natural Resources: Firewood and Medicinal Plants
Traditional use of medicinal plants remains a vital practice among puesteros and their families, used for treating common ailments and in rituals. However, intergenerational transmission of this knowledge is weakening, as younger people increasingly rely on modern medicine.

The availability of medicinal plants is seasonal, and some puesteros must travel farther to find specific species. Similarly, firewood collection is a longstanding daily practice, essential for cooking and heating, with no commercial use. It is typically done manually using basic tools.

Common firewood species include:

- Añawa (low smoke, good combustion).
- Tola (intense fire, ideal for cooking).
- Yellowthorn, rica rica, legia (abundant in winter).
- Cuerno/cuernal (long-lasting fire).
- Chacha (also used as incense).

Most puesteros report year-round availability of firewood. However, since 2018, natural gas access in towns like Olacapato and Estación Salar de Pocitos has reduced reliance on firewood. In remote puestos, firewood remains the primary energy source.

Situation and Role of Women in the Communities
In Estación Salar de Pocitos, Olacapato, and Catua, women are increasingly participating in community leadership and decision-making. Notably, the highest communal authorities (cacicazgos) in all three communities are currently led by women, marking a significant shift from traditionally male-dominated leadership roles.

Despite this progress, structural inequalities persist, especially due to limited public services in rural areas. Nonetheless, women continue to play prominent roles in political and social life.

In many cases, land linked to puestos is inherited through maternal lines, even though men are often listed as formal owners or representatives, highlighting the informal but influential role of women in land tenure and community organization.

3.4.3 Land Use Assessment

3.4.3.1. Legal Status

The legal status of Project land and Indigenous rights is summarised as follows:

- The land used by the Project is owned by the Province of Salta.
- Indigenous communities (Olacapato and Pocitos) do not hold ownership rights, only traditional occupation rights recognized by authorities.
- Rio Tinto is not required to pay for land use; access is granted free of charge by the provincial government.
- Negotiations for land access are conducted with government authorities, not directly with communities.

Under Argentine law and international standards (ILO Convention 169, IFC PS5), Rio Tinto must:

- Provide full compensation if its activities materially impact Indigenous traditional rights or livelihoods.
- Compensation may be monetary or involve alternative land of equal or better quality.

The Project complies with national regulations and international best practices. Environmental impact assessments include obligations to:

- Consult and inform affected communities.
- Ensure ongoing compliance with both local and global standards.

3.4.3.2. Historical Patterns of Land and Natural Resource Use

The Puna de Atacama has long been characterised by low population density, seasonal mobility, and temporary settlements adapted to a harsh environment. Historically, it served as an ecological corridor for the exchange of goods, people, and knowledge. Cultural influences from Tiwanaku, Tawantinsuyu, and Spanish colonization shaped a lifestyle based on multi-residence and seasonal resource use.

Key developments in the region include the following:

- 19th-century livestock trade between Salta and Chile, with oases like Catua as rest stops.
- The rise of borate mining, shifting male labour from traditional tasks to mining, shaping settlements like Susques, Olaroz Chico, Catua, and Puesto Sey.
- The Antofagasta-Salta railway (C14) connected the region to broader labour markets and led to the founding of towns like Olacapato and Estación Salar de Pocitos.
- Public schools established in Catua (1934), Estación Salar de Pocitos (1965), and Olacapato (1978) encouraged permanent settlement.
- Cross-border trade with Chile (until the 1980s) fostered material and cultural exchange, now discontinued.

A large portion of the population identifies as Kolla or Atacama, with Argentina’s constitution recognizing their pre-existence, communal land rights, and participation in resource management. The Project overlaps with traditional territories of the Kolla Aboriginal Community of Estación Salar de Pocitos and the Quewar Community of Olacapato, previously protected under Law 26.160, repealed in late 2024. Indigenous identity is undergoing renewed affirmation, now serving as a form of resistance and a demand for self-determination and cultural recognition, especially as traditional practices decline. Land use varies by community:

- In Estación Salar de Pocitos, puesteros operate near the town and not in mining zones.
- In Catua and Olacapato, some puesteros extend their activities beyond community boundaries, including areas like Salar de Rincon.

In Catua, Olacapato, and Estación Salar de Pocitos, there is a progressive depopulation of rural puestos, largely due to younger generations' disinterest in traditional pastoralism. Many migrate to towns seeking education and urban employment. Puestos are often abandoned after the death of older puesteros, with families discontinuing grazing. Some elders move to towns to be closer to family. There's also a decline in traditional economic activities like meat, hide, wool sales, and weaving, due to limited market access, though some production continues seasonally.

Technical support for animal husbandry has diminished, leaving puesteros without guidance on improving productivity. Grazing areas are defined by natural geographic features, and seasonal animal movement reflects deep local knowledge. Animal space and herding needs vary: 1) llamas require more space and are harder to manage with age; 2) goats return to corrals on their own; 3) sheep need to be herded back, requiring more effort; and 4) aging puesteros face increasing challenges in maintaining traditional herding practices.

The communities of Catua, Estación Salar de Pocitos, and Olacapato, belonging to the Atacama and Kolla indigenous peoples, have historically maintained a familial relationship with the land, fostering deep ties through generations via knowledge of environmental management and cultural traditions. The land is seen not just as a resource, but as a core part of collective identity. In recent years, there's been a shift toward communal land management, prompted by external pressures like mining expansion. Decisions about land use are increasingly made in community forums, reflecting evolving organizational structures.

The region has seen major investments in digital connectivity, renewable energy, transportation, and lithium mining. These developments have boosted local economies, created jobs and training programs, fostered university partnerships, and enabled collaboration through “Mesas de Trabajo Social”. However, these investments are offset by competition with traditional livestock farming, concerns over water extraction affecting wetlands and grazing, and youth migration for education and Salaried jobs. Despite this shift,

traditional practices such as animal husbandry are losing relevance among youth, who are drawn to urban jobs and education. However, these practices still serve as an economic safety net and a cultural anchor, especially during family gatherings and rituals. This context has led to land claims emphasizing its cultural and spiritual importance, not just economic value. Such recognition helps slow youth migration, which elders view positively. Mining is seen as a potential way to keep youth connected to the land, and animal husbandry remains valued as economic safety nets and cultural anchors.

4 Public Consultation and Engagement

4.1 Stakeholder Engagement Plan

RINCON is committed to establishing authentic, meaningful, and collaborative relationships in partnership with the Project's stakeholders, with a focus on engaging with Indigenous communities within the AoI.

This commitment is implemented through a continuous and broad process that shares information transparently, maintains good-faith dialogue, co-designs initiatives, and facilitates consultations on key topics related to the Project's development and its impacts throughout its life cycle.

The Stakeholder Engagement Plan (SEP) for the Project sets out the principles, objectives, activities, and organizational structure that the Project will adopt to implement its community engagement strategy throughout the entire Project life cycle. This Plan will be reviewed and updated annually.

4.1.1 Scope of the Engagement Plan

The RINCON SEP is directed at the Project's stakeholders, which include individuals or groups who:

- Are or may be affected by the Project ("Project-affected parties"),
- May have an interest in the Project ("other interested parties").

Although some of the stakeholders involved in this SEP operate at the national level, the primary focus is on stakeholders within the Project's Direct and Indirect Social AoIs, prioritising those who may be potentially affected.

The geographic areas shown in Table 28 are considered priorities for the implementation of this SEP:

Table 28. Priority geographic areas

Province	Territorial Unit	Direct Social AoI	Indirect Social AoI
Salta, Los Andes Department	Olacapato	X	
	Estación Salar de Pocitos	X	
	San Antonio de los Cobres		X
Jujuy, Department of Susques	Catua	X	
Salta and Jujuy	Dispersed Rural Population - Puesteros	X	

4.1.2 Applicable Legal and Regulatory Requirements

4.1.2.1. National Legislation

RINCON is committed to complying with national and provincial regulations regarding access to information and public participation. Relevant legislation includes the Mining Code (Law 1919), which regulates mining activities in Argentina, and the General Environmental Law (Law 25.675), which recognises the right of every person to express their opinion and be consulted in administrative procedures related to environmental protection. It also requires authorities to conduct consultations or public hearings for activities that may generate significant negative impacts.

Additionally, the Law on Free Access to Environmental Public Information (Law 25.831) guarantees the right to access environmental information held by the State and other entities, free of charge and available to any individual or legal entity.

Argentina ratified ILO Convention 169 in the year 2000, which establishes that governments must consult Indigenous peoples before authorizing any exploration or exploitation programs on their lands and ensure their participation in the benefits derived from such activities. Furthermore, the Argentine National Constitution recognizes the possession and community ownership of lands traditionally occupied by Indigenous peoples, guaranteeing their right to participate in the use, management, and conservation of these resources.

4.1.2.2. Provincial Legislation

Among other regulations, Article 49 of Law 7070 of Salta establishes that, prior to issuing an Environmental Suitability Certificate, the competent public authority must convene a Public Hearing, during which all relevant information must be made available to interested parties so they may submit comments. In these public hearings or consultations, local communities may express concerns, make observations, or even oppose the Project.

Resolution 375/2004 regulates the procedures for convening and conducting Public Hearings.
Consulta Previa for Indigenous Communities in the Province of Salta, Argentina, is primarily regulated by Provincial Law No. 5755, which establishes the procedure for calling a free, prior, and informed consultation with Indigenous communities that have legal recognition by the Province, when legislative or administrative measures are anticipated that may directly affect them.

4.1.2.3. Rio Tinto Communities and Social Performance (CSP) Standard

Rio Tinto's CSP standard states that consultation and participation refer to the ongoing process of dialogue with host communities and other stakeholders in a way that is meaningful, rights-based, gender-sensitive, culturally appropriate, and conducive to building relationships of trust and respect between host communities and the company.

Regarding engagement with Indigenous peoples, the standard requires that operations align with the rights set out in the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP, 2012). Specifically, it requires that assets demonstrate progress toward, or achievement of, FPIC from affected Indigenous peoples at all stages of the asset's life cycle, in accordance with the International Council on Mining and Metals (ICMM) Position Statement on Indigenous Peoples and Mining (ICMM, August 2024).

4.1.2.4. IFC Performance Standards

In addition to national and provincial laws, Rio Tinto is committed to complying with the requirements and practices established by the IFC. PS1 on Assessment and Management of Environmental and Social Risks and Impacts establishes that stakeholder engagement is an ongoing process that may include stakeholder analysis and engagement planning, information disclosure, consultations, grievance mechanisms, and continuous provision of information to affected communities. The Project must develop and implement a stakeholder engagement plan that enables communities to access relevant information about the Project, including its purpose, nature, scale, duration, risks, impacts, and mitigation measures, as well as the engagement process and grievance mechanism.

IFC PS7 on Indigenous Peoples emphasizes the importance of consultation and informed participation of Indigenous Peoples throughout the Project process, including obtaining FPIC in certain circumstances.

4.1.3 Stakeholder Identification and Analysis

The identification of Project stakeholders is based on information continuously gathered through ongoing engagement activities. RINCON analyses and classifies stakeholders according to their interest in and influence on the Project, defining four priority levels (critical, high, medium, and low).

4.1.4 Information and Consultation Activities implemented

The Project's SEP has been under development since the early stages of the Project design. During the Early-Stage phase, the objective was to present the Project and the company to authorities and communities, listen to concerns and adjust the Project design when feasible, identify key stakeholders, and gather input for social investment programs.

In this context, over 100 interviews and 618 interactions were conducted with authorities, communities, and institutions (recorded from August 2023 to the present, July 2025). The main topics of interest were local employment and suppliers, water use, Project timeline, road layout, and environmental management. All interactions are recorded on the internal platform called BM Connect.

Additionally, the CSP team, with community participation, implemented a Grievance Mechanism called "*RINCON te Escucha*" ("*RINCON Listens to You*"), which is recorded and managed through an internal platform (Enablon). The PFS phase focused on informing stakeholders about Project progress and how their input was incorporated, disseminating the 2024 ESIA and social investment programs, and maintaining an

open and responsive dialogue with communities. Validation sessions of the 2024 ESIA were also held with neighboring communities.

Since October 2023, informational meetings have been held in the towns of Estación Salar de Pocitos, Olacapato, and Catua, as well as workshops with authorities in Salta. Detailed information was shared regarding water use, extraction methods, local employment, and environmental and social management plans. Feedback was received and considered within the Project framework, especially regarding concerns about environmental and social impacts and management plans.

The interviews helped fill information gaps and improve the quantity, reliability, and accuracy of the data used in the baseline and preliminary stakeholder mapping. Up to the approval date of R3000 by the Mining Secretariat (28/12/2023), 75 interactions were conducted with government and institutional entities and over 200 interactions with communities in the Project's Direct AoI.

These initial meetings allowed for the early identification of some key stakeholder concerns and interests:

- Planned construction and operation start timelines.
- Rio Tinto's policy on prioritizing local employment and suppliers, particularly from neighboring communities.
- Access road layout to the Project.
- Sources and quantities of water consumption.
- Characteristics of the extraction, processing, and transportation methods.
- Environmental management during current and future stages.

As a result, local hiring was prioritized. RINCON established a policy to prioritize local employment and suppliers for both construction and operation phases, through capacity-building programs for residents and local suppliers to maximize hiring opportunities. RINCON prioritises hiring from the Department of Los Andes, particularly the towns of Olacapato, Estación Salar de Pocitos, and then San Antonio de los Cobres, followed by Catua in the Department of Susques, Jujuy.

In the series of informational meetings held since October 2023, the goals were to:

- Share general information about the Project, announce the feasibility approval obtained in mid-2023, and inform stakeholders about how their concerns and interests are being addressed in RINCON's socio-environmental management plans and social investment programs.
- Inform stakeholders about the contents of the 2024 ESIA and incorporate feedback from consultation and informational meetings.
- Provide detailed information on topics of special interest, including water use, extraction methods, local employment and supplier guidelines, committed contributions, identified impacts, and environmental and social management plans.
- Receive and disseminate concerns expressed by each resident or Indigenous community member during the meetings, respond to questions during the sessions, or create new in-person or virtual spaces to clarify doubts and gather stakeholder opinions.

4.2 Public Consultation with Indigenous Peoples

In compliance with Argentine legislation, the applicable regulations of the Province of Salta, and Rio Tinto's standards for engagement with Indigenous Peoples, the Project has been conducting dialogue processes with the Indigenous communities within its Direct AoI.

During 2024, RINCON carried out Consulta Previa for the RFP in the three indigenous communities of the Direct AoI. This consultation with the indigenous communities located in Salta are mandated by

Salta regulations, but RINCON is going beyond this legal obligation and organized similar sessions with the Catua indigenous community.

In the community of Catua, the Commission of the community determined the number of sessions they considered appropriate and the specific dates on which they believed it necessary to hold them. Thus, two sessions were agreed upon, the first in July 2024 and the second in September 2024, both within the framework of a community Assembly.

In the community of Estación Salar de Pocitos, two Consultation sessions were held in July and September 2024. The sessions took place within the framework of community assemblies, with the participation of the Secretary of Indigenous Affairs, the Secretariat of Water Resources, and the Secretariat of Mining of the Province of Salta.

In the case of the community of Olacapato, after three informative sessions on different topics related to the impact management of the Project that the community requested before deciding the date of the formal Consulta Previa session the community agreed to hold a single session in November 2024, which was also attended by the Secretary of Indigenous Affairs, the Secretariat of Water Resources, and the Secretariat of Mining of the Province of Salta.

4.3 ESIA Public Hearing

Within the framework of the regulations of the Province of Salta for public consultation processes of mining Projects, the Secretariat of Mining and Energy of the Province of Salta has called for a Public Hearing to be held in Olacapato on July 29, 2025. The objective of the Public Hearing is to analyse the environmental and social impact of the Project. The meeting will allow communities to express their opinions about the plant that will produce 50,000Ktpa.

The Public Hearing took place at the Olacapato Community Centre, with the aim of continuing to advance the approval process of the ESIA for the plant planned as part of the Project.

The Public Hearing represents the final stage of the information and consultation process as established by provincial regulations, allowing the community, involved sectors, and any interested person to express opinions, inquiries, or objections that will be considered when making decisions about the development of the Project.

To ensure transparency and access to information, the Secretariat of Mining has made the 2024 ESIA available to the public, which can be consulted both in the Public Hearings Program of the Ministry of Production and Sustainable Development and in the community centres of Olacapato and Estación Salar de Pocitos.

Prior to initiating the process of permits and submission of the 2024 ESIA to the authorities, the information in the document was presented to the community of Estación Salar de Pocitos and Olacapato in a validation instance. In this instance, experts from different disciplines involved in the preparation of the ESIA shared key information about the baseline, impact assessment, and management plans with the communities, receiving feedback, concerns, and inquiries from the residents.

4.4 FPIC Process

4.4.1 FPIC Training

Within the framework of the free, prior consent process with indigenous communities and based on the guidelines of Rio Tinto and IFC's PS7, FPIC trainings for RINCON’s senior management, key leadership roles, and CSP team were delivered. In addition, the Project is supporting the generation and strengthening of capacities in these communities for their participation in the FPIC process. To this end, and with the prior agreement of the indigenous communities, a specialized firm (Socionaut) was hired to strengthen the indigenous communities so that they can participate in an informed, inclusive, and effective manner in the relationship process with the Project, adequately expressing their interests and concerns throughout all phases of the consultation process.

The capacity-building activities facilitated by Socionaut began in December 2024 with meetings and training workshops on the FPIC process with representatives and members of each community (the workshops are independent for each community). In addition to the training workshops, community representatives maintain

specific interactions and meetings with the Socionaut team to make specific inquiries related to the informed consultation process and the signing of the Framework Agreements.

In the case of Olacapato, an accompaniment and advisory activity was carried out at the community's request, aimed at analysing the content of the Framework Agreement.

Once the planned training workshops are completed, each community will be able to decide if they require continued support from the consulting team related to their participation in the relationship process with RINCON.

4.4.2 Framework Agreements

The Project area overlaps with the traditional use territories of the Kolla Aboriginal Community of Estación Salar de Pocitos and the Quewar Community of the Kolla Ethnicity of Olacapato, both in the Province of Salta. Additionally, in the Province of Jujuy, the Catua Aboriginal Community is located 17km from the Project.

In compliance with Argentinian legislation, the applicable regulations of the Province of Salta, and Rio Tinto's standards for engagement with Indigenous Peoples, the Project has been conducting dialogue processes with the indigenous communities in its Direct AoI.

In this context, RINCON engaged closely with each indigenous communities to develop a Framework Agreement which establish a roadmap for long-term relationships and the generation of mutual benefits with the ultimate goal of reaching agreements based on shared aspirations through the methodology of FPIC, recognized by Rio Tinto's Communities and Social Performance Standard.

Prior to the signing of the Framework Agreements, a training and capacity-building process plan was designed for each community by specialized external advisors to promote better participation in the dialogue process. This training has already begun and is currently underway.

The Framework Agreements are voluntary agreements between the Project and each indigenous community, which establish the pillars for long-term relationships and coexistence between the Project and the community. Their signing demonstrates the mutual will and interest in achieving documented agreements that allow the execution of the Project in harmony with the Community's interests.

These Agreements are an important step in the FPIC process expressing the communities' interest and willingness to reach long-term joint agreements.

The signing of these Framework Agreements establishes the conditions for carrying out dialogue processes within which relevant information about the Project is shared before making any decisions that affect indigenous communities: information about planned activities, potential impacts, mitigation measures, and opportunities for generating shared benefits. This dialogue process is carried out respecting each community's decision-making mechanisms, governance structures, and instances.

The Framework Agreements also establish the commitment of the Project to promote opportunities for development and benefits for the communities (e.g., jobs, social investments, among others).

The following sections describe the status of the signing of these Agreements with each involved indigenous community.

4.4.2.1. Catua

Initially, the proposal and a draft of the Agreement were presented to the community's Commission, which analysed it and formulated a series of inquiries. In a second instance, the community's Commission reviewed the Agreement with the advice of the Secretariat of Indigenous Peoples of the Province of Jujuy.

Subsequently, the Commission presented the Agreement proposal in an Assembly with all community members. In the last stage, RINCON was invited to present the Agreement and respond to questions and concerns raised by the community during a dedicated Assembly. Finally, the Assembly invited RINCON to sign the Framework Agreement in a community space. The particularity of this Agreement is that a Relationship Table was implemented, where all community institutions participate and share the areas or

topics, they are interested in working on. The Framework Agreement with the Catua Community was signed on February 5, 2025.

4.4.2.2. Estación Salar de Pocitos

The signing process of the Agreement with this community involved several clarifying instances between the community's Commission and RINCON. In the final instance, the consulting firm training the community in dialogue processes within the FPIC methodology also participated. In this case, the community decided not to involve any government actor, and it was their Assembly that decided to sign the Agreement. The Framework Agreement with the Estación Salar de Pocitos Community was signed on February 6, 2025.

4.4.2.3. Olacapato

The dialogue process prior to the signing of the Framework Agreement is still being developed with this community. Various meetings were held between the community's Commission and RINCON to understand what a Framework Agreement entails. This community decided to involve the Secretariat of Indigenous Peoples of the Province of Salta in the process, who read the Agreement and made themselves available to the community. Additionally, the community's Commission sought the support of external advisors (Socionaut) who are training them in dialogue processes within the FPIC framework, for which they held a meeting to review each clause of the draft Framework Agreement. So far, the community's Commission has made an initial presentation of the Agreement in an Assembly and plans to resume this discussion after September 2025.

4.4.3 Indigenous Agreements (Indigenous People Plan)

The development of the Indigenous People Plans (IPP) corresponds to the final stage of the FPIC process being developed, as it will reflect the agreements reached with each community.

The formulation of the IPPs will be collaborative and will be built based on the Framework Agreements being signed with the communities to guide the FPIC process and will be based on the guidelines and requirements established in Rio Tinto's standards and IFC's PS7.

The IPPs will integrate information on potential impacts and the agreements reached regarding mitigation measures, social investments, capacity building, local content, among other topics. Dialogue for the Indigenous Agreement with the Catua began in June 2025.

4.4.4 Formal Process to Document FPIC

The entire engagement process of RINCON with the indigenous communities is being documented. According to the customs and practices of each community, meetings and agreements made with representatives of the Commissions of each community and/or the Assemblies are manually recorded in the Minutes Book of each community. These minutes contain: a) day and place of meetings; b) topics discussed; c) agreements and commitments established; and d) signatures of those present.

Before signing the minutes, their contents are read aloud so that those present can make any corrections they deem necessary. The minutes are signed by representatives of each party.

In addition to recording agreements and commitments in the communities' minutes books, RINCON records the minutes in an internal digital platform (BM Connect). All commitments made by RINCON with the communities are recorded in a registry and monitored for compliance.

5 Updated Impact Assessment

5.1 Updated Impact Assessment Diagram

RINCON has updated an internal risk management tool by integrating insights from the 2024 ESIA and supplemental studies conducted to align with the IFC PSs. This update employs a modified bow-tie diagram to visually represent the Project's adaptive management framework.

The diagram is structured around a central Event node, with Threats leading to the Event on the left side and Consequences flowing from the Event on the right. Supporting this structure are:

- Studies (past, ongoing, and planned) that will/have inform(ed) the development of Controls, i.e., preventive measures designed to reduce the likelihood of the Event.
- Corrective Measures, i.e., mitigative actions positioned on the right side to address potential Consequences if the Event occurs.

The objective of the diagram is to visually consolidate the key environmental and social threats and link them to the adaptive management process on a single page, demonstrating how RINCON:

- Identifies credible **Threats**.
- Will/has implement(ed) **Studies** to inform the appropriate **Controls** (most are existing, but some are still under development, e.g., the EMEs Management Plan) to prevent Events.
- Understands potential **Consequences** of **Events** if they should occur.
- Will implement **Corrective Measures** to mitigate **Consequences** effectively.

This approach facilitates a clear, single-page visualisation of how the Project anticipates, prevents, and responds to key risks.

The diagram focuses on two primary categories of potential Events:

1. Environment: Unpredicted Material Impacts on the Environment—caused by water and biodiversity threats.
2. Social: a) Actual or perceived adverse impacts on communities and ecosystem services; and b) Unanticipated conflicts arising from land access issues—caused by community and stakeholder threats.

The Adaptive Management Plan for Water and Biodiversity Threats is presented in Figure 41.

The Adaptive Management Plan for Community and Stakeholder Threats is presented in Figure 42.

It is noted that the Project will have impacts to environmental and socioeconomic resources and receptors, as described in Sections 5.2, 5.3, and 5.4. However, RINCON has adopted a practice of adaptive management in which the implementation of mitigation and management measures are responsive to changing conditions and the results of monitoring throughout the Project's lifecycle.

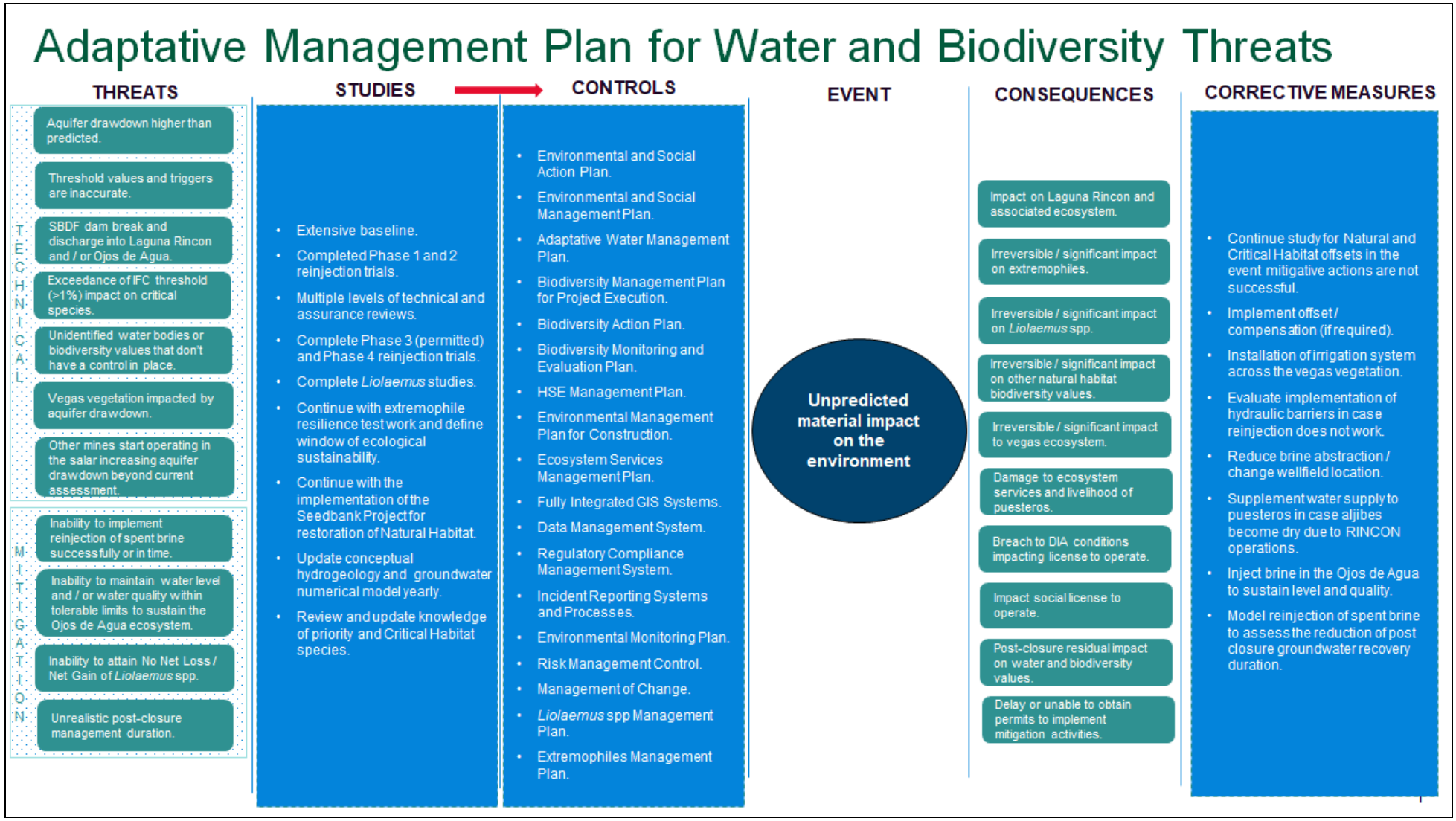


Figure 41: Adaptive Management Plan for Water and Biodiversity Threats

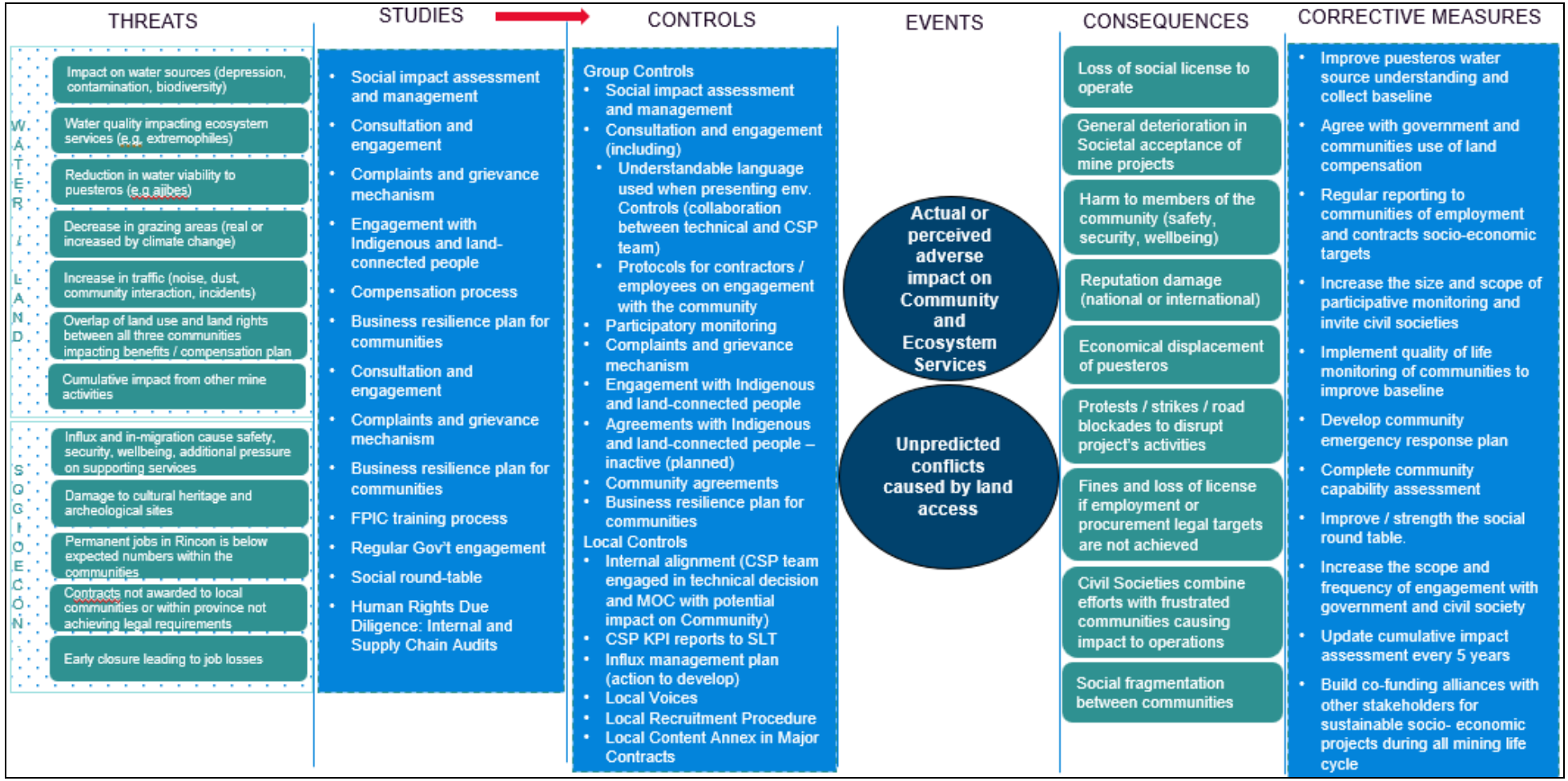


Figure 42: Adaptive Management Plan for Communities and Stakeholder Threats

5.2 Environmental Impacts

5.2.1 Water Resources

5.2.1.1. Previous Work

Previous assessment of impacts to water resources are presented in Chapter 4 of the 2024 ESIA, Section 4.A: Description of Environmental and Social Impacts.

5.2.1.2. Groundwater Modelling Updates

Updates to the groundwater modelling are presented in the Assessment of Brine & Water Resources document (ERM, 2025c). The following provides a summary of the activities.

Groundwater Model Set-Up
Two numerical groundwater models were developed for the Rincon Basin, comprising:

- The “Rincon Basin Model” used for lithium resource and reserve estimation and production planning and also to assess cumulative groundwater level drawdown across the Rincon Basin.

- The “Catua Alluvial Fan Model” (sub-model) focused on the raw (industrial) water supply and used to assess salinity variations, pumping rates and optimal wellfield designs.

Two numerical groundwater models were developed in parallel for the Rincon Basin using the latest meteorological, hydrological, and hydrogeological data available up to June 2024. The models were built with the United States Geological Survey (USGS) Modular Finite-Difference Flow Model-Unstructured Grid (MODFLOW-USG), covering an area of approximately 3,230km², and include detailed boundaries extending into Chile and surrounding mountain ranges.

To improve accuracy in key areas, the model mesh was refined with smaller grid sizes—250m within the Salar and 50m–250m in high-interest zones like the Catua Alluvial Fan and proposed wellfield. Less critical areas used larger cells up to 1,500m.

The models consist of 23 layers and over 425,000 active cells, with hydraulic properties informed by 40+ pumping tests and conductivity profiles. A transient recharge model was included using local weather data and Coupled Model Intercomparison Project Phase 6 (CMIP6) climate projections.

Layering was optimized for lithium resource estimation within the Salar and groundwater fluctuation analysis outside it. Both models share consistent layer elevations across the domain.

The groundwater models are dual-density, incorporating variable water quality based on detailed datasets, including electrical conductivity profiles, field measurements, and lab analyses. This allows accurate simulation of density-driven flow.

No-flow boundaries were applied at the model edges, aligning with natural topographic divides. Hydrogeologic units and hydraulic properties were assigned to model layers using data from extensive drilling and testing.

Two models were developed:

- Regional Rincon Basin Model:
  - Supports lithium resource/reserve estimation and strategic planning.
  - Simulates regional groundwater flow, drawdown, recovery, and lithium distribution.
  - Informs lithium wellfield design and brine/water management.

- Catua Alluvial Fan Sub-Model:
  - Focuses on raw (industrial) water abstraction.
  - Designed to simulate the interface between fresh and saline water using a refined mesh and thin vertical layers.
  - Includes 32 layers (9 more than the regional model) to capture the saline front in detail.
  - Uses boundary conditions from the regional model and guides wellfield layout in the Catua Fan area.

Groundwater Model Simulations
Numerical groundwater model simulations were undertaken for a 40-year LoM operation. The operational scenario assessed includes the following attributes:

- Lithium Brine: A 53Ktpa lithium operation simulated using lithium brine wellfield provided August 2024, ramping up from an initial 3Ktpa, up to 28Ktpa, up to a final 53Ktpa.
- Raw Water: Raw water abstraction associated with base case of an annual average 120L/s abstraction (maximum 140L/s instantaneous abstraction) and upper sensitivity case an annual average 178L/s abstraction (maximum 210L/s instantaneous abstraction) from the Catua Alluvial Fan.
- SDDF: Infiltration of spent brine into the Carbonate Platform, with spent brine being pumped to the SBDF at a rate ranging between 4,800 and 5,700 cubic metres per hour (m^3/hr).
- Puna Mining (Argosy): A 12Ktpa lithium operation in the southeastern part of the Rincon Basin at an assumed 55% lithium recovery rate, exact locations of the abstraction wells are uncertain.

The groundwater modelling includes climate change projections within the base case simulation. The inclusion of climate change leads to small reductions in the average annual recharge to the basin during both the operational and closure periods.

The modelling completed was used to establish a lithium brine wellfiled and a raw (industrial) water wellfiled that met the Projects current lithium and raw water requirements.

Groundwater Model Calibration
The numerical groundwater models were calibrated using water level monitoring data from across the basin from 2022 to 2025 (particularly in the Salar and Catua Alluvial Fan areas), over 40 pumping tests and an extensive data base of electrical conductivity and laboratory water quality data.

5.2.1.3. Predicted Water-Related Impacts

Numerical groundwater modelling was used to evaluate the potential impacts of brine abstraction, raw (industrial) water abstraction and SBDF infiltration over the life of the Project (capturing both the operational phase and closure) on the brine/water environment across the Rincon Basin. The model simulates how brine/water levels and flows may change in response to the proposed operations, considering both baseline conditions and future development scenarios.

Groundwater Level Drawdown
Salar
The Regional Basin Model was applied to evaluate groundwater level drawdown at 10-year intervals over the proposed 40-year LoM, simulating the temporal evolution of water level changes. Incorporating climate change into the base case affects both recharge and evapotranspiration rates, leading to increased predicted drawdown. However, significant uncertainty remains regarding drawdown predictions near the edge of the Salar nucleus due to limited hydraulic conductivity data. These areas require additional field investigations to improve model reliability.

10 years of Operation – As shown in Figure 43, the maximum drawdown after 10 years of simulation is approximately 26m located on the adjacent property (Argosy). The maximum drawdown in the northern fractured halite wells is approximately 8.8m.

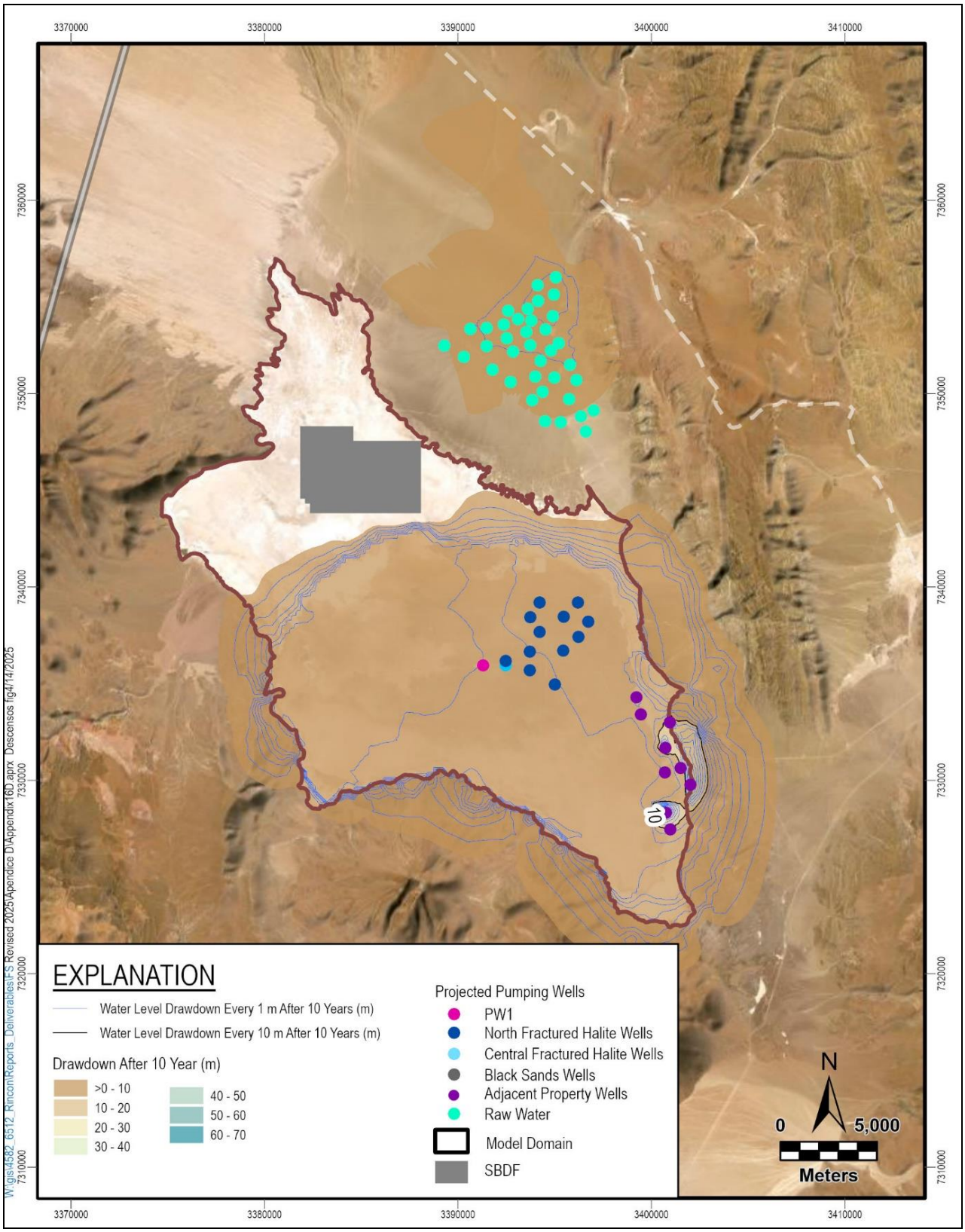


Figure 43: Simulated water level drawdown after 10 years

20 years of Operation – As shown in Figure 44, by Year 20 of the simulation, the fractured halite wells have exceeded their peak flow rates, with evidence of lithium concentration dilution prompting a reduction in pumping rates. The model indicates a maximum drawdown of 47m on adjacent property (Argosy) and 18m within the fractured halite zone—following partial recovery and equilibration after peak extraction in Year 15. Meanwhile, the black sand wells have become active in the northwest portion of the Salar, showing a maximum drawdown of 22m south of the SBDF.

30 years of Operation – As shown in Figure 45, after 30 years of simulation, the maximum groundwater level drawdown reaches 45m, occurring at the western edge of the Salar near the black sand wells. The drawdown contours reflect the sequential development of black sand wells, progressing from the northwest to the southwest Salar area, with the greatest drawdown observed in these zones. The asymmetrical drawdown pattern is attributed to varying well flow rates and differences in hydraulic parameters, which shape the drawdown cone. Additionally, the influence of the SBDF is evident through localized mounding, resulting in reduced drawdown in adjacent areas despite ongoing pumping.

40 years of Operation – As shown in Figure 46, after 40 years of simulation, the maximum water level drawdown is approximately 67.3m located in the western Salar. The progression of drawdown to the Salar nucleus follows the addition of black sand wells over time and the SBDF mounding persists.

Key Surface Water Features

- Groundwater Drawdown Predictions:
  - The model simulated groundwater level changes over a 40-year LoM, including climate change impacts.
  - Drawdown predictions were made at key surface water and groundwater locations across the Rincon Basin, with additional reference points for broader insight.
- Climate Change Effects:
  - Climate change contributes to drawdown even without mining operations.
  - When combined with RINCON operations, climate change increases drawdown by 1–2m over 40 years.
  - At Faldeo Cienago and Vega Amarilla, climate change causes a ~5m in drawdown, but this finding is likely due to model limitations near bedrock zones with low conductivity and potential hydraulic disconnection (i.e., these features are unlikely to be connected to the regional groundwater system from which brine extraction will occur).
- Catua Fan Impact:
  - Climate change causes a north-westerly expansion of drawdown around the Catua Fan raw water wellfield, not seen in scenarios without climate change.
- Drawdown Magnitudes:
  - Most locations show ≤1m drawdown over 40 years.
  - Four locations show >10m drawdown, as shown in Figure 47:
    - Adicional9: 35m.
    - Vega Unquillar: 26m.
    - Aljibe en Campamento de Chocobar: 20m.
    - Pozo en Campemento de Mina Talismain: 13m.

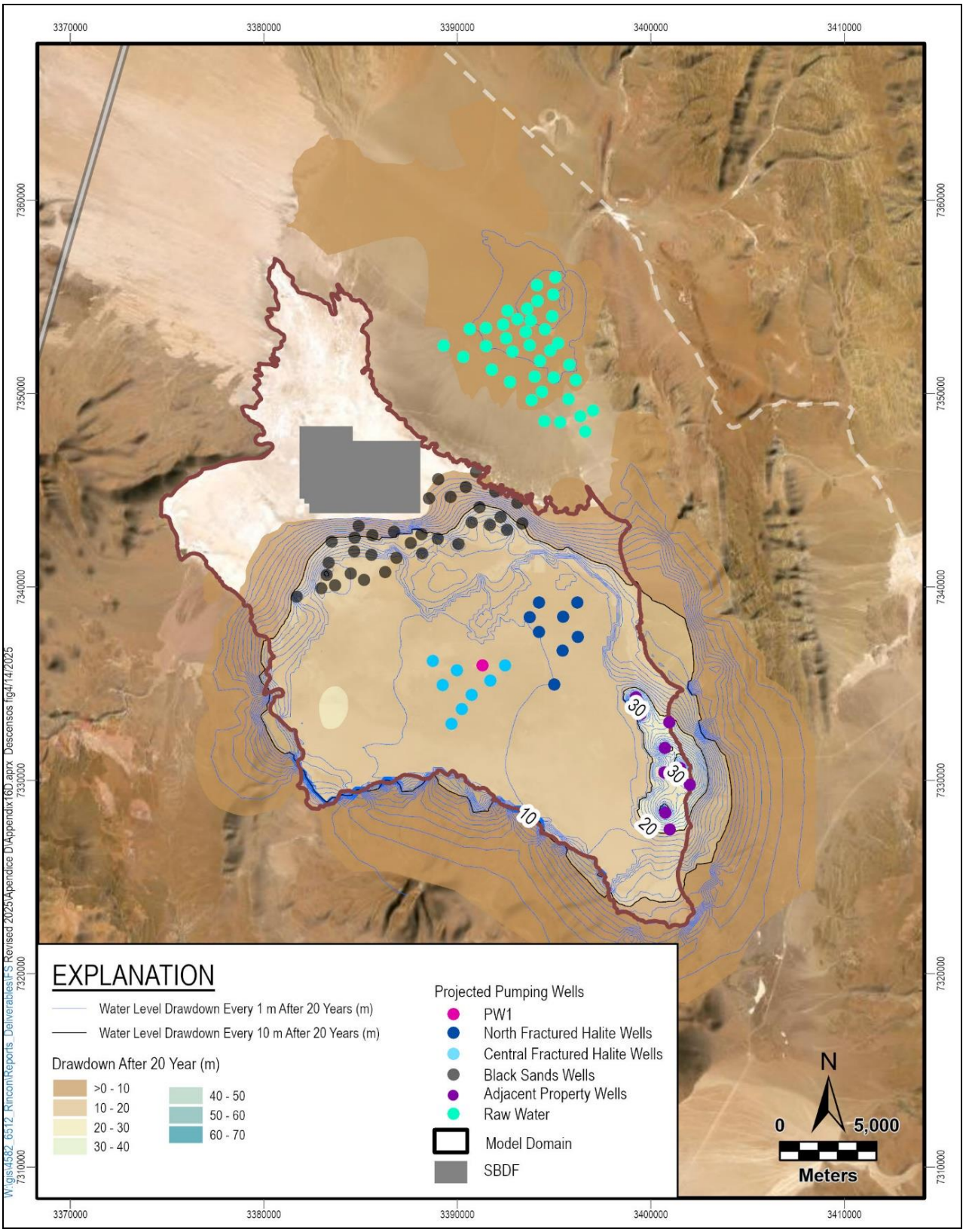


Figure 44: Simulated water level drawdown after 20 years

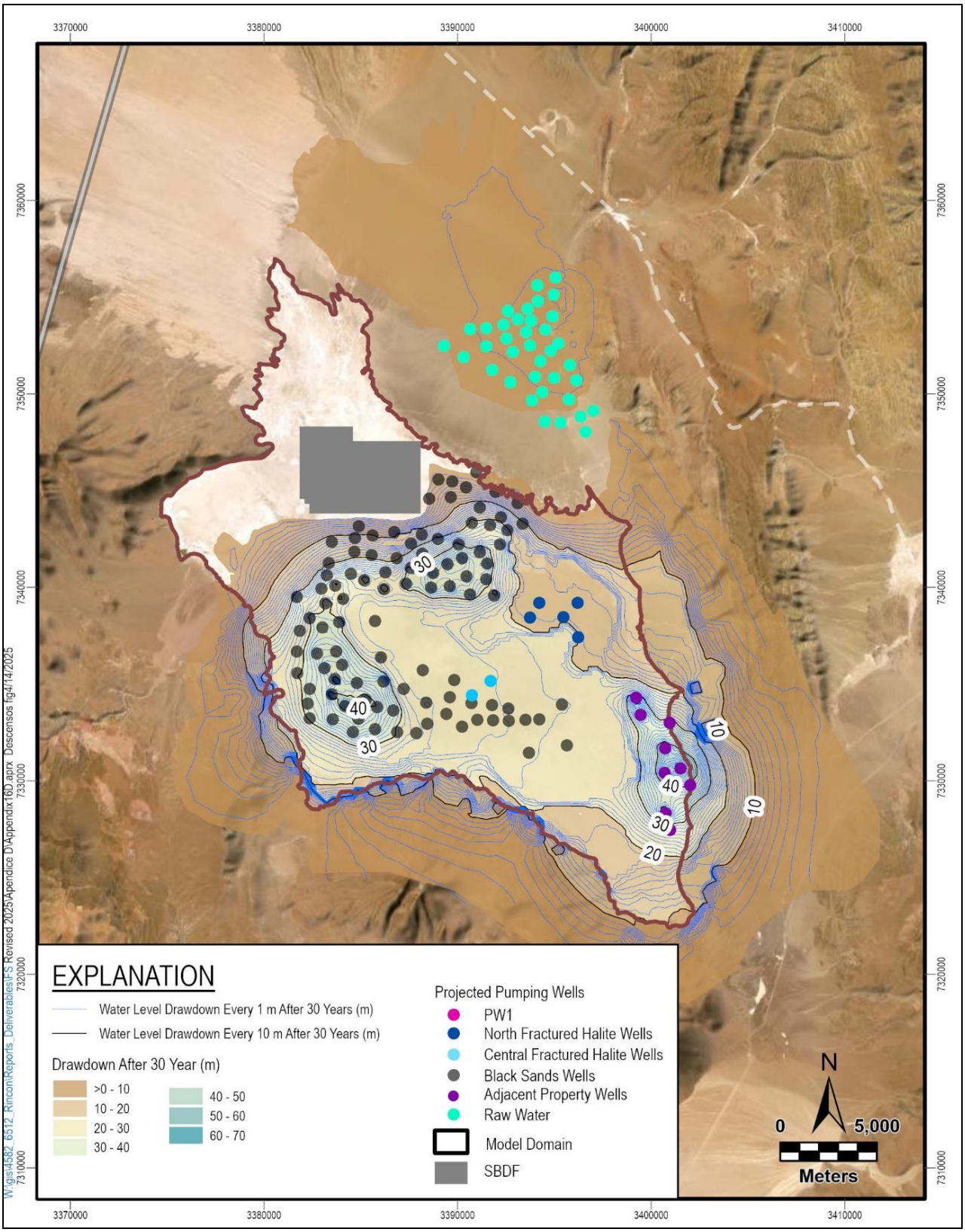


Figure 45: Simulated water level drawdown after 30 years

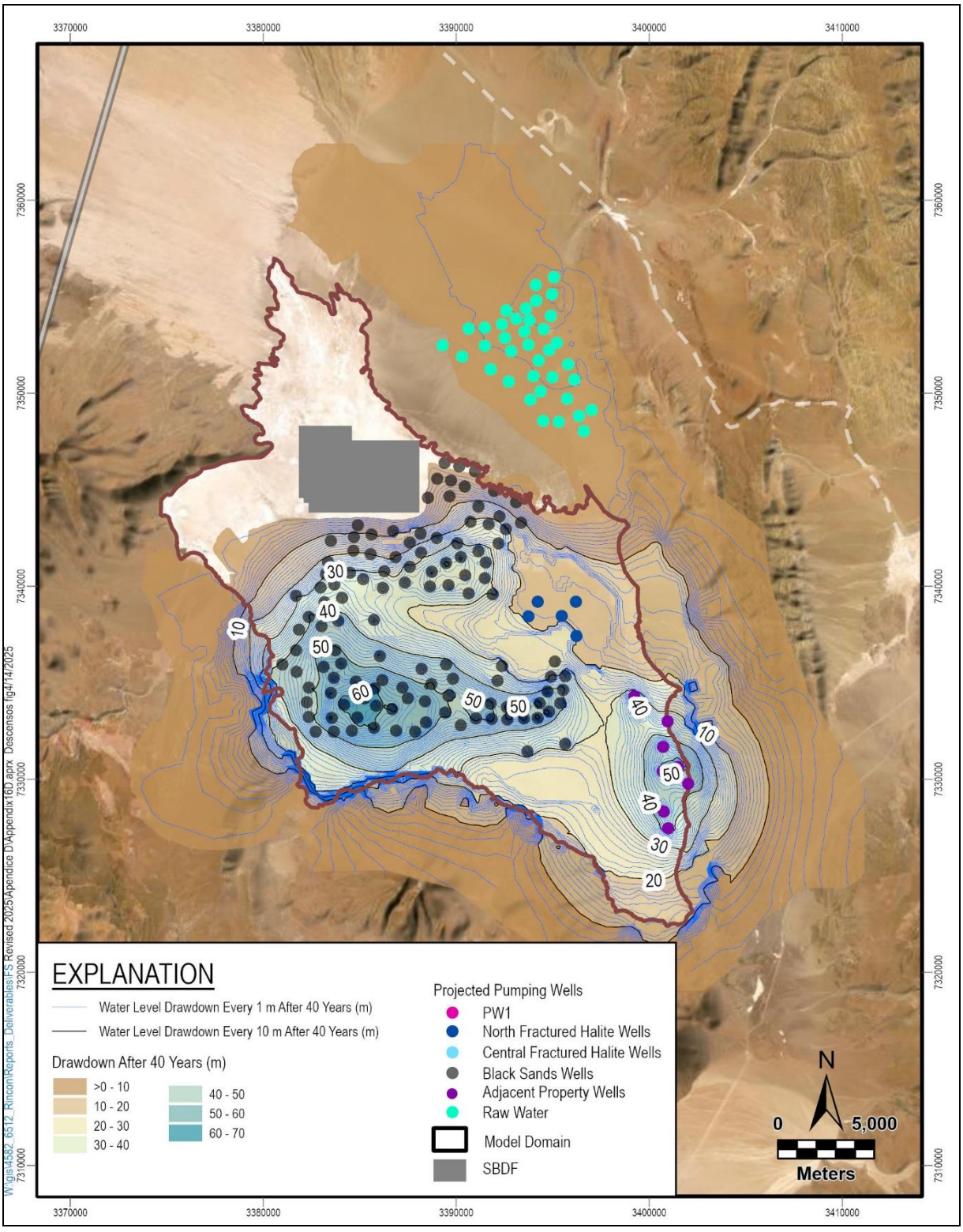


Figure 46: Simulated water level drawdown after 40 years[29]

[29] The wellfield presented herein is the most updated version from early 2025, which is not exactly the same as the wellfield presented in the 2024 ESIA. This new wellfield considers different locations for the wells that are being built from the 10th operation year on.

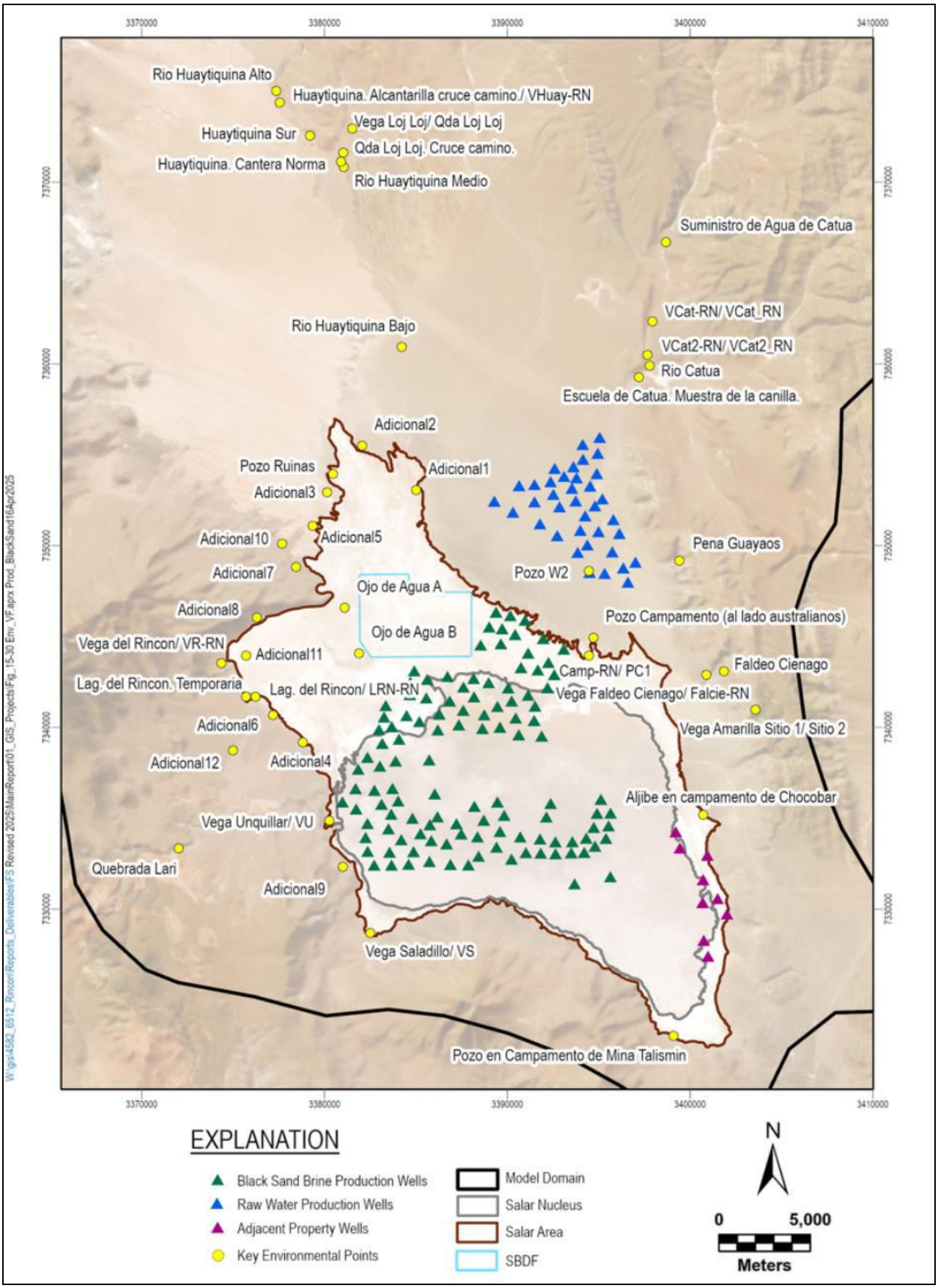


Figure 47: Locations with >10m drawdown

The drawdowns at Chocobar and Talismain are mainly due to the Puna Mining (Argosy) operation. Nonetheless, the Project has committed to present, yearly, the updated groundwater model to the authorities, and the continuous assessment of the potential impacts is part of the water adaptative management plan.

Groundwater level drawdown is predicted to be approximately 2m at the notional additional reference point Adicional4, located approximately midway between Vega Unquillar (Figure 48) and the Rincon Lagoon. Groundwater level drawdown is predicted to be less than 1m at the Rincon Lagoon.

Figure 48: Vega Unquillar

Ojos de Agua
The two Ojos de Agua (natural springs) located along the western margin of the proposed SBDF are considered key environmental receptors. During the operational phase of the Project, groundwater levels at these locations are predicted to rise due to seepage from the SBDF. Model results indicate a maximum groundwater table increase of approximately 0.6m at Ojos de Agua A and 1.2m at Ojos de Agua B, as shown in Figure 49. However, several limitations affect the accuracy of model predictions at these sites:

Model Limitations

- Model cell dimensions in this area are 250m x 250m, while the Ojos de Agua features are only ~30m wide.
- The model assumes a starting depth to water of 1–2mbgl, based on nearby wells (0.86–3.02mbgl), whereas water in the Ojos de Agua is observed at ground level.
- Seepage from the SBDF is modelled as a constant rate over the entire 40-year operational period.
- Evaporation rates do not account for exposed surface water, likely underestimating actual evaporation at the Ojos de Agua.

Ground Conditions:

- Brine is present at ground level in both Ojos de Agua.
- Unlike other areas of the SBDF, these locations lack a travertine cap, resulting in unconfined groundwater conditions.
- The Ojos de Agua are vertical shafts that may intersect multiple sedimentary units.
- There is potential connectivity to deep geothermal upwelling, which may influence water chemistry and flow dynamics.

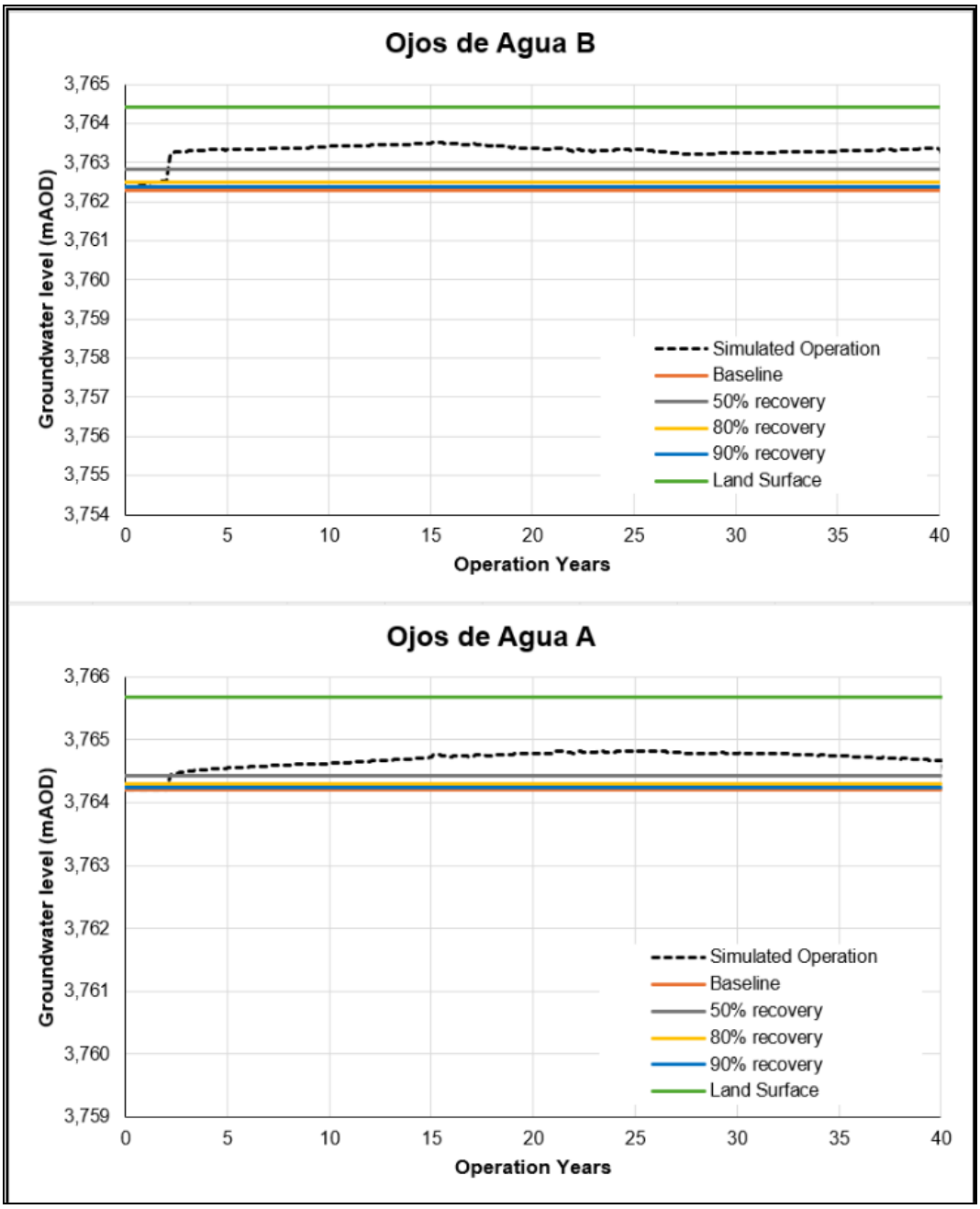


Figure 49: Predicted groundwater level rise at Ojos de Agua A & B

While the model predicts a modest rise in groundwater levels—suggesting localized mounding rather than flooding—these results should be interpreted with caution. The sensitivity of the Ojos de Agua to changes in water levels and quality highlights the need for further site-specific investigations to validate model assumptions and assess potential environmental impacts during the operational phase.

Groundwater Level Recovery (Post-Operation)

Key Surface Water Features

During the post-operational phase of the Project, groundwater levels at Ojos de Agua A and Ojos de Agua B are predicted to decline following the rises observed during the operational phase. The maximum drop in the groundwater table is expected to occur approximately 7 to 10 years after brine extraction ceases, with declines of around 5m at Ojos de Agua A and 8m at Ojos de Agua B, as shown in Figure 50.

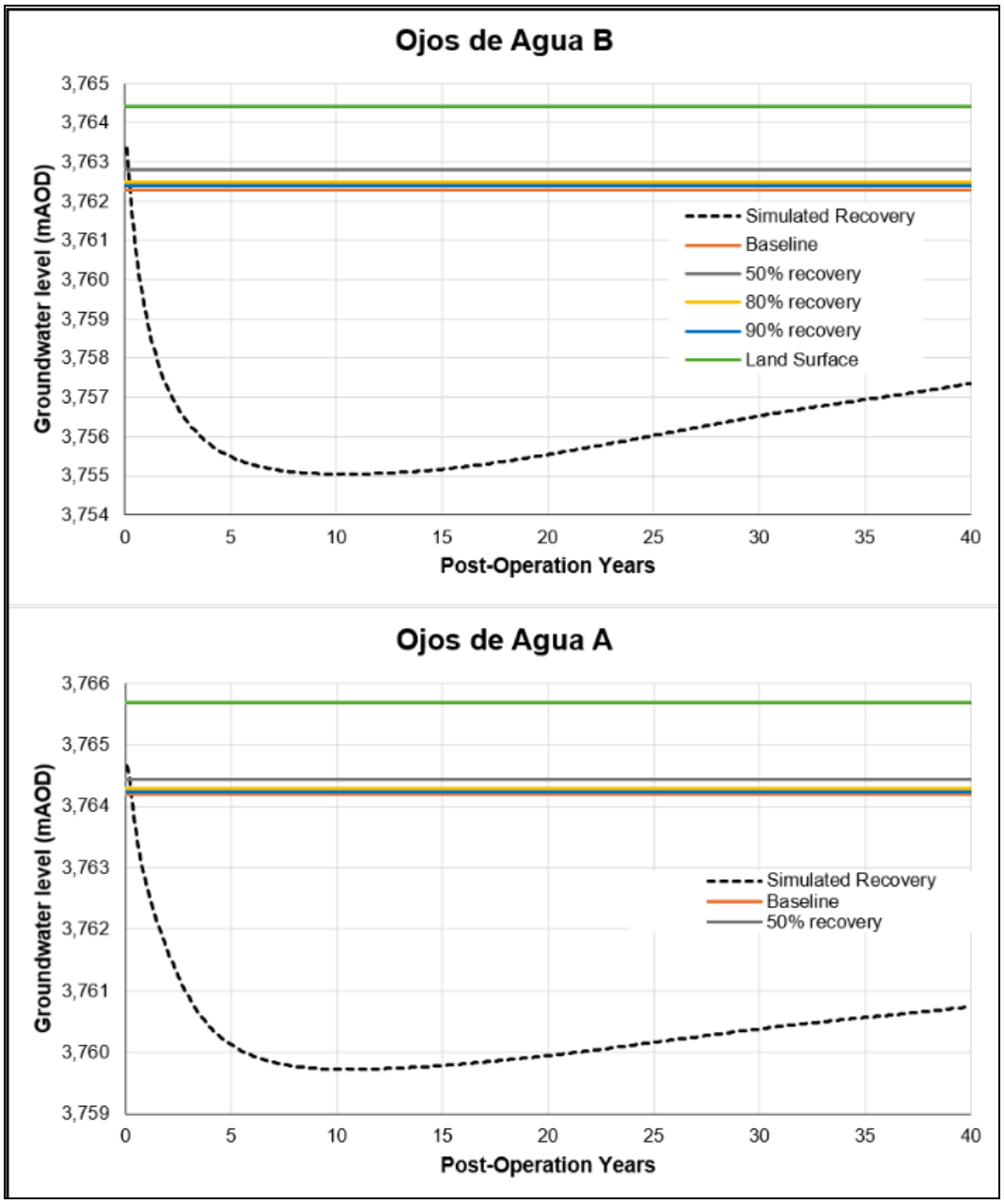


Figure 50: Predicted groundwater level decline at Ojos de Agua A & B

The predicted decline in groundwater levels post-operation is primarily due to the cessation of seepage from the SBDF into the underlying sediments—meaning the SBDF no longer contributes recharge. As a result, drawdown previously concentrated in the Salar due to brine abstraction during the operational phase begins to migrate northward into the SBDF area, as shown in Figure 51.

It is essential to consider the model limitations previously outlined when evaluating potential impacts on the Ojos de Agua. These limitations affect the accuracy of predictions, particularly in relation to water level changes and environmental sensitivity at these locations.

Despite these constraints, model results suggest that mitigation measures may be necessary during the later stages of operation to address the predicted decline in water levels following the cessation of brine pumping. These measures would aim to protect the Ojos de Agua—key environmental receptors—from potential adverse impacts on both water levels and water quality.

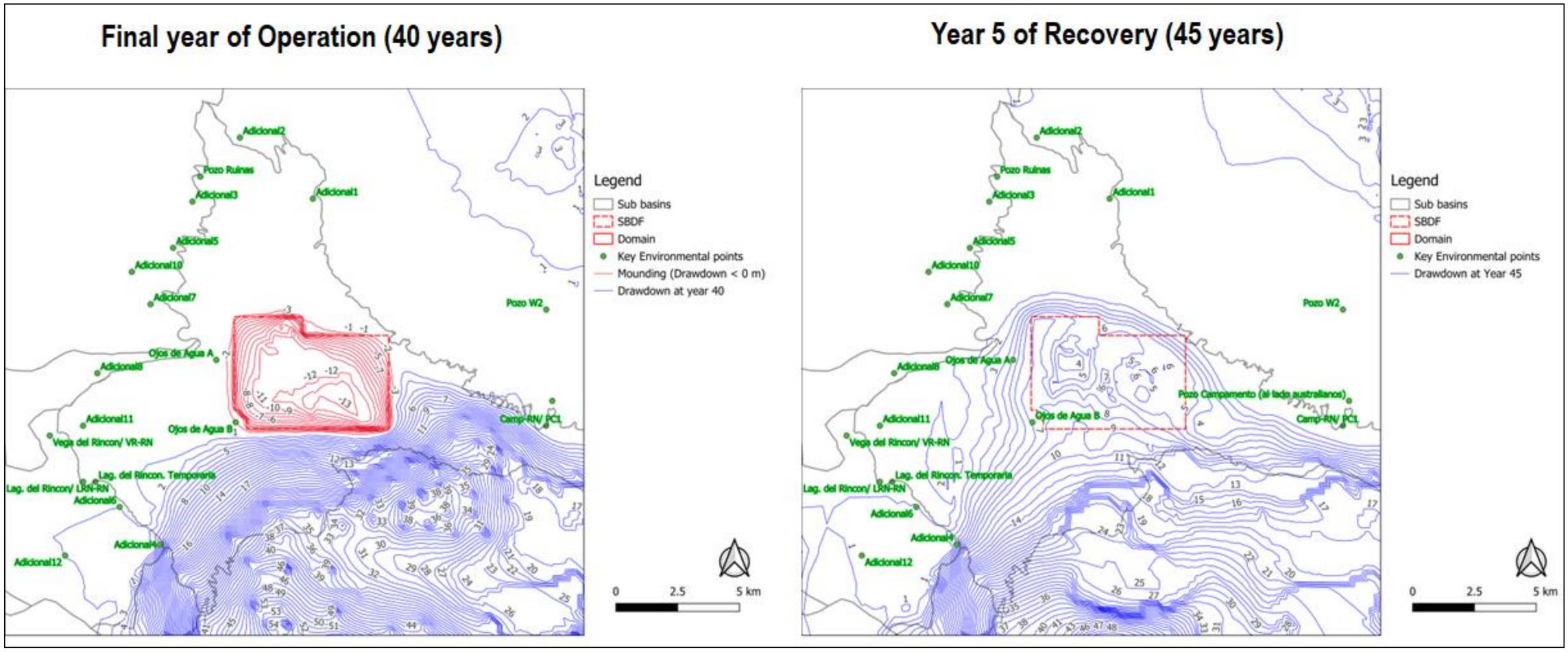


Figure 51: Predicted groundwater levels Ojos de Agua A & B

5.2.1.4. Future Groundwater Modelling Work & Knowledge Management

The basin-wide Rincon watershed and the local Catua Alluvial Fan groundwater models have been developed based on the current hydrological and hydrogeological understanding of the region. These models incorporate all available data, including climatic records, groundwater level measurements, water quality analyses, pumping test results, geophysical surveys, and geological logs.

Ongoing production activities, observation well drilling, hydraulic testing, field investigations, and water monitoring will continue to generate substantial new data. This evolving dataset will significantly enhance the hydrogeological understanding of the project and will be used to refine the conceptual hydrogeological model and update the numerical groundwater models accordingly.

Future groundwater modelling is planned at key project milestones and in alignment with the acquisition of new data—including inputs from newly installed weather stations. These updates will serve to validate previous model predictions, assess raw water supply sustainability, and evaluate potential operational impacts on the water environment, including reinjection dynamics and wellfield optimization. At a minimum, annual model updates are anticipated to meet regulatory requirements from the Mining Secretariat and other Project stakeholders.

5.2.2 Critical Habitat

5.2.2.1. Impact Identification and Losses

To date, five and possibly six (depending on the final taxonomic status of *Liolaemus* sp.) Critical Biodiversity Values (*Liolaemus* AC, *Liolaemus porosus*, *Liolaemus multicolour*, and *Liolaemus scrocchi*, and EMEs) have been identified within the Salar de Rincon Basin.

As stated in Section 3.3.2, both taxonomic, population, and geographic distribution uncertainty in the case of *Liolaemus* spp. make a final determination of Critical Habitat status for habitats difficult.

Nonetheless, at present, Critical Habitat is assigned to vegetation types where *Liolaemus* spp. have been recorded within the EAAA, as shown in Table 29, while Table 30 shows the degree of overlap of the Project footprint within the different vegetation types.

The entire EAAA is Critical Habitat for this species, as shown in Figure 52.

Liolaemus spp.
The Project facilities will impact 324.94ha of Peladar, 53.49ha of Shrub Steppe, 7.00ha of Halophytic Transition Vegetation (referenced in the Dynamik report as “Saline Vega”), 2,900.44ha of interior salt crust, 0.68ha of Salt Crust Edge, 9.34ha of the Tolar, and 4.72ha of Hydric Grassland, habitats where *Liolaemus* spp. have been recorded. The airstrip stands out as the facilities with the largest footprint in Peladar, affecting 61.10ha, followed by the R3000 Plant (51.00ha), and then the Rococo quarry (40.89ha).

Liolaemus lizards exhibit low mobility and strong site fidelity (Abdala & Paz, 2025). As a result, the most significant adverse impact anticipated from the Project is alteration and removal of natural ground cover due to land-clearing activities (i.e., habitat loss) due to overlap of some Project components with areas utilized by *Liolaemus*.

Additional impacts to *Liolaemus* species from the Project will include habitat fragmentation. Habitat fragmentation occurs when linear infrastructure, such as roads or pipeline corridors, disrupts landscape connectivity (Bennett, 2004). This isolation impedes individual movement and gene flow, increasing vulnerability to predation and vehicle collisions during attempted crossings.

Noise from machinery and opportunistic predators can trigger stress in lizards, though such exposures are typically brief (Bradley et al., 2022; Mancera et al., 2017). Vehicular dust may reduce stomatal conductance in plants, limiting biomass production and indirectly affecting herbivores and omnivores (Zia-Khan et al., 2015). While these risks are relevant, they are manageable and reversible.

Table 29. Critical Habitat in the EAAA

Vegetation type	Area in the EAAA (ha)
Critical Habitats	
Peladar	51,446.00
Halophytic Transition Vegetation (referenced in the Dynamik report as “Saline Vega”)	588.20
Salt Crust Edge	1,276.40
Shrub Steppe	70,088.00
Water bodies	35.00
Mixed Steppe	29,143.00
Grass Steppe	43,620.00
Hydric Grassland	1,180.00
Tolar	665.00
Vega	798.00
Salt Crust Interior	41,630.00
Total Critical Habitat	**240,470.20**

Table 30. Project footprint overlap with Critical Habitats

Vegetation type	Project Footprint (ha)
Critical Habitats	
Hydric Grassland	4.72
Scarce vegetation (Peladar)	324.94
Halophytic Transition Vegetation (referenced in the Dynamik report as “Saline Vega”)	7.00
Salt Crust Edge	0.68
Shrub Steppe	53.49
Tolar	9.34
Grass Steppe	0.00
Water bodies	0.00
Mixed Steppe	0.00
Salt Crust Interior	2,900.44
Vega	0.00
Total Critical Habitats	**3,300.62**

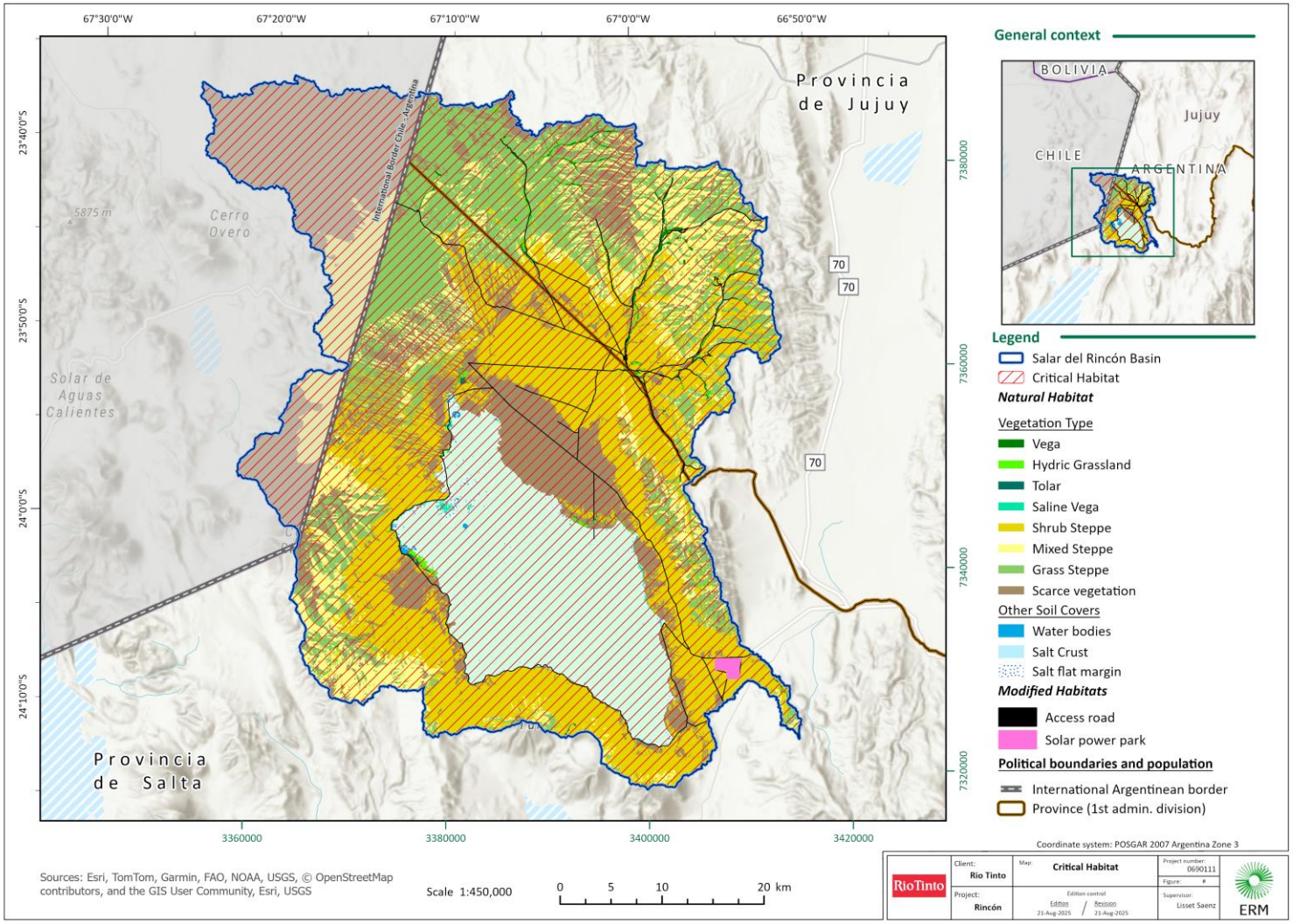


Figure 52: Critical Habitats in the EAAA

Table 31 summarises the spatial overlap between the Project footprint and *Liolaemus* habitats. Although habitat loss is expected for *Liolaemus scrocchii*, *Liolaemus porosus*, and *Liolaemus* sp. C, these species have been recorded in areas of the Rincon Basin that lie outside the boundaries of the Project footprint.

Table 31. Potential Project footprint habitat loss for *Liolaemus* sp.

Vegetation and soil cover type	**Footprint area (ha)**	***Liolaemus multicolour***	***Liolaemus porosus***	***Liolaemus scrocchii***	***Liolaemus* sp. AC**	***Liolaemus* sp. A**	***Liolaemus* sp. C**
Peladar	324.94	yes	no	yes	yes	yes	yes
Halophytic Transition Vegetation (referenced as “Saline Vega”)	7.00	yes	no	yes	yes	yes	yes
Salt Crust Edge	0.68	yes	no	yes	yes	yes	yes
Shrub Steppe	53.49	yes	no	yes	yes	yes	yes
Mixed Steppe	0	yes	no	yes	no	no	no
Grass Steppe	0	yes	yes	yes	yes	yes	no
Tolar	9.34	yes	no	no	no	no	no
Hydric Grassland	4.72	yes	no	no	no	no	no
Total	**400.18**						

Source: Abdala & Paz (2025) (refer to Annex C) and shapes sent by Rio Tinto in June 2025.

Although the Project footprint overlaps with the salt crust, it is devoid of vegetation and not considered suitable habitat for *Liolaemus* spp.; therefore, footprint impacts to the salt crust are not considered as a loss for these species. Figure 53 shows the *Liolaemus* spp. records in relation to the Project footprint.

Extremophile Microbial Ecosystems
EMEs have been recorded in Halophytic Transition Vegetation along the edge of Rincon Lagoon and near a shallow water pond north of the Salar, in addition to the water eyes located within the Salt Crust (Figure 54). None of these EME sites overlap with the Project footprint, so losses will not occur; nevertheless they are found within the Direct Environmental AoI, which does require management and monitoring. Areas where EMEs occur include:

- Sites I, VII, and VIII are located in Halophytic Transition Vegetation (Saline Vega) while Sites II and III, at the edges of the Saline Vega (2m-4m over the Salt Crust) with the following features:
  - Sites I and II are shallow ponds fed by groundwater and show constant bubbling from the bottom (Irazusta and Rajal, 2023; Annex H1).
  - Site III consists of geological formations called “gas domes”, which are a particular type of microbiologically induced sedimentary structure and originate from cracks that form in cohesive microbial mats that are found covering a seasonal pond (Irazusta and Rajal, 2023; Annex H1).
- Rincon Lagoon and its edge: west of Laguna del Rincon, there is an area of Halophytic Transition Vegetation (Site VI) and Hydric Grassland (Sites IV and V), characterised by the presence of several shallow ponds, where microbial mats are formed (Irazusta and Rajal, 2023; Annex H1).
- Ojos de Agua A, B1, and B2: Sites IX, X, and XI.
- EMEs found near superficial water body north of the Salar: Site XII is a recently discovered water body located north of the Salar in November 2024.

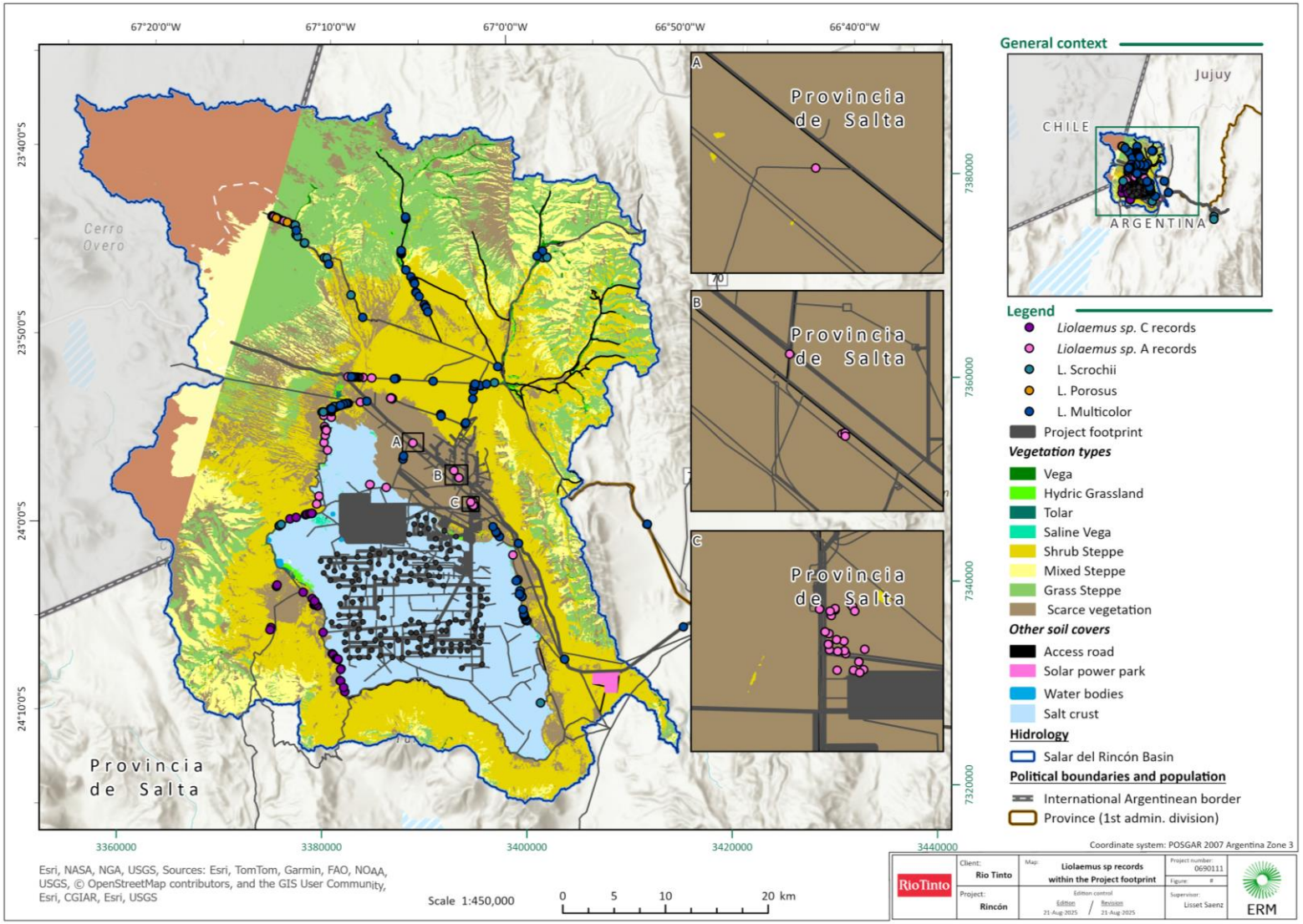


Figure 53: *Liolaemus* spp. records in relation to the Project fo

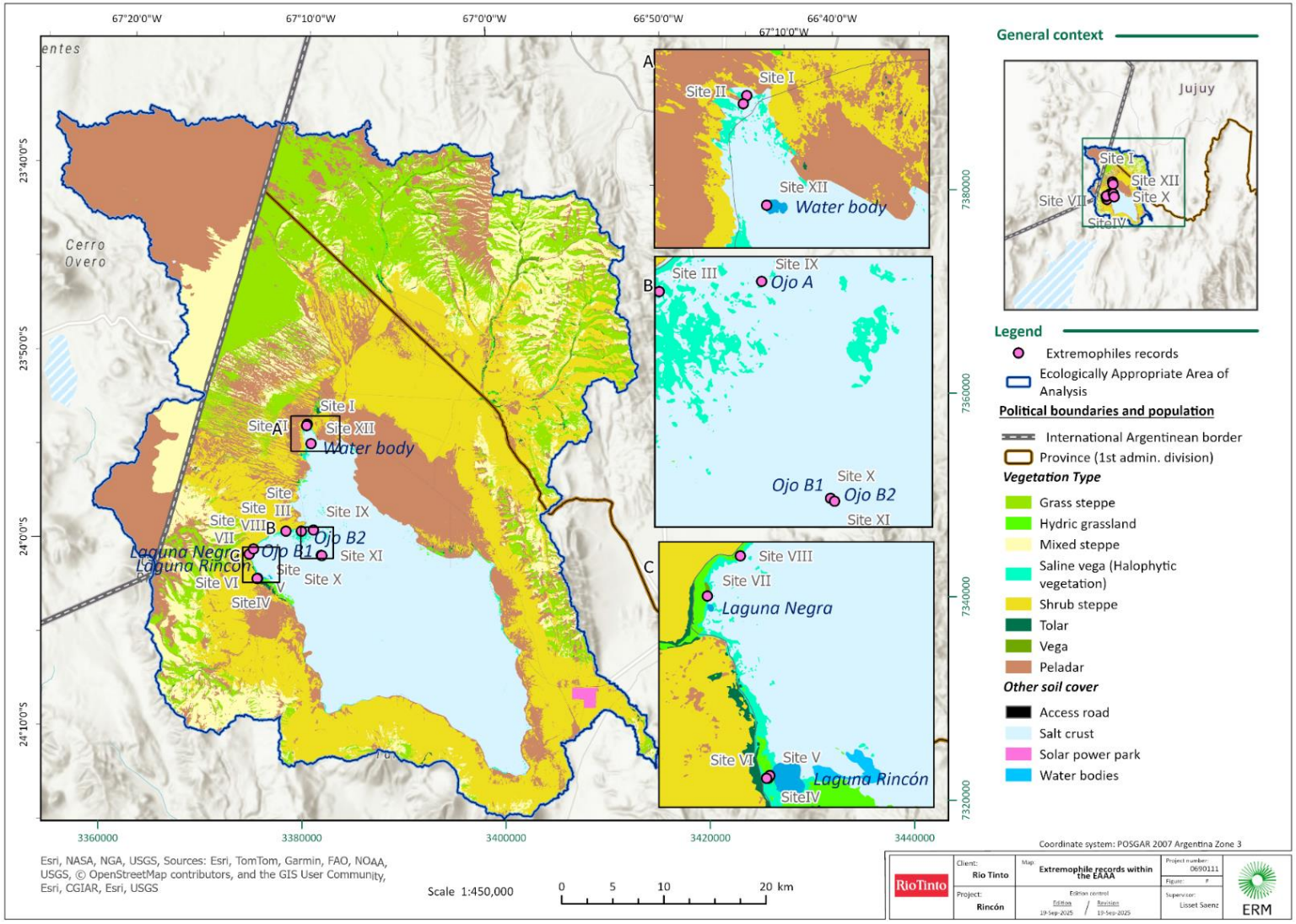


Figure 54: EMEs in the EAAA

5.2.2.2. Ecosystem Services Impact and Risk Assessment

Methods for Evaluation of Ecosystem Services

This section presents the characterisation of each ecosystem service, identifying potential interactions with impacts and risks on the previously identified relevant environmental and social components. The use of existing documents ensures that the assessment and characterization of impacts on ecosystem services is consistent with the information already analysed and authorized for the Project.

The impact assessment considers both potential impacts on natural resources within the AoI and the effects on the beneficiaries of these services. It focuses on identifying and evaluating actual or expected effects of the Project on ecosystems and communities. The significance of the impacts is determined by the combination of the magnitude of the impact and the value (relative importance) assigned to the affected ecosystem service. In addition, a risk analysis is incorporated, which considers the probability of occurrence of each impact and its consequences on ecosystem services. This approach facilitates the identification of mitigation, compensation, or management measures and guides decision-making to minimise negative effects on ecosystem services and associated livelihoods.

Magnitude

This analysis was based on information from previous studies and technical documentation, which had already identified and assessed various environmental impacts. It is noted that these studies focused on impacts on the environmental systems that generate or support ecosystem services, rather than on the services themselves. For this reason, the magnitude of the impact on a specific ecosystem service was determined by considering the cumulative impacts on the environmental systems on which it depends as well as the specific conditions generated by the Project that may alter the use or accessibility of the service.

The assessment of the magnitude of the impact for each ecosystem service was conducted on a case-by-case basis, considering the number of impacts identified, their intensity, and any other factors that could modify the functionality, availability, or access to the priority ecosystem service. The magnitude of an impact on ecosystem services refers to the degree of alteration that an activity causes in the natural systems providing those services. This concept combines biophysical dimensions (such as the spatial extent, intensity, and duration of the change) with social dimensions, especially regarding the beneficiaries of the service. In the context of ecosystem services, assessing magnitude involves considering not only how much the ecological system is modified, but also how much the service's capacity to support human well-being is affected.

According to approaches such as those of the Millennium Ecosystem Assessment and the WRI, magnitude should be assessed based on:

- The proportion of the service affected in functional terms (for example, reduction in water regulation capacity or loss of habitat for pollinators).
- The number and type of beneficiaries who depend on the service, considering their level of vulnerability and dependence.
- The irreversibility or difficulty of recovery of the affected service.

This perspective allows for a more contextualized, case-specific, and equitable assessment, recognizing that an impact can have significant magnitude even if it affects few beneficiaries, as long as they are highly dependent or lack alternatives.

Priority of the Ecosystem Service

This ranking considers the importance of the ecosystem services to stakeholders, as well as the availability of alternatives to fulfill that same function. In addition, the existence of other services that can provide similar benefits is assessed, which influences the assignment of their priority level.

Assessing the Significance of the Impact of Ecosystem Services

The significance of the impacts on ecosystem services was assessed based on the magnitude of the impact and priority, plus the vulnerability of the recipients. The significance ratings are shown in Table 32.

Table 32. Significance of the impact on ecosystem services

Magnitude of the impact	**Ecosystem services priority**		
	Low	Moderate	High-Critical
Insignificant	Insignificant	Insignificant	Insignificant
Low	Insignificant	Low	Moderate
Moderate	Low	Moderate	High
High	Moderate	High	High

The significance ratings of the impacts are described as follows:

- Insignificant: They do not alter the function, use, or accessibility of the ecosystem service, and do not have a noticeable effect on the environmental systems that support the ecosystem service.

- Low: They may cause small changes in the function, use, or accessibility of the ecosystem service, but do not significantly alter supporting environmental systems or the overall availability of the ecosystem service.

- Moderate: They cause clear changes in the function, use, or accessibility of the ecosystem services and may moderately affect supporting environmental systems. These impacts require attention but are not critical.

- High: They substantially alter the function, use, or accessibility of ecosystem services and have a significant impact on the environmental systems that support them. These impacts are critical and require immediate and significant intervention.

Estimation of Risk

Risk estimation is based on the product of the likelihood of occurrence (“Probability”) and the severity of the consequences (“Consequence”) associated with each identified risk. It is important to distinguish between risk and impact:

- Impact refers to any modification or (negative) change in an ecosystem or ecosystem service caused by a project action or activity. In other words, impact is the change that actually materializes as a consequence of the activity; it is a concrete result.

- Risk, on the other hand, refers to the possibility or potential danger that damage or harm may occur to the ecosystem or ecosystem service, also caused by a project action or activity. Risk involves uncertainty, as it represents the probability or possibility that a negative event may occur in the future.

This distinction is essential for a rigorous assessment, as it allows for the anticipation of uncertain adverse events and the design of appropriate preventive or mitigation measures. Furthermore, it facilitates the application of the hierarchical impact management approach—avoid, minimise, mitigate, and compensate—thus promoting sustainable environmental and social performance throughout the project lifecycle.

In summary, impact is a change that has already occurred or can be observed, while risk is the possibility that such a negative change may occur in the future.

Probability: refers to the likelihood that the risk will materialise and an undesired event will occur.

Table 33 specifies the criteria used to evaluate and categorise the probability of an undesired event occurring during the construction/operation/closure phase of the Project. This classification allows for a clearer estimate of the likelihood of an impact occurring.

Table 33. Criteria for categorising the probability of risk occurrence

Probability	Qualitative description	% Probability
Almost certainly	It is almost undeniable that the unwanted event will happen once or more than once.	>90%
Probable/has occurred	The event is almost certain to occur at least once.	75% - 90%
Possible	It is quite likely that the event will occur, a real probability of occurrence is estimated.	50% - 75%
Occasional	The event could eventually occur.	20% - 50%
Unlikely	Unlikely to occur, there is a low probability that it could occur.	5% - 20%
Unusual / Almost impossible	Extremely unlikely or practically impossible.	0 - 5%

Consequence: refers to the effect that the risk or event would have if it occurred, on ecosystem services and the benefits they provide to people, as shown in Table 34. To clarify, the term “Catastrophic” is used to describe a loss that affects more than 90% of the ecosystem service available to all or nearly all beneficiaries, especially when it involves critical services such as drinking water, climate regulation, or pollination. This classification can also apply in situations where one or a few key beneficiaries (for example, an Indigenous community or a highly dependent group) lose more than 90% of the benefits they receive from that service, even if the total number of beneficiaries is low.

Table 34. Risk consequence categorisation criteria

Probability	Qualitative description	Consequence
Catastrophic	A loss of functionality of an ecosystem service that affects more than 90% of its total provision within the project's area of influence, or that results in the loss of more than 90% of the benefits for one or more highly dependent beneficiary groups, without viable alternatives for substitution or recovery.	>90%
Major / Important	The impact is severe and can cause substantial damage or very significant losses to ecosystem services and the benefits they provide to people.	75% - 90%
Significant	The impact is very considerable and can cause significant problems for ecosystem services and the benefits they provide to people.	50% - 75%
Serious	The impact is considerable and can cause significant problems for ecosystem services and the benefits they provide to people.	20% - 50%
Moderate / Medium	The impact is limited and does not cause significant problems for ecosystem services and the benefits they provide to people.	5% - 20%
Minor	The impact is minimal or non-existent. The event causes minor damage to ecosystem services and the benefits they provide to people.	0 - 5%

This definition is linked to the principle of vulnerability: not all beneficiaries have the same degree of dependence or the same adaptive capacity in the face of service loss. Therefore, when assessing consequences, it is essential to consider not only the quantitative magnitude of the loss but also the relative importance of the service for the affected groups.

Based on these approaches, a “Catastrophic” impact can be defined as: A loss of functionality of an ecosystem service that affects more than 90% of its total provision within the project’s area of influence, or that results in the loss of more than 90% of the benefits for one or more highly dependent beneficiary groups, with no viable alternatives for substitution or recovery.

The same logic applies to probability categorisation for Major / Important, Significant, Serious, Moderate / Medium, and Minor. This approach allows for capturing both the quantitative scale and the relative importance of the service for beneficiaries, aligning with principles of equity and sustainability.

Risk Matrix: as shown in Table 35, is based on a qualitative approach and displays the frequency values (horizontal section) and the estimated levels of consequence (vertical section). The intersection of frequency and consequence gives us the risk, which can be located in different zones, indicating the risk level represented by a different colour. Furthermore, the analysis considers the vulnerability of the impact recipients (stakeholders) and the existence and effectiveness of controls to eliminate or reduce risks.

Table 35. Risk matrix

			Consequence					
	Criteria		**Minor**	**Moderate / Medium**	**Serious**	**Significant**	**Major / Important**	**Catastrophic**
			1	**2**	**3**	**4**	**5**	**10**
Probability	**Almost Sure**	**6**	6	12	18	24	30	60
	Probable / Has Occurred	**5**	5	10	15	20	25	50
	Possible	**4**	4	8	12	16	20	40
	Occasional	**3**	3	6	9	12	15	30
	Unlikely	**2**	2	4	6	8	10	20
	Unusual / Almost Impossible	**1**	1	2	3	4	5	10

Risk level categorisation			
Extreme	**High**	**Moderate**	**Low**
30 - 60	15 - 25	5 - 12	1 - 4

It is important to highlight that the matrix is evaluated from the perspective where prevention and mitigation measures are not considered.

Table 36 presents the criteria to be met in respect to scale, vulnerability and controls, depending on each risk rate category.

Impact Assessment
Six ecosystem services determined to be of Moderate or High priority are analysed:

- Provision of clean and abundant water – High.
- Provision of natural pastures – High.
- Vicuñas – High.
- Firewood for domestic use – High.
- Extraction of plants for medicinal and ceremonial purposes – Moderate.
- Sites of scientific interest – High.

Table 36. Categorisation criteria for the rate of evaluated risks

Criteria	Risk categorisation			
	Extreme	**High**	**Average**	**Low**
Scale: How significant is the scale of risk to ecosystem services?	• Total loss of access to the ecosystem service and the benefits it provides to people and communities in the Project's AoI.	• Significant change in access to ecosystem services and the benefits it offers to people and communities in the Project's AoI. • A significant change is created in the daily lives of people and communities in the Project's AoI.	• Partial change in access to ecosystem services and the benefits they offer to people and communities in the Project's AoI.	• Minor change in access to ecosystem services, and the benefits it offers to the people and communities in the Project's AoI. • A minimal change is created in the daily lives of people and communities in the Project's AoI.
Vulnerability: How vulnerable or resilient to risk are people and affected communities?	• People and communities affected by risk lack the capacity to adapt to risk scenarios.	• People and communities affected by risk have a very limited capacity to adapt to risk scenarios.	• People and communities affected by the risk. • They have a moderate capacity to adapt to risk scenarios.	• People and communities affected by the risk have a high or very high capacity to adapt to risk scenarios.
Controls: How effective are controls in eliminating or reducing risks?	• The controls are extremely well designed and work efficiently at all times. • The control environment operates at an optimal level from the perspective of risk management for ecosystem services and the benefits they generate.	• The controls are well designed and work relatively well most of the time. • The control environment operates at an optimal level from the perspective of risk management for ecosystem services and the benefits they generate.	• Controls are considered to be designed and/or operating with partial effectiveness. • The control environment operates with partial effectiveness from the perspective of risk management for ecosystem services.	• Controls are missing or are considered to be poorly designed or operating ineffectively. • The control environment is ineffective from the perspective of risk management for ecosystem services.

As presented Table 37, the key information for each ecosystem service is summarised:

- The type of impact identified.
- The technical justification for its magnitude.
- The potentially affected beneficiaries.
- The assigned priority.
- The assessment of the significance of the impact.
- The existing mitigation measures.

A description of impacts to the six ecosystem services is presented in the following sections.

Alteration of the Quality of Water Sources Used by Puesteros

During the construction phase of the Project, significant indirect impacts on the water provisioning ecosystem service were identified, particularly in the Vega de Catua, a key ecosystem used by at least seven urban pastoral families and a ranch for raising llamas, goats, and sheep.

The production of aggregates by AB Construcciones—the Project's materials supplier—involves extracting water from the Catua River, storing the materials in the open air along the riverbed, and operating a mobile concrete plant located on the plain. These activities generate environmental risks related to potential alteration of water quality, sediment generation, and potential overflows of the reservoir water, which directly affect the availability and quality of the water used by shepherds to water their animals.

The intensive use of water resources and the modification of the natural environment of the plain temporarily compromise the supply of clean and continuous water, affecting an essential ecosystem service for local livestock subsistence. Furthermore, there have been reports of complaints from shepherds due to the presence of concrete debris in the water, reinforcing the perception of risk and the possibility of direct impact.

Although demand for aggregates is expected to decrease significantly once RINCON completes construction of its own concrete plant, during the current construction phase, the impact remains possible and has moderate consequences, given the number of families involved and the importance of the resource.

Based on the above, the significance of the impact is considered High.

Restricting Access to Grazing for a Vulnerable Puestero

The development of the Project, both during its construction and operational stages, directly impacts the ecosystem service of providing grazing, which is essential for the traditional livestock farming of local communities. The installation of infrastructure, the opening of roads, the drilling of wells, and the demarcation of restricted areas for security reasons reduce access to areas of natural vegetation historically used for grazing llamas, goats, and sheep.

This impact is only relevant in the case of the owner of puesto CP01, a rancher from the Catua Aboriginal Community, who seasonally uses an area of approximately 26,880ha for llama farming. During the construction phase, an estimated 335.6ha (1.2% of the total) will be occupied by Project facilities, affecting areas of regular and recent use. Although the proportion is low, the impact is significant due to its strategic location and the duration of the impact (5 to 6 months within the 30-month construction period), according to the updated social baseline for the Project (Rio Tinto, Supplemental Social Baseline (puesteros), September 2025). During the operation phase, while some areas will be remediated, others—such as roads, pipelines, waste ponds, and well pads—will remain occupied for at least 40 years, restricting the use of 254.6ha (0.9% of the total grazing area). This permanent occupation implies a sustained loss of access to natural grazing, which may affect the productivity of the CP01 livestock herd.

Table 37. Evaluating the impacts on ecosystem services

Ecosystem service	Impact	Justification of the magnitude of the impact	Beneficiaries	Magnitude	Priority	Significance	Current and planned mitigation measures
Provision of clean and abundant water	Alteration of the quality of water sources used by puesteros	During construction, aggregate production in the Vega de Catua area poses risks such as water quality disturbances, overflowing reservoirs, and the presence of concrete in the water. This impacts seven families of puesteros.	Seven families of puesteros from Catua.	Moderate	High-Critical	High	• Environmental audits of suppliers.
Provision of natural pastures	Restricting access to grazing for a vulnerable puestero	During construction, 335.6ha (1.2%) of the puesto CP01's grazing area will be occupied, restricting access to natural grazing in areas of regular and recent use. During operation, 254.6ha (0.9%) will remain occupied for 40 years. The owner of the puesto CP01 is highly vulnerable to socioeconomic issues.	Puestero	High	High-Critical	High	• Strictly comply with the defined area of the project. • Use existing roads and trails whenever possible. • Delimit areas for manoeuvring, unloading, storage, and parking. • Conserve and store soil for restoration. • Relocate plant species of interest before clearing. • Allocate extracted plant material for community use, according to agreements. • Periodically train staff in vegetation preservation. • Prohibit the collection of plants, burning of vegetation, and the introduction of exotic species. • Execute a species rescue and relocation plan prior to the intervention. • Periodically update the environmental and social baseline. • Monitor air quality, noise, traffic, and complaints/incidents from vendors.
	Reduction in grazing quality and availability due to dust accumulation	During the construction and operation phases of the Project, the constant movement of vehicles and machinery generates particulate emissions (dust) that settle on natural vegetation near access roads and Project areas. This vegetation is used for grazing by fifteen puesteros families who use land near the roads. Dust accumulation can reduce the nutritional quality and availability of the grass, affecting livestock nutrition.	Fifteen families of puesteros who are located on the access roads to the project	Low	High-Critical	Moderate	
Vicuñas	Reduction in grazing availability by Project facility overlap	The Project's activities could limit the grazing patterns of the vicuña and could affect the health of the grassland ecosystem. Disruption of the balance of grazing pastures can reduce their nutritional quality, affect their palatability, and limit their availability, thus compromising vicuña nutrition. In turn, alterations to the vicuña herd size could result in impacts to Indigenous livelihoods.	Communities of Catua, Olacapato, and Estación Salar de Pocitos	High	High-Critical	High	• Strictly comply with the defined area of the project. • Use existing roads and trails whenever possible. • Relocate plant species of interest before clearing. • Periodically train staff in vegetation preservation. • Prohibit the collection of plants, burning of vegetation, and the introduction of exotic species. • Periodically update the environmental and social baseline. • Monitor vegetation removal areas and record complaints or community access issues.
Firewood for domestic use	Reduction in firewood availability due to vegetation removal	In the rural communities in the Puna region, firewood is an essential resource for heating and cooking, collected manually in areas near the puestos. Although the Project's activities could generate access restrictions and affect native vegetation, community consultation confirmed that the main collection areas will not be directly impacted. Furthermore, households can adjust their practices to unaffected areas. The only puestero whose area of use overlaps with Project facilities collects in La Esquina, an unaffected area. Therefore, the magnitude of the impact is considered insignificant.	Puesteros of Catua and Olacapato	Insignificant	High-Critical	Insignificant	• Strictly limit intervention areas to avoid unnecessary vegetation removal near homes. • Prioritize the use of existing roads and trails to reduce new disturbances. • Delineate manoeuvring and storage areas to prevent off-site impacts. • Train staff on the importance of native vegetation and prohibit its collection or burning. • Make the removed plant material available to the community, as agreed. • Monitor vegetation removal areas and record complaints or community access issues.
Extraction of plants for medicinal and ceremonial use	Reduction in the availability of medicinal plants due to vegetation removal	Although construction involves the removal of some native vegetation, community validation indicate that this impact on medicinal plant availability is very low. There are no specific, fixed collection sites, and the affected species are widely distributed across the landscape. People can collect medicinal plants in other nearby areas if some sites become temporarily inaccessible due to construction. Therefore, overall access to and availability of medicinal plants is largely maintained.	Puesteros of Catua and Olacapato	Low	Moderate	Low	• Minimize vegetation removal and utilize previously disturbed areas whenever possible. • Implement rescue and relocation of valuable or sensitive plant species before clearing. • Train staff on the cultural and medicinal value of local plants. • Prohibit unauthorized collection and burning of vegetation by project personnel. • Discuss with communities possible changes in access and available alternatives. • Update the environmental baseline and monitor vegetation cover and composition.
Sites of scientific interest	Alteration of the habitat of water bodies that host extremophile microorganisms	Some Project activities, particularly the construction and operation of the SBDF, could generate indirect pressures on extremophile microbial ecosystems present in the water bodies. These ecosystems, of high scientific value, could be affected by effluent infiltration, lowering water levels, and the deposition of particulate matter, which would alter their chemical composition and functionality. Since studies are still underway and there is uncertainty about the hydraulic connectivity and resilience of these ecosystems, the risk is considered medium, with potentially serious consequences in terms of loss of unique biodiversity and scientific value.	Communities of Catua, Olacapato, and Estación Salar de Pocitos and the scientific community	High	High-Critical	High	• Comply with the "Plan Integral de Manejo de Desarrollo de la Reserva Natural de Fauna Silvestre Los Andes, Refugio Provincial de Vida Silvestre Laguna Socompa y Refugio Provincial de Vida Silvestre Ojos de Mar de Tolar Grande" (Resolución 48/18) which considers the EMEs as emblematic environments and they are under an untouchable zone, in which only scientific research and environmental education activities are allowed. • Condition 21 of Resolution 101/25 requires increasing the distance between the SBDF and the Ojos de Agua, from 250m to 700m. • Train staff on the value of the Ojos de Agua. • Prohibit Project personnel from traversing the Ojos de Agua. • Continue to monitor the composition of the Ojos de Agua and resilience studies.

A major limitation of this assessment is the lack of specific studies on the animal carrying capacity of the grazing area. Without this information, it is impossible to accurately estimate whether the current herd size can be maintained with the same productivity in the remaining portion of the territory. Failure to do so could lead to additional impacts, such as increased grazing pressure in other areas, including communal areas such as Vega de Catua or territories used by other grazing landowners, which could lead to conflicts over land use.

From the perspective of IFC PS5, this impact could constitute economic displacement, as it affects access to natural resources essential for subsistence. Furthermore, according to PS1 and PS7, the owner of puesto CP01's situation presents a high degree of vulnerability: she is 65 years old, has no pension or family support, and partially relies on selling meat for her income. Although her employment with the Catua Municipal Commission partially mitigates this vulnerability, the impact on her livestock activity represents a concrete threat to her economic security and well-being. This analysis highlights how even a relatively small spatial impact can have significant consequences when it comes to ecosystem services essential to traditional livelihoods, especially in contexts of high social and cultural sensitivity.

Based on the above, the significance of the impact is considered High.

Reduction in Grazing Quality and Availability due to Dust Accumulation

During the construction and operation stages of the Project, the constant movement of heavy machinery and vehicles generates particulate matter (dust) emissions that settle on the natural vegetation in the areas surrounding access roads and operational areas. This vegetation plays a key role as a source of natural grazing for small livestock—llamas, goats, and sheep—raised by local shepherd families.

Dust accumulation on grazing pastures can reduce their nutritional quality, affect their palatability, and limit their availability, thus compromising livestock nutrition. This impact is especially significant for at least fifteen ranching families whose grazing areas coincide with or are close to the roads used by the Project. The disruption of this ecosystem service can translate into decreased livestock productivity, increased efforts to access unaffected areas, and potentially, conflicts over the use of alternative grazing areas.

Although the impact can vary in intensity depending on the distance from the emission sources and climatic conditions, its persistence over time and its cumulative effect on vegetation make it a factor of environmental pressure on the livelihoods of pastoralists.

Based on the above, the significance of the impact is considered Insignificant.

Reduction in Grazing Availability by Project Facility Overlap

Vicuñas play a vital ecological role through their selective grazing, which promotes plant diversity and prevents overgrowth, helping to maintain the health and balance of high-altitude grassland ecosystems. By preserving the structure of these habitats, vicuñas indirectly support a variety of other species, contributing to overall ecosystem resilience. In addition, Indigenous practice traditional "chaku" methods—capturing, shearing, and releasing vicuñas—which provide a sustainable livelihood. The wool harvested through this method is highly valued on the international market, providing a sustainable source of income.

The Project's activities could limit the grazing patterns of the vicuña and could affect the health of the grassland ecosystem. Disruption of the balance of grazing pastures can reduce their nutritional quality, affect their palatability, and limit their availability, thus compromising vicuña nutrition. In turn, alternations to the vicuña herd size could result in impacts to Indigenous livelihoods.

Based on the above, the significance of the impact is considered High.

Reduction in Firewood Availability due to Vegetation Removal

In rural communities in the Puna region—such as Catua, Estación Salar de Pocitos, and the various puestos scattered around the Salar de Rincon—firewood is a strategic resource for daily life. Its use is essential as a source of thermal energy for cooking and heating homes in a climate characterised by extreme low temperatures for much of the year. The most commonly used species include añagua (*Adesmia* sp.), rica rica (*Aloysia deserticola*), yellowthorn (*Chuquiraga atacamensis*), and tolares (*Parastrephia* spp.), collected manually in areas near the puestos and in natural areas close to the Project.

Most households collect firewood near their puestos. Collection is done in a decentralized manner, without specific storage areas. According to local accounts, Catua municipal workers usually collect firewood near Rincon Lagoon, while other locations mentioned include the La Esquina puesto (CP01).

The Project's activities—including infrastructure development, increased vehicular traffic, and restricted access zones—could slightly limit access to nearby harvesting areas or reduce local vegetation cover. Additionally, the potential alteration or loss of native vegetation due to soil compaction, dust generation, or direct intervention in the area could compromise the natural regeneration of fuel species, contributing to a gradual reduction in the available supply in the communities' immediate surroundings.

In particular, it was identified that the only rancher whose area of use overlaps with project facilities collects firewood in the area of the La Esquina puesto (CP01), a location not expected to be affected by Project activities. However, community consultations confirmed that the main firewood collection areas will not be directly impacted by project activities. Furthermore, households can adjust their collection practices to nearby unaffected areas.

Based on the above, the significance of the impact is considered Insignificant.

Reduction in the Availability of Medicinal Plants due to Vegetation Removal

In the study region, particularly in rural puestos near the Rincon Salt Flats, the use of medicinal plants constitutes an essential ecosystem service, linked both to everyday health care and to long-standing cultural and spiritual practices. The local population—primarily older adults and dispersed rural communities—regularly resorts to collecting wild plants as a primary form of care for common ailments, occasionally supplementing them with allopathic medical care.

The plant species used, such as rica rica (*Aloysia deserticola*), chachacoma (*Senecio nutans*), copa copa (*Artemisia copa*), añagua (*Adesmia* sp.), yellowthorn (*Chuquiraga atacamensis*), among others, grow naturally in different ecological levels - from low areas ("el campo") to slopes and high areas ("el alto") - and are collected in small quantities, directly from the environment surrounding the residential puestos.

The various stages of the Project could generate negative impacts on the availability and access to these medicinal plants, mainly through the removal of native vegetation, soil compaction, and the deposit of particulate matter (dust), as well as the installation of infrastructure, extraction wells, exclusion zones, or intensive vehicular traffic, which could restrict access to areas traditionally used for collection. However, community validations indicate that this impact is low. There are no specific, fixed collection sites, and the affected species are widely distributed across the landscape. People can collect medicinal plants in other nearby areas if some sites become temporarily inaccessible due to construction. Therefore, overall access and availability of medicinal plants is largely maintained. However, the Project's footprint is limited relative to the surrounding ecosystems impacts would be localized.

Based on the above, the significance of the impact is considered Insignificant.

Alteration of the Habitat of Water Bodies that Host Extremophile Microorganisms

Certain Project activities—particularly the construction and operation of the SBDF—may exert indirect pressure on extremophile microbial ecosystems found in local water bodies. These ecosystems, which hold high scientific value, could be impacted by factors such as effluent infiltration, declining water levels, and particulate matter deposition, all of which may alter their chemical composition and functional integrity. Given the ongoing studies and existing uncertainty regarding hydraulic connectivity and ecosystem resilience, the risk level is considered medium. However, the potential consequences—especially the loss of unique biodiversity and scientific knowledge—could be significant.

Based on the above, the significance of the impact is considered High.

Risk Assessment

To determine the Project's risk to the ecosystem service, the considered the previous assessment presented in the 2024 ESIA, the biodiversity workshop held in 2025 in conjunction with RINCON, and expert judgment and experience in other similar mining projects. An interdisciplinary team of environmental and social professionals (environmental engineers, biologists, and social specialists) participated in these instances.

For the risk analysis, a general association of the potential impacts on the provision of ecosystem services is made for the environmental factors affected. It is important to note that not all of the risks identified in the

Project scenario interact directly or indirectly with an ecosystem service, so only those that do have the potential for impact are considered. These are:

- Decrease in the depth, capacity, and availability of surface water resources.
- Livestock collision.
- Alteration of the habitat of water bodies that host extremophile microorganism ecosystems.

The risk analysis is presented in Table 38.

A description of risks is presented in the following sections.

Decrease in the Depth, Capacity, and Availability of Surface Water Resources

Based on the hydrogeological information available to date, no direct hydraulic connection has been identified between surface water bodies and the deep groundwater system proposed for abstraction. Each appears to respond to distinct hydrological processes within an endorheic basin: surface run-off would preferentially contribute to recharge in lower-lying sectors, whereas in higher sectors, where some consumptive uses are located, a greater degree of hydrogeological isolation between surface and groundwater would be expected. This working hypothesis is being validated through ongoing studies that include water balance assessment, analysis of natural variability, conceptual modelling of floodplains and channels, installation of piezometers, and evaluation of vertical flows, among others.

As there is still no conclusive evidence regarding connectivity and potential effects, this is incorporated as a potential hydrogeological risk rather than a current impact. The categorisation will be revised as studies progress. Under a conservative scenario and recognising that the project will use water in its processes, a localised reduction in the resource could occur, with implications for domestic and livestock uses, particularly where water infrastructure is limited. In this regard, the social baseline in Catua, Olacapato, and Estación Salar de Pocitos indicates conditions of water vulnerability and strong dependence on nearby sources, with supply sometimes obtained from vegas, channels or wells and, depending on seasonality, transported in containers or trucks. These circumstances reinforce the need for monitoring and preventive management.

In specific areas linked to puesteros families, such as the supplies used by the Talismán puesto (OP02), modelled piezometric drawdown scenarios could translate into measurable declines in the water table if local connectivity proves greater than assumed. However, these are hypotheses subject to field verification. Accordingly, these sources will be monitored closely and proportionate, gradual measures will be implemented if trends outside the natural range are observed. Seasonality and existing logistical support options will also be considered to minimise temporary effects.

Aligned with an adaptive management approach, Rincon will be consolidating participatory programme for quantity and quality monitoring with the involvement of the families mentioned and other local users, strengthening communication and grievance channels, and assessing targeted support for storage and distribution where vulnerability is greatest. If needed, low-impact contingency measures can be agreed, such as improvements to existing intakes, additional storage points, or complementary distribution schemes. In parallel, and where hydrogeological and water-quality conditions allow, the use of Managed Aquifer Recharge (MAR) will be considered at pilot and community scale, for example via small infiltration trenches or ponds to make use of seasonal surpluses or treated inputs, with participatory design and local oversight. These actions enable early detection of deviations from the expected range and the application of gradual, proportionate responses, helping to maintain continuity of access to water for domestic and livestock uses.

Based on the above, the probability of occurrence is considered Unlikely (2), while the associated consequence is classified as Major (5). This combination results in a risk level of Moderate (Risk Matrix Value = 10).

Livestock Collision

As part of the land use in the Project area, extensive livestock farming is identified as a fundamental activity. Pastoralists possess local ecological knowledge that involves environmental classification, assessment, and management of their surroundings. This understanding is based on ancestral knowledge of natural resources at different landscape scales.

Table 38. Risk analysis

Ecosystem service	Expected risks identified	Description of the risk to the ecosystem service	Probability	Consequence	Assessment of Risk	Measurement / Control
Provision of clean and abundant water	Decrease in the depth, capacity, and availability of surface water resources.	Within the framework of the Project, preliminary hydrogeological studies have not identified a direct connection between surface water and the deep aquifer that will be used in the operation. However, there is a potential hydrogeological risk associated with the progressive lowering of the water table due to the extraction of raw water and brine, especially in upper reaches of the basin where consumptive water uses are located. This risk could affect access to water for animal and domestic consumption by ranching families, who depend on nearby natural sources and are highly vulnerable due to the limited water infrastructure in locations such as Catua, Olacapato, and Estación Salar de Pocitos. In particular, the risk is greatest/significant for the Talismán outpost, where the 2-meter-deep well could experience a reduction of at least 1 meter in the first five years of operation, and more than 2 meters in ten years, which could dry up the well or increase the salinity of the water, affecting its use for animal husbandry. In the case of another puestero, the risk is lower due to the eventual use of the land and the location of its watersheds in higher areas, although monitoring for possible indirect impacts is recommended. Not all control measures have yet been defined; however, there is a commitment to PS5 and implementation of a Livelihood Restoration Plan (LRP) should economic displacement impacts be identified. Actions such as participatory monitoring, community grievance systems, and alternative water supply programs are planned.	Possible	Major / Important	High 20	• Water storage and distribution program.
Provision of natural pastures	Livestock collision	Extensive livestock farming is a central activity for the puesteros families in the Project area, who depend on livestock—primarily llamas, sheep, and goats—for their food, economic, and cultural subsistence. The significant increase in vehicular traffic during the project's construction and operation poses a high risk of livestock collisions, especially in areas near access routes where natural habitats and grazing areas converge. This risk could directly affect families' food security, generate community tensions, and compromise traditional practices. Although control measures such as speed limits, driver training, and compensation systems are planned, the likelihood of such an event is real, and the consequences are considered significant given the strategic value of livestock in the area.	Occasional	Major / Important	High 15	• Cruise control. • Code of Conduct. • Compensation/Replacement Program.
Cultural: Sites of scientific interest	Alteration of the habitat of water bodies that harbor extremophile microorganisms	Some project activities, particularly the construction and operation of the SBDF, could generate indirect pressures on extremophile microbial ecosystems present in the water bodies. These ecosystems, of high scientific value, could be affected by effluent infiltration, lowering water levels, and the deposition of particulate matter, which would alter their chemical composition and functionality. Since studies are still underway and there is uncertainty about the hydraulic connectivity and resilience of these ecosystems, the risk is considered medium, with potentially serious consequences in terms of loss of unique biodiversity and scientific value.	Possible	Catastrophic	High 40	• Monitoring programs • Dust emission control • Change in the location of the spent brine pool

In the case of the Project, several families have been identified (in the case of Catua, 94 puestos were identified, distributed among 36 families, in Olacapato 38 puestos, with 12 families, and Pocitos 21 puestos, with 6 families) that use the territory for livestock activity, and that belong to the different communities that are grouped in the nearest towns Catua (Jujuy Province), Olacapato and Estación Salar de Pocitos in the Province of Salta.

Due to the environmental conditions of the surroundings, the type of livestock raised by the ranching families is mainly composed of goats, sheep and llamas.

Due to the Project, vehicular traffic will increase significantly in the project area, creating an imminent risk of livestock being run over. Therefore, the increased vehicular traffic could cause accidents, resulting in injury or death to livestock, thus posing a risk to the food security of livestock farming families.

Furthermore, habitat fragmentation can encourage livestock to cross roads more frequently, increasing the risk of road accidents and creating an additional risk of disputes with livestock-raising families living near project access routes if this risk is not properly managed.

According to the 2024 ESIA, during the 30-month construction phase, an estimated 4,439 trips (approximately 148 trips per month or 5 trips per day) will be made from Salta to the Project site to transport equipment, machinery, and supplies; this does not include personnel transportation, which will be by air-transport, except for local residents who will be transported by bus.

These Project-related trips will generate a significant increase in traffic on the roads, increasing the risk of livestock collisions for ranching families living near the Project's access routes.

Similarly, according to the 2024 ESIA, during the operation of the Project the number of trips from Salta to the project site will increase, reaching 5,711 trips per year, which represents about 15 trips per day, without considering the transportation of personnel (as above).

This increase will be generated by the transportation of sodium carbonate, chemicals, and fuel from Salta to the Project site, and lithium carbonate from the Project site to Salta.

In terms of likelihood, there is a real possibility that livestock could be run over during the Project’s construction and operation, either due to environmental conditions, lack of signage, driver carelessness, or the natural behaviour of livestock, especially in areas where natural habitats and grazing areas meet. In addition, livestock may be attracted to the roads by the presence of water or food.

The consequences of livestock collisions are considered major or significant due to the cultural and subsistence significance of livestock for ranching families, and the vulnerability of some families (elderly people and children, for example) who depend on livestock for food. However, risk categorization considers the establishment of controls and risk management measures that will reduce the likelihood and significance of the incident. These controls include, for example:

- Speed controls for all vehicles linked to the Project (own vehicles, contractors', and subcontractors' vehicles).
- Driver training in safety and community relations.
- The establishment of codes of conduct for drivers.
- Community complaint and grievance systems.
- Replacement or compensation programs in the event of a livestock collision.

In conclusion, the likelihood of occurrence is considered Occasional (3), while the associated consequence is classified as Major (5). This combination results in a risk level of High (Risk Matrix Value = 15).

Alteration of the Habitat of Water Bodies that Host Ecosystems of EMEs

The Project's activities could generate indirect pressures on areas identified as being of high scientific value within the Management Plan of Los Andes Wildlife Reserve (RNFSLA), particularly those where extremophile microbial ecosystems are found in Ojos de Agua.

RINCON is currently undertaking key studies to understand the dynamics, structure, and vulnerability of the EMEs. These studies, prompted by a discovery made in March 2024, aim to generate a robust baseline of ecosystem composition, metabolic interactions, and resilience to environmental disturbances, with a focus on how these microorganisms have developed unique adaptations to survive.

Three potential risks are considered relative to the RNFSLA zonation and criteria for Critical Habitat:

Infiltration of mixed liquids from the SBDF

The SBDF is designed to receive the liquid effluents generated during the DLE process, including spent brine (with a lower lithium concentration) and reverse osmosis reject water. The possibility of these liquids infiltrating the subsoil poses a risk of contamination to the water bodies, given their proximity. The infiltration of these effluents could alter the chemical composition of the water in the reservoirs, affecting critical factors such as salinity (and therefore conductivity), pH, nutrient availability, and the presence of metals/metalloids or chemical compounds that could be toxic or lethal (either by their mere presence or in relation to their concentration) to microbial communities. This alteration could lead to changes in the structure and function of the EMEs and their environment in general. Furthermore, the absence of any of these compounds could also cause alterations in the microbial community.

Decrease in the level of water sources due to the extraction process

The Project envisions a process based on the extraction of lithium-rich brine from the Salar at various depths, which could lead to a reduction in the current water level of the Ojos de Agua. Currently, the degree of hydraulic connection between the Ojos de Agua and underground lithium-rich brine reservoirs has not been precisely determined. This uncertainty represents a critical challenge for the management of these ecosystems and the study of mitigation measures.

Ingress of particulate matter

The progressive construction and development of the SBDF could generate a significant increase in the emission of suspended particulate matter (dust) due to vehicle traffic, soil removal, and the progressive elevation of this infrastructure. Given the proximity of the springs to the reservoir, this suspended material could be carried by the wind and deposited in the springs and surrounding areas. This phenomenon could potentially alter the transparency of the water, modifying light penetration and thus affecting the metabolic processes of photosynthetic microorganisms. Furthermore, dust depositing on the water surface and substrate could create a layer that limits oxygen availability, nutrient exchange, and radiation penetration.

At this time, the probability of occurrence is considered Possible (4), while the associated consequence is classified as Catastrophic (10). This combination results in a risk level of Extreme (Risk Matrix Value = 40). Further study will inform the RINCON’s understanding of the probability of occurrence and associated consequence.

5.3 Impacts to Puesteros and Local Communities

5.3.1 Previous Work

Previous assessment of impacts to puesteros and communities are presented in Chapter 4 of the 2024 ESIA, Section 4.A: Description of Environmental and Social Impacts.

5.3.2 Updated Impact Assessment for Puesteros and Local Communities

The development of the supplemental social baseline for the puesteros and indigenous communities within the Direct AoI enabled an evaluation of the social impacts and risks that the Project activities might generate on this population. The evaluation considered the guidelines established in IFC PS1, PS5, and PS7.

The evaluation focuses particularly on the risks and impacts that the Project might generate on the land rights and uses by puesteros and indigenous communities. This includes considering the situation of land ownership and use, water sources, and ecosystem services in the concession area, the temporary or

permanent change in their current usage patterns (e.g., in animal husbandry), and its consequences on the livelihoods of puestero families and indigenous communities.

The evaluation was conducted at the level of each potentially affected puesteros and urban shepherd family, and collectively at the level of the three indigenous communities within the Direct AoI. It considered the family groups that have permanent or seasonal puestos and/or corrals, their usage areas, grazing areas, and the natural resources and ecosystem services they use for their subsistence.

The evaluation considered the analysis of the probability of occurrence and the expected consequences of each identified impact or risk, allowing them to be prioritized based on their relevance and urgency for the Project's social management. The evaluation of the consequences of each impact also considered, in addition to the scale and possibility of remediation, the vulnerability of those affected.

In the evaluation, the cause, consequence, or undesired event, and the probability of occurrence of the known risks and impacts of the Project were qualitatively estimated, including both actual impacts and potential risks. Social risks and impacts were identified and evaluated for the activities planned during the construction and operation stages of the Project.

5.3.2.1. Identified Risks and Impacts for Specific Puesteros Families

Six specific risks and impacts were identified for puesteros families, and eight community-level impacts and risks affecting indigenous communities. These impacts are related to the reduction or alteration of key natural resources (e.g., grazing areas, water sources), social consequences of some project activities (e.g., increased traffic or migration), and broader social effects such as community cohesion, intangible cultural heritage, and perceptions of exposure to safety risks.

Risks

- Alteration of grazing dynamics (e.g., llamas moving to unusual areas and grazing) increases time and costs of animal management, affecting the livelihoods of a puestero from the Catua community.
- Increased vehicular traffic and related socio-environmental impacts (e.g., dust, noise, vibration) cause discomfort to puesteros and urban shepherds with homes or usage areas near internal roads or project access routes.
- Accidents involving livestock (e.g., llamas, sheep, goats, or others) of puesteros and urban shepherds located near internal roads or project access routes, resulting in economic displacement due to damage and/or loss of community members' assets.

Impacts

- Reduction of available grazing areas at La Playa puesto and Vallecito rural corral, resulting in economic displacement (puestero from Catua community).
- Reduction in quantity and alteration of quality of productive water sources (animal consumption) at Talismán puesto and potentially other puesteros, resulting in economic displacement.
- Reduction in quantity and alteration of quality of water sources used for animal husbandry by eight urban shepherd families in Vega de Catua, due to indirect impacts generated by a supplier's of aggregate for the Project’s concrete plant, resulting in economic displacement (short-term potential impact).

5.3.2.2. Identified Risks and Impacts on Indigenous Communities

Risks

- Risk on tangible cultural heritage (sacred places) and intangible cultural heritage (customs, traditions). Note: tangible and intangible cultural heritage has been mapped and there is a Cultural Heritage Management Plan (CHMP) which includes mitigation measures designed to prevent and manage potential impacts on cultural heritage and local sociocultural dynamics. Also, it includes a procedure for

action in case of chance findings, aimed at protecting tangible cultural assets in the event of unexpected discoveries during construction or operational activities.

- Increased risk to community health and safety.
- Increased cost of living due to the project, affecting the ability of vulnerable groups to acquire essential goods and services.
- Weakening of community social capital and risk of internal and inter-community tensions or conflicts related to perceived unequal distribution of benefits.
- Project-induced migration causes population growth and pressure on resources and services.
- Changes in social and economic context generate risks of gender-based violence.
- Changes in social and economic context create risks for children and vulnerable individuals.

Impacts

- Modification of land use patterns of indigenous communities in Catua, Olacapato, and Estación Salar de Pocitos, resulting in restrictions on access to land and water.

5.4 In-Progress Cumulative Impact Assessment

RINCON is currently developing a Cumulative Impact Assessment (CIA) in alignment with IFC's Good Practice Handbook --- Cumulative Impact Assessment and Management: Guidance for Private Sector in Emerging Markets (IFC, 2013), and specifically, IFC PS1.

CIA is the process of analysing: 1) the potential impacts and risks of the Project in the context of the potential effects of other human activities and natural environmental and social external drivers on the chosen VECs over time; and 2) proposing concrete measures to avoid, reduce, or mitigate such cumulative impacts and risk to the extent possible.

The methods for undertaking the CIA follow the Rapid Cumulative Impact Assessment (RCIA) approach, which is an iterative six-step process:

- Scoping (Steps 1 and 2).
- Valued Environmental Component (VEC) baseline determination (Step 3).
- Assessment of the contribution of the Project to the predicted cumulative impacts (Step 4).
- Evaluation of the significance of predicted cumulative impacts to the viability or sustainability of the affected VECs (Step 5).
- Design and implementation of mitigation measures to manage the development's contribution to the cumulative impacts and risks (Step 6).

The RCIA process is shown Figure 55.

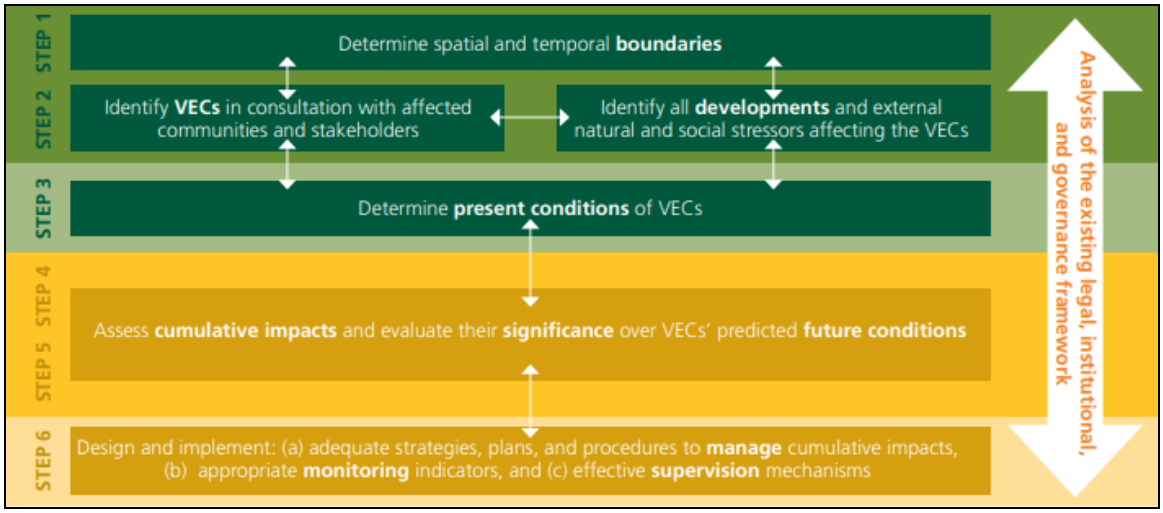


Figure 55: RCIA six-step approach

VECs are the environmental and social attributes that are considered to be important in assessing cumulative impacts. VECs may be directly or indirectly affected by a specific development, and they often are also affected by the cumulative effects of several developments.

The following sections present the current progress of the CIA, through Step 3, or the determination of present conditions of VECs. RINCON will continue to advance the CIA, through Step 6, and will disclose the final, stand-alone CIA on IFC's website in November 2025.

5.4.1 Step 1: Spatial and Temporal Boundaries

Each VEC has its own spatial scope. For example, VEC-5 "Road Infrastructure" may be impacted across a wider area. In contrast, VEC-1 "Water Resources" will only be affected within the Salar del Rincon Basin. The spatial boundaries for the CIA are as follows:

- VEC-1 to VEC-2: The Direct and Indirect Environmental AoI, i.e., Salar de Rincon Basin.
- VEC-3 to VEC-8: The Direct and Indirect Social AoI, i.e., including Catua, Estación Salar de Pocitos, Olacapato, and San Antonio de los Cobres. Note: other communities will be identified along the transport corridors, but data will not be sourced for VECs other than impacts to transportation infrastructure.

The temporal boundary for the CIA is 3 years.

5.4.2 Step 2: Identify VECs and Developments/External Stressors

Identification of VECs for this study commenced with a long list of environmental and social attributes relevant to the Project, including geology, geomorphology, seismicity, climate, groundwater and surface water quality and quantity, air quality and noise, flora and fauna (for example, protected areas and critical habitats), affected people and natural resource–dependent livelihoods, cultural and ethnic archaeology and heritage, etc.

5.4.2.1. VECs

The VECs presented in Table 39 were selected based on scientific research and professional judgment to estimate the appropriate scope of VECs and to analyse the limits of acceptable change. This selection will be validated/updated by stakeholder feedback planned for September-October 2025.

5.4.2.2. Other Developments

For VEC-1 and VEC-2, Puna Mining will be the only other project considered within the Salar del Rincon Basin as it is in the exploitation phase.

For VEC-3 through VEC-8, other regional projects contributing to pressures on demographic and socioeconomic structure, services, and traditional productive activities will be considered.

5.4.2.3. External Stressors

External drivers are those environmental and social factors that may have an impact on a VEC, including environmental processes such as landslides, earthquake, or climate change, and social elements such as regional economic growth and development or tourism. The assessment will be limited to consideration of the external drivers that can reasonably be expected:

- Infrastructure development and links to induced changes to demographics and demand on services.
- Infrastructure development and links to induced changes to regional economic growth.
- Climate change and natural hazards.

5.4.3 Step 3: Determine Present Conditions of VECs

5.4.3.1. VEC-1: Water Resources

There are various components of the water resources of the Salar del Rincon Basin which could potentially be impacted by the Project activities. For further analysis, the following water resources variables within the Project's Direct AoI were selected:

- Groundwater resources, the existence of shared hydrogeological units throughout the Salar del Rincon Basin.
- Surface water resources, including springs, vegas, lagoons and rivers (Huaytiquina, Pompón, and Catua Rivers).
- Lithium brine reserves.

The following key potential impacts to the water resources of the Salar del Rincon Basin have been identified:

- Impact to groundwater and/or surface water flows, levels, and/or quality due to raw water abstraction.
- Impact to groundwater and/or surface water flows, levels and/or quality due to lithium brine abstraction.
- Impact to groundwater and/or surface water flows, levels and/or quality due to SBDF infiltration.
- Impact to groundwater and/or surface water quality due to inappropriate surface water management and/or potential release of potential water contaminants stored/used on-site.

Details of updated baseline for the brine and water resources of the Salar del Rincon Basin, including details of all previously completed, ongoing, and proposed future water related studies, as well as the current conceptual hydrogeological and eco-hydrogeological models are presented in Section 3.2 of this report. While the predicted impact that the Project activities will have on the groundwater and brine levels and flow directions across the Salar del Rincon Basin are presented in Section 5.2.1 of this report. In addition, further details of all these aspects (including the water related studies, conceptual models and numerical modelling) are presented in the Assessment of Brine & Water Resources document (Rio Tinto, September 2025).

The predicted changes in water and brine levels and flow characteristics across of the Salar del Rincon Basin has the potential to impact the water resources in a number of different ways, which is related to the specific baseline aspect of VEC-1 and the hydraulic mechanisms existing at each particular aspect. The present baseline conditions that are pertinent to addressing the potential impact that the Project may have on VEC-1 is detailed below for each of the principal water resource categories.

Table 39. Valued Environmental Components

VEC	Definition	Potential Impacts Identified
VEC-1: Water Resources	• Groundwater resources, the existence of shared hydrogeological units throughout the Salar del Rincon Basin. • Surface water resources, including springs, vegas, lagoons and rivers (Huaytiquina, Catua and Pompón Rivers). • Brine reserves.	• Impact to groundwater and/or surface water flows, levels and/or quality due to raw water abstraction. • Impact to groundwater and/or surface water flows, levels and/or quality due to lithium brine abstraction. • Impact to groundwater and/or surface water flows, levels and/or quality due to SBDF infiltration. • Impact to groundwater and/or surface water quality due to inappropriate surface water management and/or potential release of potential water contaminants stored/used on-site.
VEC-2: Terrestrial Biodiversity and Ecosystems	• Designated protected areas and conservation sites. • Endangered and Critical Habitat-triggering species.	• Impacts to protected areas and conservation sites. • Loss of Critical Habitat-triggering species, *Liolaemus* spp.
VEC-3: Demographic Structure	• A group of people who inhabit the same geographical area. • Variables include sex, age, ethnicity, spatial distribution, and changes in migratory patterns, population growth rate, migratory movements (immigration / emigration), urban and rural configuration, as well as specific indicators such as the Economically Active Population (EAP) and the masculinity rate.	• Migration of foreign population. • Return of local population.
VEC-4: Socioeconomic Structure	• Economic, sociological, and labour variables that make up the organization and distribution of wealth, resources, and opportunities within a population. • Variables include formal employment levels, household income, purchasing power, and living costs.	• Generation of direct and indirect employment. • Revitalization of the local economy. • Generation of taxes and royalties.
VEC-5: Road Infrastructure	• Public infrastructure to accommodate the safe, efficient and comfortable transit of people and goods between different parts of a territory. • Variables include state routes, rural roads, and strategic corridors, as well as changes in the patterns of use of the road network, the increase in traffic flows and travel times in urban, peri-urban and rural areas.	• Impact and pressure on existing road infrastructure. • Inconvenience from vehicular traffic.
VEC-6: Educational Services	• Factors associated with the availability, accessibility, quality and responsiveness of the formal and informal education system in a given territory. • Variables include the existing educational infrastructure, the offer of educational levels, coverage of enrolment, educational quality, school dropout, equity in access to training opportunities, and the strengthening of community capacities.	• Acquisition of skills and abilities by the local population. • Additional pressure on educational infrastructure.
VEC-7: Provision of Health Services	• Biological, environmental, social and cultural factors that determine the physical and mental state of the population in a given territory. • Variables include the coverage, accessibility, and quality of health services.	• Additional pressure on health services.
VEC-8: Traditional Productive Activities	• Economic activities based on knowledge, practices and techniques transmitted from generation to generation, deeply rooted in the culture, identity and ways of life of local and native communities. • Variables include work such as extensive livestock, the production of natural fibres, handicrafts, the collection and extraction of resources such as salt, among others.	• Modification of land use, affectation of traditional ways of life and use of ecosystem services, i.e., changing of culture. • Movement from traditional livelihoods to mining.

Groundwater Resources
The Salar del Rincon Basin functions as a closed hydrological system, with groundwater recharge approximately balanced by evaporation losses and no surface outflows. Under these conditions, the water resources of the basin are highly sensitive to both climatic variability and anthropogenic interaction.

The hydrogeological units across the basin all interact and there is a hydraulic link between the various different categories of water resources across the Basin. As such, modification to one specific hydrogeological unit has the potential to correspondingly impact other hydrogeological units within the Basin and impacting the water cycle equilibrium and the water balance of the entire Basin.

The groundwater resources across the Salar del Rincon Basin are variable in nature and have very different water quality.

Groundwater which the Salar nucleus is generally:

- Highly saline (a brine).
- Highly mineralized.
- Exists very close to ground level.
- Occurs within a series of high permeability aquifers (e.g., fractured halite and black sands) interbedded with various low permeability aquitards (e.g., clays).

The lithium resources which are the target of the Project are associated with these Salar brines (this is discussed later in this section under the Lithium Brine Reserves subheading).

Around the margins of the Basin, the water is generally:

- Lower in salinity (fresh to brackish water), particularly in the upper part of the groundwater body.
- Less mineralized.
- Often at a considerable depth below ground level.
- Occurs within high permeability zones (e.g., alluvial/colluvial sand and gravel horizons and fractured zones within the bedrock) and various low permeability aquitards (e.g., clays and basement rocks).

The fresh groundwater resources within the Basin are especially valuable due to the region’s arid climate and limited water availability. These resources primarily originate from the infiltration of precipitation, surface runoff, stream flows, and lateral inflows from adjacent, higher-elevation rock formations within the Basin catchment. The most significant fresh groundwater reserves are found in the alluvial and colluvial sediments surrounding the margins of the Salar nucleus.

The Catua Alluvial Fan, located north of the Salar nucleus, serves as the primary source of raw (industrial) water for the Project. Extensive hydrogeological investigations—including drilling, well installation, and hydraulic testing—have been conducted across the Fan. Water abstraction has been ongoing for approximately 15 years, primarily from Production Well W2.

The Catua Alluvial Fan consists of interbedded clays, silts, sands, and gravels, with the sand and gravel layers generally exhibiting high porosity and favourable hydraulic conductivity. Groundwater within the Catua Alluvial Fan typically flows southward toward the Salar nucleus. Hydrogeological investigations have identified a distinct lens of lower salinity (and lower density) water overlying higher salinity (higher density) brines. Within the proposed raw water wellfield area, this freshwater lens reaches thicknesses of up to approximately 35m.

Across the proposed raw water wellfield area, the depth to groundwater generally ranges from approximately 50 to over 150 meters below ground level (mbgl). These freshwater resources are currently not utilised by any other parties within the Basin, with the exception of RINCON as part of the R3000 pilot operation. Due to

the considerable depth of the water table, surface vegetation is not dependent on or connected to this deep freshwater source.

The alluvial and colluvial sediments along the western margin of the Basin are also considered important sources of fresh groundwater. These deposits are located primarily outside the Project property boundary, and as a result, hydrogeological investigations in this area have been limited.

Fresh groundwater resources are likely present in the upper portion of the aquifer system as a lens of lower salinity water. While the exact thickness of this lens and the depth to groundwater remain uncertain, available data suggest that water table depth decreases eastward, with groundwater generally flowing in that direction toward the Salar nucleus. These fresh groundwater resources are likely hydraulically connected to surface water features—such as vegas and lagoons—located along the western margin of the Salar nucleus. This connection likely plays a critical role in sustaining these surface water systems, influencing both their water quantity and quality.

Several mining exploration projects have conducted drilling and well testing within areas hosting alluvial and colluvial fresh groundwater resources. Although there is no evidence of significant groundwater abstraction from these third-party exploration properties, there remains potential for impacts to the natural baseline groundwater environment. This risk is particularly relevant if vertical hydraulic pathways were inadvertently created during drilling and boreholes were not properly decommissioned, potentially altering natural flow regimes or facilitating mixing between water-bearing zones.

Several isolated puesteros wells (aljibes) are located around the margins of the Salar nucleus, typically associated with shallow alluvial deposits in the upper reaches of the Rincon Basin River catchments. These hand-dug wells tap into shallow fresh groundwater found in the upper portion of the aquifer system. Ongoing monitoring of these wells is underway, with a baseline water quality dataset being established. In parallel, active consultation with the puesteros is being conducted to better understand current water use practices and ensure alignment with groundwater management objectives.

Historically, Puna Mining operated in the southeastern corner of the Salar nucleus; however, RINCON understands that these operations are currently suspended. During its active period, Puna Mining abstracted both lithium-rich brine (discussed later in this section) and raw water (fresh to brackish) from the surrounding Basin. The raw water supply was sourced from alluvial and colluvial sediments located near the operational site. The historical abstraction of raw water by Puna Mining has likely already influenced baseline groundwater conditions in the southeastern part of the Salar. If operations were to resume, additional impacts on the groundwater system would be expected. Both the Project and any future activities by Puna Mining have the potential to contribute to cumulative effects on groundwater resources in this portion of the Basin, underscoring the need for coordinated management and monitoring.

Recharge within the Salar del Rincon Basin is relatively low, resulting in infrequent replenishment of fresh groundwater resources. Isotope analyses and water chemistry assessments have been instrumental in advancing hydrogeological understanding by providing insights into the origin, age, flow paths, and travel times of groundwater across the Basin. While scientific evidence confirms the occurrence of recent recharge, the region’s low precipitation and high evaporation rates suggest that only limited volumes of “new” fresh water are entering the groundwater system.

Surface Water Resources

Rivers

The Salar del Rincon Basin is drained by eight distinct sub-catchments, with three principal rivers—the Huaytiquina, Pompón, and Catua—originating in the upper reaches of the Basin and ultimately converging at the Catua Alluvial Fan in the north. In their upper courses, these rivers flow through discrete alluvial channels bordered by low-permeability bedrock. Upon reaching the highly permeable sediments of the Catua Fan, river flows typically infiltrate rapidly into the subsurface. Although discrete drainage channels associated with each river extend across the Fan, it is rare for surface flows to reach beyond its northern edge.
River discharge is generally highest immediately following significant rainfall events and declines rapidly thereafter. During the dry season, baseflow from groundwater and residual snowmelt sustains flow in the upper reaches of these rivers. In contrast, the wet season can occasionally result in localized flooding around the margins of the Salar nucleus.

Vegas and Lagoons

A variety of springs, lagoons, and vegas (wetlands/meadows) are present throughout the Rincon Basin, each playing a vital role in the hydrology and ecology of the region.

Mountain Springs and Upper Basin Vegas

In the eastern mountains, several perched springs and associated vegas—such as Peña Guayaos, Vega Faldeo Cienago, and Vega Amarilla—are located in upper mountain valleys. These water bodies are hydrologically isolated from the regional groundwater system and are sustained by localized recharge.

Western Margin Vegas

Along the western margin of the Salar nucleus, where colluvial and alluvial sediments transition into Salar sediments, key vegas include Vega Rincon, Vega Unquillar, and Vega Saladillo.

- Vega Rincon is fed by a perennial spring emerging from the western slopes. This spring supplies a perennial stream that flows toward the Salar nucleus, forming an intermittent lake (Laguna Nega) on the Salar sediments. A vegetated corridor follows the stream channel, and an additional broad band of vegetation exists at the sediment margin, likely sustained by shallow fresh groundwater rather than the spring itself.

- Vega Unquillar and Vega Saladillo also feature spring seepages near the edge of the Salar nucleus. However, these springs appear to have limited influence on surrounding vegetation. Similar to Vega Rincon, extensive vegetation bands at the sediment margin are likely supported by shallow groundwater flows.

Rincon Lagoon System

The Rincon Lagoon is a perennial surface water feature located along the western margin of the Salar nucleus. It comprises three distinct lagoon bodies:

- An inner lake (main Rincon Lagoon).

- An outer lake receiving overflow from the inner lake.

- A diffuse third lake extending further into the Salar nucleus.

The lagoon system receives inflows from several tributaries and likely benefits from shallow fresh groundwater contributions. Monitoring data indicate increasing salinity from the tributaries to the inner and outer lakes, attributed to progressive evaporation. Water levels and quality in the lagoon system show significant seasonal variability.

Hydrogeological Investigations

Targeted field investigations have been conducted around these vegas and lagoons. Numerous shallow boreholes and monitoring wells have been installed, revealing the presence of shallow clay layers adjacent to surface water features. Water level and quality data from these wells show marked differences above and below the clay layers, suggesting potential hydraulic isolation between shallow surface water systems and deeper brine-bearing sediments.

Monitoring and Ecological Importance

Extensive baseline monitoring of water levels, flows, and quality is ongoing across all key surface water features. This dataset is enhancing understanding of seasonal dynamics and the hydraulic mechanisms governing these environments.

All vegas, springs, and lagoons are sustained by shallow fresh groundwater inflows. Consequently, any changes to these inflows could significantly affect the water levels, flow regimes, and water quality of these ecologically sensitive features.

These environments are of high ecological value, supporting unique microbial communities, specialized vegetation, and fauna. They are critical components of both the natural ecosystem and the cultural landscape of the Salar del Rincon Basin.

Ojos de Agua

Two Ojos de Agua (water eyes) are located within the carbonate platform interzone on the northwestern margin of the Salar nucleus, adjacent to the western edge of the proposed SBDF Cell B. These features are vertical shafts where brine reaches the surface through openings in the carbonate sequence, forming exposed brine pools at ground level.

Bathymetric surveys have characterized the two Ojos de Agua:

- Ojo de Agua A: Approximately 35m in diameter and 25m deep.
- Ojo de Agua B: Approximately 15m in diameter and 15m deep.

Ecological Significance

The upper zones of these brine shafts host extremophile bacteria, which thrive in high-salinity conditions and are exposed to direct sunlight. The presence of these unique microbial communities designates the Ojos de Agua as critical biodiversity features within the Basin.

Monitoring and Research

Intensive water and biodiversity monitoring, field investigations, and pilot laboratory studies are ongoing to better understand the origin, seasonal variability, and resilience of the Ojos de Agua to potential changes resulting from the Project operation.

Monitoring data collected across four seasons reveal:

- Significant vertical variation in physical and chemical parameters within the brine column.
- Seasonal fluctuations in water quality and brine characteristics, indicating that these features naturally undergo dynamic changes in response to environmental conditions.

Hydrogeological Insights

These findings suggest that the brine within the Ojos de Agua is subject to both depth-dependent stratification and seasonal variability, which must be considered in any impact assessment. Ongoing resilience testing is essential to evaluate potential project-related effects and to develop appropriate protection strategies.

Lithium Brine Reserves

Hydrogeological System and Lithium Brine Resources

The hydrogeological units across the Rincon Basin are hydraulically interconnected, with both groundwater and surface water generally flowing from the outer catchment areas toward the Salar nucleus. As groundwater moves radially inward, it becomes progressively more saline and mineralised, culminating in highly saline brine near the Salar nucleus. This salinity increase is further intensified by evaporation, particularly near the terminal discharge zone where the water table lies close to the surface—often within 1 meter of ground level.

Brine Characteristics and Flow Dynamics

The brine within the Salar nucleus is highly saline and mineral-rich, preferentially flowing through high-permeability zones such as fractured halite and black sands. These permeable layers are interbedded with lower-permeability materials like clays, which can partially or fully isolate hydraulic connectivity between different sedimentary units. This stratification plays a critical role in controlling brine movement and resource accessibility.

Field Investigations and Modelling

Extensive geophysical surveys, borehole drilling, hydraulic testing, well installations, and water quality sampling have been conducted across the Salar nucleus, where lithium-rich brines are concentrated. These investigations have enabled the development of detailed geological and hydrogeological models, with particularly high resolution in the Salar nucleus due to the abundance of field data. A robust baseline understanding now exists regarding:

- Hydraulic properties of individual units,
- Interactions between hydro stratigraphic layers,
- Piezometric conditions (brine levels),
- Brine chemistry, including lithium concentrations.

Additionally, comprehensive pumping tests have provided valuable insights into how the brine system responds to extraction, informing sustainable resource management strategies.

Lithium Resource Targeting

The lithium targeted for extraction by the Rincon Project is hosted within the Salar brines. The primary focus is on zones where high lithium concentrations coincide with high permeability, allowing for efficient recovery from relatively productive wells. Lithium reserves have been estimated using available field data, conceptual hydrogeological models, and numerical groundwater simulations, incorporating both concentration profiles and sustainable pumping rates.

Hydraulic Connectivity and Potential Impacts

The lithium-rich brines are hydraulically linked—at least to some degree—to surrounding water resources in adjacent sediments and rock formations. Inflows from these external units contribute to the Salar nucleus, meaning that changes in brine levels could influence not only the brine system itself but also peripheral groundwater and surface water resources. Understanding the degree of hydraulic connectivity or isolation is essential for assessing the broader impacts of brine extraction.

Cumulative Impact Considerations

Historically, lithium brine extraction occurred in the southeastern corner of the Salar nucleus by Puna Mining, although operations are currently understood to be suspended. These past activities have likely altered baseline conditions in that area. If operations resume, additional impacts may occur. The combined activities of the Project and Puna Mining (if reactivated) have the potential to exert cumulative pressure on the brine resources in this part of the Basin, necessitating coordinated management and monitoring.

5.4.3.2. VEC-2: Terrestrial Biodiversity and Ecosystems

Changes to terrestrial biodiversity and ecosystems have been identified as potential impacts. For further analysis, the following variables were selected to describe the Project's Direct AoI:

- Protected areas and conservation sites.
- *Liolaemus* spp., a Critical Habitat-triggering species.

Protected Areas and Conservation Sites

As mentioned in Section 3.3.1, the Project area is located within the Sustainable Use Zone - Special Management Zone - Salt Flats Sector of the "*Reserva Provincial de Fauna Los Andes*", as shown in Figure 15. The reserve is one of Argentina's largest and most ecologically significant protected areas, and it covers over half of the Los Andes department within the Salta Province. As shown in Table 14, it represents biotic and abiotic conservation values which are relevant and have special value, particularly for local communities.

One of the main reasons that the RFSNLA was established was to protect the region's threatened fauna. It also includes:

- "*Zona de Reserva de la Vicuña*." The vicuña population throughout the region was rapidly declining until the reserve was established. The Zona de Reserva de la Vicuña in Argentina is a conservation initiative that encompasses several protected areas in the northwest of the country, especially in the Provinces of Jujuy, Salta, Catamarca, La Rioja and San Juan, where the vicuña (*Vicugna vicugna*) lives, a wild camelid emblematic of the Andean region.

  Key vegetation types include:

- Pajonal: Grass-dominated areas with species like *Festuca orthophylla* and *Stipa* spp., preferred by vicuñas for foraging[30].

- Esporal: Mixed grass and shrub communities with moderate plant cover.

- Vegas: Wet meadows with permanent or semi-permanent water sources, supporting lush vegetation and biodiversity.

- Shrub Steppe: Dominated by drought-resistant shrubs and sparse grasses.

- Salar: Salt flats with minimal vegetation, often surrounding hypersaline lagoons.

These habitats are heterogeneous, and vicuñas show selective use depending on food availability and predator risk. Family groups tend to spend more time in areas with high plant cover, while solitary individuals are more exposed and vigilant.

- "*Reserva Provincial Altoandina de la Chinchilla*." As the name suggests, the Reserva Provincial Altoandina de la Chinchilla is vital for the survival of the chinchilla. In particular, the reserve is home to the short-tailed chinchilla (*Chinchilla chinchilla*), which is an endangered species. Besides chinchillas, the reserve is also home to the vicuña (*Vicugna vicugna*), Andean cat (*Leopardus jacobita*), and the Andean rhea (*Rhea pennata*), and is one of the most ecologically significant reserves in the Argentine Puna region.

- "*Sistema de Lagunas de Vilama-Pululos*." The Sistema de Lagunas de Vilama-Pululos is a remarkable high-Andean wetland complex, located primarily within the Province of Jujuy. It is recognised internationally for its ecological importance and biodiversity. It features 12 major lagoons, including:

  - Vilama (~4,600ha, shallow and hypersaline).

  - Palar (~2,250ha, hypersaline).

  - Pululos (~1,000ha, freshwater).

  - Others: Arenal, Colpayoc, Isla Grande, Catal, Guindas, Honda, Blanca, Caití, and Cerro Negro.

  These lagoons are fed by spring water and snowmelt, which accumulate salts as they descend. They do not drain into the sea but instead evaporate or filter into the ground. The lagoons vary widely in characteristics: 1) Salinity: From saline to hypersaline; 2) Depth: From shallow to deep; and 3) Hydrology: Some lakes are permanent, others seasonal or associated with salt flats.

  The Vilama-Pululos system is classified as a Key Biodiversity Area (KBA), Ramsar Wetland of International Importance, and Important Bird Area (IBA) due to its rich and unique wildlife:

  - Birds:

    - Andean flamingo (*Phoenicoparrus andinus*).
    - James's flamingo (*Phoenicoparrus jamesi*).
    - Horned coot (*Fulica cornuta*).
    - Numerous Central and South America migratory species.

[30] Yanina Arzamendia, Marcelo H. Cassini and Bibiana L. Vilá. Oryx Vol 40 No 2 April 2006, Habitat use by vicuña Vicugna vicugna in Laguna Pozuelos Reserve, Jujuy, Argentina.

  - Mammals:
    - Vicuña (*Vicugna vicugna*).
    - Suri or Lesser Rhea (*Pterocnemia pennata garleppi*).

  These species rely on the lakes and surrounding vegas for feeding, nesting, and migration stopovers. Dominant vegetation includes Shrub Steppe and high-Andean grazing pastures. The vegas support traditional transhumant grazing by local communities, using domesticated camelids and sheep. Recognised under Ramsar criteria for its ecological representativeness and role in regional hydrology and biodiversity, it is part of the Tropical Andes Hotspot, one of the most biologically rich and threatened regions on Earth.

- "*Reserva Provincial de Fauna y Flora Olaroz – Cauchari.*" The Reserva Provincial de Fauna y Flora Olaroz – Cauchari spans approximately 180,000ha and plays a vital role in conserving the unique biodiversity of the Puna ecosystem. The area is characterised by broad Andean plateaus, salars, and volcanic formations. Vegetation is dominated by Puna steppe vegetation, including:
  - Shrubs and grasses adapted to arid, high-altitude conditions.
  - Wet meadows (vegas) near springs and snowmelt-fed lagoons.

  The reserve was created to protect several high-Andean species, including:
  - Vicuña (*Vicugna vicugna*).
  - Short-tailed chinchilla (*Chinchilla chinchilla*).

  These species are emblematic of the Puna and have faced threats from habitat loss and poaching. The reserve also supports genetic diversity preservation and is considered an IBA due to its avian richness. Notable species include:
  - Andean flamingo (*Phoenicoparrus andinus*).
  - Chilean flamingo (*Phoenicopterus chilensis*).
  - Andean rhea (*Rhea pennata*).
  - Other migratory and endemic high-Andean birds.

Consideration of Cumulative Impact Potential on Protected Areas and Conservation Sites
Habitat Fragmentation and Pressure on Conservation Zones

The Project, and other mining exploration projects, are located within the Sustainable Use Zone – Special Management Zone – Salt Flats Sector of the *Reserva Provincial de Fauna Los Andes*, a vast and ecologically critical reserve. With multiple mining projects operating or exploring in proximity, cumulative impacts may include:

- Encroachment into sensitive habitats, especially vegas, pajonales, and shrub steppes.
- Disruption of ecological corridors used by species such as *Vicugna vicugna* (vicuña), *Chinchilla chinchilla*, and *Leopardus jacobita* (Andean cat).
- Increased edge effects, leading to changes in vegetation structure, microclimate, and predator-prey dynamics.

Hydrological Alteration Affecting Wetlands and Lagoons

Mining activities—particularly groundwater abstraction and brine extraction—can alter hydrological regimes that sustain high-Andean wetlands and lagoons, including:

- Sistema de Lagunas de Vilama-Pululos, a Ramsar site and Key Biodiversity Area (KBA), which relies on spring-fed and snowmelt-driven hydrology.

- Vegas and meadows that support transhumant grazing and biodiversity.

- Cumulative drawdown of groundwater or changes in recharge patterns could reduce water availability, alter salinity gradients, and degrade wetland function, impacting species like flamingos, Horned coots, and Lesser rheas.

Biodiversity Stress and Species Vulnerability

The region supports several endangered and endemic species, many of which are sensitive to disturbance and habitat change:

- Short-tailed chinchilla (*Chinchilla chinchilla*): Highly vulnerable to habitat loss and fragmentation.

- Andean flamingo (*Phoenicoparrus andinus*) and James's flamingo (*Phoenicoparrus jamesi*): Dependent on stable lagoon ecosystems.

- *Liolaemus* spp.: Trigger Critical Habitat designation and are sensitive to microhabitat changes.

Cumulative impacts from multiple projects may exceed thresholds of ecological resilience, leading to population declines or local extirpation.

Cultural and Community Impacts

Many protected areas support traditional land uses, such as:

- Transhumant grazing by local communities using camelids and sheep.

- Cultural stewardship of vegas and wetlands.

Mining-related changes to water availability, vegetation, and access may disrupt these practices, leading to socio-ecological tensions and loss of cultural heritage.

Conservation Integrity and Management Challenges

The presence of multiple mining operations within or adjacent to protected areas complicates:

- Enforcement of conservation objectives (e.g., in the Zona de Reserva de la Vicuña or Altoandina de la Chinchilla).

- Monitoring and mitigation coordination across jurisdictions and operators.

- Maintaining ecological representativeness in the Tropical Andes Hotspot, one of the most biologically rich and threatened regions globally.

Liolaemus spp., a Critical Habitat-triggering species

Between November 2024 and March 2025, Dr. Abdala, Dr. Paz, and ERM conducted field surveys to identify *Liolaemus* lizard species in the Salar del Rincon Basin and surrounding areas. Five known *Liolaemus* species occur within the Salar del Rincon Basin:

- *Liolaemus* sp. AC is an endemic and restricted-range lizard that may be a new species. It was recorded in the Salar de Rincon Basin and EAAA during field studies conducted by experts Dr. Cristian Abdala and Dr. Marcos Paz in November 2024 and February-March 2025. *Liolaemus* sp. AC reaches Critical Habitat Criterion 2 thresholds. *Liolaemus* sp. AC, may possibly be two distinct species: *Liolaemus* sp. A and sp. C (see bullets below). It is possible that this species could be divided into two subspecies or species:

- *Liolaemus* sp. A is an endemic and restricted-range lizard and a new species for science. This species (if confirmed as being taxonomically distinct) meets Critical Habitat Criterion 2 thresholds.

- *Liolaemus* sp. C is an endemic and restricted-range lizard, new species for science If confirmed as a being taxonomically distinct, it meets Critical Habitat Criterion 2 thresholds.

- *Liolaemus multicolour* is an endemic and restricted-range lizard. Recorded in the EAAA in November 2024 and February-March 2025. This species meets Critical Habitat Criterion 2 thresholds.

- *Liolaemus porosus* is an endemic and restricted-range lizard. Recorded in the EAAA during November 2024 and February-March 2025. This species meets Critical Habitat Criterion 2 thresholds.

- *Liolaemus scrocchi* is an endemic and restricted-range lizard. Recorded in the EAAA during November 2024 and February-March 2025. This species meets Critical Habitat Criterion 2 thresholds.

One previously recorded species, *Liolaemus cazianiae*, occurs outside the Salar del Rincon Basin. Due to taxonomic uncertainty surrounding *Liolaemus cazianiae* and four affiliated varieties, tissue samples were collected during the second biodiversity survey for molecular genetic analysis. The resulting consensus hypothesis—integrating both molecular and morphological data—suggests that the four *Liolaemus* aff. varieties may represent two to three distinct, previously undescribed species. Of these, one or two are likely to occur within the Salar del Rincon Basin, while another appears to be restricted to areas outside the Basin. This finding is yet to be confirmed.

The Project facilities will directly impact a range of habitat types known to support *Liolaemus* spp., totalling approximately 3,293.4ha. The affected habitats include:

- Peladar: 325.5ha.

- Shrub Steppe: 55.8ha.

- Halophytic Transition Vegetation (referred to in the Dynamik report as “Saline Vega”): 6.9ha.

- Salt Crust Interior: 2,892.2ha.

- Salt Crust Edge: 0.7ha.

- Tolar: 7.2ha.

- Hydric Grassland: 5.1ha.

Among these, *Liolaemus* spp. have been recorded in multiple habitat types, indicating potential biodiversity sensitivity.

Cumulative Impact Considerations

The Project footprint and its broader Areas of Direct and Indirect Influence (ADI and AII) intersect with the known or potential ranges of several *Liolaemus* species. These overlaps suggest that multiple species—some of which may be taxonomically distinct and undescribed—could be affected by direct habitat disturbance, edge effects, and indirect environmental changes.

Conservation Status and Data Gaps

Several *Liolaemus* species have been identified within and around the Project area, including:

- Recognized species: *Liolaemus multicolour*, *L. porosus*, and *L. scrocchii*—though their conservation status may vary or be under review.

- Undescribed taxa: *Liolaemus* sp. AC, sp. A, and sp. C—not yet formally assessed under the IUCN Red List or Argentine conservation frameworks.

- The presence of these undescribed species in a high-altitude, ecologically sensitive environment suggests they may have restricted distributions, specialized habitat requirements, and low resilience to disturbance. This data deficiency significantly increases the risk of unintended impacts, as their population sizes, ecological roles, and adaptive capacities remain poorly understood.

Cumulative Pressures from Regional Mining Activities

With multiple mining exploration and development projects occurring across the region, *Liolaemus* species face a range of cumulative pressures, including:

- Habitat loss and degradation from land clearing, infrastructure development, and quarrying.
- Habitat fragmentation caused by linear infrastructure (e.g., roads, pipelines), which disrupts landscape connectivity and isolates populations.
- Microhabitat alteration due to dust deposition, soil compaction, and vegetation removal, which can affect thermoregulation and shelter availability.
- Thermal and hydrological changes that modify the microclimates these reptiles depend on.
- Barriers to dispersal, reducing gene flow and increasing the risk of local extirpation.
- These pressures are particularly concerning for *Liolaemus* lizards, which are highly localized, thermally sensitive, and ecologically specialized.

Species Ecology and Project-Specific Risks

Liolaemus lizards exhibit low mobility and strong site fidelity (Abdala & Paz, 2025), meaning individuals typically remain within small home ranges and are unlikely to recolonize disturbed areas. As such, the most significant direct impact from the Project is the loss and alteration of natural ground cover due to land-clearing activities in habitats known to support these species.

In addition, habitat fragmentation from roads and pipelines may further isolate populations. As noted by Bennett (2004), fragmentation impedes movement and gene flow, increasing vulnerability to predation, inbreeding, and vehicle collisions during attempted crossings.

5.4.3.3. VEC-3: Demographic Structure

The migration of the foreign population and the return of the local population have been identified as potential impacts. For further analysis, the following variables were selected to describe the Project's Direct and Indirect AoI:

- Total population.
- Distribution by sex and age.
- Ethnic self-identification.
- Spatial distribution.
- Population growth.
- Migration processes.
- Masculinity index.

The VEC analysis is based on the areas of Project’s Direct and Indirect AoI, the distribution of which is presented in Table 40.

Table 40. Project AoI

Province	Department	Localities
Salta Province	The Andes	Olacapato
		Estación Salar de Pocitos
		San Antonio de Los Cobres
Jujuy Province	Susques	Catua Municipal Commission

Total Population
According to the 2022 National Population, Household, and Housing Census, the population in private homes in the towns within the Project's Direct and Indirect AoIs show significant differences in size. In the Province of Salta, the town of Olacapato has 199 inhabitants, while Estación Salar de Pocitos has a population of just 54. In the Province of Jujuy, within the Susques department, Catua has a more significant population, with 507 people. Meanwhile, San Antonio de los Cobres, which forms the Indirect AoI, has 6,306 inhabitants, consolidating its position as the most populated urban centre in the area. The population by locality is presented in Table 41.

Table 41. Population by locality (2022)

Locality	Total
Direct AoI	
Olacapato	199
Estación Salar de Pocitos	54
Catua	507
Indirect AoI	
San Antonio de los Cobres	6,306

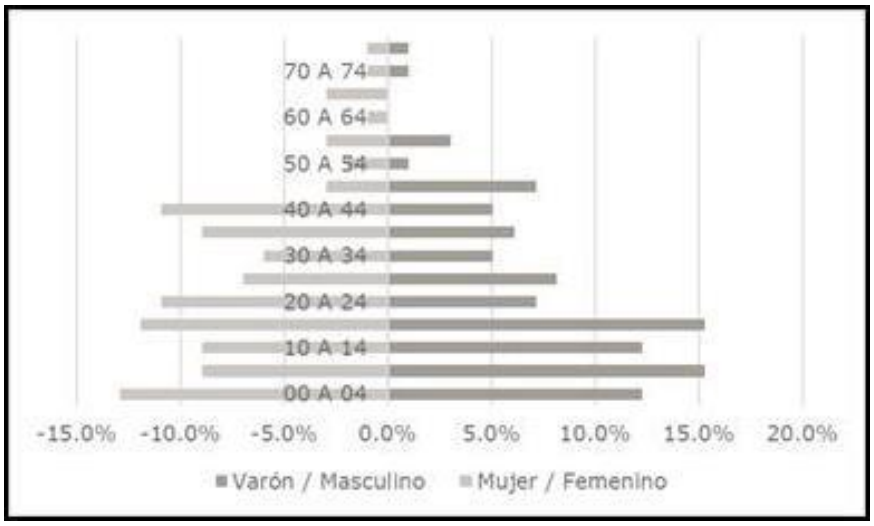
Source: Prepared by the authors based on the 2022 National Population, Household and Housing Census

This distribution shows a marked contrast between densely populated centres and small settlements, allowing us to anticipate potential differential effects from the arrival of foreign populations or the return of local residents, especially in smaller towns.

Distribution by Sex and Age
The sex and age distribution in the localities within the Project’s Direct and Indirect AoI allows us to understand current demographic dynamics and anticipate relevant trends for the analysis of cumulative impacts.

Olacapato
In the town of Olacapato, the gender structure remains balanced, with 49.2% males and 50.8% females. The population pyramid shows a strong presence of young people: 30.7% of women are under 14 years old, followed by 11.9% between 15 and 19 years old, and 10.9% between 20 and 24, as shown in Figure 56.

Among men, this trend is even more pronounced, with 39.7% under 14 years old and 22.4% between 15 and 24 years old. These figures reflect a broad demographic base, with a high proportion of girls, boys, and adolescents. Meanwhile, the adult and older adult population represents percentages below 10% in almost all age groups.



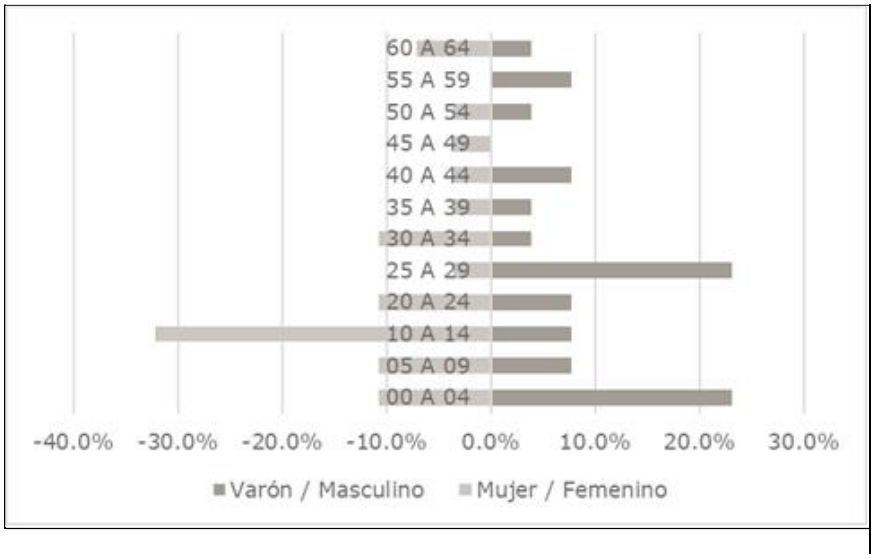
Source: Prepared based on the 2022 National Population, Household and Housing Census published by Instituto Nacional de Estadística y Censos (INDEC).

Figure 56: Population Pyramid of Olacapato 2022

In general, it is observed that in Olacapato the population is mostly young, with a downward trend in the adult and older adult population. Likewise, for both men and women, it is observed that after the age of 15, two situations arise. The first is that the proportion of the population decreases; this may be due to part of the population leaving in search of other opportunities and professional development or access to other services. The second situation indicates that, although the later age ranges do not reach the same percentage representation of infants and children, there is a marked presence of youth, adults and young adults (the main workforce), which could imply that there are favourable conditions for the population to stay and even for the arrival of external population or inhabitants returning to their place of origin.

Estación Salar de Pocitos

In Estación Salar de Pocitos, with a much smaller total population, girls and adolescents also predominate, as shown in Figure 57.



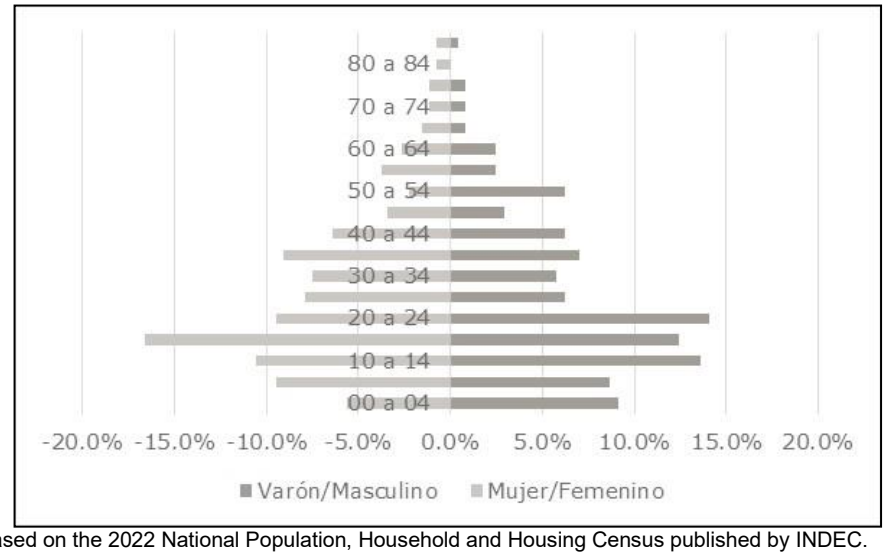
Source: Prepared based on the 2022 National Population, Household and Housing Census published by INDEC.

Figure 57: Population Pyramid of Estación Salar de Pocitos 2022

Among women, 53.6% are under 14 years old, with a strong concentration between 10 and 14 years old (32.1%). Among men, 38.5% are under 14 years old, and a notable group of young adults between 25 and 29 years old represents 23.1%. This combination suggests a growing population with a high birth rate, although with potential migration flows for economic reasons.

Catua

In the town of Catua, the female and male distribution is 52.3% and 47.7%, respectively. In the former case, the female population under 14 years of age is 25.7%; the 15- to 19-year-old age group stands out, representing 16.6%. After that, the age groups decrease, considering only two larger age groups: 20 to 24 years and 35 to 39 years, with 9.4% each, as shown in Figure 58.



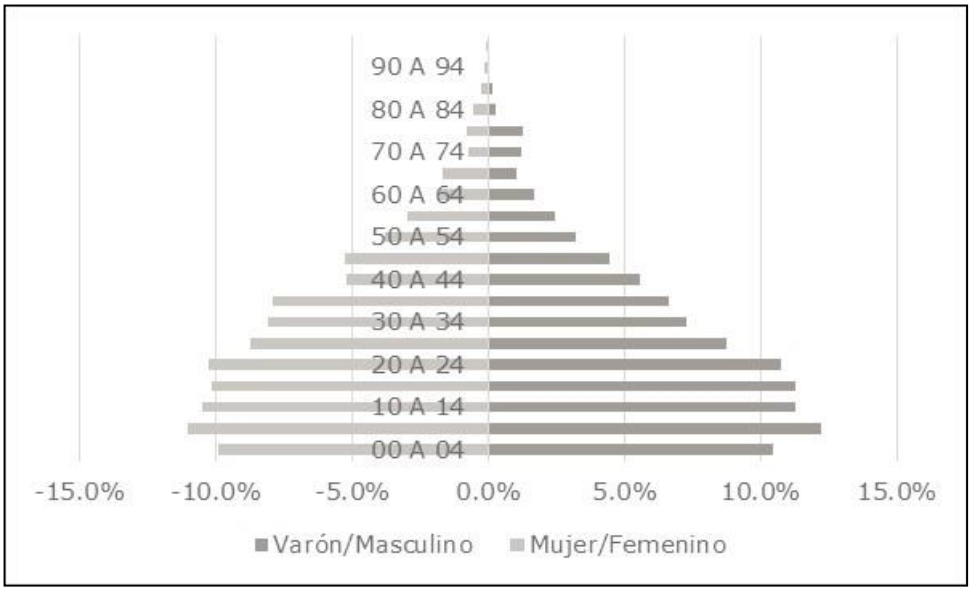
Source: Prepared based on the 2022 National Population, Household and Housing Census published by INDEC.

Figure 58: Population Pyramid of Catua 2022

Regarding the male population, the under-14 age group represents 31.4%. Adolescents and young adults aged 15 to 19 represent 12.4%, and young adults aged 20 to 24 represent 14%. It's worth noting that adults over 54 represent less than 5% in both cases. In relation to the Economically Active Population (EAP), it is observed that, for women aged 15 to 19, the rate decreases by 7.2% compared to the next highest age group; for men, this change occurs from the 20 to 24 age group, with a decrease of 7.9% compared to the next highest age group.

San Antonio de los Cobres

Finally, in the Indirect AoI, in San Antonio de los Cobres, a similar distribution is observed between women and men, with 51.1% and 48.9%, respectively, as shown in Figure 59.



Source: Prepared based on the 2022 National Population, Household and Housing Census published by INDEC.

Figure 59: Population Pyramid of San Antonio de los Cobres 2022

In consideration of the EAP, it is observed that this sector does not present drastic changes in representation from the age of 15, which could be indicative of the existence of sufficient job opportunities to avoid a strong youth emigration, differentiating itself from smaller towns.

In conclusion, all localities show a predominantly young population structure, albeit with varying degrees of intensity. This characteristic implies high potential for future growth but also challenges in terms of access to services and territorial planning.

Ethnic Self-Identification
According to the 2022 Census, self-perception refers to a person's right to be recognized by their self-perceived identity (self-identification), which refers to one's identification with a social or cultural group, such as race, ethnicity, among others. Likewise, the definition of an Indigenous or Native People explains that it is the declaration by a person that they identify as Indigenous or a descendant of Indigenous or Native peoples.

At the departmental level, 49.9% of the population in Los Andes self-identifies as Indigenous or of Indigenous descent; while in Susques, the self-identification is 81.3%, as shown in Table 42.

Table 42. Population that identifies as indigenous or descended from indigenous or native peoples, by department, 2022

Sex registered at birth	**Los Andes Department**		**Susques Department**	
	Cases	%	Cases	%
Indigenous population	3,581	49.9%	3,223	81.3%
Total population	**7,182**	**100%**	**3,966**	**100%**

Source: Prepared by the authors based on the 2022 National Population, Household and Housing Census published by INDEC.

The communities present in the Direct AoI include the Quewar-Kolla Community, the Kolla Indigenous Community of the Estación Salar de Pocitos, the Atacama Raíces Andinas Rural Community, and the Coquena Catua Indigenous Community – Atacama People. In the Indirect AoI, there are the Kollas El Desierto, Atacama, Collas Unidos, and Kollas Peña Alta communities.

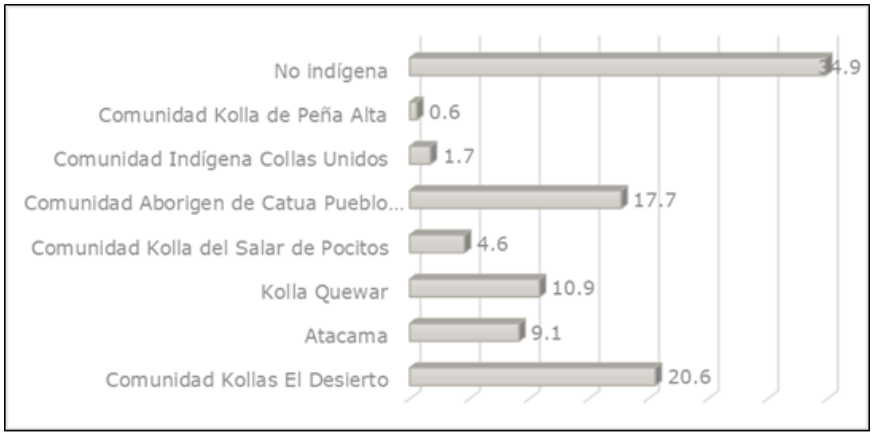
In the Project's AoI, 65.1% of the population identifies as Indigenous, while 34.9% do not. The data comes from an exploratory survey conducted in 2022, which covered 175 households in San Antonio de los Cobres (Indirect AoI) and 75 households in the Direct AoI, distributed in Catua (35 households), Olacapato (25), and Estación Salar de Pocitos (15). At the local level, a strong community affiliation is notable: in Catua, 77.5% of respondents identify with the Coquena Catua Community; in Olacapato, 90.5% with the Quewar–Kolla Community; and in Estación Salar de Pocitos, 57.1% with the local Kolla Community, as shown in Table 43.

Table 43. Indigenous affiliation by locality

Community	Direct AoI			Indirect AoI	Total
	Olacapato	Estación Salar de Pocitos	Catua	San Antonio de los Cobres	
Kollas The Desert	-	-	-	36%	20.6%
Atacama –	-	14.3%	-	14%	9.1%
Quewar Community - Kolla Ethnic Group	90.5%	-	-	-	10.9%
Kolla Aboriginal Community of the Estación Salar de Pocitos	-	57.1%	-	-	4.6%
Coquena Catua Aboriginal Community – Atacama People	-	-	77.5%	-	17.7%
Non-indigenous	9.5%	28.6%	22.5%	46%	34.9%
United Collas	-	-	-	3%	1.7%
Kollas Peña Alta	-		-	1%	0.6%

Source: 2024 ESIA

The majority of those who identify as indigenous in this region belong to the Kolla ethnic group, although there are also groups that define themselves as Atacamas. These variations respond to political and organizational aspects of the community itself. Often, within the same family or neighbourhood, some define themselves as Kollas and others as Atacamas, without any linguistic, cultural, or ritual differences between them; however, they have a distinct organizational structure, as shown in Figure 60. This cultural component is key in assessing cumulative impacts, as social and economic transformations in the environment can differentially affect the ways of life and traditional practices of these communities.



Source: 2024 ESIA

Figure 60: Ethnic Affiliation in the Project's AoI

Spatial Distribution
Based on the 2022 Census, census radii were used for locality-level information, so the methodology breaks down the spatial configuration into three types:

- Urban: Concentrates the population and housing grouped into blocks belonging to a town.
- Rural: Contains the population and housing dispersed in rural areas.
- Mixed: They combine characteristics of urban and rural areas, with clustered and dispersed population areas.

In the Project's AoI, the towns of Olacapato and Estación Salar de Pocitos are classified as having a mixed configuration. In the town of Catua, 87.2% of the population lives in rural areas, with only 12.8% of the population living in rural areas.

A similar trend is observed in San Antonio de los Cobres, where 97.3% of the population lives in urban areas. One factor that influences the majority of the urban area is the lack of infrastructure in rural areas for access to basic services (education, healthcare, among others), as shown in Table 44.

Table 44. Urban rural configuration

Geographic area	Urban	Rural	Mixed	Total
Direct AoI				
Olacapato	-	-	199	199
Estación Salar de Pocitos	-	-	54	54
Catua	442	65	-	507
Indirect AoI				
San Antonio de los Cobres	6,137	169	-	6,306

Source: Prepared by the authors based on the 2022 National Population, Household and Housing Census published by INDEC.

These differences are key to analysing impacts related to access to services, infrastructure, and the potential influx of foreign population. Mixed communities, which lack developed urban centres, could face greater challenges in the face of rapid population growth, given their limited capacity to absorb new residents.

Population Growth
Population growth between the last three censuses reveals that the town of Olacapato reached its peak population of 218 inhabitants in 2010: its population growth rate increased by +17.2%. However, between 2010 and 2022, the population decreased by -8.7%. This may be linked to internal migration to urban centres.

In Catua, the variation between 2001 and 2010 indicates a decrease of -23.1%; compared to the population growth rate between 2010 and 2022, an increase of +5.6% is observed; this is slightly lower than the projected growth rate for 2022 of 8.0% (519 inhabitants), according to the 2001-2010 National Census and the Jujuy Statistics Directorate.

Finally, in San Antonio de los Cobres, the population growth rate is characterized by being constant and increasing, since from 2001 to 2010, the rate was 11.4%, and from 2010 to 2022, the rate almost tripled to 32.4%.

It should be noted that there is no information from the 2001 and 2010 censuses at the Estación Salar de Pocitos level.

Population growth is shown in Table 45.

Table 45. Population growth (2001 - 2022)

Locality*	2001	2010	2022	Variation between 2010 and 2022
Direct AoI				
Olacapato	186	218	199	- 8.7%
Catua	624	480	507	+ 5.6%
Indirect AoI				
San Antonio de los Cobres	4,274	4,763	6,306	+ 32.4%

Source: National Census 2001-2022
* No data available for Estación Salar de Pocitos

In general terms, population growth in the towns within the Direct AoI shows distinct dynamics, marked both by the development of productive activities and by the conditions of access to basic services. In San Antonio de los Cobres, the sustained and accelerated population growth (+32.4% between 2010 and 2022) is linked to its status as the departmental capital, with greater urban infrastructure and availability of educational and healthcare services. This trend reinforces its role as a magnet for rural populations and migrants from other areas.

In Catua, a demographic recovery is observed (up 5.6% between 2010 and 2022), after a previous decade of sharp decline. This upswing may be associated with the development of mining projects in the surrounding area, which are beginning to generate economic opportunities and favour return migration processes.

Olacapato, on the other hand, shows a slight population loss (-8.7% over the same period), which reverses the growth observed until 2010. This could be due to a combination of factors: limited access to services, limited job opportunities, and youth migration to urban centres.

In short, recent demographic developments suggest a trend toward population concentration in urban centres or those with better infrastructure, such as San Antonio de los Cobres, while smaller towns show modest growth or decline. In a context of mining expansion and the potential attraction of a foreign workforce, monitoring these changes will be key to avoiding undue pressure on local services.

Migration Processes
Spatial mobility has historically been a constitutive characteristic of Andean populations. Traditional caravanning, livestock transhumance, and migrations to agro-industrial complexes or to different ecological regions—between the Puna, the valleys, and the Yungas—were part of a cultural system that articulated networks of exchange, circulation, and territorial complementarity. This pattern of mobility continues to have current expressions, although adapted to new social and economic contexts.

In recent decades, the most visible migration processes in the study area have been concentrated within the department of Los Andes itself, with a progressive movement from rural areas to urban and semi-urban centres. This phenomenon has been particularly evident in San Antonio de los Cobres, where population concentration has generated urban tensions: increased overcrowding, pressure on public services, and greater demands on basic infrastructure.

A relevant factor in this migration dynamic is access to education. Many rural families adopt a dual-residency scheme: they maintain the rural outpost for livestock production, but establish a second home in the urban area, primarily to ensure the schooling of children and young people. This strategy entails children residing in urban areas during the school year, while adults remain in charge of livestock management at the puestos, often alternating their presence based on seasonal needs. According to local reports, this arrangement has increased the number of families settling in San Antonio de los Cobres for educational reasons, placing increasing pressure on school infrastructure, health services, and housing availability.

Furthermore, structural factors have been identified that hinder access to essential services in rural areas, such as the lack of public transportation, poor road conditions, and distance to healthcare centers. These shortcomings reinforce the tendency for families to permanently or semi-permanently relocate to better-equipped population centres.

Data from the 2022 Census confirm that, in Olacapato, 80.5% of the current population resided there five years ago, reflecting a degree of stability, although 12% come from other towns in the same province. In Catua, 87.2% of the population is native, with only 3.9% coming from other provincial towns and 1% of foreign origin. In contrast, Estación Salar de Pocitos shows a more volatile dynamic: only 49.1% of current residents lived there five years ago, and 32.7% come from other towns, indicating a greater degree of recent mobility. Meanwhile, in San Antonio de los Cobres, 83.7% of current residents are originally from the town, while 2.9% come from other provinces and 0.1% from another country, as shown in Table 46.

Table 46. Place of residence 5 years ago by location

Place of residence 5 years ago	Direct AoI						Indirect AoI	
	Olacapato		Estación Salar de Pocitos		Catua		San Antonio de los Cobres	
	No.	%	No.	%	No.	%	No.	%
This town or place	182	80.5%	27	49.1%	442	87.2%	5,277	83.7%
Another town or place in this Province	27	12%	18	32.7%	20	3.9%	207	3.3%
Another Argentine Province	0	0%	1	1.8%	3	0.6%	182	2.9%
Another country	0	0%	0	0%	5	1%	5	0.1%
I had not been born	17	7.5%	9	16.4%	37	7.3%	635	10.1%
Total	**226**	**100%**	**55**	**100%**	**507**	**100%**	**6,306**	**100%**

Source: Prepared by the authors based on the 2022 National Population, Household and Housing Census published by INDEC.

These migratory flows are also influenced by the growth of the mining sector. The presence of projects at different stages—exploration, construction, and operation—and the labour demand they generate are attractive factors for foreign and returning workers. Consequently, there is a risk that population growth, if sustained or intensified, will exceed the installed capacity of urban services and disrupt community dynamics, especially in localities with indigenous populations.

Currently, there are no defined thresholds at the regional level that allow for clearly establishing when a change in population composition or size could compromise social, environmental, or institutional sustainability. Therefore, it is essential that these criteria be developed in a participatory manner with local authorities, Indigenous communities, and other territorial stakeholders. This will allow for adequate anticipation and management of the cumulative impacts associated with population growth, mobility, and territorial transformation.

5.4.3.4. VEC-4: Socioeconomic Structure

For VEC S-4, working conditions and economic structure, the potential impacts identified were direct and indirect employment generation, increased family income, and changes in the local productive structure linked to mining development. For further analysis, related variables were selected that describe the Project's Direct and Indirect AoI in relation to labour and economic dynamics:

- Economically active population (EAP).
- Sources of employment.
- Salary remuneration (nominal and actual).
- Evolution of salaries by sector.
- Local entrepreneurships.

Economically Active Population

The economically active population refers to the group of people of working age who have a job or, without one, are actively seeking one. Therefore, the EAP is divided into two categories: employed population (those who have their own or dependent employment) and unemployed population (but are actively seeking employment). Thus, as can be seen in the following table, in the Direct AoI, Estación Salar de Pocitos is the locality with the highest EAP rate (83.87%), while Olacapato and Catua have similar EAP rates, 55.48% and 49.06%. In all three localities, the majority of the EAP is employed, with minimal unemployment rates. It is noteworthy that in Estación Salar de Pocitos, the EAP is fully employed, as shown in Table 47.

Table 47. Economically active population index

EAP	EAP index	Occupancy rate	Unemployment rate
Direct AoI			
Olacapato	55.48%	54.19%	2.33%
Estación Salar de Pocitos	83.87%	83.87%	0.00%
Catua	49.06%	48.52%	1.09%
Indirect AoI			
San Antonio de los Cobres	58.43%	53.54%	8.33%

Source: Prepared by the authors based on the 2022 National Population, Household and Housing Census published by INDEC.

In many cases, the economically active population in the Project’s Direct and Indirect AoI exhibits a combination of economic activity conditions, such as working only or working and studying, working and receiving a pension, studying only and seeking employment, among others.

Thus, according to information from the 2022 census (INDEC), it can be noted that in the Project’s Direct AoI in Estación Salar de Pocitos, 64.52% of the EAP is only working, while 16.13% works and also receives a pension or retirement, and 3.23% works and studies. It is worth noting that, in the case of Estación Salar de Pocitos, the entire EAP is employed, as shown in Table 48.

In the town of Olacapato, 47.74% of the working population is working alone, and 13.55% receive only a pension. Only 1.29% are looking for work, but this percentage could be understood given that 15.48% are studying. A significantly smaller percentage is working and studying at the same time (4.52%).

The situation in Catua is slightly different from the other two towns in the Direct AoI, as only 32.71% work, while 10.46% work and study. It is worth noting that almost 17% of the economically active population is only studying.

Table 48. Conditions of economic activity

Combined economic activity condition	Direct AoI						Indirect AoI	
	Estación Salar de Pocitos		Olacapato		Catua		San Antonio de los Cobres	
	Cases	%	Cases	%	Cases	%	Cases	%
Just work	20	64.52%	74	47.74%	122	32.71%	1904	41.8%
Work and receive retirement or pension	5	16.13%	3	1.94%	20	5.36%	296	6.5%
Work and study	1	3.23%	7	4.52%	39	10.46%	310	6.8%
Just study	2	6.45%	24	15.48%	63	16.89%	760	16.7%
Only receives retirement or pension	1	3.23%	21	13.55%	34	9.12%	474	10.4%
Just looking for a job	0	0	2	1.29%	1	0.27%	165	3.6%
Looking for a job and receiving retirement or pension	0	0	0	0	1	0.27%	20	0.4%
Another situation	2	6.45%	24	15.48%	93	24.93%	43	0.9%
Total	31	100%	155	100%	373	100%	4687	100%

Source: Prepared by the authors based on the 2022 National Population, Household and Housing Census published by INDEC.

In San Antonio de los Cobres, 41% of the total working population only works, while 16.7% only studies. It's worth noting that just over 10% receive only a pension or retirement.

In summary, the EAP in the Direct AoI shows marked differences between localities. Estación Salar de Pocitos has high participation and full employment, while Olacapato and Catua have lower levels of activity and greater diversity in economic conditions, combining work, education, and pension receipts. In San Antonio de los Cobres, although participation is higher than in some localities in the Direct AoI, there is a higher unemployment rate and a significant proportion of people who only study or receive pensions.

Sources of employment

The analysis of employment sources in the Project's Direct and Indirect AoI facilitates the identification of key dynamics for assessing cumulative impacts. The evolution of employment in the mining sector, the participation of the local workforce, the diversification of occupations, and the interaction with other economic activities provide fundamental elements for understanding how the regional socioeconomic structure is changing in the face of the sustained expansion of mining.

The results of the 2022 survey reveal that the predominant economic activities in the Project area are grouped into commerce and personal services (38%), mining and related services (24.1%), and construction (7.4%). Among the most common occupations are workers, merchants, cooks, bricklayers, artisans,

technicians, cleaning staff, and public employees, reflecting a changing occupational structure increasingly linked to mining development and its support services, as shown in Table 49.

Table 49. Type of work carried out in the Project's Direct and Indirect AoI

Sector	Percentage (%)
Trade and personal services	38%
Mining and related services	24.1%
Public administration	9.1%
Construction and maintenance	7.4%
Transport and logistics	6.6%
Others	5.7%
Tourism and hospitality	4.2%
Health and care	2.5%
Education	2.5%

Source: 2024 ESIA.

According to recent census data, mining represents the main source of employment in the Direct AoI localities: 53.3% of the employed population in Catua, 43.8% in Olacapato, and 27.3% in Estación Salar de Pocitos. In San Antonio de los Cobres, commerce leads as a source of employment (27.8%), followed by mining (22.2%) and government employment (19.4%). Self-employment also stands out at 15.3%, indicating a certain degree of economic autonomy, as shown in Table 50.

Table 50. Sources of employment in the Project's Direct and Indirect AoI

Sector	Direct AoI			Indirect AoI	Total
	Olacapato	Estación Salar de Pocitos	Catua	San Antonio de los Cobres	
Works in the State (Municipal, Provincial, National)	12.5%	9.1%	30.0%	19.4%	20.2%
Works in a mining company	43.8%	27.3%	53.3%	22.2%	32.6%
Works in a service company	12.5%	18.2%	6.7%	1.4%	5.4%
Works in a construction company	6.3%	9.1%	3.3%	5.6%	5.4%
Works in a tourism company	-	-	-	4.2%	23%
Works in Commerce	12.5%	9.1%		27.8%	17.8%
Works in a family home	-	9.1%	6.7%	1.4%	3.1%
In our own workshop	-	-	-	1.4%	0.8%
Self-employed	6.3%	9.1%	-	15.3%	10.1%
Gastronomy	-	9.1%	-	1.4%	1.6%
Security company	6.3%	-	-	-	0.8%
Total	**100%**	**100%**	**100%**	**100%**	**100%**

Source: Prepared by the authors based on the 2022 National Population, Household and Housing Census published by INDEC.

In the case of the department of Los Andes, the composition of the mining workforce allows us to observe the level of participation of the local population in this activity. According to official records, as of 2022, a total of 471 local workers were employed in mining companies or related activities, representing 16.3% of total mining employment and approximately 22% of the department's projected Economically Active Population (EAP). Of this total, only 9.7% are women, highlighting the low level of female participation in the sector, as shown in Table 51.

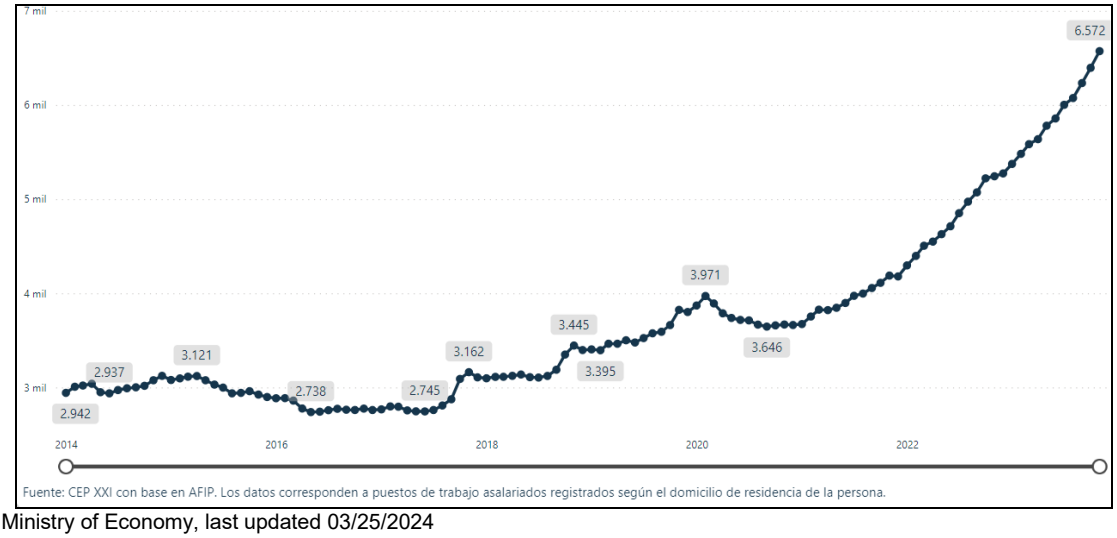
Table 51. Distribution of local labour by mining sector - Department of Los Andes

Heading	Number of local workers
Lithium exploration and financing	52
Lithium Production	26
Metalliferous exploration and financing	6
Metalliferous production	178
Unclassified minerals	30
Non-metallic	69
Application rocks	1
Mining services and related activities	62
Non-mining related economic activities	47
Total	471

Source: Prepared by the authors based on data from the Ministry of Economy. Updated 10/10/2022

The distribution of this local labour force by mining sector shows a concentration in tasks related to metal production (178 people), mining services (62 people), and lithium exploitation in its exploration and financing phases (52 people). There is also a lower participation in non-mining economic activities related to the sector (47 people), suggesting the existence of local productive chains linked to the development of mining.

In Salta Province, the sector has shown a sustained growth trend since 2014. This expansion intensified significantly starting in 2020, a period in which the number of registered positions doubled, reaching a total of 6,572 jobs in 2023, according to data from the Ministry of Economy (updated March 2024). This trend reflects the growing dynamism of extractive activity, particularly in the lithium and metalliferous areas, and its direct impact on the provincial labour structure. The registered employment in mining and oil in Salta is shown in Figure 61.



Source: Ministry of Economy, last updated 03/25/2024

Figure 61: Registered employment in mining and oil in Salta Province, 2014 – 2023

In the mining sector specifically, registered employment reached 5,500 in September 2023, representing 13.7% of the national total. Of these positions, 82.8% are held by men and 17.2% by women. Female participation has shown sustained growth, although it remains a minority compared to men. Regarding the distribution of these positions by sector, the mining services and related activities sector employs the most workers (2,144), followed by metalliferous production (899) and lithium exploration and production (1,246 and 397, respectively). Women have a greater relative presence in exploration areas, particularly in lithium (25.4%) and metalliferous (39.7%), as shown in Table 52.

Table 52. Mining sector jobs by sector and gender - Salta Province - September 2023

Sector/sex	Female	Female in %	Male	Male in %	Total
Mining services and related activities	260	12.1%	1,884	87.9%	2,144
Metalliferous: exploration and financing	25	39.7%	38	60.3%	63
Metalliferous production	153	17%	746	83%	899
Lithium: exploration and financing	317	25.4%	929	74.6%	1,246
Lithium: production	92	23.2%	305	76.8%	397
Non-metallic	39	10.3%	338	89.7%	377
Unclassified minerals	54	19.8%	219	80.2%	273
Application rocks	7	6.9%	94	93.2%	102
Total	**947**	**17.2%**	**4,553**	**82.8%**	**5,500**

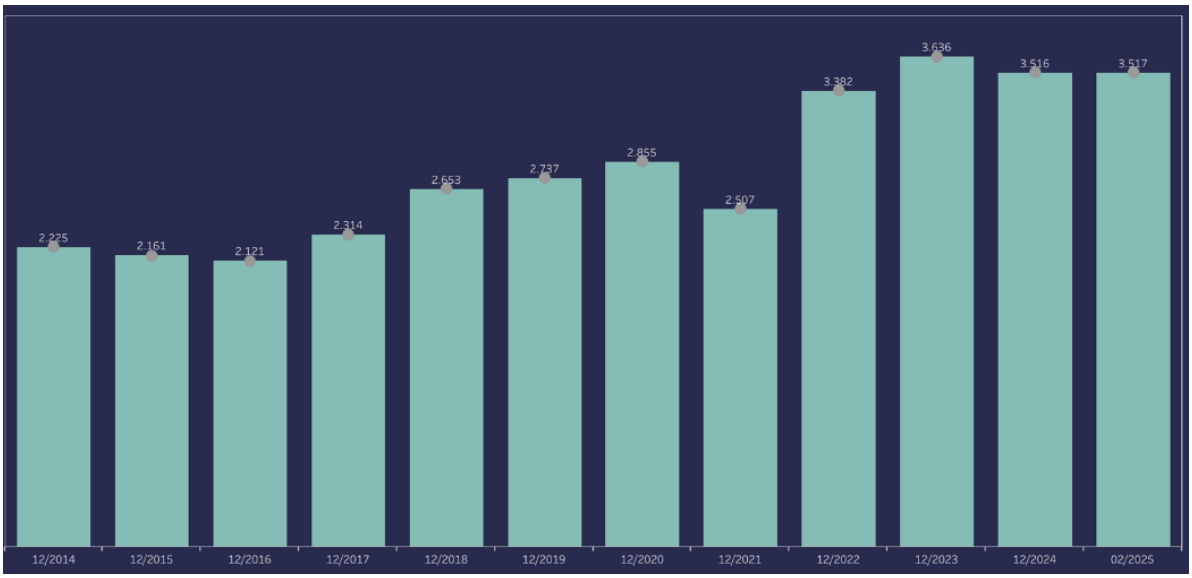
Source: Ministry of Economy, September 2023

According to the Monthly Report – Provincial Employment of the Argentine Mining Industry (2024)[31], by September 2023, mining employment in Jujuy. The total number of jobs in mining reached 3,563, representing 8.9% of total employment. Based on this, female employment accounted for 482 jobs, or 13.5% of total employment in Jujuy. Furthermore, in September 2023, mining employment in Jujuy was composed of 41.7% lithium production, 36.7% metal production, and 21.6% other industries.

Historically, as in Salta, the Province of Jujuy has shown sustained growth since 2014, emphasizing the transition from 2021 to 2022, where there was an increase of 875 positions. Starting in 2022, there is a certain stability in the number of jobs (ranging from 3,382 to 3,636), according to the Ministry of Economy (updated to July 2025), as shown in Figure 62.

The analysis of employment sources reveals the structural impact that mining has on the communities in the project's AoI. The high proportion of the economically active population dedicated to mining, along with the sustained growth in registered employment and the emerging diversification of sectors, constitute key indicators of a shift in the local productive matrix. Therefore, it is essential to monitor these dynamics to design management strategies that favour inclusive employment, strengthen local capacities, and promote sustainable productive linkages, without affecting the local social and cultural fabric.

[31] Monthly Report: Employment by Province in the Argentine Mining Industry, January 2024. National Directorate of Mining Promotion and Economy, Ministry of Mining Development.



Source: Ministry of Economy, last updated 04/07/2025

Figure 62: Registered employment in mining in Jujuy Province, 2014-2025

Salary Remuneration: Nominal and Actual Salary
Wages are the compensation a person receives for their time worked or for the services they provide. The amount of money a worker receives directly for their services is called the nominal wage, while the real wage refers to the purchasing power of wages and refers to the quantity of goods and services (a basket) that can be purchased with the money received for work, and is related to the CPI.

According to the report on registered private sector employees in the Province of Salta (no records by locality are available) for the period September 2024 (Government of Salta, 2024), the average nominal salary was $1,100,852. This value represented a 3.4% increase compared to August 2024 and a year-on-year increase of 209.4%. The sectors with the greatest growth in nominal Salaries in the last year were hotels and restaurants (264%), followed by mining and quarrying (230.5%), and construction with an increase of 226.1%. The increase in these sectors may be due to their link to mining activity, given that the growth of mining demands indirect construction jobs and impacts the growth of hotels and restaurants. However, sectors with smaller increases such as social and health services, transportation, and education (190.5%, 189.8%, and 168.6% respectively) also saw significant year-on-year growth.

As can be seen in the following table, workers working in the mining and quarrying sector receive a nominal salary that is twice the median salary for the period, as shown in Table 53.

Analysing nominal wages in relation to the cost of a basket of goods provides an interpretation of real wages. INDEC uses the monthly value per adult equivalent of two types of baskets: the Basic Food Basket (BFB, canasta básica alimentaria) and the Total Basic Basket (TBB) of the Northwest Argentine region (NOA). Expressing wages in terms of the BFB quantity allows for a concrete measurement of purchasing power, as it indicates how many times an average salary can cover a person's basic food costs.

Thus, according to the report Nominal and real Salaries, registered employees of the private sector - Salta (Regional Government of Salta, September 2024): "*In September 2024, the value of the BFB in the NOA region was $121,210. This means that the average nominal remuneration of a private sector employee was equivalent to the capacity to purchase approximately 9.1 BFB*". According to the report, salaries in the Education sector have the lowest purchasing power in terms of the BFB, while the Mining and Quarrying sector had the highest purchasing power in terms of the BFB.

Table 53. Nominal and real remuneration by activity category – Salta Province

Areas of activity	Nominal remuneration		Real remuneration (BFB)	
	September 2024	**Year-on-year variation**	**September 2024**	**Year-on-year variation**
Agriculture, livestock, hunting and forestry	$700,979	205.9%	5.8	0.3%
Mining and quarrying	$3,276,955	230.5%	27.0	3.3%
Manufacturing industry	$1,187,717	202.5%	9.8	0.4%
Electricity, gas and water	$2,507,541	202.0%	20.7	0.8%
Construction	$1,036,904	226.1%	8.6	0.9%
Wholesale and retail trade	$948,408	202.8%	7.8	0.3%
Hotels and restaurants	$936,471	264.1%	7.9	1.6%
Transportation, storage and communications services	$1,404,385	189.8%	11.6	0.0%
Financial intermediation and other financial services	$2,023,555	208.8%	16.7	1.0%
Real estate, business and rental services	$939,065	218.6%	7.7	0.7%
Teaching	$644,683	168.6%	5.3	-0.4%
Social and health services	$1,046,295	190.5%	8.6	0.0%
Community, social and personal services	$99,079	206.0%	8.2	0.4%
Total average	**$1,100,852**	**209.4%**	**9.1**	**0.6%**

Source: Prepared by the authors based on data from the Ministry of Economy.

In the Province of Jujuy, and according to the Secretariat of Economic Policy, in 2022, the average salary in the registered private sector was $138,224, representing a 20.7% drop compared to the national average of $174,300. Compared to the average income of workers in the private sector in the Province of Jujuy, there was a 73.0% increase overall, as shown in Table 54, with the most notable sectors being:

- Storage, transportation, and communications services with 1,684%.
- Teaching with an increase of 114.5%.
- Agriculture, livestock, hunting, and forestry, with a 93.0% increase in remuneration.
- Mining and quarrying increased by 64.2%.

Table 54. Average remuneration of registered private sector workers, branch of activity, Jujuy Province

Branch of activities	March 2024	March 2025
Agriculture, livestock, hunting and forestry	464,891	897,173
Fishing and Related Services	Selective default	Selective default
Mining and Quarrying	2,117,686	3,477,370
Manufacturing Industry	776,454	1,290,491
Electricity, Gas and Water	2,348,765	3,276,677
Construction	662,044	1,222,710
Wholesale and Retail Trade	682,645	1,124,866
Hotels and Restaurants	509,795	1,189,296
Transportation, Storage and Communications Services	79,311	1,415,271
Financial Intermediation and Other Financial Services	1,546,794	2,545,874
Real Estate, Business and Rental Services	657,831	1,159,537
Teaching	339,581	728,558
Social and Health Services	654,497	1,165,767
Community, Social and Personal Services NCP	515,381	936,466

Source: STE y SS - National Directorate of Labor Studies and Statistics - Employment and Business Dynamics Observatory, based on SIPA, 2025.

In the mining and quarrying sector, there is no record of remuneration for crude oil and natural gas extraction; however, a larger increase is observed for the extraction of metal ores (68.6%), while for the exploitation of other mines and quarries, it is 55.5%, as shown in Table 55.

Table 55. Average remuneration of registered private sector workers, by mining and quarrying activity, Jujuy Province

Mining and Quarrying	March 2024	March 2025
Extraction of crude oil and natural gas	sd	sd
Extraction of metalliferous minerals	2,060,707	3,479,634
Exploitation of other mines and quarries	2,258,065	3,511,267

Source: STE y SS - National Directorate of Labor Studies and Statistics - Employment and Business Dynamics Observatory, based on SIPA, 2025.

Evolution of salaries in the main sectors

Between 2015 and 2023, wages in Salta experienced a sustained increase, albeit in a context of high inflation. Salary variation during this period was significant across all sectors. In 2015, the average general salary was $16,085, which rose to $72,141 in 2020 and $501,186 in 2023. In sectoral terms, wages in mining and oil rose from $34,665 in 2015 to $144,920 in 2020 and $983,798 in 2023, the highest among all sectors. Also notable were increases in electricity, gas, and water ($25,575 in 2015 to $777,492 in 2023) and in the manufacturing industry ($14,401 to $392,897). In contrast, sectors such as education, commerce, and social services show lower levels and less pronounced growth, as shown in Table 56.

Table 56. Average monthly Salaries for the main sectors in Salta*

	Average Salary in 2015		Average Salary in 2018		Average Salary in 2023	
	AR Pesos	**USD**	**AR Pesos**	**USD**	**AR Pesos**	**USD**
Agriculture, livestock and fishing	$6,923[32]	$520.50	$34,537	$386.96	$ 229,076	$276.74
Mining and oil	$34,665	$2,606.30	$144,920	$1,623.75	$983,798	$1,188.52
Industry	$14,401	$1,082	$64,651	$724.38	$392,897	$474.65
Trade (retail and wholesale)	$11,415	$858.27	$50,067	$560.97	$314,956	$380.49
Services	$11,453	$861.12	$50,061	$560.90	$491,069	$593.25
Electricity, gas and water	$25,575	$1,922.9	$120,415	$1,349.18	$777,492	$939.28
Construction	$8,161	$613.6	$40,335	$451.93	$319,013	$385.39
Total	**$16,085**	**$1,209.24**	**$72,141**	**$808.30**	**$501,186**	**$605.47**

Source: Prepared by the authors using data from the Ministry of Finance, 2017, Ministry of Economy, 2021, General Directorate of Statistics and Census - General Secretariat of the Interior, 2023, and historical exchange rate of the official dollar, Banco Nación.
* The sample information for this survey is not available; therefore, peak increases could be associated with changes in the population used for data collection. The observed trend is one of constant wage increases.

During this same period, average annual inflation was 63.48%, which puts the evolution of real purchasing power into context. In the specific case of the Department of Los Andes, the average private sector salary in 2023 was $165,334, a figure below the provincial average and strongly influenced by the concentration of employment in mining and the lack of economic diversification.

The growth in labour demand in the mining sector is also reflected in the Salary levels it offers. In September 2023, the gross monthly salary in lithium exploration in the Province of Salta was $1,373,403, even above the national average ($1,184,029), as shown in Table 57. Other sectors such as metal and unclassified mineral production also show high wages, although in some cases, such as mining services or application rock exploitation, Salaries in Salta are below the national average. However, the overall average in the province for the mining sector as a whole was $734,089, slightly lower than the national average ($807,997).

The increase in demand for employment in the mining sector in the province and in the department of Los Andes is also reflected in the average wages offered, where, in sectors such as lithium exploration, the sector offers better salaries in the province than at the national level.

Although wages in the Province of Salta have shown sustained nominal growth between 2015 and 2023, the high inflationary context has significantly affected workers' real purchasing power. Mining, especially lithium mining, is positioned as the sector with the highest wage potential, above other productive sectors and, in some cases, even the national average. However, this situation contrasts with sectors such as education, commerce, and social services, which have considerably lower wage levels.

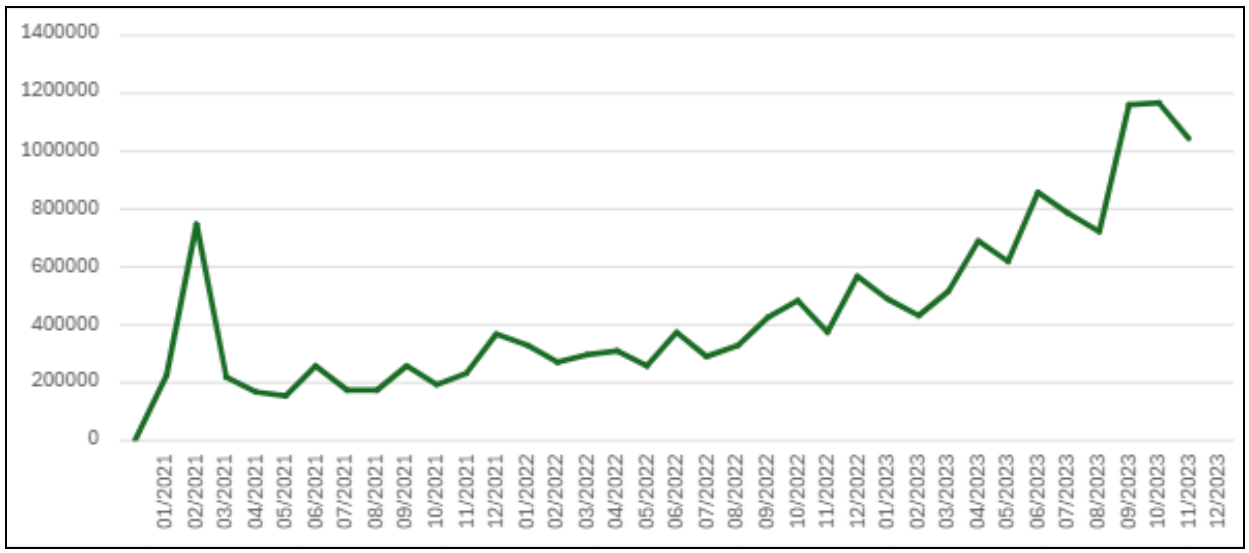
[32]In Argentine pesos.

Table 57. Gross monthly nominal Salary in mining by sector in Salta and Argentina – September 2023 (in Argentine pesos)

Heading	Salta	Argentina	Variation
Mining services and related activities	$385,230	$498,791	-23%
Metalliferous: exploration and financing	$833,938	$950,104	-12%
Metalliferous production	$1,020,100	$1,185,026	-14%
Lithium: exploration and financing	$1,373,403	$1,184,029	16%
Lithium: production	$1,027,448	$1,141,274	-10%
Non-metallic	$462,816	$646,981	-28%
Unclassified minerals	$486,150	$425,987	14%
Application rocks	$283,628	$431,782	-34%
Average	$734,089	$807,997	-11%

Source: Ministry of Economy of the Nation, 2024

At the level of the Province of Jujuy, according to the Argentina Data Portal, the historical evolution of the average gross salary of private sector employees is presented, as shown in Figure 63 - mining and quarrying[33].



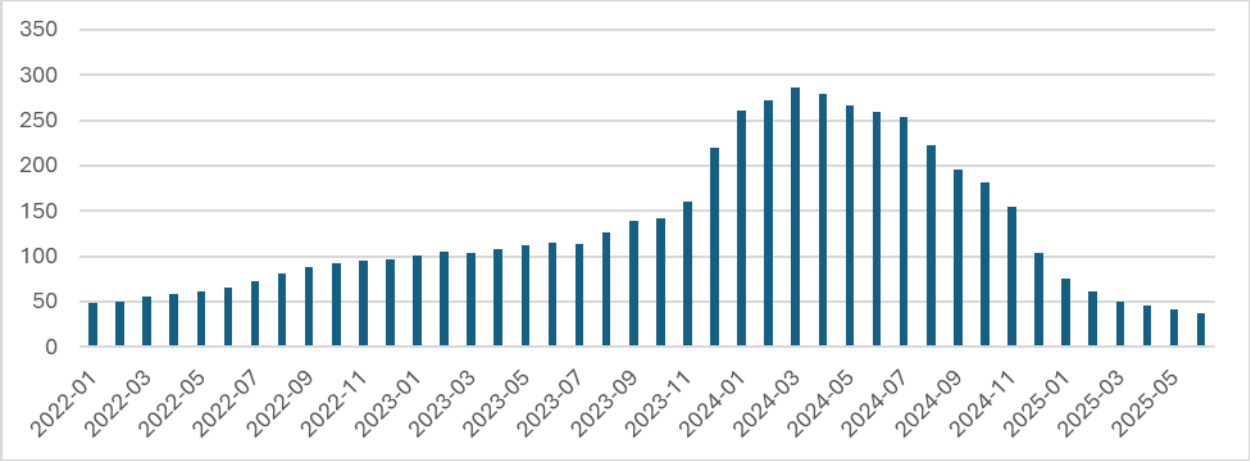
Source: Argentina Data Portal, 2023

Figure 63: Historical evolution of the average Salary in Jujuy Province, private sector, mining and quarrying (in Argentine pesos)

In the Department of Los Andes, the strong concentration of employment in mining activities, coupled with limited economic diversification, creates a mid-range wage scenario, where average incomes remain below the provincial level, but with some mining sectors offering competitive wages. This development reinforces the growing centrality of the mining sector in the regional economy, both in terms of employment and income, although it also poses challenges in terms of territorial and sectoral equity.

[33]Based on the Economic Activities Classifier (CLAE).

Consumer Price Index
INDEC does not release the CPI at the provincial level, by region only. In 2024, the CPI registered a progressive increase in the first quarter, reaching its peak in March at 286.2; however, the indicator has decreased considerably, reaching 37.1 in June 2025, as shown in Figure 64.



Source: National Institute of Statistics and Census (2025)

Figure 64: Consumer price index in the northwest region, by year-on-year frequency (2022-2025)

Local entrepreneurship in the Direct AoI
In the Project's Direct AoI, various productive and service-based enterprises have been identified, most of which have emerged to meet the demand generated by mining activities, as shown in Table 58.

These initiatives, generally managed by family units, are part of local economic strategies and allow communities to diversify their sources of income. The enterprises combine traditional trades with mining-related services, such as transportation, gastronomy, lodging, cleaning, laundry, bakery, tire repair, sewing, and basic goods retailing, among others. It is worth mentioning that, according to observations, the most common services are related to lodging, cleaning, restaurant services, and catering.

In the town of Catua, five lodging establishments and one dining hall were identified as functioning. It is important to note that this characterisation does not constitute an exhaustive survey of all existing businesses. The information presented is based on observations made during various field projects conducted by ERM in 2024.

Nineteen ventures were surveyed in Estación Salar de Pocitos, while at least ten were identified in Olacapato. In both cases, several of these ventures combine more than one sector, allowing them to diversify their sources of income and adapt to the demands of the productive environment. The information was compiled and systematized by the Communities and Social Performance Department of the Project, based on data provided by community leaders and representatives.

Understanding these undertakings is key to understanding the local socioeconomic framework and anticipating the cumulative impacts of mining development. Direct and indirect employment generation, increased family income, and the transformation of the productive structure are interrelated processes that can be enhanced by strengthening local capacities. This information also helps identify opportunities to foster sustainable development, promote economic inclusion, and design management measures that consider the realities and potential of the communities involved.

Table 58. List of suppliers by location

Company			Activity
1	Olacapato	The stars	Catering, restaurant, hospitality, laundry and cleaning services including logistics
2		Service B and A	Cleaning services, restaurant, catering, lodging. Laundry service includes logistics.
3		Walwil	Transportation, logistics, lodging, chemical toilets, retail and wholesale sales of cleaning and household items, collection, transportation, treatment, and final disposal of non-hazardous waste.
4		The Andean peaks	Laundry service, restaurant, event catering, including logistics, cleaning service, sales of cleaning supplies, and sales of hardware items.
5		Yanela Laundry	Laundry
6		Marine Laundry	Laundry
7		Inn of the Wind	Lodging
8		El Nacho Tire Shop, Los Primos Lodging, S and L Kiosk	Tire shop, lodging and kiosk
9		Khory Services	Confectionery, hotel, catering, cleaning, camp maintenance, logistics, drugstore and tire shop
10		Atilio Ruller Gerónimo	Restaurant service, food delivery, laundry service, linens, guest linens, for companies and individuals
1	Estación Salar de Pocitos	The Time	General cargo transportation.
2		Planeta Puna SRL	Restaurant, Catering, Cleaning and Hospitality.
3		Serminca SRL	Engineering and Logistics.
4		Terraflex Logistics	National and provincial general cargo transportation.
5		Huguito	Tire shop.
6		Don Fabián Bakery	Bakery.
7		Don Sato	General cargo transportation.
8		Serv and Exploit Min Cruz	Mining Support Service. Logistics.
9		Esmaci Brothers SAS	Restaurant - Cleaning.
10		The Andean	Lodging.
11		The Time	Lodging. Dining room.
12		Thola	Dining Room, Catering and Cleaning.
13		Bubbles of the Puna	laundry. Sale of cleaning supplies.
14		Alto Las Nieves	Restaurant and Catering.
15		Alfa Group SRL	Logistics and transportation. Distribution of mineral water and soft drinks.
16		SIMA SAS	Comprehensive camp maintenance.
17		The Fox	Dining hall, travel, and freight services. Distribution of mineral water and soft drinks.
18		Ochuro	Sale of personal protection items.
19		Alto Las Nieves	Laundry.

5.4.3.5. VEC-5: Educational Services

For VEC-5, potential impacts to educational conditions have been identified as the acquisition of skills and capabilities by the local population and the additional pressure on educational infrastructure. For further analysis, related variables have been selected that describe the Project's Direct and Indirect AoI in relation to educational services:

- Offer of educational levels.
- Educational infrastructure.
- Educational level.

Offer of Educational Levels

A total of 15 educational institutions is located in the AoI, offering primary, secondary, technical, higher, and adult education, as shown in Table 59.

Table 59. Educational institutions in the AoI

Locality	Level Directions	Number	Total
Direct AoI			
Olacapato	Primary school address	1	2
	Technical direction	1	
Estación Salar de Pocitos	Primary school address	1	1
Catua	Initial address	1	2
	Secondary school management	1	
Indirect AoI			
San Antonio de los Cobres	Primary school address	5	10
	Secondary school management	1	
	Technical direction	2	
	Superior direction	1	
	Adult direction	1	

Source: Ministry of Education, Culture, Science and Technology of Salta, 2019.

In the Direct AoI, five educational institutions have been identified. In Olacapato, there are two with primary and technical education; in the town of Estación Salar de Pocitos, there is one with primary education; and in Catua, there are two for preschool and secondary education.

In the Indirect AoI, San Antonio de los Cobres has 10 institutions: six primary schools; one secondary school; two technical schools; one higher education school; and one adult education school, providing a broader range of educational offerings compared to other locations.

Likewise, based on information from the Ministry of Education, Culture, Science, and Technology of Salta, a list of institutions is presented according to their scope, location, and addresses is presented in Table 60.

From this, it is observed that in the towns of Estación Salar de Pocitos and Olacapato, educational centers are located in rural areas; in contrast to San Antonio de los Cobres, which are located in urban areas. It is worth noting that, in the Project’s Direct AoI, only Olacapato has a technical education institution. Furthermore, the only higher education institution located in San Antonio de los Cobres is a teacher training institution.

Table 60. List of educational institutions in the AoI

No.	Establishment Name	Scope	Locality	Home	Level
Direct AoI					
1	Mayor Juan Carlos Leonetti EX No. 832	Dispersed Rural	Olacapato Station	Olacapato, (a4413)	Primary school
2	Olacapato Annex "Technical Education Center"	Dispersed Rural	Olacapato	San Jose s/n°, (a4413)	Technical direction
3	May 7 EX No. 521	Dispersed Rural	Estación Salar de Pocitos	Provincial Route No. 27 – Estación Salar de Pocitos, (a4413)	Primary school
4	Andes Pass No. 389	s/n	Catua	s/n	Initial address
5	Secondary School No. 20	s/n	Catua	s/n	Secondary school
Indirect AoI					
1	Technical Education School No. 3173 EX No. 5211	Urban	San Antonio de los Cobres	Ayacucho s/n and Sarmiento s/n (A4411)	Technical direction
2	Master Victorino Sosa EX No. 301	Urban	San Antonio de los Cobres	General Güemes Passage s/n, (A4411)	Primary school
3	Domingo Faustino Sarmiento EX No. 786	Urban	San Antonio de los Cobres	Brigido Zavaleta s/n, (a4411)	Primary school
4	Carlos Guido Spano Home School EX No. 915	Urban	San Antonio de los Cobres	Avellaneda s/n, Power Plant (a4411)	Primary school
5	Early Childhood Education School No. 4840	Urban	San Antonio de los Cobres	Hipolito Yrigoyen s/n, fair judge (4411)	Primary school
6	Sacred Heart of Jesus School	Urban	San Antonio de los Cobres	Belgrano s/n, downtown (a4411)	Secondary school
7	Higher Institute of Teacher Training No. 6028	Urban	San Antonio de los Cobres	Belgrano s/n, (a4411)	Superior direction
8	BSPA CenterNo.7093-Secondary School EX No. 22-	Urban	San Antonio de los Cobres	Belgrano s/n, (a4411)	Adult direction
9	Technical Education Center No. 7151	Urban	San Antonio de los Cobres	Belgrano s/n, downtown (a4411)	Technical direction
10	Special Education School No. 7168	Urban	San Antonio de los Cobres	Belgrano 11, downtown (a4411)	Primary school

Source: Ministry of Education, Culture, Science and Technology of Salta, 2019.

According to this information, the AoI has limited and dispersed educational offerings, especially at higher education levels. This could restrict the development of local capacities in the short term and put pressure on existing institutions if educational demand increases as a result of the Project.

Educational Population
In 2022, the majority of the population in the Project's Direct AoI is concentrated in primary and secondary education. This pattern is partly explained by the age structure of the localities, characterized by a high proportion of children, adolescents, and young adults. Localities such as Olacapato, Catua, and Estación Salar de Pocitos have a predominantly young population base, which explains why more than 80% of educational enrolment is at the compulsory levels, as shown in Table 61.

Table 61. Educational level they are studying in the AoI

Educational level you are studying	Direct AoI						Indirect AoI	
	Olacapato		Estación Salar de Pocitos		Catua		San Antonio de los Cobres	
	Cases	%	Cases	%	Cases	%	Cases	%
Kindergarten, nursery, care centre, rooms for children aged 0 to 3	9	9.5%	-	-	3	1.3%	89	3.3%
Room 4 or 5 (kindergarten or preschool)	5	5.3%	-	-	19	8.4%	289	10.6%
Primary	50	52.6%	16	88.9%	107	47.4%	1,238	45.2%
Secondary	28	29.5%	2	11.1%	88	38.9%	927	33.9%
Non-university tertiary education	2	2.1%	-	-	7	3.1%	277	10.1%
University degree	1	1.1%	-	-	2	0.9%	110	4%
Postgraduate (specialisation, Master or Doctorate)	-	-	-	-	-	-	29	1.1%
Total	**95**	**100%**	**18**	**100%**	**226**	**100%**	**2,959**	**100%**

Source: Prepared by the authors based on the 2022 National Population, Household and Housing Census published by INDEC.

In Olacapato, for example, more than 60% of the female population is under 24 years old, and this figure is even higher among men. This translates into an educational distribution where 52.6% attend primary school and 29.5% secondary school, while participation in tertiary and university education is marginal (barely 3.2% combined). Similar situations are observed in Catua and Estación Salar de Pocitos, where the age structure also reflects a significant child and youth population. In Catua, 47.4% of cases are in primary school and 38.9% in secondary school; and in Estación Salar de Pocitos, 88.9% attend primary school and only 11.1%. secondary school. Neither of these two localities records any higher education population.

In contrast, San Antonio de los Cobres presents a more diverse educational profile. While there is also a significant proportion of children and adolescents, the presence of young and adult populations is reflected in a broader educational offering and an enrolment rate that includes 10.1% at the non-university tertiary level, 4% in undergraduate university studies, and 1.1% in postgraduate programs. It is, in fact, the only locality with a population at the latter level. This figure is consistent with its role as a regional centre, as it has at least three options for accessing higher education, compared to the absence of such institutions in the other localities.

Thus, the combined analysis of educational and demographic data suggests that participation at higher education levels is closely related to both the availability of educational opportunities and the age structure of each locality. In contexts where the population is predominantly children or adolescents and there are no higher education institutions, educational continuity beyond the secondary level is limited. Conversely, in environments where young people and adults coexist, and where greater opportunities for access exist, greater diversity is recorded in the educational levels completed.

An analysis of the educational offerings, along with the level of education currently being pursued by the population, reveals a low local capacity to respond to skilled employment opportunities, with potential increased pressure on educational infrastructure if demand increases.

There is no specific information on school dropout rates in any of the localities in the AoI. This data would be very useful for monitoring cumulative impacts, as it would allow for identifying trends linked to school dropouts due to factors such as changes in academic offerings or early labour market entry. The collection of this information could be integrated into field surveys through interviews with educational professionals or community surveys.

Educational Infrastructure
Institutions of Olacapato

Olacapato has an elementary school called "Mayor Juan Carlos Leonetti" No. 4,600, with a pre-primary education program, as shown in Figure 65.

Source: 2024 ESIA

Figure 65. Olacapato Primary School

Currently, for the 2023-2024 school year, the enrolment is 45 students. The institution operates a multi-grade system, grouping courses based on the enrolment in each division. The classes are currently distributed as follows: 1st and 2nd grade; 3rd and 5th grade; 4th and 6th grade; and finally, 7th grade, which is taught by Principal Celeste Martínez.

They receive some students from the Las Lomitas area. This is the only case in which students must travel to the town to attend classes. In the past, there was a shelter at the primary level because they received students from the puestos, but it was closed because people have concentrated in the villages and there are few active puestos.

The school offers a full-day program. This means that the schedule runs from 8 am to 4 pm, including both classes and special activities (agronomy, English, physical education, and art). It is important to note that children at the school receive breakfast and lunch, provided by a supplier from San Antonio de Los Cobres. The school also has a greenhouse where they grow squash, mint, lettuce, corn, potatoes, chard, and carrots, which are used in the kitchen. According to teachers, funding comes from the provincial government, but it is not sufficient, so teachers make monthly contributions on a private basis to provide breakfast.

The school building was constructed with industrial materials and has sheet metal roofs, except for a group of classrooms that still have thatched roofs.

The school has solar panels, mains water, electricity, a gas stove, and internet access. During the March 2024 site visit, students at the school reported that the signal is weak and most of the time unavailable for online work. Furthermore, while heating is available in all rooms, it doesn't work in some classrooms, so firewood is used as a backup. This is especially true in larger classrooms, such as the 3rd and 5th grades. In 7th grade, however, an electric heater is used because there are fewer students and the classroom is much smaller.

The school has a gymnasium, but physical education classes are often held in the town square, which, according to teachers, is in better condition.

With the establishment of mining companies in the area, the demand for rental accommodation has increased, so families in Olacapato must choose between providing services to the miners or the teachers. Because they can charge higher rates for the former, they end up choosing the latter. This has created a problem for the teaching staff, who have had to improvise rooms within the school building because they cannot afford the rental prices. Thus, two old classrooms have been vacated and converted into rooms. The conditions are not optimal, and the teachers live in overcrowded conditions inside the school.

The traveling multi-grade secondary school No. 5,193 has a campus in Olacapato, with an enrolment of 47 students for the 2023-2024 school year. It shares a building with the primary school, using three of its classrooms, shown in Figure 66.

Source: 2024 ESIA

Figure 66. Secondary school classroom used simultaneously for taking exams and as a teacher's residence

The school offers full-day classes (9 am to 4 pm). The situation of teachers at this level is similar to that of primary school teachers, as they have also been forced to live at the school. In this case, one of the classrooms they occupy is used as a bedroom. In total, 15 teachers provide mobile classes.

The overcrowding of these teachers is even more critical, since at the time of the field survey, teachers were taking exams in the same classroom where they sleep.

In September 2023, the Virtual University Study Center, affiliated with the Catholic University of Salta (UCASAL), was inaugurated in the towns of Tolar Grande and Olacapato. In the town of Olacapato, this centre is operated through an agreement between the Municipality of San Antonio de Los Cobres and Rio Tinto. This has expanded the department's educational offerings.

Institutions of Estación Salar de Pocitos

Primary School No. 4332, known as 7 de Mayo, operates on a summer calendar that begins in August and ends in June. It employs a multi-grade system, offering full-day classes from 1st to 7th grade (9 am to 5 pm). The school's staff consists of a principal (teacher), two permanent teachers, four special teachers who rotate with other communities (for English, physics, art, and agronomy courses), and a custodian. Interviews conducted in 2022 for the 2024 ESIA show that the school is being repopulated with new students due to return migration related to the incipient mining development in the area. Residents who had left the town a few years earlier are returning to their old homes. According to them, the necessary services include internet access and solar panels, given that the school has grown from 8 students to 29 in the last 5 years.

The facilities are in good overall condition and include additional classrooms provided through private investment from a mining company, as shown in Figure 67.

Source: 2024 ESIA

Figure 67: Primary School No. 4332, Estación Salar de Pocitos Station

Until the end of 2019, the Neighbourhood Centre operated as a branch of the multi-grade Secondary School No. 5193, whose main campus is located in Santa Rosa de los Pastos Grandes. Teachers travelled between towns in the Department. Due to the COVID-19 pandemic, this program was suspended, and students were forced to travel to the towns of Santa Rosa de los Pastos Grandes and Olacapato. In 2022, the campus reopened with an enrolment of eight students and operates on the premises of the Primary School.

Since the secondary school focuses on humanities and social sciences, the community has requested that it be changed to a focus more closely linked to job opportunities in the area or converted into a technical school; however, the initiative has not yet been implemented. Like the primary school, the school follows the summer calendar and has extended school hours. Additionally, a support service for adults is provided through tutoring.

Institutions of Catua

The town of Catua has two educational institutions: Paso de los Andes School No. 389, which includes pre-school, and Secondary School No. 20. Both operate during the summer season and offer full-day classes. In 2024, the primary school will have an enrolment of 63 students, while the secondary school will have 75 students, according to a witness. The institutions share a building, shown in Figure 68, which is in excellent condition and has all the services necessary for their activities.

Source: 2024 ESIA

Figure 68. Primary school, Catua

In short, while the quality of education in the Project's Direct AoI has improved in infrastructure (partly thanks to contributions from the private sector), there are persistent challenges: poor teacher housing, restrictions on curricular orientation, and poor connectivity. These conditions limit the institutions' capacity to absorb new demand without additional support.

Currently, there is no information available on the enrolment threshold to avoid saturation of the education system in each locality. Having this parameter would be key to assessing the resilience of existing infrastructure in the face of sustained growth in demand. This threshold could be established based on consultations with management teams, analysis of installed capacity (number of classrooms, teachers, available shifts), and local demographic projections, constituting a valuable tool for monitoring cumulative impacts.

Educational level achieved
Educational institutions play an important role in the community beyond cognitive development, as they also provide social support for students. They serve as a space for socialization for adolescents and young adults, in addition to meeting their basic nutritional needs.

In the Project's Direct AoI, the town of Olacapato has two educational institutions, one primary and one technical. The population most frequently has attained primary and secondary education levels. 21.6% of the population has incomplete primary education; similarly, at the secondary level, 18.6% are currently enrolled in primary school or have not completed it. It is worth mentioning that the distribution is similar for those who completed these levels: 21.6% at the primary level and 13.1% at the secondary level. Likewise, those who did not manage to access an educational institution represent 18.6% of the total population of the town. Regarding higher education, only 1.5% of the population achieved a complete university or non-university education.

In the town of Estación Salar de Pocitos, there is only one institution with primary education. There is also a significant gap at this level: while 33.3% of the population has incomplete primary education (either in the process of completing it or not yet completed it), only 9.3% successfully completed it. At the secondary level, 20.4% have completed, while 14.8% have incomplete education. The population that did not have access to education is 18.5%, similar to the town of Olacapato. Only 1.9% reached higher education; one factor influencing the low accessibility to higher education is the educational offerings.

Catua has a population of 24.9% who are currently studying or have incomplete primary education. Similarly, at the secondary level, 21.5% of those who have not completed secondary education or are in the process of completing it account for; 19.3% have managed to complete primary education. At the tertiary level, a total of 4.0% have reached this level, while only 1.8% had completed it at the time of the census.

In the Indirect AoI, there are ten educational institutions offering a diverse range of education, including primary, secondary, technical, higher, and one for adults. The highest level of education with the highest representation is incomplete primary (23.6%), followed by incomplete secondary (20%), and complete secondary (16.2%). Regarding tertiary education, 3.7% completed this level.

Overall, in the localities, it is noteworthy that more than 15% of Olacapato, Estación Salar de Pocitos, and San Antonio de los Cobres residents have not accessed educational training. As can be seen in Table 62, the transition from school to higher education is contrasting in terms of the percentages of the population in the Project's Direct AoI who access tertiary or university education. In the case of Estación Salar de Pocitos, only 1.9% managed to complete a full degree. The transition becomes more complex, since very few basic education graduates are able to study due to the costs that families must assume to support a 3- or 5-year degree in the city of San Antonio de Los Cobres or Salta.

This creates a conflict between the expectations of students and parents, as the latter want their children to work in mining companies. The situation is exacerbated by the limited higher education offerings in the area, which can also be a trigger for the increase in school dropouts. It is also worth noting that the dynamics vary between men and women: while the majority of male students enter the labour market, the women start families.

Table 62. Highest educational level achieved and completeness of the level – AoI (2022)

Highest educational level	Direct AoI						Indirect AoI	
	Olacapato		Estación Salar de Pocitos		Catua		San Antonio de los Cobres	
	N	%	N	%	N	%	N	%
Without instruction	37	18.6%	10	18.5%	65	12.8%	1027	16.3%
Incomplete primary education	43	21.6%	18	33.3%	126	24.9%	1491	23.6%
Complete primary	46	23.1%	5	9.3%	98	19.3%	690	10.9%
Incomplete secondary education	37	18.6%	8	14.8%	109	21.5%	1264	20%
Complete secondary education	26	13.1%	11	20.4%	84	16.6%	1024	16.2%
Incomplete tertiary	6	3%	0	0%	11	2.2%	352	5.6%
Complete tertiary	1	0.5%	0	0%	9	1.8%	233	3.7%
Incomplete university degree	-	-	-	-	2	0.4%	139	2.2%
Complete university degree	2	1%	1	1.9%	-	-	37	0.6%
Incomplete postgraduate studies	-	-	-	-	1	0.2%	29	0.5%
Complete postgraduate studies	-	-	-	-	-	-	12	0.2%
Ignored	1	0.5%	1	1.9%	2	0.4%	8	0.1%
Total	**199**	**100%**	**54**	**100.0%**	**507**	**100%**	**6306**	**100%**

Source: Prepared by the authors based on the 2022 National Population, Household and Housing Census

During this transition, educational institutions support the process through vocational workshops and complementary activities. Some companies have collaborated to finance projects of this type, such as Rio Tinto, which finances access to university education and educational assistance for completing secondary school through a scholarship program. Finally, it is important to highlight that schools and colleges are embedded within the communities and develop different ways of connecting with authorities and addressing social issues. The directors and teachers of educational institutions have extensive knowledge of the conditions in these populated areas. Educational institutions are actors with the potential to build networks with the community, impact children and youth, and support the incorporation of workers into mining and/or related productive activities.

At the higher education level, although the only in-person offering is non-university in San Antonio de Los Cobres, the towns offer virtual options. In September 2023, the Virtual University Study Center, dependent on UCASAL, was inaugurated, operating in the towns of Tolar Grande and Olacapato. In the former, it is located in the building of Secondary School No. 3239, as a joint initiative between the Ministry of Education, Culture, Science and Technology, the Catholic University of Salta, the Kolla Community of Tolar Grande, the Municipality of Tolar Grande, and Mansfield Minera, South America (SA). In the town of Olacapato, the Virtual University Study Centre is operating thanks to an agreement between the Municipality of San Antonio de Los Cobres and Rio Tinto.

Through this partnership, the educational offerings in the town of Olacapato were expanded. According to the Olacapato Virtual University Centre Monitoring Report, in April 2025, four scholarship students were registered: two for Business Administration, one for Occupational Health and Safety, and one for University Teaching in Early Childhood Education. Two are enrolled in the virtual program and two in the in-person program.

According to records, for the virtual students, the registration process posed a challenge in adapting and catching up with the progress of their degree courses. In one case, communication barriers were due to connectivity issues. On the other hand, although the in-person students attended classes from the start, which facilitated their connection with the university, one of them reported having trouble organizing her time, so it was suggested that she connect with the UCASAL Educational Guidance Center (COEDU). Additionally, based on the February–July 2025 Performance Report, a new scholarship recipient has been registered for the Occupational Health and Hygiene program at the technical level. Finally, the highest progress recorded in the program among the five scholarship recipients is 7.41%.

The limited educational continuity in the Project's AoI and the low levels of higher education represent a structural barrier to local capacity development. Although valuable experiences with public-private partnerships exist, pressure on educational institutions could increase as the project progresses, in the absence of specific strengthening policies.

5.4.3.6. VEC-6: Provision of Health Services

For VEC-6, the provision of health services, additional pressure on health services has been identified as a potential impact. For further analysis, the following related variables have been selected that describe the Project's Direct and Indirect AoI:

- Health infrastructure.
- Treatments (number and type) – main diseases.
- Accessibility and quality of services.

Health infrastructure in the Project’s Direct and Indirect AoI

Four healthcare centers are identified within the project's AoI: three Level I health posts located in Olacapato, Estación Salar de Pocitos, and Catua (Direct AoI), and one Level II hospital in San Antonio de los Cobres (Indirect AoI), as shown in Table 63. Care is provided primarily by permanent nurses and health workers; medical presence is rotating and depends on the location. Care is provided on an outpatient basis, and the hospital also includes specialized services. It should be noted that the available information was obtained from fieldwork conducted in 2022 and 2024, as it is not provided in the 2022 Census.

Table 63. Health care centres in the AoI

Locality	Centre	Level
Direct AoI		
Olacapato	Health Post	Level I
Estación Salar de Pocitos	Health Post	Level I
Catua	Health Post	Level I
Indirect AoI		
San Antonio de los Cobres	Nicolas Pagano Hospital	Level II

Source: Prepared by the authors based on an interview in Primary Health Care at the San Antonio de los Cobres Hospital.

At the local level, in Olacapato, and regarding access, the health centre does not have an ambulance (Figure 69). Some internal transfers are handled with police assistance, as well as accident treatment. For all other cases (emergencies and complex care), the San Antonio Hospital handles the transfers. Until 2022, they had one ambulance; however, due to mechanical failures, it was sent to the San Antonio de los Cobres Hospital and never returned.

Source: 2024 ESIA

Figure 69: Olacapato Health Post

In terms of the quality of service provided, they only have one nurse and one health worker on staff. The nurse works seven days a week, while the worker visits the neighbourhoods and nearby puestos from Monday to Friday. A general practitioner and an obstetrician from San Antonio Hospital visit the outpost monthly. According to an interview with nurse Liliana Martínez in 2024, the outpost had a limited supply of medications and could only provide treatment for two days. However, for illnesses requiring treatment for a week or more, families were forced to purchase them at in San Antonio de los Cobres, since the town does not have a pharmacy.

In the case of Estación Salar de Pocitos (Figure 70), due to accessibility issues, they do not have an ambulance, and emergencies are handled in San Antonio de los Cobres. Regarding the quality of services, this post was built in 2023 and includes spaces such as an inpatient ward with capacity for two patients, an infirmary, a medical consultation room, a dental office, and a waiting room. However, regarding medical staff, they only have one nurse who resides on-site on a 21-day shift with seven days off, so the health centre is unavailable on his or her days off. Additionally, every two weeks, a doctor from the Tolar Grande Health Center visits the post to serve the population of the town and surrounding area.

Source: 2024 ESIA

Figure 70: Health Post at the Estación Salar de Pocitos

In Catua, the health centre also provides primary care (Figure 71). The building is in good condition, and the staff includes a nurse who cares for local families, as well as the dispersed rural population. No further information is available regarding this facility.

Source: 2024 ESIA

Figure 71: Catua Health Post

In San Antonio, Nicolas Pagano Hospital (Figure 72), the main hospital for the entire operational area, is the largest and closest to the project. It covers approximately 34,000km^2 with its services, Primary Health Care (PHC)[34]. The hospital has 11 healthcare workers available to patrol rural areas such as Piscuno, Palomar, Cuevas, Toro, Cerro Negro, and Esquina Guardia. To this end, the hospital has three ambulances (one donated by a company); however, only one is operational, as there is no budget to repair the remaining two. This situation limits the hospital's operational capacity to provide care in the area, especially at remote healthcare centres, as well as the hospital's response capacity for urgent and emergency cases.

[34] According to the Official Gazette of the Argentine Republic, it is a health strategy that strengthens the right to health with the aim of reducing inequity in access to this service, thereby improving health coverage.

Source: 2024 ESIA

Figure 72: Dr. Nicolás C. Pagano Hospital in San Antonio de los Cobres

In terms of quality, it has the most comprehensive resources for its level of care (Level II). The services it provides include ultrasound, pharmacy, laboratory, X-ray, outpatient clinics, primary care, and 24-hour on-call services. It is also equipped with inpatient and short stay care rooms, and a delivery room. It does not perform complex surgeries; all procedures are referred to Salta. It also has a mental health care area staffed by a psychologist and a social worker. The staff consists of 91 people, five of whom are general practitioners or general practitioners (one of whom is located in Tolar Grande), three are full-time physicians, and one is contracted.

Furthermore, the presence of a private medical service, provided by the company LABTEC, has been identified, which represents an exception in the region. In this regard, the AID does not have private options in any of its localities, so the entire population relies exclusively on the public system—whether at local health centres or at the Nicolás Pagano Hospital.

Overall, the towns of Olacapato, Estación Salar de Pocitos, and Catua are observed to have deficiencies in infrastructure, equipment, and medication supplies. Furthermore, they are also being affected by mining development, as workers use the service.

Specialized doctors are located in the departmental capital, arriving at the clinics every two weeks to a month. In case of emergencies, residents must travel to the Nicolás Pagano Hospital because the clinics lack ambulances. Regarding resources, although the Olacapato and Salar de Pocitos hospitals were recently renovated (in 2012 and 2023, respectively), they lack equipment such as desks, chairs, and medical instruments. Similarly, there are limitations on access to medications, a situation that worsens in towns like Olacapato, where there are no pharmacies, so residents must purchase them in San Antonio de los Cobres.

Furthermore, it is worth highlighting that the area's geographical conditions, such as low winter temperatures, are an environmental factor influencing the increase in respiratory illnesses. Awareness campaigns have been implemented in response to this; however, they have not been sufficient. Another relevant issue is mental health, as a suicide case was reported in Olacapato, and while the San Antonio de los Cobres hospital conducts workshops at health centres, no related services are listed in the localities, with the exception of the health operation in Catua carried out in 2022, where two mental health services were reported.

Finally, in San Antonio de los Cobres, although it is an institution with greater availability of services, human resources, and quality, according to the data collected, there are notable problems hindering the healthcare

service, such as the lack of physicians to cover a very large area, since within its jurisdiction it serves populations from the Provinces of Jujuy and Catamarca. Emphasis is placed on the fact that the most in-demand specialties are paediatrics, linked to childhood malnutrition, and ophthalmology, primarily associated with older adults.

Linked to the lack of personnel, there is talk of service saturation, since the population has increased significantly with the development of mining. Although the department's population is estimated at 7,000 people, there are a large number of mining workers who are not registered as residents and these use the public health service, according to the testimony of health personnel interviewed for the Social Baseline of the 2024 ESIA. Likewise, regarding medications, the resources sent by the State are insufficient, and in the interior towns there are no pharmacies in the health centres. Below is a comparative table of the towns showing the number of staff, accessibility, and quality of the health facilities in the AoI, as shown in Table 64.

Despite the existence of significant private group coverage (social insurance and prepaid health insurance), limited access to state services and the lack of private services outside of San Antonio de los Cobres create significant vulnerabilities, especially in emergencies, chronic illnesses, or specialized care. In contexts of additional pressure on public services due to population growth or increased demand, this lack of diversification in the health care offering can further saturate the system; therefore, it must be well supplied with medical personnel, instruments and tools, medications, among other things.

Accessibility and quality of health services
One aspect of accessibility is based on the population's health coverage. It can be observed that, in the Project’s Direct AoI, more than 60% of the population has social security or prepaid insurance; Olacapato is the largest city where this coverage reaches 69.5% of the population; while in Salar de Pocitos, it only reaches 61.8%.

Table 64. Access and quality of health facilities

Locality	Staff		Accessibility	Quality
	Fixed	Visit		
Direct AoI				
Olacapato	01 nurse and 01 health agent	01 doctor and 01 obstetrician (every month)	• They have not had an ambulance since 2022. They receive police support for transportation. • Complex and emergency care is referred to San Antonio.	• No stock of medications for treatments for more than 2 days. • There are no pharmacies in the town, access is through the post or through the San Antonio de los Cobres Hospital
Estación Salar de Pocitos	01 nurse	01 doctor (every 15 days)	• There is no ambulance. • Emergencies are handled from San Antonio.	**Spaces:** • Hospitalization room (capacity: 2 patients) • An infirmary. • Medical consultation room. • Dental office. • Waiting room.
Catua	01 nurse	Health operation (01 in 2022)	-	-
Indirect AoI				
San Antonio de los Cobres	91 people, of which 5 are general practitioners or clinicians (03 staff and 01 contracted)	01 doctor in Tolar Grande	• It has 01 ambulance for emergency transfer.	**Services:** • Ultrasound. • Pharmacy. • Laboratory. • X-rays. • Outpatient clinics. • Adult protective services (APS). • 24-hour security. **Spaces** • Inpatient rooms • Abbreviated hospitalization. • Delivery room. It does not perform complex surgeries; all procedures are referred to Salta. It also has a mental health care unit staffed by a psychologist and a social worker.

Source: 2024 ESIA

Furthermore, state health programs or plans have less than 10% coverage in the Project's Direct AoI, with Salar de Pocitos having 3.6%. Regarding the number of people who do not subscribe to social security, prepaid insurance, or a State Program or Plan, they represent 34.6% in Salar de Pocitos; 31.2% in Catua; and 29.2% in Olacapato, as shown in Table 65. In San Antonio de Los Cobres, 49.5% have social security or prepaid insurance; 47.3% do not have this type of coverage or are not subscribed to a state health program or plan; and only 3.3% have a state health plan.

Table 65. Health coverage – AoI (2022)

Health coverage	Direct AoI						Indirect AoI	
	Olacapato		Estación Salar de Pocitos		Catua		San Antonio de Los Cobres	
	Cases	%	Cases	%	Cases	% of total	Cases	% of total
Social security or prepaid (including PAMI)	157	69.5%	34	61.8%	341	67.3%	3118	49.5%
State health programs or plans	3	1.3%	2	3.6%	8	1.6%	206	3.3%
He has no social security, prepaid insurance or state plan.	66	29.2%	19	34.6%	158	31.2%	2982	47.3%
Total	**226**	**100%**	**55**	**100%**	**507**	**100%**	**6306**	**100%**

Source: Prepared by the authors based on the 2022 National Population, Household and Housing Census

Characterisation of the Health Status

In the town of Olacapato, the population served is a total of 58 families; in addition, they also serve company personnel, according to the testimony of health personnel interviewed for the social baseline of the 2024 ESIA. However, there is no data on how many such services are provided to better characterize the use of services by the activity. However, according to those interviewed, there is collaboration, since the post treats patients from the mining companies, generally for traffic or work-related accidents. In return, the company doctors collaborate with the post by treating emergency cases that cannot wait for transfer to San Antonio de los Cobres. It is worth mentioning that, although there is no information on the companies that serve residents, this practice is not carried out by RINCON.

The health centre provides care for illnesses such as diabetes and hypertension, with weekly follow-up, as well as cases of alcoholism. It also provides care for traffic accidents, on a less frequent basis, and has recorded one suicide case. In the case of the accident, the level of urgency was high, as the patient (a mine worker) lost his leg. The mental health case, on the other hand, indicates that it occurred almost five years ago, from the date of the fieldwork.

Compared to the town of Estación Salar de Pocitos, the most common illnesses are respiratory and diarrheal diseases; they also provide care to residents of the surrounding area.

In Catua, patients from the dispersed surrounding population are also admitted, with respiratory illnesses being the most common. Based on the Jujuy Ministry of Health (2022), the information is supplemented by indicating that a health operation was carried out that same year, providing care for the following cases: clinical medicine, 32 visits; gynaecology, 10 visits; dentistry, 25 visits; social work assistance, 13 visits; check-ups for pregnant women, 2 visits; and mental health care, 2 visits.

According to records from the Ministry of Public Health of the Province of Salta, San Antonio de los Cobres reports the following common pathologies: infectious diseases, trauma, cardiovascular diseases, cancer and tumours, digestive system disorders, nutritional disorders, and acute respiratory infections (ARI).

Depending on the severity of the case, cases are transferred to hospitals or clinics in Salta (18–25 referrals); the hospital typically receives 60 to 80 admissions per month. Regarding check-ups for pregnant women, 15 are performed annually, and births are only provided in emergency settings (approximately 20 per year). According to the San Antonio de Los Cobres PHC Supervision (2020), information was collected on infant mortality, which was 14.2% in 2011, reaching a peak of 62.5% in 2016, and decreasing to 10.3% in 2019.

It is worth noting that the Nicolas Pagano Hospital is the head of Operational Area XXIX, meaning that its services cover the entire Department of Los Andes, parts of Rosario de Lerma and La Poma, and nearby towns in the Provinces of Catamarca and Jujuy. The information collected in 2019 delves into certain health-related care needs: in terms of nutrition, 6.4% of children aged 0–2 years were found to be underweight or very underweight, and 2.6% of children aged 2–6 years were underweight. Stomach illnesses are also present, with cases of salmonella detected. Finally, traffic accidents were attributed to the presence of foreigners such as tourists, migrants, and miners who lack driving experience in the Puna's geographical conditions (winding roads); however, a decrease in cases was reported due to safety conditions in the mines.

At the social level, health problems are linked to cases of alcoholism, widespread among adolescents and young adults, and cases of teenage pregnancies, although a decrease has been observed due to campaigns related to sexual and reproductive health.

At the gender level, cases of violence are reported and are addressed by the police, the municipality, and health and education personnel. In response, the hospital provides psychological care and also offers workshops at various health centers.

Finally, linked to mental health care, suicide affects the adolescent and youth population, accounting for two cases annually. This issue is addressed by the Hospital in conjunction with the United Nations Children's Fund (UNICEF), the Pontifical Foundation Scholas Ocurrentes, and schools. Specific actions include the "San Antonio de los Cobres Listens to You" workshops and talks with mental health professionals.

In conclusion, the AoI is burdened by a high rate of respiratory and chronic diseases, along with mental health disorders and manifestations such as alcoholism (especially among adolescents and young adults) and suicide (two cases have been recorded annually in the last decade). This burden, combined with the need to care for foreign populations and limited medical personnel, creates a scenario prone to saturation of the healthcare system in the face of possible population growth.

5.4.3.7. VEC-7: Road infrastructure

For VEC-7, potential impacts have been identified as pressure on the existing infrastructure and disruptions caused by vehicular traffic. For further analysis, relevant variables have been selected that describe the current conditions of the Project's Direct and Indirect AoI, organized along the following axes:

- Routes enabled for vehicular traffic associated with the Project, according to the type of vehicle (trucks, articulated vehicles, oversized vehicles) and distances to be travelled.
- General conditions of the existing road network, including characteristics, state of repair, and connectivity in the Provinces of Salta and Jujuy.
- Communities, projects, and points of interest near the routes used, with an emphasis on multifunctionality and cumulative pressure.
- Pressure on road infrastructure from the identification of mining, tourism, and transportation projects that share the same roads or could influence their future use.

This information will facilitate an accurate characterization of the road infrastructure status in the Project area, anticipating risks, inter-institutional coordination needs, and potential cumulative effects resulting from increased traffic.

Road network and access to the Project
Road access to the Project, located in Argentina's Puna region, is provided through a network of national and provincial routes connecting the Provinces of Salta and Jujuy with the Project area. Characterizing this network is essential to understanding current accessibility conditions, the types of vehicles allowed, the distances involved, and the logistical challenges that may arise during project development and operation.

Depending on the type of vehicle, different authorized routes were established:

- Trucks and chassis vehicles. They travel approximately 280km from the capital of Salta to the Project via National Route 51 (RN 51), which crosses the entire Province of Salta.

- Articulated vehicles. They access from Purmamarca (Jujuy) via National Route 52 (RN 52), connecting with Provincial Route 70 (RP 70) and then with RN 51, until reaching the Project. This route covers a distance of approximately 434km.

- Oversized vehicles. They use a mixed route that begins in Campo Quijano (Salta) along RN 51 to San Antonio de los Cobres, with options along the former RN 40 (currently Provincial Route 79 (RP 79) or National Route 38 (RN 38), depending on the conditions surveyed), continuing along RN 52 from Susques, and then connecting with RP 70 and RN 51. This route presents the greatest distance, with an estimated 460km.

The road conditions of each of these routes are described below, differentiating between the sections corresponding to the Province of Salta and the Province of Jujuy. This description considers both the strategic importance of these roads and their physical characteristics, state of preservation, and current use.

Routes in the Province of Salta
The Province of Salta contains one of the variants of the Capricorn Bioceanic Corridor, which, starting from the Sico Pass and following the routes of RN 51, RN 9, RN 34 and RN 16, facilitates these flows towards the northeast of the country (Ministry of the Interior, Public Works and Housing, San Antonio de los Cobres Territorial Strategic Plan, n.d.).

The main road network crossing the department of Los Andes is RN 51, which forms the east-west corridor linking the Province of Salta with the Republic of Chile via the Sico Pass. This road is the main access to San Antonio de los Cobres and Olacapato, located between km 218 and km 222 of the aforementioned route (consolidated dirt section of the road).

Regarding the condition of RN 51, it is paved up to San Antonio de Los Cobres, while the remaining sections are gravel and maintained by the National Highway Administration.

At the national level, road infrastructure policy in recent months has been characterized by budget cuts, delays in the transfer of funds, and a reorientation of priorities toward specific strategic projects. These conditions have led to slowdowns in the construction and maintenance of key roads in several provinces.

In this context, RN 51 accumulated a significant maintenance deficit, with critical sectors such as the Campo Quijano–Alfarcito section affected by subsidence and recurring cuts.

In 2025, new agreements and management guidelines were established to reverse this situation by resuming patching, milling, and construction of bays on priority sections (El Aybal–Campo Quijano). It was also agreed that the province would undertake paving of strategic sections (San Antonio de los Cobres–Mina Poma), with financing arranged through Plata Basin Financial Development Fund (FONPLATA). At the same time, negotiations are underway with the Inter-American Development Bank (IDB) to expand the scope of the work.

Table 66 summarises the works carried out during the 2024-2025 period for RN 51.

Table 66. Updates to RN 51

Date	Update	Stretch
March 2024	Progress on the Campo Quijano bypass: ~6km, 30% complete; road clearance, widening, and maintenance work are being carried out by the Recursos Energéticos y Mineros de Salta, S.A (REMSA).	Campo Quijano (detour RN 51 – RP 36)
October 2024	Start of the conservation plan by the National Road Authority (5th District Salta): re-assembly of gabions, cleaning of shoulders and signage in vulnerable areas such as El Alfarcito.	Various: El Cebollar, Chorrillos Station, Alfarcito
February 2025	Collapsed section (km 0–63) Campo Quijano–Alfarcito: cuts, subsidence and emergency repair with temporary fillings.	Campo Quijano–Alfarcito
June 2025	The National Roads Authority is moving forward with restoration works (milling, patching, 80 bays, and shoulder cleaning) between El Aybal and Campo Quijano, as part of Plan Malla 401B.	The Aybal–Quijano Field
July 2025	Repaving begins from La Silleta to the entrance to Campo Quijano (4km in two phases), including widening of culverts.	The Silleta–Campo Quijano
July 2025	Province-National Agreement: Salta will undertake the execution and financing (FONPLATA) of the San Antonio de los Cobres–Mina Poma paving project (~42km); IDB will undertake the upper sections.	San Antonio de los Cobres–Mina Poma (+ projected sections IV and V)

Source: Government of the Province of Salta (salta.gob.ar)

RP 27 connects with RN 51 and connects to the Estación Salar de Pocitos (Figure 73).

Source: 2024 ESIA.

Figure 73: Route 27 - Start in Cauchari

This route is the only one that reaches the town of Tolar Grande and then connects with Provincial Route 43, which connects the Estación Salar de Pocitos with Antofagasta de la Sierra and Antofalla (Catamarca).

Highway 27 is a gravel road, and its maintenance is managed by the Provincial Highway Department. In recent years, it has received investments to optimize critical sections, with 38.6km of basic works and drainage completed and paving of 40km scheduled to begin in 2024. However, local communities and authorities have complained about insufficient maintenance and the slow progress of construction, which limits productive and logistical integration with mining projects such as Lindero and Taca Taca. Furthermore, there is a need to consolidate a public-private consortium to guarantee the road's sustainability. Table 67 summarises the most recent progress and complaints.

Table 67. Update on works on Provincial Route No. 27

Date / Period	Situation / Progress	Section / Location
April 2022 – August 2023	Completion of 38.6km of optimized infrastructure (basic works, drainage, and artwork) with an investment of ARS 212.2 million.	RN 51 Junction – Estación Salar de Pocitos
July 2024	Start of paving 40km with double asphalt treatment.	First section (Cauchari – Estación Salar de Pocitos)
2024 onwards	Agreement between the Highway Department and REMSA to extend works and consolidate a new 38.6km route.	Cauchari – Estación Salar de Pocitos
June 2025	Complaint about poor maintenance and slow progress of paving.	Mining connection: Lindero, Taca Taca, and Puna Mining
Present	Communities call for consolidation of public-private consortium for sustained maintenance	Salta Puna (mining and tourism use)

Source: Government of the Province of Salta (salta.gob.ar)

The condition of the aforementioned roads, mostly gravel (in poor condition), has been identified as one of the main weaknesses identified in Salta's 2030 Strategic Plan, through the Strengths, Weaknesses, Opportunities, and Threats (SWOT) analysis for mining development.

Routes in the Province of Jujuy

In Jujuy, RN 52 plays a central role in connecting the Humahuaca Gorge, the Puna region, and the Jama Pass, enabling links with Chile and consolidating the northern stretch of the bio oceanic corridor. Its route includes key tourist spots such as Purmamarca, the Cuesta de Lipán, and Salinas Grandes, but it is also essential for transportation linked to mining projects, such as the lithium projects in the Susques, Catua, and Olaroz regions.

From this route, the connection to the Project is via RP 70, which connects Catua with RN 51 on the stretch between Cauchari and Olacapato. Table 68 presents the Jujuy towns near RN 52 and their distances to the Project, to illustrate the route's use for both mining and tourism.

Table 68. Distance from Jujuy towns to the Project

Locality	Distance to the Project (km)	Main access	Travel time / Route status
Humahuaca	300km	RN 9 → Abra Pampa → Susques → RP 129/129A to the Salar	5 hours/Good asphalt until Susques, then sections of consolidated gravel at altitude, with frequent wind.
Purmamarca	320km	RN 52 (Cuesta de Lipán – Salinas Grandes) → Susques → RP 16 (Salta) → RP 129/129A to the Salar	5 hours/All paved until Susques, then consolidated gravel in the Puna.
Maimara	330km	NR 9 → Tilcara → Humahuaca → Abra Pampa → Susques → RP 129/129A	5.2 hours/RN 9 Pavement.
Tilcara	330km	RN 9 → Humahuaca → Abra Pampa → Susques → RP 129/129A	5.2 hours/Good pavement until Susques; then a gravel road.
Uquía	290km	RN 9 → Abra Pampa → Susques → RP 129/129A	5 hours/Short section to Humahuaca, maintained mining roads.

Although it is a strategic route, RN 52 has historically presented various traffic problems, especially during the summer, including landslides, road closures due to rain, bridge deterioration, and lack of regular maintenance. These conditions, in addition to affecting the communities that use it and their visitors, generate delays and logistical uncertainty for projects, both for the transportation of supplies and for the movement of people and goods.

Table 69 summarizes the main updates to RN 52 in Jujuy, including works, closures, and interventions carried out in recent years.

Table 69. Updates to National Route No. 52

Date	Update	Section/Location
March 2024	Complete closure due to collapse of the Ronqui Angosto–Saladillo bridge following heavy rains; open only to light vehicles with temporary access.	Ronqui Angosto–Saladillo
March 2024	The National Highway Administration and the DPV (Department of Public Works) begin repairing an undermined section, constructing an embankment and replacing a culvert; and opening an alternative route along RP 78/79.	Lipán–Salinas Slope
March 2024	Provincial investment of $300 million to improve traffic flow in the Paso de Jama corridor; use of alternative routes for heavy transport.	RN 52 (general)
March 2024	RN 52 is expected to be reopened in Ronqui Angosto over the long weekend following embankment and culvert work.	Ronquido estrecho
March 2025	Complete nighttime closure and regulated daytime traffic at km 6 (north access to Purmamarca) due to bridge repair work.	Purmamarca North Access
June 2025	Not reported; RN 52 is not included in the scheduled closures in the state of provincial routes during that period.	Various sections of Jujuy

Source: El Tribuno Newspaper, Jujuy

Railway Network available and status of use

The General Manuel Belgrano Railway, inaugurated in 1876, played a fundamental role in the formation of towns in the Salta Puna. In San Antonio de los Cobres, the construction of the Polvorilla Viaduct required a significant amount of labour, made up of both local inhabitants and workers from other areas of the Andean region, who settled there permanently after the completion of the works. Similarly, the towns of Olacapato and Estación Salar de Pocitos were structured around the railway line and the movement associated with mining activity.

In 2016, the Belgrano Cargas C14 branch line was reactivated after eight years of inactivity, reestablishing rail links between Salta and towns such as San Antonio de los Cobres and Olacapato, although with limited use compared to its historical period of peak demand (Figure 74). In November 2017, this branch line began handling cargo exclusively to and from Chile for the company Arcadium Lithium, which has a transfer station in the Salar de Pocitos. This company's mining cargo was sent to the border, where Ferronor (Empresa de Transporte Ferroviario SA, a Chilean rail transport company) collected the mineral and transported it to the port of Antofagasta, Chile, twice a month. These operations continued until the end of 2022 (Ministry of the Interior, Public Works and Housing, San Antonio de los Cobres Strategic Territorial Plan, n.d.).

The branch currently operates between General Güemes and Socompa, covering approximately 554km of narrow-gauge track through the Salta Puna region. It operates an average of six trains per month, transporting approximately 120Ktpa, primarily sodium carbonate and mining inputs. Its infrastructure includes an intermodal system at the Güemes Node, which allows for freight on trains to Atlantic ports, reducing logistics costs. Its capacity is projected to increase to 2Mta through public and private investment.

There is no passenger transportation, and various communities have expressed the importance of reactivating the passenger transportation system.

Source: Casa Rosada, 2016.

Figure 74: Branch C14 reactivated

Airports - River/Maritime Infrastructure

The nearest planned international airport is Martín Miguel de Güemes International Airport, located in the city of Salta. There is also an airfield in San Antonio de los Cobres.

The mining companies that built their own runways are:

- Mansfield Minera (Lindero Project).
- Eramine (Centennial Project-Salar de Ratones).
- Posco (Gold Salt Project) Salar de Hombre Muerto, Province of Salta.
- Livent (Phoenix Project), Salar de Hombre Muerto, Catamarca Province.
- The Project, Salar del Rincon, Province of Salta.

The latter operates flights for staff shift changes on Mondays, Tuesdays, Thursdays, and Fridays with the company Flytec.

Regarding river/maritime infrastructure, the municipality of San Antonio de los Cobres is located approximately 717km from the Port of Mejillones (located in Chile) (via the railway branch) and 635km by vehicle roads (via the Sico Pass).

Regarding ports with access to the Atlantic Ocean, San Antonio de los Cobres is located 1,380km from the Port of Rosario and 1,720km from the Port of Buenos Aires, always by land (Ministry of the Interior, Public Works and Housing, San Antonio de los Cobres Territorial Strategic Plan, n.d.).

Means of Transport

Regarding public transportation, the only company serving the area is Ale Hnos, which operates daily intercity routes from the Salta bus terminal to San Antonio de los Cobres.

Currently, there is no public transportation from San Antonio de los Cobres to the towns in the interior of the Department, except for Tolar Grande, so access to Olacapato and Estación Salar de Pocitos is by private means.

Recently, a passenger shuttle service from Salta to Tolar Grande was implemented by SERVINORTE. The service runs twice a week, starting at 1:00 pm, departing from the Salta Capital bus terminal and connecting the intermediate towns of Olacapato and Estación Salar de Pocitos.

Table 70 shows the distances of the aforementioned towns from the Project and their respective distances.

Table 70. Distances between the localities of Direct and Indirect AoI and their access

Localities	Distance to the Project (~ km)	Accesses	Travel times / Road conditions
San Antonio de los Cobres	120	RN 51	4 hours/Route in passable condition
Olacapato	47	RN 51	2 hours/Route in poor condition without maintenance
Estación Salar de Pocitos	40	RP 27 and RN 51	2 hours/Route 27 with regular maintenance, Route 51 in poor condition and without periodic maintenance
Catua	17	RP 37 and RN 51	1 hour-Route in regular conditions

Source: 2024 ESIA

The problem of isolation was highlighted in the interviews conducted during the social survey, especially by teachers and residents who own businesses that require constant replenishment (greengrocers, butcher shops, restaurants, etc.). Isolation also affects the ability to continue their education in San Antonio de Los Cobres (where there is a greater diversity of higher education offerings), the transportation of teachers to attend school groups in different towns, and the transportation of residents to receive care at the hospital (ambulances only provide emergency transport).

Border Crossings

The project is located near the Sico Pass, which is located at 4,000masl and connects Salta with the Antofagasta region in Chile. It is accessed via RN 51. According to the report "Migration Movement Panorama 2024" by the General Directorate of Information, Analysis, and Migration Control, the Sico Pass does not report any inflows or outflows. However, the Jama Pass, located in Jujuy and accessed via RN 52, reported a total of 213,369 entries and exits.

Communities, Projects, and Points of interest near the routes used

As described above, access to the Project is via a network of national and provincial routes connecting the Provinces of Salta and Jujuy, with routes differentiated by vehicle type and logistics requirements. These routes not only constitute essential infrastructure for the project's operation but are also shared corridors for multiple productive, tourism, and community activities.

Figure 75 shows the main elements exerting current and potential pressure on this road network. It represents the national and provincial routes used by the project, along with the active or developing mining projects that rely on these corridors for the transportation of inputs, products, and personnel. It also includes the main tourist routes (Salinas Grandes, Cuesta de Lipán, San Antonio de los Cobres), the international border crossings (Paso de Sico and Paso de Jama), and the Indigenous communities located along these transportation axes, taken from public information collected by the National Institute of Indigenous Affairs.

It is worth noting that Salinas Grandes, the fourth largest salar in South America, is located on RN 52 (67km). This is an important tourist attraction both nationally and internationally, attracting a large daily influx of private vehicles, van tours, and group tours.

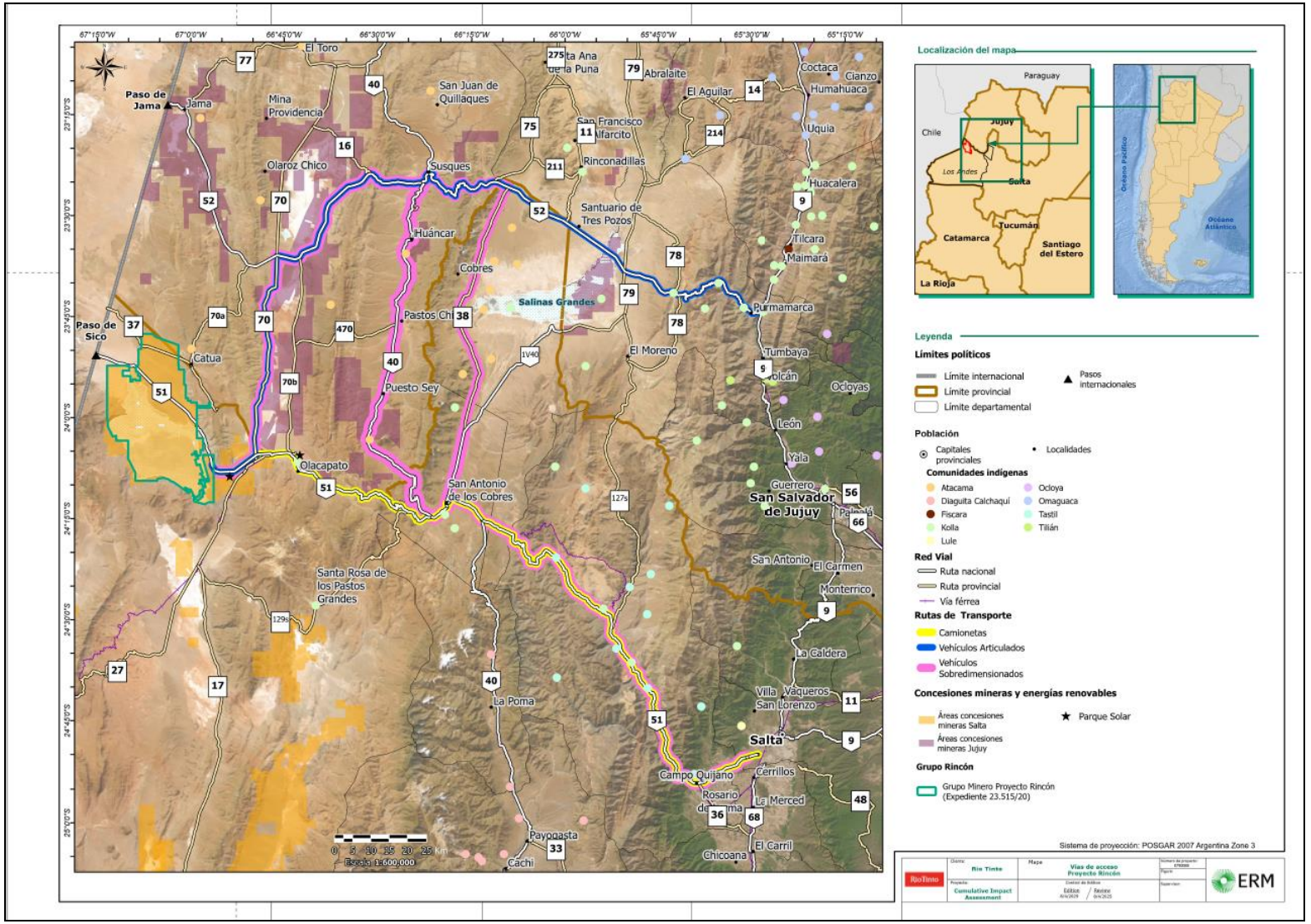


Figure 75: Map of routes used in the project and location of indigenous communities

Additionally, the map highlights the areas corresponding to mining projects that use both access roads to the Project as main routes. Generally speaking, the projects located in the Province of Salta are supplied primarily via RN 51, while those located in the Province of Jujuy are supplied via RN 52. This differentiation is key to understanding how mining traffic is distributed, and which sections of the road network concentrate the greatest logistical demand.

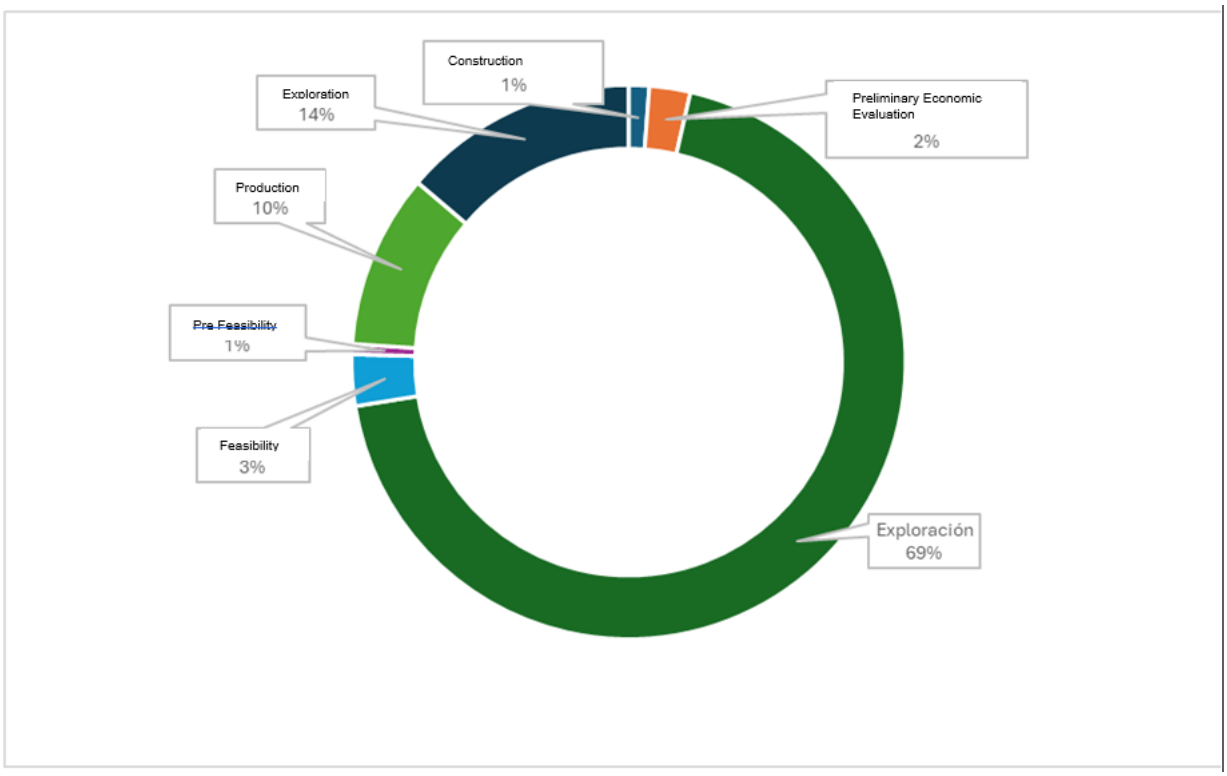
Based on the analysis of routes that include both RN 51 and RN 52, the presence of indigenous communities in nearby areas was identified. The information for each route is detailed in Table 71.

Table 71. Routes overlapping indigenous communities

Type of Road Network	Route	Indigenous Community
National	RN 51	• Catua Aboriginal Community Quewar Community Kolla Ethnic Group of Olacapato • Collas Unidos Community • Kollas Community in the San Antonio de los Cobres Desert • Las Cuevas Indigenous Community • Colla Pacha inti Community
	RN 52	• Paso de Jama Aboriginal Community (route to Chile) • Aboriginal Community of Olaroz Chico • Aboriginal Community “Portico of the Andes” of Susques • Antigales de Lipán Native Community • Purmamarka indigenous community • Coquena indigenous community
	RN 40	• Atacama communities of Puesto Sey, Pastos Chicos and Huáncar
	RN 9	• Yaqui Pampa Community • El Chañi Aboriginal Community • Aboriginal Community of the Tilián People's Band • Indigenous Community of El Antigal de Volcán • Aboriginal Community of the Tilián del Volcán People • Aboriginal Community of El Angosto, El Moreno District • Aboriginal Community of San Roque, Chief Francisco Limpitay
	RN 34	• No communities are identified
Provincial	RP 70	• Aboriginal Community of Catua
	RP 70A	• Atacama communities of Puesto Sey, Pastos Chicos and Huáncar (Cauchari Salar)
	RP 70B	• Aboriginal Community of Catua

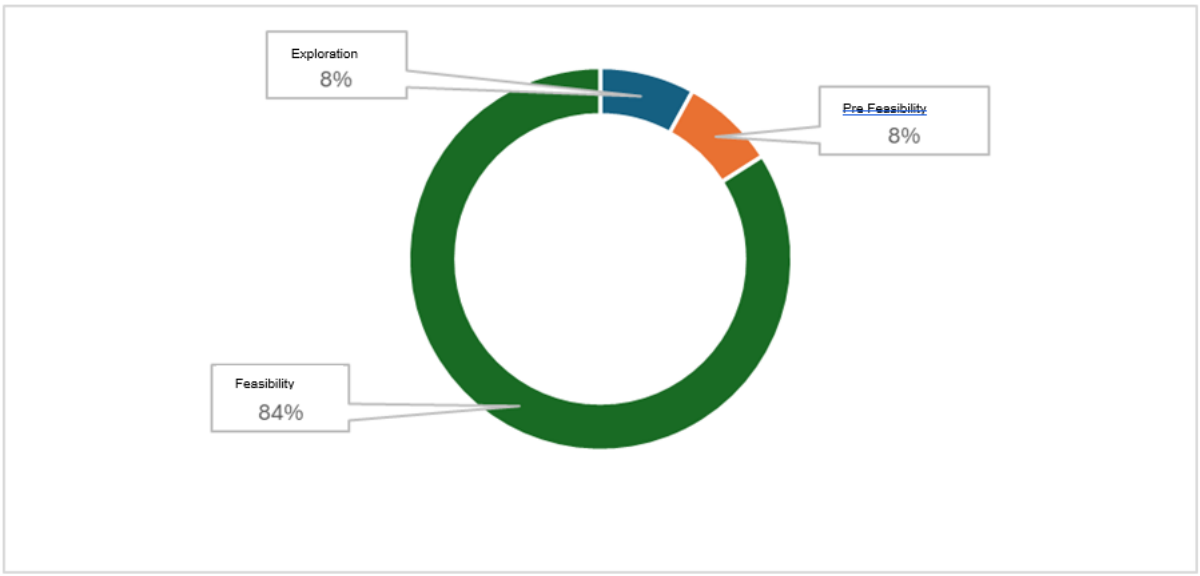
Source: Indigenous Peoples Plan (2024)

Figure 76 and Figure 77 provide a visualisation of the location and progress of mining projects, identifying which are in exploration, construction, or production. This information is important because each stage involves a different level of cargo and personnel movement, which impacts the intensity of road use.



Source: Ministry of Economy of the Nation (2025)

Figure 76: Distribution of mining projects by stage in the Province of Salta



Source: Ministry of Economy of the Nation (2025).

Figure 77: Distribution of mining projects by stage in the Province of Jujuy

Regarding production status, according to data from the Ministry of Mining (2025), there are currently 17 projects in operation in the Province of Salta—three of them metal and lithium projects—while in Jujuy the number rises to 21, nine of which fall into these same categories. This overview is detailed in Table 72, which presents the complete list of active projects, their main mineral, and the parent company.

This cartographic approach provides insight into the multiplicity of functions these routes serve—economic, logistical, social, and cultural—and serves as a basis for subsequent analysis of their condition, capacity, challenges, and maintenance requirements. It also helps assess the cumulative pressure on road infrastructure in a region with complex geographic conditions and low redundancy of alternative routes.

Table 72. List of mining projects in production status in the Provinces of Salta and Jujuy

Province	Main Mineral	Name	Controller
Salta	Clays	Arcillas, Floresta	Alberdi Ceramics SA
		Fernanda (Niño)	Nuñez Ramon
		La Candelaria	Northern Ceramics SA
		La Isla	Northern Ceramics SA
	Borates (B2O3)	Patito	Minera Santa Rita SRL
		Sijes	Borax Argentina SA
		Tincalayu	Borax Argentina SA
	Limestone	Cerros San Miguel El Carmen Los Pinos El Tarco San Cayetano	Martínez Cerrano Ana Edith
		Citrus	Carem SRL
		Mi Esperanza	-
		Santa Elena	-
	Lithium	Centenario-Ratones	Eramet
		Mariana	Ganfeng Lithium Co. Ltd.
	Gold	Lindero	Fortuna Mining Corp.
	Perlite	Quiron	White Wind SRL
		Ramadas	Imerys Minerales Argentina SA
		Rupasca	Imerys Minerales Argentina SA
Jujuy	Sand	Cantera La Quinta	Viramonte Iturriza German Maria
	Borates (B2O3)	Cilon	Zeballos Oscar Adolfo
		Grupo Minero BOroquimica	Borax Argentina SA
		Guayatayoc	Losi Luis SA
	Limestone	Cantera Barcena	Suc. by Carlos Martin Jaime Barcena
		Cantera Puesto Viejo	Holcim Argentina SA
		Puesto Viejo UV	Holcim Argentina SA
	Sodium chloride	Salinas Grandes	Cachi del Chincho Aboriginal Mining Work Coop. LTDA
		Salinas Grandes	Yea Rin Wu
	Copper	Martín Bronce	MOM Mining SRL
	Lithium	Cauchari-Olaroz	Ganfeng Lithium Co. Ltd.
		Olaroz	Rio Tinto Group
	Gold	Ajedrez	Spirit of the Andes Inc.

Province	Main Mineral	Name	Controller
		Córdoba	Santa Maria Mining Company SA
		Mina Catalina II	Spirit of the Andes Inc.
	Silver	La Providencia	Hanaq Group
		Puna Operation (Chinchillas - Pirquitas)	SSR Mining Inc.
	Lead	Aguilar	Integra Group
	Tailings	Mina Puma Norte	Bragantini Jorge Alberto
	Crushed stone	Cantera Garzon	Jose Cartellone Civil Constructions SA
	Gypsum	Jeremias 1	Foray Rosa Maria, Infante Gabriel Alberto and Infante María del Valle (Urkupiña Mining Company)

Source: Ministry of Energy and Mining, Mining Secretariat

Use of Road Infrastructure

National Road Information

To characterize vehicular traffic on RN 51, two main sources of information were used: historical records from the National Roads Department between 2006 and 2022 on Average Annual Daily Traffic (AADT) at the key points of San Antonio de los Cobres and Paso de Sico, and specific vehicle censuses carried out in November 2019[35] and April 2023[36] by direct measurements.

Three strategic measurement points were established for the 2023 census: Paso de Sico, Cauchari (intersection with RP 27), and San Antonio de los Cobres. Traffic was recorded in three-hour periods in the morning and three-hour periods in the afternoon for three consecutive days. Vehicles were classified as light (cars and motorcycles), medium (utility vehicles and pickup trucks), and heavy (trucks and buses).

From these records, indicators such as the average daily traffic index (ADCI), the average hourly traffic index (AHI), and vehicle composition by category and direction of travel were calculated, complemented by observations on traffic conditions and their relationship to mining, tourism, and local transportation activities.

Vehicular traffic on National Route No. 51: trends and critical points

Historical average daily traffic (ADTT) measurements conducted by the National Roads Authority between 2006 and 2022 show sustained growth in San Antonio de los Cobres (SAC), the main urban centre in the area. In 2006, an average of 200 vehicles circulated per day, while in 2022, the flow reached 480 vehicles per day, driven by mining and energy development and tourism (Tren a las Nubes).

In contrast, the Sico Pass, at the border's extreme end, maintains limited and variable traffic. Between 2009 and 2015, it stabilized at around 70 vehicles per day, with a peak in 2016-2017 due to logistical detours, before declining due to border restrictions. There, traffic is almost exclusively composed of international cargo trucks.

[35]As part of the RN 51 Paving project, the Salta Highway Administration (DNV) conducted a vehicle census in November 2019 on the San Antonio de los Cobres – Olacapato section.

[36]During the days of April 4, 5 and 6, 2023, a vehicle census was carried out on RN 51.

This upward trend is confirmed by the vehicle census conducted in November 2019, which recorded a daily average of 464 vehicles, 43% higher than in 2018, with a predominance of pickup trucks linked to the mining industry.

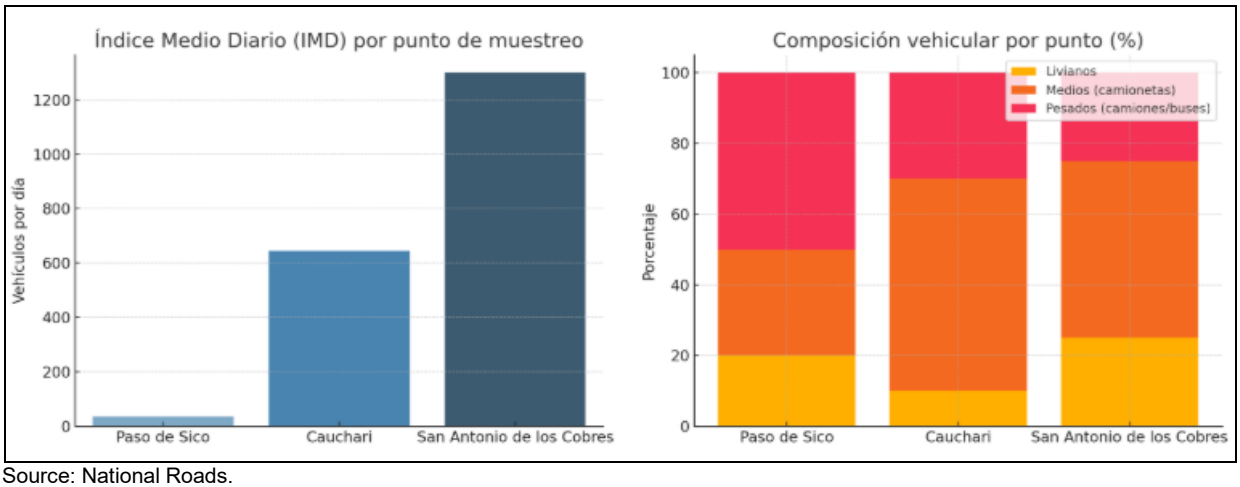
In the 2023 census, an increasing gradient of traffic pressure is observed from west to east, as shown in Table 73.

Table 73. Results on RN 51

Sampling point	ADT (vehicles/day)	Predominant traffic
Sico Pass	36	International cargo trucks
Cauchari	644	Mining trucks and trucks
San Antonio de los Cobres	1300	Vans, local transport, tourism and buses

The traffic mix confirms that mining and logistics traffic is the main source of road freight, complemented by tourism and local transportation. Unpaved sections to the west present a greater risk due to dust and low visibility, while bypass routes, such as RP 27, handle heavy traffic without being adequately prepared.

Figure 78 shows the Average Daily Index (left), which shows how San Antonio de los Cobres has the most vehicular traffic, followed by Cauchari and, far behind, Paso de Sico. On the right, the vehicle mix shows that in Cauchari and San Antonio de los Cobres, mining trucks and utility vehicles predominate, while in Paso de Sico, the traffic is mostly heavy trucks.



Source: National Roads.

Figure 78: Vehicle load distribution

A new census conducted in April 2023 at three points along RN 51 (Paso de Sico, Cauchari, and San Antonio de los Cobres) confirmed the gradient of traffic pressure from west to east.

- Paso de Sico registered only 36 vehicles per day, almost all of them heavy trucks authorized for international cargo transport.
- Cauchari had an intermediate flow, with 644 vehicles per day; 57% were mining trucks, followed by cargo trucks.
- San Antonio de los Cobres had the most activity, with 1,300 vehicles per day, combining local, tourist, and mining transportation.

During peak hours, San Antonio de los Cobres reached 688 vehicles between 9 am and 12 pm, while in Cauchari, the greatest movement occurred between 11 am and 2 pm, reflecting the dynamics of mining

and logistics movements. The results also revealed the vehicle composition of Paso de Sico, Cauchari, and San Antonio de los Cobres.

The Sico Pass is made up of four vehicular routes, with the largest traffic being trucks:

- RN 51 - RP Catua: From Paso de Sico to Catua where motorcycles and trucks travel, an equal proportion was observed during the time slot (one for each type of vehicle).
- RN 51 - RN 51: From Paso de Sico to Olacapato or Salar de Pocitos, 33.0% being vans and 67.0% trucks.
- RP Catua - RN 51: From Catua to Paso de Sico, no vehicle passage was identified.
- RN 51 - RN 51: From Olacapato or Salar de Pocitos to Paso de Sico, the transit of a car was identified.

In the case of Cauchari, the greatest traffic corresponds to medium-sized vehicles such as pickup trucks:

- RN 51 - RP 27: From Cauchari to Salar de Pocitos, 59.0% of vehicles were vans; 27.0% were trucks; and 11.0% were buses. Motorcycles and cars were equally present (3.0%).
- RN 51 - RN 51: From Cauchari to Paso de Sico, 75.0% of vehicles were vans, 12.5% were cars, and the remaining 12.5% were trucks.
- RP 27 - RN 51: From Estación Salar de Pocitos to Olacapato, San Antonio de los Cobres, or Salta, where 50.0% of vehicle traffic is vans; 40.0% is trucks; 8.8% is buses; and 1.3% is cars. This is the busiest route, with a total of 80 vehicles.
- 2RN 51 - RN 51: From Paso de Sico to Olacapato, San Antonio de los Cobres or Salta, where only the transit of vans (seven units) was observed.

Finally, in the case of San Antonio de los Cobres, the largest number of vehicles are pickup trucks:

- RN 51 - RN 51: From San Antonio de los Cobres to Olacapato - Paso de Sico – Estación Salar de Pocitos. The composition is dominated by light trucks (47.4%); cars (18.9%); motorcycles (13.0%); buses (10.9%); and trucks (10.3%).
- RN 51 - RN 51: From San Antonio de los Cobres to Salta. 49.3% of vehicles are vans; 21.3% are trucks; 14.7% are cars; 8.0% are motorcycles; and 6.7% are buses.

RN 51 is consolidating its position as an essential logistics hub for mining, energy, and tourism transport, concentrating its greatest pressure in San Antonio de los Cobres, the region's main urban centre and the only paved section to Salta. In contrast, to the west, dirt roads with lower capacity predominate, where the traffic of medium and heavy vehicles raises dust and reduces visibility, increasing road hazards.

Traffic is distributed in staggered order: Paso de Sico has a reduced flow, almost exclusively for heavy cargo linked to the border crossing; Cauchari serves as an intermediate node, dominated by mining company trucks; and San Antonio de los Cobres concentrates the largest volume of vehicles, combining local, tourist, and mining transport.

Furthermore, the diversion of traffic to secondary routes such as RP 27, which connects to projects in Catamarca and towns like Tolar Grande and Salar del Hombre Muerto, increases traffic on roads not designed to handle heavy traffic. In this context, the current road infrastructure is not prepared for the sustained growth of this activity, which accelerates its deterioration and increases traffic risks.

5.4.3.8. VEC-8: Traditional Productive Activities

In VEC S-8, traditional productive activities, potential impacts have been identified as land use modification, disruption to traditional ways of life, and the transition from traditional livelihoods to mining

activities. For analysis, related variables have been selected that describe the Project's Direct and Indirect AoI:

- Diversity and characteristics of traditional productive activities.
- Ownership and use of livestock puestos.
- Economic dependence on livestock farming.
- Age distribution of people engaged in shepherding.
- Utilization of animal fibres for spinning and weaving.

Productive Activities Identified
A variety of traditional productive practices are developed in the Project's AoI, including extensive livestock farming, handicrafts, and, to a lesser extent, subsistence agriculture. These activities are part of a comprehensive productive strategy, closely linked to the environmental conditions of the Puna and the family organization of the groups that inhabit the region.

Particularly among the Andean population, family reproduction strategies exhibit a strong territorial dispersion, with multiple residences linked to the development of different activities. It is common for the same family to maintain temporary or permanent residences in livestock ranches, in towns such as San Antonio de los Cobres, Quijano, and even the city of Salta, which fulfill specific functions within their productive and social structure.

Extensive livestock farming has historically formed the basis of the traditional economy in the Puna. Camelids (llamas) are raised primarily for meat and wool, along with sheep and goats, and also for consumption and the production of textiles. The production units—known as haciendas or puestos—are run by ranchers, who manage between 30 and 300 animals, depending on the capacity of the area.

The natural vegetation available in high Andean Steppe and vega ecosystems constitutes the main source of food for livestock (Quiroga Mendiola and Cladera, 2018). Herds typically include llama (*Llama glama*), goats (*Capra aegagrus hircus*), and sheep (*Ovis orientalis aries*). This production is mostly intended for family consumption, with few instances of commercialization. While bartering once existed, there is currently no evidence of its widespread continuation. Some families still use it in times of scarcity, exchanging fabrics for food or animals. This reflects a change in the dynamics of production and in the role of livestock farming within local economies, which remains today primarily a subsistence activity.

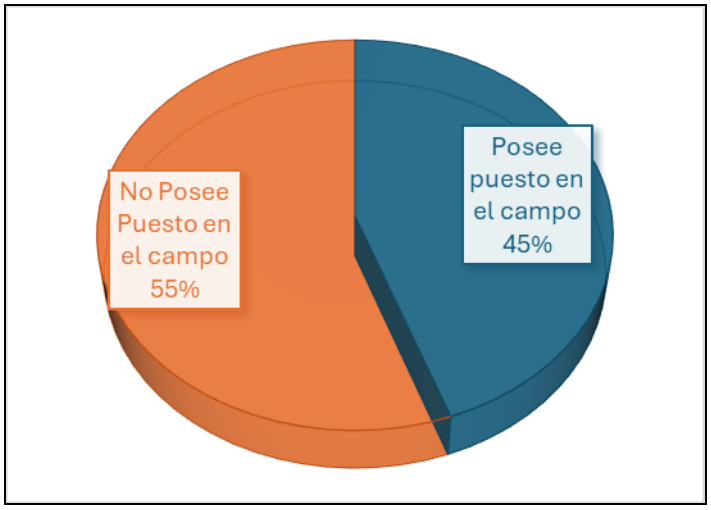
In communities like Catua, livestock farming has traditionally been the predominant economic and cultural activity. Since the 1970s—a time referred to by the community as the "grandparents' era"—significant changes have occurred in the productive and social dynamics of the territory. Currently, although many families earn income from wage employment, animal husbandry continues to provide economic autonomy and food security, acting as a strategic lifeline in the face of crises or emergencies. Sales of meat or fibre are sporadic, and low prices, coupled with low demand and a lack of consistent buyers, limit income from this activity. Although its economic contribution to families is small, the use of llama and sheep wool remains central to the preservation of cultural identity.

Among the current challenges families face, their testimonies highlight the lack of institutional support, such as the absence of health campaigns or basic infrastructure—for example, water reservoirs—and the seasonal variation in grazing, which depends on the amount and frequency of rainfall. In dry years, families must resort to purchasing feed or corn, which affects the economic viability of raising livestock.

Livestock farming remains largely transhumant, involving seasonal mobility based on the availability of grazing pasture, water, and shelter. Both livestock and families move throughout the year to different puestos, where they establish temporary residences. This way of life involves extensive land use and maintains a dynamic relationship with the high Andean ecosystem, where adaptation to the environment is essential.

However, a growing process of partial sedentism (i.e., the process where a population transitions from a nomadic lifestyle, characterized by frequent movement, to a more settled, stationary way of life, typically involving permanent dwellings and agriculture) is observed in the communities in the AoI. Many families have extended their stay in homes located in the villages, and some of their members have established permanent residence in urban areas.

Despite this, they retain their rural productive spaces—the farm puestos—which they visit periodically or leave in the care of relatives. This pattern was confirmed through an exploratory survey conducted in 2022 for the 2024 ESIA, which covered 175 households in San Antonio de los Cobres (Indirect AoI) and 75 households in the Direct AoI, distributed in Catua (35 households), Olacapato (25), and Estación Salar de Pocitos (15). Among the most relevant results, it is worth highlighting that almost half of the respondents stated that their family maintains at least one farm post, despite currently residing in urban or semi-urban areas. This trend reflects a dual form of residence that combines urban living with traditional productive practices, as shown in Figure 79.



Source: 2024 ESIA

Figure 79: Possession of positions in the field

Catua and San Antonio de los Cobres are the towns where the most families still maintain livestock ranches, as shown in Table 74. In Estación Salar de Pocitos and Olacapato, only a few indicated that they still have them.

Table 74: Ownership of positions in the field by locality

Locality	**Does the Family own a farm in addition to this house?**	
	Yes	**No**
Direct AoI		
Catua	71.8%	28.2%
Olacapato	19.0%	81.0%
Estación Salar de Pocitos	28.6%	71.4%
Indirect AoI		
San Antonio de los Cobres	41.4%	58.6%
Total	**44.5%**	**55.5%**

Source: 2024 ESIA

Despite the difficulties, many of these practices maintain a deep social and cultural connection, both for their contribution to family subsistence and for their role in the reproduction of ancestral ways of life. An example of this cultural continuity is the hacienda sign, a community practice carried out between the months of January and March. Although some interviewees mentioned that it is no longer carried out with the same enthusiasm as in previous generations, it is still carried out with incense, flowers, and coloured wool, in gratitude to Pachamama. This family-oriented and symbolic activity strengthens community cohesion.

Positions by Location in the AoI
Information on livestock farms in the Project's Direct AoI comes from the Livestock Farm Study conducted by SCG (2025). Specific data on the Indirect AoI are not available.

In Catua, 94 livestock puestos were surveyed, located within the communal territory recognized as collective property of the Catua Aboriginal Community. This registry also includes those puestos linked to families who, although residing in the urban area, maintain active ties to the community and its productive spaces, as shown in Table 75.

Table 75. Number of Catua puestos and corrals according to usage status reported by their puesteros

Catua	No.	Current use	Seasonal	In disuse
Number of positions identified	94	45 (47.9%)	19 (20.2%)	30 (31.9%)
Use of the post's grazing area	94	67 (71.3%)	16 (17.0%)	11 (11.7%)
Urban corrals	20	16	2	2
Rural corrals	3	3	-	-

Source: SCG, 2025.

These puestos are distributed among 36 families, some of whom are responsible for more than one production unit. Of the total registered, 64 puestos (68.1%) are habitable and are currently operating:

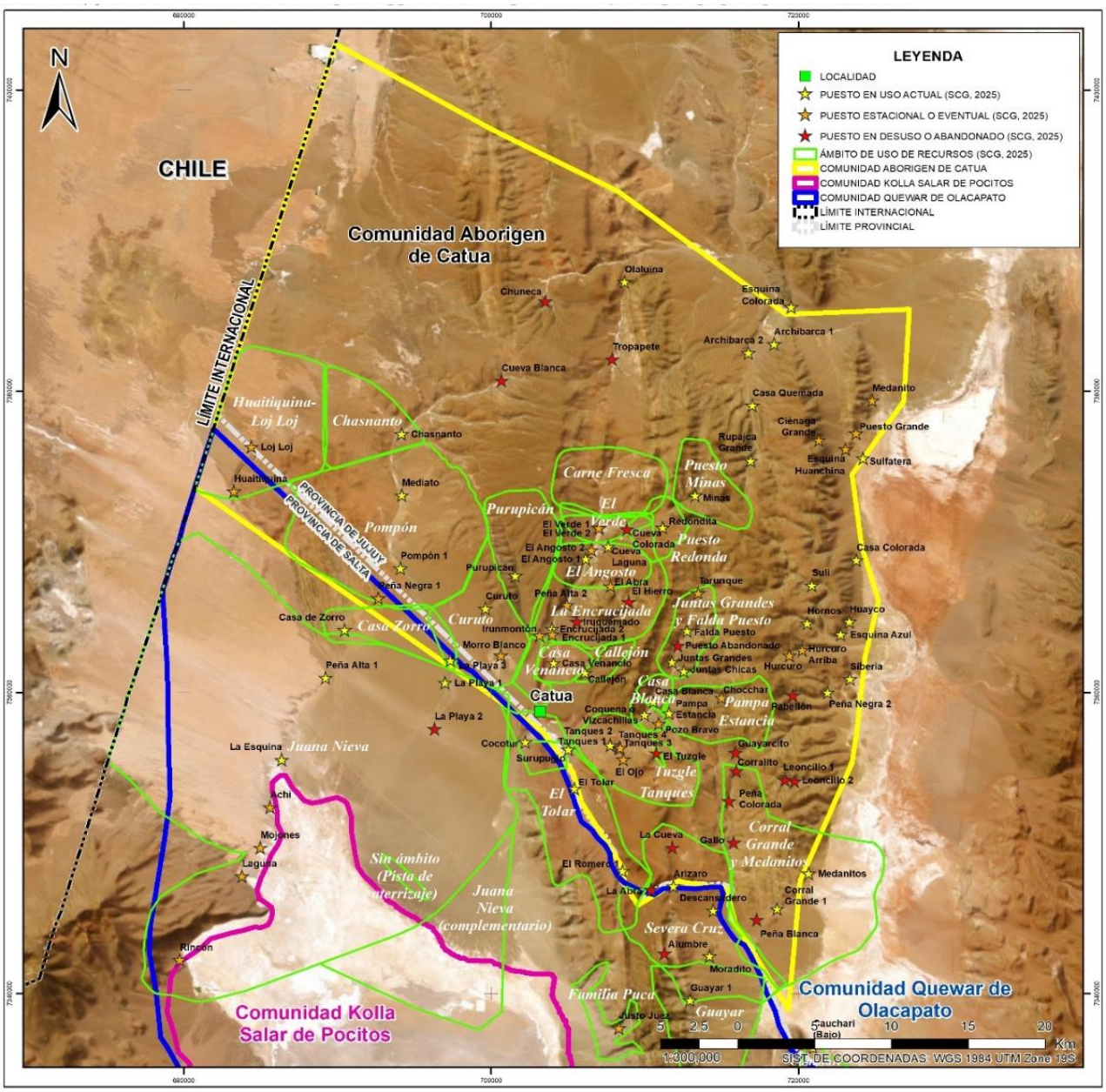
- 45 with permanent use throughout the year.
- 19 used seasonally or according to production needs.
- 11 puestos were unused, with no registered activity or adequate housing conditions at the time of the survey.

Figure 80 shows the geographic location of the puestos and corrals in Catua, as well as the areas identified by families for grazing, firewood collection (for cooking and heating), medicinal plant extraction, and access to water.

In Olacapato, the study identified a total of 38 positions, of which 26 (68.4%) are active in different modalities:

- 21 have permanent use and habitable conditions.
- 5 are used sporadically or seasonally.

The remaining 12 puestos (31.6%) are currently inactive, often due to deterioration or the death of the puesteros who historically occupied them. Among the cases mentioned by local officials are Sucar 1 and 2 puestos, vacated after the death of Jacinto Cruz, as well as Corral Colorado, Traspuesto, Casa Banca, and another puesto near Cruz del Pueblo, all linked to the late Gregorio Cruz, considered one of the town's founders.



Source: SCG, 2025.

Figure 80: Location of puestos and their areas of use in Catua

It is important to note that abandoning a home does not necessarily imply the loss of use of the surrounding area. In many cases, the areas surrounding these puestos continue to be used for grazing, both by the original families and by other community members. Examples include Rita Ramos's Cata post, Escolástica Condori's Minas, and an old post in Vega de Olacapato Chico, currently under the responsibility of Tomasa Nieva. In all of these cases, livestock farming remains active in the surrounding grazing pastures.

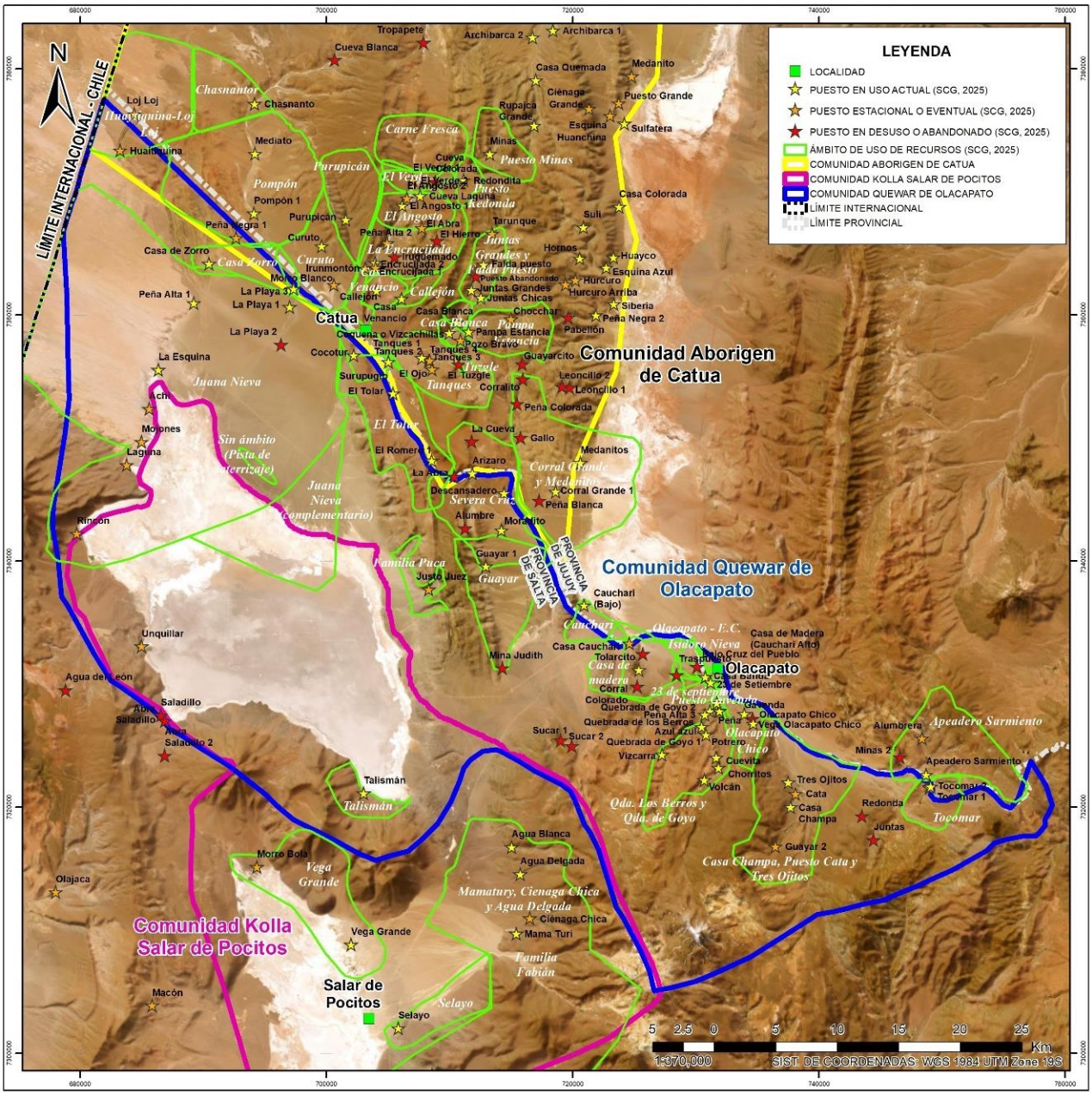
This dynamic was confirmed in a validation session with community members, where Cinthia Fabián, Chief of Estación Salar de Pocitos, pointed out that an unused outpost should not be interpreted as permanently abandoned, as it can go a long time without formal use before a community member resumes its occupation.

Considering the use of associated grazing territories, 32 of the 38 puestos (84.2%) continue to be used fully or partially, while only 6 are completely unused, as shown in Table 76 and Figure 81.

Table 76. Number of puestos and corrals in Olacapato according to the status of use reported by its puesteros

Olacapato	No.	Current use	Seasonal	In disuse
Number of positions identified	**38**	21 (55.3%)	5 (13.2%)	12 (31.6%)
Use of the post's grazing area	**38**	31 (81.6%)	1 (2.6%)	6 (15.8%)
Urban corrals	**3**	3	-	-
Rural corrals	**1**	-	1	-

Source: SCG, 2025.



Source: SCG, 2025.

Figure 81: Location of puestos and their areas of use in Olacapato

In the town of Estación Salar de Pocitos, 21 livestock puestos were documented. Of these, 8 are permanently inhabited, 5 are used temporarily, depending on environmental conditions and production needs, and 4 are uninhabited and not actively used.

This flexibility in land use is also reflected in specific examples such as the Quirón and Casa de Hueso puestos, which are currently uninhabited but continue to be used as grazing areas, especially during rainy summers. In total:

- 13 puestos have permanent grazing areas.
- 4 are used occasionally or seasonally.
- 4 are completely inactive.

The study also identified two corrals located within the urban area of Estación Salar de Pocitos, both owned by Mr. Romualdo Fabián. Only one of these corrals is currently in operation, as shown in Table 77 and Figure 82.

Table 77. Puestos and corrals at the Estación Salar de Pocitos by usage status reported by puesteros

Estación Salard de Pocitos	No.	Current use	Seasonal	In disuse
Number of positions identified	21	8 (38.1%)	5 (23.8%)	8 (38.1%)
Use of the post's grazing area	21	13 (61.9%)	4 (19.0%)	4 (19.0%)
Urban corrals	2	1 (50.0%)	-	1 (50.0%)
Rural corrals	0	-	-	-

Source: SCG, 2025.

Economic dependence on livestock activity
The fieldwork conducted by SCG (2025) included surveys aimed at understanding the economic importance of livestock farming for families in the Project's Direct AoI. Through questions about the importance of animal husbandry in the family economy and whether, if they were unable to do so, they would have another source of income, the level of dependence on this activity in each household was investigated.

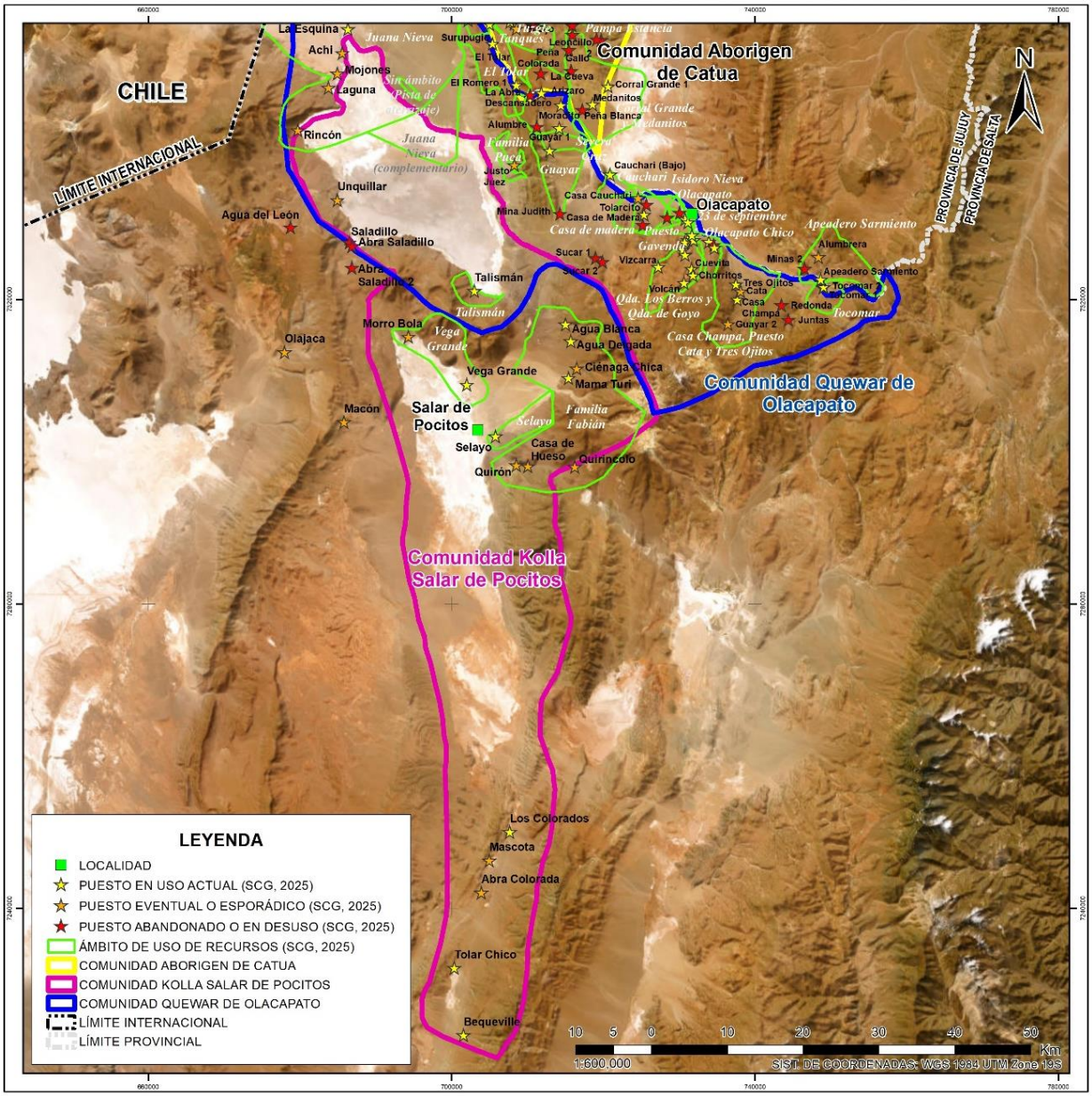
Based on the responses obtained, livestock farming was classified as a primary or secondary activity, or marked as not answered (NC), depending on the role it plays in the economic dynamics of the family group. The results for the different localities are shown in Table 78.

Table 78. Classification of livestock activity as primary or secondary by location

Locality	Major	Secondary	NC	Total
Catua (includes urban corrals)	10 (35.7%)	15 (53.6%)	3 (10.7%)	28
Pocitos	1 (25%)	2 (50%)	1 (25%)	4
Olacapato	1 (9.10%)	8 (72.7%)	2 (18.2%)	11
Total	**12 (27.9%)**	**25 (58.1%)**	**6 (13.9%)**	**43**

Source: Prepared by the authors using data from SCG, 2025.

Overall, more than half of those interviewed (58.1%) consider livestock farming a secondary activity, while nearly 28% identify it as their primary activity. The remaining 14% did not respond or did not specify their level of dependency.



Source: SCG, 2025.

Figure 82: Location of stands and their areas of use in Estación Salar de Pocitos

Catua (including its urban corrals) is the locality with the highest percentage of people who recognize livestock farming as their primary activity (35.7%). However, the majority (53.6%) still consider it secondary, suggesting a diversified economic structure, with livestock farming as an important but not exclusive source of income. Within this locality, the urban corrals (6 people in total) present a mixed profile: 3 people indicated that livestock farming is their primary source of income, 2 consider it secondary, and only 1 did not answer.

In Pocitos, a portion of the population considers it their primary activity (25%), half consider it their secondary activity, and 25% did not respond. This could be linked to a situation of low production scale or dependence on other family income.

For its part, Olacapato shows less structural dependence: 72.7% of those interviewed consider livestock farming a secondary activity, while only one person (9.1%) declared it as their primary activity. This could be explained by the greater employment opportunities in other areas, such as mining or public employment.

From a qualitative perspective, among those who indicated that livestock farming plays a secondary role in the family economy (58.1%), it was mentioned that this activity "contributes to the economy," "functions as savings," or "as a backup," and is crucial when their primary income is insufficient. In these cases, families often supplement their income with pensions, municipal jobs, work in educational institutions, community kitchens, mining, or other family contributions.

One point worth highlighting is that, in the community validation sessions, several people reported that during the pandemic, when all formal economic activity was paralysed, farming was the main source of income for many families, ensuring self-consumption and, in some cases, generating small surpluses for exchange or sale. This experience highlighted the strategic role of livestock farming and other traditional productive activities as an economic and food safety net in times of crisis.

For those who consider it their main activity (27.9%), the response was categorical: if they couldn't do it, they wouldn't have a way to make a living. In these cases, livestock farming constitutes the structural economic basis of the household, not just a supplementary source of income.
In short, while a percentage of the ranching population still depends on subsistence livestock farming, it takes on special relevance for the entire community's family reproduction strategies in the face of uncertain future scenarios, such as the closure of mining projects in which they work, the socioeconomic context, or health contingencies. In these cases, ancestral activities—already proven in their ability to sustain the population—are presented as a fundamental pillar of community resilience.

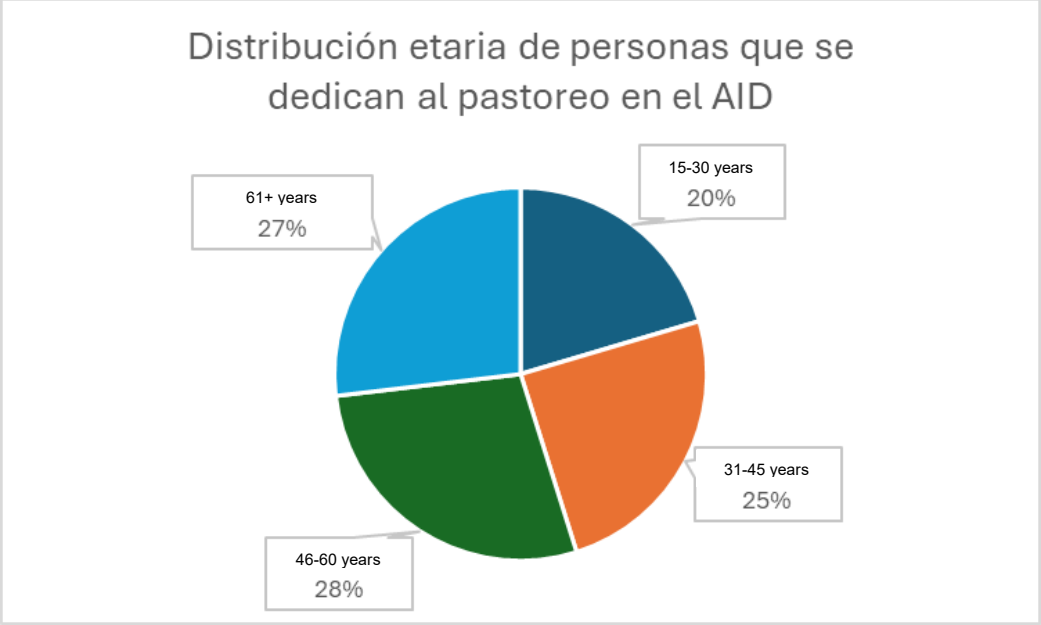
Age Distribution of People Engaged in Shepherding
Knowing the age of those involved in traditional productive activities, such as herding, is essential for understanding the current dynamics of this practice and anticipating its future sustainability. Within the framework of analysing potential impacts on these activities, this variable allows us to identify whether there is generational change, whether long trajectories predominate, or whether, on the contrary, the activity faces risks of intergenerational discontinuity.

The information presented in this section comes from the Ranch Keepers Study conducted by SCG (2025), which included field interviews with families in the Project's Direct AoI. As part of this survey, families were asked who within the family group had the greatest presence at the ranches and was effectively involved in herding tasks.

For this analysis, both those who reside permanently at the puestos, generally older adults, and those who come regularly, at least once every two weeks, such as children or grandchildren who visit and help with farm care tasks, were included. Some informants reported visiting the puestos as frequently as once or twice a week. However, those whose presence was considered occasional or sporadic were excluded from the analysis.

Of a total of 93 people considered for the analysis, the general age distribution is shown in Figure 83 and as follows:

- 15 to 30 years: 19 people (20.4%).
- 31 to 45 years: 23 people (24.7%).
- 46 to 60 years: 26 people (28.0%).
- 61 years or older: 25 people (26.9%).



Source: Prepared by the authors using data from SCG, 2025.

Figure 83: Age distribution of people engaged in pastoralism in the Direct AoI

As can be seen in the figure, the most represented group is the 46- to 60-year-old group, followed closely by those over 61. While young people represent a fifth of the total, the activity is primarily sustained by people over 45, which represents a potential risk of aging in the sector if generational change is not promoted.

The analysis for each location is detailed below.

- Catua (63 people): This locality has the largest number of shepherds and a relatively balanced age distribution. It stands out especially in the 46-60 age group, which represents 34.5% of its pastoral population. It also has the largest number of young people: 13 people between the ages of 15 and 30, suggesting significant potential for generational renewal.

  Within this locality, the people who carry out the activity in urban corrals (8 people) show a mixed profile: 37.5% are over 61 years old and 25% are young. This reflects a coexistence of tradition and some active youth participation, albeit on a reduced scale. The higher proportion of older adults reinforces the need for support and generational strengthening in this specific sector.

- Estación Salar de Pocitos (5 people): presents a clearly aged profile, with 40% of shepherds over 61 years old and no one under 30. This could indicate a critical situation in terms of intergenerational continuity of shepherding.

- Olacapato (25 people): has a significant proportion of older adults (36% in the 61+ age group), along with moderate youth participation (16%). This suggests that, although there is a youth base, the activity is strongly supported by older generations.

The observed intergenerational presence indicates that pastoralism still maintains a certain degree of cultural transmission between generations. However, the predominance of older adults and people of mature age highlights the need for specific policies to encourage the incorporation of young people.

Catua is positioned as a key area for strengthening generational renewal, thanks to its number of shepherds and relative age diversity. Urban corrals, while representing a smaller proportion, also show signs of youth participation that could be strengthened with targeted strategies. In contrast, areas such as Estación Salar de Pocitos show clear signs of structural aging in the sector, which demands urgent interventions to prevent the disappearance of pastoral practices.

This age baseline constitutes a key input for future monitoring. Its update will allow for the evaluation of the impact of potential training strategies, incentives, and strengthening of the connection between new generations and traditional pastoral practices.

Utilization of Animal Fibres for Spinning and Weaving
In the Salta Puna region, the production and use of animal fibres—primarily from llamas and sheep—is a traditional productive activity with great cultural and social value. These fibres are used to make clothing, blankets, ropes, sashes, yarns, and chuspas, many of which also have symbolic meaning, such as lloke, a thread used as a protective amulet in rituals.

Shearing takes place between October and December, during the warm season, to protect the animals from the cold winter. It is a family task dominated by women, who use traditional methods with special scissors ("tijerón") to avoid damaging the skin. The amount of wool obtained varies depending on the animal, between 500 grams and 2 kilos per animal.

Wool is primarily used for family consumption, storage, or exchange, while sales have declined in recent decades due to low demand and a lack of time for spinning and weaving. Despite this, in places like Olacapato, some weavers participate in local fairs to market their products.

The most common wool colours are white, black, grey, and brown, and some families maintain knowledge of natural dyeing with local plants such as chacha, copal, and chuchar. Spinning and weaving are concentrated in the summer and reflect a cultural blend of pre-Hispanic and colonial motifs. According to surveys conducted by SCG (2025), most families continue to use animal fibres, as shown in Table 79.

Table 79. People who use fibre in the Direct AoI

Locality	Make use of fibres	Does not perform the activity	Total
Catua	23 (82.14%)	5 (17.86%)	28
Estación Salar de Pocitos	2 (50.00%)	2 (50.00%)	4
Olacapato	8 (72.73%)	3 (27.27%)	11
Total	33 (76.74%)	10 (23.26%)	43

Source: Prepared by the authors using data from SCG, 2025.

Most families carry out this activity primarily for personal consumption and to preserve traditions, while only a small percentage reported selling products derived from animal fibres.

Changes and Trends in Productive Activities
As part of the 2025 study of puesteros conducted by SCG, various community perceptions and testimonies were collected, allowing us to identify recent changes and trends surrounding traditional productive activities, especially animal husbandry and the use of fibre for spinning and weaving. This information was collected in community workshops during the months of March and April.

The accounts collected reveal a decline in livestock farming, primarily due to climatic factors—such as less frequent rainfall, deteriorating grazing pastures, and a scarcity of native vegetation—that directly

affect the availability of feed for livestock. This situation has led to a significant reduction in the number of ranchers and animals, as well as a growing need to purchase feed, a practice that was uncommon decades ago. Environmental pollution, both from suspended dust and drilling, is also cited as an additional cause of stress on the livestock production system.

The testimonies also reveal a process of social transformation that impacts the continuity of these activities: many families have stopped living in the puestos permanently and have moved to the village, making animal husbandry a secondary occupation. This change in residential patterns has weakened the daily care of livestock and made it difficult to care for more demanding species, such as goats, which require constant attention. Added to this is the decline in family involvement, especially among younger generations, both in herding and in practices associated with spinning and weaving. Older adults point out that young people have lost interest in these tasks, which were previously performed by women and men equally, and emphasize that today's focus is on other forms of work, particularly mining employment.

Regarding the use of fibre, it is noted that wool shearing and processing have declined significantly, as has the market value of leather and other byproducts. While some women continue to produce artisanal weaving, many do so on a small scale and without stable marketing channels. It is mentioned that some products are sold in tourist spots such as San Antonio de los Cobres, but no collective bodies or institutional support are identified to sustain these initiatives. At the same time, key practices, such as bathing for livestock sanitation, which previously kept animals free of parasites and improved fibre quality, have disappeared.

Another aspect worth highlighting is the transformation of gender roles in economic activities. Traditionally, women were closely tied to spinning, weaving, and livestock care. Currently, many of them are employed in mining or the service sector, which has contributed both to economic empowerment and a shift away from traditional productive practices. This reconfiguration has hindered the intergenerational transfer of knowledge related to these activities, reinforcing their fragility.

Finally, the testimonies point to a progressive weakening of community support structures. The interruption of vaccination campaigns, the lack of investment in basic infrastructure for livestock puestos, and the absence of programs promoting the appreciation of traditional products are factors that have negatively affected the sustainability of livestock farming and its associated activities. While there remains a desire to resume and strengthen these practices, especially among older adults and some families with strong ties to the territory, current conditions limit their viability, according to the testimonies.

Evaluating changes and trends in traditional productive activities is essential within the framework of a cumulative impact study, especially when one of the potential impacts identified is the transition from traditional livelihoods to mining. This transformation implies not only a shift in the local economy but also a series of social, cultural, and environmental effects that accumulate and sustainably affect community and territorial dynamics.

The displacement of activities such as animal husbandry and artisanal production toward mining jobs can introduce changes in traditional cultural practices and alter the social fabric. This entails risks such as the loss of ancestral knowledge, economic dependence on volatile sectors, and changes in community organization, which can compromise local well-being and identity in the medium and long term.

Therefore, integrating these changes and trends into the analysis allows for a comprehensive approach to cumulative impacts, considering not only the direct consequences of mining activity but also the interactions with previous and concurrent socioeconomic and cultural processes. This approach contributes to the design of more effective monitoring and mitigation measures aimed at preserving cultural and productive heritage, fostering economic diversification, and strengthening community resilience in the face of profound transformations in their ways of life.

Community Participation in the Workshops
Community workshops were held in the towns of Catua, Estación Salar de Pocitos, and Olacapato, all within the Project's Direct AoI. The participation of puesteros was ensured through invitations specifically

targeted to this population, and in the case of Catua, a dedicated workshop was held for them, allowing for a more in-depth look at their practices, knowledge, and perceptions.

Catua was the town with the highest level of participation, with a total of 46 people participating in the two-day workshop: 16 on the first day, focused on puesteros, and 30 on the second day, open to the general community. In Olacapato, 14 people participated in an open session. A single meeting was also held at Estación Salar de Pocitos, with 15 people in attendance, although no personal registration was kept in this case.

Regarding gender composition, of the 60 registered individuals between Catua and Olacapato, 42 were women and 18 were men, representing 70% of the female population. This predominance is observed in both localities: in Catua, women represented 67% and in Olacapato, 79%. This broad participation of women is especially relevant, as it reflects the active role they are taking in the continuation or redefinition of traditional productive activities and in the integration with new economic and social dynamics in the region.

5.4.3.9. Recommendations for Future Baseline Assessment

Finally, the purpose of this section is to present indicators that have not been obtained through secondary data collection, as well as available qualitative information; however, they are important for fine-tuning the characterization of VECs and subsequently conducting impact analysis.

VEC-3: Demographic Structure
Population that lived in Estación Salar de Pocitos in 2001 and 2010: The possibility of determining the year in which the population has lived is proposed in order to obtain this data and determine the population growth rate of this town.

VEC-5: Educational Services
Student enrolment threshold: There is no information available on the student enrolment threshold to prevent overcrowding of the education system in each locality. This parameter would allow for an assessment of the resilience of the existing infrastructure in the face of sustained growth in demand, both from the local and migrant populations. This information would be collected through consultations with management teams, analysis of installed capacity, and local demographic projections.

VEC-6: Provision of Health Services
Number of visits to health centers for mining company workers: According to interviews conducted for the 2024 ESIA, a large number of mining company workers use health services; however, there are no records of this data. Its importance lies in its impact on potential health centre saturation, considering that some localities lack sufficient resources to care for local patients. Furthermore, in relation to the Project, even if the services are not used, it will allow us to determine the actual capacity that the centre can provide, if required and without any impact.

5.4.4 Next Steps

Over the next few months, RINCON will complete the CIA to include the following:

- Assessment of the contribution of the Project and other relevant projects to the predicted cumulative impacts on each VEC (Step 4).
- Conduct a qualitative assessment of the predicted cumulative impacts on the viability or sustainability (i.e., future condition) of the affected VECs, using a High/Medium/Low rating (Step 5).
- Define mitigation measures to manage the Project’s contribution to cumulative impacts and associated risks (Step 6).

It is anticipated that the CIA will disclosed be a stand-alone document by the end of November 2025.

6 Environmental and Social Mitigation and Management

6.1 Water Resources Mitigation and Management

As detailed in the Assessment of Brine and Water Resources document (ERM, 2025c), the Project follows a hierarchical mitigation strategy: avoidance of impacts, followed by minimisation, restoration, and, if necessary, offsetting. A range of targeted measures has been implemented to mitigate potential impacts on water systems and sensitive ecosystems. Overall, the Project adopts a conservative, adaptive, and modular approach to spent brine management, supported by a robust monitoring system designed to prevent and respond to any potential risk of aquifer contamination.

6.1.1 SBDF

Several actions have already been taken to avoid impacts at the SBDF, particularly in relation to the Ojos de Agua, which host extremophile microbial communities. The location and design of the SBDF were modified to prevent direct interference with these sensitive features. Additionally, buffer zones were established and categorized into three levels of restriction based on textural, morphological, and geophysical analyses, aimed at preserving the ecological integrity of the surrounding environment.

The SBDF design and environmental management plan incorporate multiple safeguards to prevent brine infiltration into the underlying aquifer, including:

- Site preparation and ground conditioning: Each SBDF cell is levelled and compacted to reduce percolation and promote surface evaporation. The natural low permeability of the Salar's surface crust is preserved and enhanced to act as an infiltration barrier.

- Perimeter drainage and surface water control: Perimeter channels are constructed to divert stormwater away from disposal areas, minimizing water accumulation and potential infiltration.

- Progressive, modular brine disposal: The SBDF is developed in sequential modules, allowing controlled brine volumes and surface exposure. This modular approach facilitates containment and monitoring of potential seepage.

- Groundwater monitoring: A dedicated monitoring network surrounds the SBDF to track changes in water quality and hydraulic gradients, enabling early detection and corrective action in the event of suspected infiltration.

- Contingency and adaptive management: The environmental management plan includes responsive measures such as containment, recovery, or redesign of affected cells, supported by continuous evaluation and regulatory oversight.

Important: Condition 21 of Resolution 101/25 requires increasing the distance between the SBDF and the Ojos de Agua, from 250m to 700m. This design modification will be implemented by SRK (Engineer of Record), and the numerical groundwater model will be updated by Montgomery & Associates by November 2025 to assess any variations in predicted groundwater drawdown resulting from this design change.

6.1.2 EMEs

A dedicated environmental monitoring subprogram for EMEs has been developed, incorporating physicochemical and microbiological analyses alongside seasonal sampling campaigns. This program is being implemented in collaboration with national scientific institutions, including INIQUI-CONICET. Additionally, an in-situ microcosm experiment has been initiated to evaluate the resilience of these microbial communities to potential water quality changes associated with project activities, such as spent brine infiltration.

The alternatives analysis has been updated to include specific ecological criteria—such as the presence and proximity of extremophile habitats—within the multicriteria framework used for siting key infrastructure. These efforts aim to ensure the Project's compatibility with the conservation objectives of the Los Andes Wildlife Reserve and to guarantee that any residual impacts are appropriately managed or offset.

A range of mitigation options is currently under evaluation in the event that project activities are predicted to affect environmentally sensitive water-related receptors. Mitigation strategies will be tailored to each site, based on its unique characteristics, hydraulic dynamics, ecological sensitivity, and resilience. Ongoing studies are focused on deepening the understanding of these receptors, which will inform the development of appropriate, site-specific mitigation measures.

6.1.3 Rincon Lagoon Area and Vegas

To protect environmentally sensitive receptors such as the Rincon Lagoon and adjacent vegas, the following site-specific mitigation strategies are being considered:

- Reduction or cessation of brine abstraction: Brine extraction from wells located immediately east of the Rincon Lagoon and vegas may be reduced or halted to minimize drawdown impacts on groundwater levels in these sensitive areas.

- Targeted brine or spent brine reinjection: Reinjection of brine into sediments near the Rincon Lagoon and vegas can act as a hydraulic barrier, helping to stabilize groundwater levels. Pilot injection trials conducted in these areas have successfully raised the water table. Numerical groundwater modelling also supports reinjection as an effective method to mitigate drawdown in both the lagoon and vegas along the western Salar margin.

- Construction of low-permeability physical barriers: If reinjection proves insufficient, engineered barriers may be constructed to reduce lateral groundwater flow and prevent further declines in water levels.

- Surface water augmentation and irrigation: Supplemental irrigation or surface water flow enhancement may be used to maintain saturated conditions at the ground surface—particularly in vegas areas that are more dependent on groundwater levels than spring discharge.

6.1.4 Ojos de Agua

- Cessation or reduction of abstraction from brine wells in the immediate vicinity of the Ojos de Agua (although this is unlikely to be a required mitigation due to the creation of a mound underneath the SBDF that will possibly, and based on latest numerical modelling, offset any potential drawdown in the Ojos de Agua).

- Increase the width of the SBDF drainage in the foot of the embankment to further promote evaporation and reduce the risk of water level rise in the Ojos de Agua (the risk of water level raise has decreased with the extension of the buffer zone between the SBDF and Ojos de Agua, from 250m to 700m).

- Injection of brine or spent brine into sediments in the immediate vicinity of the Ojos de Agua, which will act as a hydraulic barrier and reduce the risk of dropping groundwater levels.

- Injection of spent brine during operations (sometime between years 20 and 30 of operations) to reduce the localised drawdown post closure and therefore reduce the time required to mitigate the drawdown in the Ojos de Agua upon closure.

- One potential mitigation measure under evaluation involves the controlled injection of diluted brine directly into the Ojos de Agua to reduce the risk of abrupt changes in brine quality seeping beneath the SBDF. The feasibility of this approach will be confirmed following the completion of resilience testing, which aims to assess the sensitivity of extremophile microbial communities to variations in key chemical parameters. Special focus is being placed on lithium concentration, total dissolved solids (TDS), pH, and temperature.

- The full list of chemical parameters included in the resilience testing program is provided in Table 80. These results will inform whether direct injection is a viable strategy for maintaining ecological stability at these sensitive receptor sites.

Table 80. Parameters included in bacteria resilience testing

Parameters	Total Phosphorus, Sulphate, Total Dissolved Solids (TDS) at 180 °C, Lithium, Total Kjeldahl Nitrogen (TKN), Nitrate, Manganese, Iron, Chloride, Calcium, Potassium, Orthophosphate (as PO_4^{3-}), Nickel, Trivalent Chromium (Cr III), Hexavalent Chromium (Cr VI), Zinc, Total Hardness (as calcium carbonate ($CaCO_3$)), Total Alkalinity (as $CaCO_3$), Total Organic Carbon (TOC), Ammonium (as NH_4^+), pH, Salinity, Electrical Conductivity at 25 °C, Sodium, Magnesium, Nitrite (as NO_2^-), Bicarbonate Alkalinity (as HCO_3^-), and Arsenic.

Given the ecological sensitivity of the Rincon Basin and the potential risks to its water-dependent ecosystems, Rio Tinto is committed to exploring offset alternatives within the region, should avoidance and mitigation measures prove insufficient, and offsets become necessary.

In parallel, Rio Tinto is collaborating with the Laboratory of Water and Soils (LAgS) of INIQUI–CONICET to establish advanced DNA testing capabilities within Salta Province. This initiative responds to local legislation prohibiting the transfer of extremophile bacterial samples outside Salta for genetic analysis. The LAgS is currently preparing a comprehensive budget proposal that includes not only high-end laboratory equipment but also specialized software, trained personnel, and supporting infrastructure. This effort represents a strategic investment in regional scientific and technological capacity-building.

This potential initiative could significantly enhance the laboratory's ability to deliver timely and accurate DNA analysis services for the Project. Beyond its immediate benefits, the initiative contributes to long-term institutional strengthening, supporting the National University, CONICET, and the Province of Salta. By equipping the region with cutting-edge molecular and environmental analysis tools, it fosters local research capabilities and promotes sustainable development.

Additionally, a special permit has been granted by the Secretariat of Environment in July 2025—through its Biodiversity and Protected Areas Divisions—authorizing the development of baseline and resilience studies focused on EMEs within the Rincon area. This regulatory milestone provides a robust framework for conducting in-depth environmental assessments under scientifically and legally supported conditions.

6.1.5 Adaptive Water Management Plan

The Adaptive Water Management Plan (AWMP) document (ERM, 2025d) provides a summary of the proposed water management plan for the Project and a framework whereby appropriate adaptative management measures can be implemented (if required) in response to circumstances or events that are not fully predictable or expected at this stage. The adaptive nature of the AWMP sets out, in advance, the actions required to gather information and respond appropriately in the event of circumstances occurring which were neither anticipated nor predicted.

This overarching AWMP document provides the strategic framework for water management, monitoring, mitigation and reporting. Other key related documents include water management and water monitoring plans which are summarised in the body text in this document and provided in full as appendices to this document.

The AWMP is a live document, which will be reviewed and updated regularly in line with advancements in the hydrogeological understanding of the Project area, insights obtained from the collection of operational data and any changes in management approaches and/or legislation. The objective of the AWMP is to:

- Promote the sustainable use of water and minimise the potential impact of the Project on the water environment within the Rincon Basin.
- Ensure that all relevant legislation and regulation (and, where applicable, licences and permits) are adhered to with regard to the water aspects of the Project.

Specific objectives of the AWMP include:

- Integration of water, biodiversity and ecosystem services aspects.
- Alignment with IFC PSs and International Best Practice.
- Sustainable use of water resources.
- Protection of the water environment.
- Definition of technical criteria that will trigger: i) mitigation actions; ii) implementation of offsets; and/or iii) community / indigenous people compensation mechanisms.
- Approach to adaptive management of water resources across Rincon Basin.

The adaptive management approach involves the establishment of appropriate indicators, thresholds, trigger/action levels, management response plans (actions) and reporting.

6.1.5.1. Indicators

Indicators are the environmental, ecological and/or water parameters which will be monitored and assessed as part of the AWMP with a view to evaluating potential impacts on the water environment. The monitoring and assessment of these indicators will:

- Adequately characterise and/or measure the environmental condition that will potentially change.
- Provide early detection of changes in environmental conditions or system performance.
- Be representative of the issue being assessed and easily measurable, accurate and reproducible.

The indicators which will be monitored for the Project will include water levels, flows, water quality, precipitation, vegetation extent/status, etc.

6.1.5.2. Thresholds

Thresholds are established based on environmental benchmarks and/or toxicity thresholds and represent the point of onset of significant adverse impacts on the water dependent ecosystem. The aim is for threshold values to not be exceeded and are used as the basis with which to define proactive management measures which will be implemented prior to the indicator reaching the threshold value, however in the event threshold are exceeded, the mitigation hierarchy comes in play. The threshold values are used to define trigger and action values for each of the indicators being monitored, at each key sensitive receptors or monitoring location.

6.1.5.3. Trigger Values

Trigger values are established to initiate specific pre-defined management responses or actions required to avoid a threshold value being reached. These trigger values represent an early warning system which allows corrective measures to be implemented to prevent significant impact on the water environment or water dependent ecosystem. Triggers are based on the following aspects or a combination of these aspects:

- Statistical change from an existing baseline condition.
- Numerical value based on a percentile of a reference data set.
- Quantifiable change from expected performance.
- Numerical threshold based on predictive modelling, relevant guidelines, or site-specific water quality objectives.
- Trend indicating increasing (or decreasing) levels of a specific indicator.

- Increasing (or decreasing) trend of an indicator which will reach the next action level triggers within a specified period of time (“forward forecasting”).

There can be various categories of Trigger levels, for example:

- Level 1 (Low) Trigger – ‘warning’ value that triggers an investigation to assess if there is cause for concern.

- Level 2 (Moderate) Trigger – value that triggers supplementary monitoring and/or actions to prevent further impacts.

- Level 3 (High) Trigger – value that triggers remedial actions.

Trigger levels are set to ensure that sufficient time is available to implement appropriate actions well in advance of any adverse impact on the environment occurring. The tiered trigger level system minimises the risk that threshold values will be reached, by the early initiation of actions addressing the impact which is occurring and initiating mitigation measures if/as required. However, it is possible that mitigations may not achieve the expected results and that threshold values may be breached at some point in the Project life, and in this eventuality, the appropriate actions will be undertaken in accordance with the mitigation hierarchy.

6.1.5.4. Monitoring Requirements

Details of the specific monitoring data (including how it will be collected and/or the source of this data) which will be used to compare site observations with trigger values. Details of the frequency of actual data review and/or trend analysis against trigger values.

6.1.5.5. Management Response Plans – Actions

The Management Response Plans provide a description of management and mitigation measures (actions) for each trigger value. In some instances, the most appropriate specific management responses may not be known in advance, in which case a “toolbox” of potential mitigations/management responses which will be considered for implementation will be identified for each trigger/action level.

An example of a set of management responses/action may be as follows:

- Level 1 (Low) Trigger – Alert - Data review and additional monitoring focused on confirming if trigger level reached, groundwater model reconciliation / update may be required.

- Level 2 (Medium) Trigger – Action - Additional monitoring and implementation of mitigation measures, trigger groundwater model reconciliation / update.

- Level 3 (High) Trigger – Action – Remedial action to remedy impact and reverse/check rising trend, develop engineering, progress stakeholder engagement and permits for the potential implementation of offsets and compensation mechanisms.

- Level 4 (Extreme) Trigger – Action – implement offset and/or compensation mechanisms.

6.1.5.6. Reporting

All data collected will be stored in the secure and dedicated EnviroSys database. All data will be entered into the database within a maximum of 3 days after data collection / laboratory results are received and will be accessible and available for review within a maximum of 7 days after data collection.

The results of monthly AWMP data reviews will be reported and the occurrence of any trigger values being reached (or any values of concern) will be highlighted.

6.1.5.7. Plan Updates and Revisions

The AWMP is a live document, which will be reviewed and updated regularly in line with advancements in the hydrogeological understanding of the Project area, insights obtained from the collection of site monitoring and operational data, and any changes in management approaches and/or legislation.

The logic and effectiveness of the AWMP will regularly be re-evaluated as conditions at the site change and as knowledge of the site evolves. Periodic comprehensive review of all available site data will be conducted to identify any new or changing conditions that were not previously considered and the AWMP approach will be updated correspondingly.

Reviews of the AWMP will be undertaken at key Project milestones and as warranted based on the findings of the monitoring event site data/trigger level comparisons (with reviews of the entire AWMP being triggered when two Level 2 trigger are reached in two consecutive monitoring periods.

6.2 Critical Habitat

6.2.1 IFC PS6 Requirements for Natural and Critical Habitat

6.2.1.1. Natural Habitat

IFC PS6 Paragraph 14 Requirements:

- Conversion or degradation of natural habitat is only permitted if:
  - No viable alternatives exist within the region.
  - Stakeholder consultation has been conducted regarding the conversion.
  - Mitigation hierarchy is applied, including:
    - Avoidance and minimization.
    - Restoration.
    - Biodiversity offsets to achieve No Net Loss (NNL).

Project Compliance:

- The Project will impact 1.23km² of non-critical Natural Habitat in the Salar del Rincon Basin:
  - Hydric Grasslands: 1.17km².
  - Tolar: 0.06km².

To comply with PS6, the Project will implement an offset strategy to achieve NNL for these habitats.

6.2.1.2. Critical Habitat

IFC PS6 states that for Critical Habitat the client will not implement Project activities unless all the following are demonstrated:

- No other viable alternatives exist within the region.
- The project does not lead to measurable adverse impacts on those biodiversity values for which the Critical Habitat was designated and on the ecological processes supporting those values.
- The Project does not lead to a net reduction in the global and/or national/regional population of any Critically Endangered or Endangered species over a reasonable period.
- A robust, appropriately designed and long-term biodiversity monitoring and evaluation program is integrated into the client’s management program.

It is estimated 3,300.62ha of Critical Habitat will be lost based on the current Project footprint:

- 4.72ha of Hydric Grassland.
- 324.94ha of Scarce Vegetation (Peladar).
- 7.00ha of Halophytic Transition Vegetation (referenced in the Dynamik report as “Saline Vega”).
- 0.68ha of Salt Crust Edge.
- 53.49ha of Shrub Steppe.
- 9.34ha of Tolar.
- 2,900.44ha of Salt Crust Interior.

As required by paragraph 18 of IFC PS6, Projects in CH shall include mitigation and offset measures to attain Net Gain (NG): Net gains are additional conservation outcomes that can be achieved for the biodiversity values for which the CH was designated.

6.2.2 Project Alignment Status with IFC PS6 Requirements for Natural and Critical Habitat

The sections below list the PS6 requirements for Natural and Critical Habitat and summarise the current Project compliance status.

6.2.2.1. Alternatives Analysis

The Project conducted an Alternatives Analysis as described in Section 1.5.

6.2.2.2. Public Consultation

- Ongoing Engagement:
  - The Project maintains a permanent process of FPIC with communities in its AoI.
  - Consultation and Public Hearing have covered all project components (e.g., plant capacities, camps, power lines) and their associated impacts and management plans.
- 2025 Stakeholder Engagement:
  - Led by RINCON, facilitated by SCG, with technical support from ERM.
  - Conducted through “Casa Abierta” (Open House) workshops in:
    - Estación Salar de Pocitos (March 26, 2025).
    - Catua (April 9–10, 2025).
    - Olacapato (April 29, 2025).

  Outreach ensured participation of puesteros, community leaders, and residents with traditional ecological knowledge.
- Workshop Outcomes:
  - Validated and expanded prior interview and survey data.
  - Explored ecosystem service use, value, and concerns.
  - Developed Natural Resource Maps documenting:

  - Ecosystems in use.
  - Perceived benefits.
  - Associated practices.
  - Community-identified threats.

- Pending Disclosure:

  - Impacts to natural and CH have not yet been shared with communities because the CHA was only completed in August 2025, and RINCON is developing conceptual mitigation and offset strategies before RINCON can consult with the communities.

6.2.2.3. Application of the Mitigation Hierarchy

The Project is applying the mitigation hierarchy—avoid, minimize, restore, and offset—as part of its Environmental and Social Management Plan (ESMP).

Current Status: A fully PS6-compliant Biodiversity Management Plan (BMP) is still under development. However, some biodiversity mitigation measures were integrated into the Environmental Management Plan (EMP) included in the 2024 ESIA.

Next Steps: The forthcoming BMP and Biodiversity Action Plan (BAP), planned for October 2025 and to be disclosed on the IFC website will:

- Expand on existing measures.

- Include additional mitigation and compensation actions.

- Be informed by findings from the CHA.

6.2.2.4. No Measurable Adverse Impacts on Critical Habitat

- IFC Requirement:

  - Projects in CH must demonstrate a NG in biodiversity values (IFC, 2019).

- Impacts on *Liolaemus* spp.:

  - A total of 3,300.62ha of CH will be lost to the Project footprint, of which 424ha overlap with records of *Liolaemus* sp.

  - A BMP is being developed with experts, including:

    - Habitat and population surveys.
    - Rescue and relocation protocols.
    - Micro-routing to avoid impacts.
    - Compensation through habitat creation or protection if residual impacts remain.

- Protection of EMEs in Ojos de Agua:

  - Collaborative studies with INIQUI, Universidad Nacional de Salta (UNSA), and CONICET aim to:

    - Monitor microbiome dynamics and seasonal changes.
    - Test resilience to brine chemistry changes.
    - Define scope to sustain brine chemistry withing sustainable levels once defined by the resilience test work.
    - Define scope for spent brine reinjection between year 20-30 of LoM to reduce post-closure legacy.

- Hydrogeological Risk Management:
  - A refined hydrogeological model is being developed using chemical and infiltration data and increase the distance between the SBDF and the Ojos de Agua, from 250m to 700m.
  - Reviewed by RINCON and external experts to assess and validate potential impacts.
  - Findings will guide mitigation or compensation measures.

A summary of mitigation measures is presented in Table 81.

- Biodiversity Action Plan:
  - Includes targeted assessments and conservation actions for Ojos de Agua and EMEs within the RNFSLA.

  The Project does not Lead to a Net Reduction in the Global and/or National/Regional Population of any Critically Endangered or Endangered Species.

- IFC Requirement:
  - Projects must ensure no net reduction in global, national, or regional populations of Critically Endangered or Endangered species.

- *Liolaemus* sp. AC (Criterion 2 Trigger):
  - A potentially newly discovered species (*Liolaemus* sp. A and C), not yet formally assessed for conservation status.
  - Surveys show preference for Rocky Areas, with potential habitat loss of:
    - 1.12% *for Liolaemus* sp. AC.
    - 1.21% for *Liolaemus* sp. A.

6.2.2.5. Mitigation Strategy

- Species experts confirmed that impacts can be mitigated through:
  - Rescue and relocation protocols.
  - Habitat creation or protection to offset residual impacts.

6.2.2.6. Robust and Long-Term Biodiversity Monitoring and Evaluation Program (BMEP)

- The Project will implement a robust BMEP to track biodiversity outcomes.
  - It will monitor:
    - Critical Habitat-triggering values.
    - Priority species.
    - Natural habitat biodiversity values.
  - The program will include:
    - Monitoring protocols, metrics, indicators, and targets for achieving NNL/NG.
    - Thresholds for triggering corrective actions.

Table 81. Summary of mitigation measures

Mitigation Hierarchy	Current Mitigation Measurement	EMP Plan Name
Avoidance: is based on preventing impacts from occurring, such as applying design alternatives that avoid environmentally sensitive areas or areas of high conservation value	The Project will avoid the opening of new tracks and roads to avoid habitat loss.	• Subprogram of Vegetation management.
	To prevent aquifer drawdown resulting from processing water demand, the Project has proposed a set of mitigation measures, including periodic monitoring of groundwater levels, analysis of flow rate data, video inspection of wells, and regular pump maintenance.	• Monitoring Subprogram of Water Management. • Monitoring Subprogram of groundwater.
	To avoid unsustainable rates of aquifer depression due to brine demand, it has been proposed to periodically monitor the characteristics of the raw brine, continuously monitor brine consumption and record the information on brine characteristics and levels/consumption in a database to keep track of groundwater levels and monitor the physicochemical characteristics of the raw brine.	• Monitoring Subprogram of Brine. • Closure Planning Program (SBFS design at closure of the Project). • Training Program.
	To avoid the modification of surface runoff at the edge of the Salar, it is planned to generate ditches around the SBDF to intercept and collect the eventual percolation coming from the SBDF. If this situation is observed, the captured flow will be pumped back to the SBDF. Retaining walls or parapets will be built with the excavated material from the ditches to divert surface water from upstream basins so that it does not come into contact with the SBDF embankment.	• Water management subprogram. • Surface water monitoring subprogram. • Training Program.
	As an avoidance measure to reduce the risk of wildlife-vehicle collisions, the Project will implement a training and communication plan for workers, enforce vehicle speed limits, and install signage to clearly mark wildlife crossing areas.	• Vehicular and Pedestrian Traffic Subprogram • Training Program • Fauna Management Subprogram.
Minimisation: measures that reduce an impact's duration, intensity, or extent throughout the application of corrective or mitigation measures.	As part of its mitigation strategy to minimize biodiversity loss, the Project will implement the translocation of priority flora species, selected based on their conservation status. Additionally, a Fauna Rescue and Translocation Plan will be developed and executed to safeguard susceptible species that may be affected by construction and operational activities.	• Flora Management Subprogram. • Fauna Management Subprogram.
	The Project will monitor noise semi-annually to test the effectiveness of mitigation measures, such as the time and space restrictions on activities.	• Environmental Noise Monitoring Subprogram.
	To minimize the impact of artificial lighting on wildlife, the Project will implement measures such as regulating light intensity and restricting its use to essential times and locations. Where lighting is necessary, luminaires will be directed downward to reduce disorientation or glare, particularly for bird species.	• Fauna Management Subprogram.
Restoration: measures to recover biodiversity values degraded by impacts that could not be avoided or minimized.	The Project will implement a Vegetation Restoration Plan during the closure phase, aimed at rehabilitating areas affected by project activities. As part of the preparatory actions, a seed bank is currently being developed, including experimental trials to assess plant survival and adaptability.	• Flora Management Subprogram.
Monitoring: Ongoing process to assess mitigation effectiveness, ensure compliance, and enable adaptive management	The Flora and Fauna Monitoring Subprograms are designed to detect changes in vegetation and wildlife populations, identify the presence of invasive species, and support adaptive management. Monitoring activities are scheduled to take place during two distinct seasons over the first three years of the project, with the possibility of extending the monitoring period if deemed necessary based on the results.	• Monitoring subprogram of Flora. • Monitoring subprogram of Fauna. • EME Monitoring Subprogram
	The surface and groundwater quality and level monitoring subprograms establishes a monitoring methodology, proposes reference levels according to the conditions of the AoI, along with sampling points, measurement of flow levels, and measurement of static and dynamic levels. The brine subprogram plans to verify the efficient use of brine, evaluate variations with respect to piezometric levels of brine extraction wells and verify the efficiency of the DLE adsorption process.	• Surface water quality and level monitoring subprogram. • Groundwater quality and level monitoring subprogram. • Brine monitoring subprogram.

- Alignment with the BAP. Focus on EMEs and Ojos de Agua:
  - The BMEP will assess the effectiveness of management measures for EMEs.
  - It will also monitor Ojos de Agua and other EMEs in the Salar del Rincon Basin.
  - This complies with the Integral Management and Development Plan for the Los Andes Reserve and associated refuges (Resolution No. 48/18).

6.2.2.7. Project's Mitigation Strategy will be Described in a BAP

The Project will summarize all mitigation and offset/compensation activities in a BAP. The BAP will consist of biodiversity mitigation measures as found in the current EMP and any updated plans, as well as the BMEP, which will monitor the effectiveness of the BAP.

6.2.3 Next Steps and Recommendations for Further Alignment with IFC PS6

6.2.3.1. *Liolaemus* spp. Management Plan

- Purpose:
  - Developed in collaboration with species experts to mitigate project impacts on *Liolaemus* spp.
- Key Components:
  - Field Surveys:
    - Conducted in project footprint and surrounding areas.
    - Collect data on population density and habitat use.
    - Inform estimates of individual losses, relocation site selection, and micro-routing of infrastructure.
  - Rescue and Relocation Strategy:
    - Protocols for relocating individuals from impact zones.
    - Selection of relocation sites based on habitat suitability, connectivity, and long-term viability.
  - Offset Measures:
    - If residual impacts persist, implement habitat creation or restoration to achieve Net Gain.
  - Monitoring and Evaluation:
    - Establish metrics and indicators to assess effectiveness of rescue, relocation, and offset actions.
  - Additional Mitigation Measures:
    - Training for staff and communities on species protection.
    - Wildlife-friendly practices in behavioural codes of conduct.
    - Minimize habitat fragmentation through design adjustments (e.g., road placement, crossings).
    - Support ongoing research on *Liolaemus* spp. within and beyond the AoI.
- Implementation Schedule:
    - Timeline under development.
    - Field assessments proposed to begin in October 2025.

6.2.3.2. Extremophile Management Plan

- Purpose:
  - The ongoing studies under Objectives 1 and 2 of the EMEs Work Plan (Annex H6) focus on the Ojos de Agua within the Project's AoI.
  - These studies aim to reduce uncertainty around the physical, chemical, and biological dynamics of EMEs and inform effective mitigation and adaptation strategies.
- Proposed Lines of Action:
  - Resilience Testing:
    - Controlled experiments (post-pilot phase) to assess EME responses to realistic concentrations of process effluents, including reverse osmosis reject and spent brine. Extreme concentrations will also be tested to understand the window of ecological sustainability.
  - Geoengineering Feasibility:
    - Explore the potential for developing EMEs in new areas using:
    - Geospatial data (e.g., satellite imagery, DEMs, land cover)
    - Habitat suitability models based on environmental variables (e.g., salinity, radiation, substrate)
    - Logistical constraints (e.g., accessibility, monitoring proximity)
  - Strategic Technical Sponsorship (Opportunity):
    - Support acquisition of advanced molecular biology infrastructure (e.g., metagenomic sequencing platforms) in partnership with INIQUI, UNSA, and CONICET.
    - Enables long-term monitoring, bioindicator development, and local scientific capacity building.
- Alignment with Conservation Goals:
  - These actions support environmental risk minimization, habitat protection, and the Comprehensive Management and Development Plan for the Los Andes Multiple-Use Nature Reserve.
  - They aim to ensure compatibility between mining operations and ecosystem preservation in the Salar del Rincon.

6.2.3.3. Hydrogeological Studies to Further Understand Potential Impacts

- Foundation:
  - Built on extensive hydrogeological, environmental, and monitoring studies, providing a strong technical basis for sustainable water management.
- Planned Activities:
  - 12 new wells in the Fractured Halite Formation (pending approval).
  - Expansion of piezometer monitoring in ecological zones.
  - Phase 3 and 4 re-injection trials using existing and new infrastructure.
  - Future isotope campaigns in 2025 and 2026.
  - Design SBDF Cell B based on R3000 SBDF performance, likely to significantly reduce the size of Cell B, and increase the distance to 700m from the Ojos de Agua.

- Refine numerical model grid in the SBDF area, and Ojos de Agua to better assess geochemical changes caused by spent brine infiltration from the SBDF.
- Installation of additional monitoring network as defined in the Adaptative Water Management Plan.
- Annual recalibration of models and development of local-scale models.
- Simulation of injection scenarios and integration of field data.
- Creation of decision-support tools for operational water management.
- Predictive analysis of brine quality and lithium production.
- Update thresholds and early warning indicators for sensitive receptors.
- Scope, obtain permit and execute irrigation trial at Vega Unquillar.

6.2.3.4. Priority Species Habitats

RINCON and ERM are engaging priority species and habitats experts to develop monitoring protocols to be incorporated into the Project BMEP. These are listed below:

- *Ctenomys opimus*: population assessment, management plan and monitoring plan.
- *Vicugna vicugna*: population assessment and monitoring plan.
- *Lama guanicoe*: population assessment and monitoring plan.
- *Rhea pennata*: population assessment and monitoring plan.
- *Vultur gryphus*: population and habitat assessment.
- *Leopardus jacobita*: population assessment and monitoring plan.
- Flamingos (*Phoenicopterus chilensis*, and *Phoenicoparrus andinus*) and Horned Coot (*Fulica cornuta*)
- Vegas: In addition to monitoring, studies will include generation of a conceptual model for the understanding of the interaction between soil-water-plant and determination of the maximum descent for plant survival by developing soil suction curves.

Specialists are currently developing survey and monitoring protocols, which will form part of the Project BMEP.

6.2.3.5. Additional Plans for IFC PS6 Alignment

To ensure full compliance with IFC PS6, the Project is developing and implementing the following reports and plans:

- Biodiversity Management Plan (BMP).
- Biodiversity Monitoring and Evaluation Plan (BMEP).
- Biodiversity Action Plan (BAP).

As compensation is a key component of the mitigation hierarchy, and in accordance with paragraph 19 of PS6, the Project must demonstrate—through a comprehensive assessment—that any significant residual impacts on biodiversity will be effectively addressed. This is necessary to achieve NNL in natural habitats and a NG in Critical Habitat.

6.3 Ecosystem Services Mitigation and Management

RINCON is currently preparing an Ecosystem Services Management Plan to mitigate impacts on, and reduce risks to those identified as priority, ensuring that beneficiaries can improve or restore the benefits they generate. This process includes proposals from the public for maintaining and optimising existing ecosystem services, as well as suggested measures to reduce the impacts on affected ecosystem services. Proposals aimed at developing alternatives to offset the loss of benefits derived from ecosystem services are also included.

This stage considers current and planned mitigation measures, such as the 2024 ESIA management plans, and will use as its main input the study of puesteros conducted by SCG in 2025. It will be developed jointly with RINCON and will include a validation process in the communities.

6.4 Preliminary Puesteros Management Plan

A key activity for finalizing the planning process is to define a definitive list of impacts and losses affecting the population, in order to jointly agree on the required assistance. The following topics will be considered:

- Eligibility criteria: Define the affected population and the necessary criteria to establish eligibility for receiving compensation or any other type of assistance.

- Description of impacts: All impacts related to the Puesteros Management Plan that the population will experience will be detailed, and their effect on production strategies and livelihoods will be analysed and assessed.

- Degrees of impact based on levels of vulnerability and risk: Differences in the degree of impact on the population will be considered according to their levels of social and economic vulnerability.

- All actions under the Puesteros Management Plan will be agreed upon through participatory processes with the affected population, respecting their own governance structures.

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