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Report

# Cumulative Impact Assessment

## Rev1 – March 2026

This Cumulative Impact Assessment (CIA) is prepared for the mining activities planned for the Rincon Project (hereinafter, the Project) by Rincon Mining Pty Limited (RINCON), 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. This document was developed to analyse:

- The potential impacts and risks of the Project in the context of other human activities and natural environmental and social external drivers on the chosen Valued Environmental and Social Components (VECs) during the Life of Mine (LoM) and post-closure until there are no residual impacts from the Project.
- Propose measures to avoid, reduce, or mitigate such cumulative impacts and risks.

This document 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, which includes the preliminary Cumulative Impact Assessment, submitted to Salta's Mining Authority on 14th April 2024 and approved on 26th August 2025 under Declaración de Impacto Ambiental (DIA) Resolution No. 101/2025. Another key document to be read in conjunction is the Assessment of Brine and Water Resources, which present in depth analysis of all groundwater and surface water investigations, results, interpretations, and numerical model predictions.

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, organised 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 mid-2029).

RINCON notes that Step 5 of the CIA presents a quantitative assessment of cumulative impacts for VEC-1: Water Resources and VEC-2: Terrestrial Biodiversity and Ecosystems. The CIA assesses cumulative impacts on social VECs using quantitative information where possible. While certain cumulative impacts are ultimately characterised qualitatively, this is consistent with international best practice when data limitations or uncertainty preclude numerical aggregation. In these cases, the CIA uses quantitative data to support and substantiate the qualitative assessment. Accordingly, the CIA evaluates the combined magnitude and interaction of multiple activities on social VECs, using both quantitative and qualitative methods appropriate to the available information.

The assessment incorporates past and anticipated changes associated with other projects and regional activities. These data inputs inform the cumulative impact predictions, where the assessment explicitly considers the overlapping effects of multiple contributors on each social receptor. The assessment examines the drivers of change, potential impacts, and predicted sustainability outlook of the VECs, rather than establishing quantitative thresholds for determining when cumulative impacts become significant. These thresholds are currently being drafted as part of the mitigation and management plans under development.

The selection of VECs and prioritisation will be validated/updated by stakeholder feedback planned for the first quarter of 2026.

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| Acronym | Definition |
|---|---|
| % | percent |
| ~ | approximately |
| AADT | Average annual daily traffic |
| ADCI | Average daily traffic index |
| AHI | Average hourly traffic index |
| AoI | Area of Influence |
| APS | Adult protective services |
| ARI | Acute respiratory infections |
| ARS | Argentine peso |
| AWMP | Adaptive Water Management Plan |
| BFB | Basic Food Basket |
| CIA | Cumulative Impact Assessment |
| CLAE | Economic Activities Classifier |
| COEDU | UCASAL Educational Guidance Center |
| CR | Critically Endangered |
| CSP | Communities and Social Performance |
| DIA | Declaración de Impacto Ambiental |
| DLE | Direct Lithium Extraction |
| 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 |
| ERM | Environmental Resources Management |
| EMEs | Extreme Microbial Ecosystems |
| EMP | Environmental Management Plan |
| EN | Endangered |
| E&S | Environmental and Social |
| ESG | Environmental and Social Governance |
| ESIA | Environmental and Social Impact Assessment |
| FONPLATA | Plata Basin Financial Development Fund |
| FWSF | Filtered Waste Storage Facility |
| g | grams |
| GBV | Gender Based Violence |
| GIS | Geographical Information Systems |
| GL/a | Giga-litres per annum (billion litres per annum) |
| $H_2SO_4$ | sulphuric acid |

| Acronym | Definition |
|---|---|
| ha | hectares |
| HCl | hydrochloric acid |
| $HCO_3$ | bicarbonate |
| IBA | Important Bird Area |
| IDB | Inter-American Development Bank |
| IFC | International Finance Corporation |
| IIA | Informe de Impacto Ambiental |
| INAI | National Institute of Indigenous Affairs |
| INDEC | Instituto Nacional de Estadística y Censos |
| IUCN | International Union for Conservation of Nature |
| KBA | Key Biodiversity Area |
| kV | kilovolt |
| km | kilometres |
| $km^2$ | square kilometres |
| Ktpa | thousand tonnes per annum |
| L | litre |
| LC | Least Concern |
| LCE | lithium carbonate equivalent |
| Li | lithium |
| $Li_2CO_3$ | lithium carbonate |
| LiCl | lithium chloride |
| LiOH | lithium hydroxide |
| LoM | life of mine |
| m | metres |
| $m^2$ | square metres |
| $m^3$ | cubic metres |
| masl | metres above sea level |
| mbgl | metres below ground level |
| mg/l | milligrams/litre |
| mm | millimetres |
| Mta | Million tonnes per annum |
| Mt | million tonnes |
| NaOH | sodium hydroxide |
| $Na_2CO_3$ | sodium carbonate |
| NC | not answered |
| NG | Net Gain |
| NNL | No Net Loss |
| NOA | Northwest Argentine Region |
| NT | Near Threatened |
| PAMI | Programa de Atención Médica Integral |
| PFS | Pre-Feasibility Study |
| PHC | Primary Health Care |
| PSs | Performance Standards |
| R3000 | Rincon 3000 Facility |
| RCIA | Rapid Cumulative Impact Assessment |

| Acronym | Definition |
|---|---|
| REMSA | Recursos Energéticos y Mineros de Salta, S.A. |
| RINCON | Rincon Mining Pty Limited |
| RFP | Rincon Full Potential Project |
| RPFLA | Reserva Provincial de Fauna Los Andes |
| RN | National Route |
| RP | Provincial Route |
| RR | Rapid Rincon |
| S | South |
| SBDF | Spent Brine Disposal Facility |
| SC | sodium carbonate |
| SCG | Social Capital Group |
| STE y SS | National Directorate of Labor Studies and Statistics |
| SWOT | Strengths, Weaknesses, Opportunities, and Threats |
| t | tonnes |
| TBB | Total Basic Basket |
| tpa | tonnes per annum |
| t/year | tonnes per year |
| UCASAL | Catholic University of Salta |
| UNICEF | United Nations Children's Fund |
| VEC | Valued Environmental and Social Component |
| VPD | Vehicles per day |
| VU | Vulnerable |

# EXECUTIVE SUMMARY

This Cumulative Impact Assessment (CIA) evaluates the combined environmental and social effects of the Rincon Project in accordance with IFC's *Good Practice Handbook: Cumulative Impact Assessment and Management* and International Finance Corporation(IFC) Performance Standard 1 (PS1). The assessment applies the Rapid CIA (RCIA) sixstep methodology and focuses on eight Valued Environmental and Social Components (VECs) selected based on sensitivity, stakeholder relevance, and exposure to Project-related change.

## Project Context

The Project includes a 50 thousand tonnes per annum (Ktpa) lithium carbonate production plant, supported by a brine wellfield, raw water abstraction, spent brine and solid waste facilities, and related infrastructure. Total production will reach 53Ktpa once combined with the existing 3Ktpa demonstration plant. Hydrological, ecological, and social baselines indicate high sensitivity to disturbance given the closed hydrological nature of the Salar del Rincon Basin, the presence of Critical Habitat-triggering species, and the reliance of local Indigenous communities on limited services and traditional livelihoods.

## Spatial and Temporal Scales

The CIA applies tailored spatial and temporal boundaries for each VEC to ensure that assessments reflect how impacts manifest across different systems and communities.

Two primary spatial scales are used:

- Salar del Rincon Basin (Watershed Scale):
  - Applied to VEC-1: Water Resources and VEC-2: Terrestrial Biodiversity and Ecosystems.
  - This boundary encompasses the full hydrological system and the broader Ecosystem Appropriate Area of Assessment (EAAA), which overlaps protected and conservation areas, including sensitive biodiversity zones.

- Social Areas of Influence (Direct and Indirect AoIs):
  - Applied to VEC-3 through VEC-8, covering demographic, socioeconomic, education, health services, roads, and traditional productive activities.
  - Includes the communities of Catua, Estación Salar de Pocitos, Olacapato (Direct AoI), and San Antonio de los Cobres (Indirect AoI), with additional communities assessed specifically for VEC-7: Road Infrastructure due to regional transport-network effects.

Temporal scales are aligned with IFC good-practice guidance and vary by VEC:

- Project Life of Mine (LoM) = 40 years + post-closure:
  - Applied to VEC-1: Water Resources and VEC-2: Terrestrial Biodiversity and Ecosystems.
  - These VECs require long-term modelling of groundwater drawdown, ecosystem change, habitat alteration, and post-closure recovery until residual impacts are no longer measurable.

- 10-Year Temporal Window (Aligned with National Census Cycles):
  - Applied to VEC-3 through VEC-8.
  - Social VECs are assessed over a 10-year period, reflecting available demographic and economic data cycles and expected patterns of regional mining-induced change.

## Other Projects

For VEC-1: Water Resources and VEC-2: Terrestrial Biodiversity and Ecosystems, the only other project included in the CIA is Argosy's Puna Mining Project, as it operates within the same geographically bounded watershed of the Salar del Rincon Basin. Although Argosy received approval in 2024 to advance to its next development stage (up to 10Ktpa plant capacity and potential marketing of 12Ktpa), the project is currently on hold with uncertain future activity. Nonetheless, the groundwater numerical model incorporates the combined potential impacts of both the Rincon Project and Argosy's operations across their full LoM should Argosy resume.

For VEC-7: Road Infrastructure, additional regional ventures are included because the area will experience impacts from an expanded and interconnected road and transport network shared by multiple projects. A key foreseeable development is the REMSA Mining Logistics Hub in Olacapato along Route 51. Advanced through a public–private partnership and funded by Fonplata, the World Bank, and the Inter-American Development Bank (IDB), the hub will feature an industrial zone, transfer yard, C-14 railway station, mining and heavy-metal waste facility, and supporting services such as a health center, lodging, commercial areas, offices, fuel services, and secure 24-hour parking.

## External Stressors

External drivers, primarily mining-related environmental and social pressures, can significantly influence the condition and resilience of VECs. The assessment focuses on foreseeable, realistic drivers linked to regional mining expansion and associated development.

- VEC-1: Water Resources and VEC-2: Terrestrial Biodiversity and Ecosystems, key external pressures include:
  - Changes in water availability, affecting hydrological balance and ecological stability.
  - Habitat loss, degradation, and fragmentation, reducing ecosystem integrity and altering species movement and microhabitats.
  - Thermal and hydrological shifts, disrupting sensitive ecological processes.
  - Barriers to species dispersal, limiting connectivity for flora and fauna.
  - Protected areas and conservation sites face additional risks, including:
    - Challenges to conservation management.
    - Unsustainable grazing contributing to habitat degradation.
    - Soil deterioration linked to regional mining activities.

- VEC-3 through VEC-8, communities including Catua, Estación Salar de Pocitos, Olacapato, and San Antonio de los Cobres may experience a wide range of induced pressures from regional mining growth, including:
  - Demographic shifts, such as in-migration, return migration, and changes in age structure.
  - Labour market effects, including job creation, workforce availability, wage changes, and gender/inclusion implications.
  - Educational and health service strain, with increased demand, capacity constraints, and staffing challenges.
  - Infrastructure pressure, including road congestion, maintenance needs, multifunctional corridor conflicts, and service demand (energy, schools, hospitals).
  - Socioeconomic restructuring, influencing livelihoods, land use, grazing territories (puestos), economic resilience, and cultural continuity.
  - Community cohesion impacts, including changes to ethnic composition, identity, and intergenerational practices.

## Key Findings by VEC

The following summarises the key findings by VEC. The prioritisation was qualitatively assigned by examining the following:

- Ecological importance.
- Conservation status.
- Cultural and socioeconomic value.
- Sensitivity to Project activities, other ventures and activities, and external stressors.

### High-Priority VECs

*VEC-1: Water Resources*

The water resources within the Rincon Basin form a tightly interconnected hydrological system that supports lithium extraction processes, supplies raw water for mining, sustains sensitive ecosystems, and underpins local community wellbeing. Project activities, including lithium brine extraction, raw water abstraction, and seepage of spent brine, may alter groundwater/brine levels, flow directions, and quality across the Basin.

These impacts will be concentrated around the Project's lithium and raw water wellfields and the Spent Brine Disposal Facility (SBDF) and vary across the Basin and over time (during operation and post closure). Key risks include:

- Localised Lowering or Raising of Groundwater/Brine Levels Due to Pumping and Infiltration.
- Altered Groundwater/Brine Flow Paths.
- Degraded or Mixed Groundwater/Brine Quality.
- Changed Groundwater Contributions (Baseflow): impacts to surface water levels, flow, and quality and features such as wetlands, lagoons, and rivers.

Cumulative impacts from nearby projects (e.g., Argosy's Puna Mining, currently not active), other future projects, as well as climate driven reductions in precipitation and slower natural recovery rates, further increase the vulnerability of the system. Even without mining, climate change alone is projected to reduce rainfall and increase extreme weather events, which would also alter and stress the Basin's water resources.

Because these water resources are delicately balanced and deeply interlinked, the Project's activities pose potentially high risk impacts that require a comprehensive and adaptive management approach. A Preliminary Management Response Plan, included in the Adaptive Water Management Plan (AWMP), identifies environmentally sensitive receptors, defines monitoring requirements, and sets the criteria (triggers and observations) that would prompt mitigation actions. It also outlines potential mitigation measures to address emerging impacts, i.e., if and when Argosy's Puna mining and/or other projects become operational. The AWMP is a dynamic, continually updated framework, incorporating new data, advancing scientific understanding, and revised monitoring metrics over time. This ensures that triggers, thresholds, and mitigation measures remain appropriate, responsive, and site-specific as knowledge of the Basin's water resources evolves.

*VEC-2: Terrestrial Biodiversity & Ecosystems*

The Project lies within the Reserva Provincial de Fauna Los Andes (RPFLA). Multiple *Liolaemus* lizard species — including new, restricted-range taxa — meet Critical Habitat (CH) criteria and demonstrate low mobility, increasing vulnerability to cumulative effects. The RPFLA contains habitats and species of high conservation significance such as wetland systems, Vicuña (*Vicugna vicugna*) and Andean flamingos (*Phoenicoparrus andinus*). The construction of the Project will disturb 3,300.62 hectares (ha), including 2,900.44ha of Natural Habitat (NH), mostly salt-crust interior with low biodiversity value. Critical Habitat loss for *Liolaemus* spp. is estimated at 400.18ha. Combined with other mining development in the Salar del Rincon Basin, regional growth, and climate variability, this contributes to progressive habitat reduction, fragmentation, and diminished resilience of endemic species. Key risks include:

- Habitat Loss: Land-use change driven by mining, infrastructure, and population growth results in the ongoing reduction of NH across the Basin, directly affecting wildlife and ecosystem functions.
- Habitat Fragmentation: Roads, transmission lines, and pipelines divide habitats, limiting wildlife movement, reducing gene flow, and increasing vulnerability to environmental stressors. Hydrological alterations from groundwater drawdown also threaten aquatic micro-endemic communities.
- Disturbance to Fauna: Noise, artificial light, dust, and human activity can disrupt feeding, mating, migration, and overall wildlife behaviour — particularly for migratory birds and nocturnal species.
- Increased Traffic and Collision Risk: Growing vehicle use raises the likelihood of wildlife mortality, including collisions with transmission lines for bird species.
- Endemic Reptile Decline: Highly range-restricted species such as *Liolaemus multicolour* and *Liolaemus* AC face population decline and reduced genetic diversity due to habitat loss and fragmentation.
- Impacts on the RPFLA: Although the Project's direct footprint occupies only ~7.5% of the Reserve, cumulative impacts across the entire protected area are considered. Existing pressures — exotic livestock, unsustainable grazing, and soil degradation — compound risks to wetlands, salt flats, extremophile habitats, and emblematic fauna such as Vicuñas, Guanacos, Flamingos, and the Puna frog.

Without basin-wide planning and targeted mitigation, the cumulative effects of mining, infrastructure expansion, and climate pressures will continue to erode NH, reduce biodiversity, and undermine conservation objectives — particularly within the RPFLA. To address these risks, the Project will:

- Prioritise Avoiding Impacts to CH and Sensitive Species: use expert ecological input and advanced habitat-mapping tools during planning and site selection.
- Undertake Additional Studies: additional taxonomic and ecological studies, implementing *Liolaemus* rescue and relocation programs, enriching habitats, and training staff to protect *Liolaemus* species.

- Minimisation of new disturbances to critical *Liolaemus* habitats, with rescue and relocation protocols where avoidance is not possible.
- Implement a Biodiversity Management Plan (BMP) and Biodiversity Action Plan (BAP) to include:
  - Targeted science-based thresholds and early-warning indicators to detect emerging biodiversity risks and trigger timely corrective actions.
  - Mitigation, restoration, species-specific management, ongoing monitoring, and species-specific management.
  - A restoration program for disturbed areas informed by proven restoration techniques.
  - Progress toward No Net Loss (NNL) and Net Gain (NG) biodiversity targets.
  - Expert-developed management plans for *Liolaemus* species, supported by ongoing research on their range, habitat needs, and population density.
  - Full alignment with CH designations and the conservation requirements of the Reserva Provincial de Fauna Los Andes (RFPLA).
  - Continued development and expansion of a seedbank to support effective long-term restoration.
- Implement a Biodiversity Monitoring and Evaluation Program (BMEP): a long-term biodiversity monitoring program that tracks key species, habitats, and ecological processes, accounting for seasonal variation and cumulative regional developments.

Overall, the Project commits to a proactive, science-driven, and habitat-sensitive approach to biodiversity protection throughout its lifecycle.

*VEC-3: Demographic Structure*

Communities in the Direct and Indirect AoIs (Olacapato, Estación Salar de Pocitos, Catua, and San Antonio de los Cobres) are predominantly Indigenous and young. Mining-driven in-migration, return migration, and urban concentration may strain limited housing, governance, and service delivery systems, altering community cohesion and cultural dynamics. Project-related and cumulative demographic shifts in the region may place significant pressure on community wellbeing, public services, and cultural integrity. Key risks include:

- Strain on Essential Public Services: Rapid population growth may overwhelm water, sanitation, energy, telecommunications, and fuel supply systems — reducing service quality and reliability.
- Increased Safety Concerns: Higher population density and socioeconomic disparities may contribute to rising crime rates and a perceived decline in community safety, particularly with the arrival of non-local workers in historically peaceful areas.
- Housing Pressures: Demand for housing may outpace supply, leading to informal settlements, overcrowding, and deteriorating living conditions — factors that heighten social tension and vulnerability for lower-income groups.
- Pressure on Health Services: Local health systems — already limited — may struggle to meet increased demand. Reduced access to reproductive health services may heighten risks of sexually transmitted infections, unplanned pregnancies, and other impacts disproportionately affecting young women and vulnerable populations.
- Social Disintegration: Rapid demographic and economic change may disrupt community cohesion, contributing to increased rates of alcohol and drug use and associated health and social harms.
- Cultural Erosion: Migration and modernisation can weaken traditional practices, languages, and Indigenous identity, particularly among younger generations, reducing long-term cultural resilience.

Projected demographic growth driven by mining activity is expected to exceed the capacity of local infrastructure and social systems, making VEC-3 a high-priority concern. Communities, especially San Antonio de los Cobres, face short-term risks of service saturation, reduced public safety, and social tension due to rapid population change and limited resilience. To address these risks, the Project will:

- Prioritise Local Hiring: Workforce needs will be met first by recruiting skilled and unskilled labour from the Project's Direct and Indirect AoIs, then from the wider Province of Salta, consistent with Provincial requirements.
- Manage Employment Expectations: Clear, accurate communication will be provided on real labour demand, contract conditions, and the temporary nature of many roles to avoid unrealistic expectations.

- Use Self-Sufficient Worker Accommodations: Temporary worker housing will be designed to operate independently, preventing additional strain on local housing markets and public services.
- Promote Local Supply Chains: Local procurement and service partnerships will be strengthened to reduce reliance on external companies and minimise associated workforce influx.
- Implement an Influx Management Plan: Develop formal collaboration agreements with Provincial and local authorities, as well as other mining and energy operators in the region. This coordinated framework will support joint data sharing, policy alignment, and harmonised service delivery to manage influx-related pressures effectively.
- Conduct a Perception and Expectations Study: Undertake a targeted study to understand community perceptions, concerns, and expectations related to Project impacts, enabling more responsive planning and communication.
- Strengthen Institutional Capacity: Design and implement tailored capacity-building programs for local organizations with limited service-delivery or utility-management capabilities. These programs will enhance operational performance and reinforce long-term institutional resilience.
- Launch Public Awareness Campaigns: Develop and disseminate communication campaigns across Salta Province to inform residents about both the opportunities and risks associated with increased migration, fostering social cohesion, informed dialogue, and constructive community engagement.

*VEC-8: Traditional Productive Activities*

Pastoralism, fibre production, and handicrafts remain central to cultural identity but are declining due to labour shifts toward mining, limited youth participation, environmental pressures, and weakening intergenerational knowledge transmission. These factors heighten cumulative vulnerability for traditional livelihoods. Project-related and cumulative demographic and economic shifts may significantly undermine traditional productive activities in the region, placing cultural continuity and local livelihoods at risk. Key risks include:

- Erosion of Traditional Knowledge and Practices: Younger generations are becoming less exposed to ancestral skills, rituals, and values, leading to weakening cultural identity and the loss of sustainable, place-based resource management practices.
- Economic Marginalisation: Modern wage employment and market-driven production can render traditional livelihoods economically unviable. Limited institutional support and declining generational renewal further threaten their long-term continuity.
- Loss of Biodiversity-linked Ecological Wisdom: Traditional practices often rely on deep ecological knowledge and sustainable use of natural resources. As these activities decline — largely concentrated among older generations — critical ecological understanding and biodiversity stewardship may be lost.
- Shortage of Skilled Labour: Rural-to-urban labour migration reduces the availability of people trained in traditional skills. With minimal access to training, funding, and formal recognition, Indigenous and rural communities face barriers to maintaining and transmitting their productive heritage.

Given the current trajectory and the scale of projected impacts, the sustainability of VEC-8 is at significant risk. Without targeted interventions to support and preserve traditional productive activities, the region may experience irreversible socioeconomic and cultural losses. To address these risks, the Project will:

- Document Traditional Activities and Rights: A dedicated study, including participatory mapping and community validation, has been completed to document puesteros' traditional land use, grazing routes, and resource access rights.
- Implement an Ecosystem Services Management Plan: Ongoing monitoring of key water sources and strategic pasture areas helps safeguard the natural resources that sustain traditional herding and other community-based activities.
- Implement a Technical Assistance Program: A participatory program is being developed to enhance and modernise traditional productive practices while incorporating Indigenous knowledge and promoting long-term sustainability.
- Commitment to Cultural Preservation: the Project will implement actions to preserve herding traditions, including documenting ancestral knowledge, supporting intergenerational transmission, and promoting awareness of cultural and productive heritage.
- Implement Awareness Campaigns: Promote the cultural and economic value of traditional herding and its link to local identity.
- Forge Strategic Partnerships: Consolidate agreements with public entities, private organisations, and social groups to drive rural development projects that integrate health, education, and infrastructure, while strengthening traditional livestock activities.
- Facilitate Coordination with Social Mining Table: Articulate community actions aimed at preserving and promoting traditional productive activities.

**Medium-Priority VECs**

*VEC-4: Socioeconomic Structure*

Mining is the primary economic driver, generating employment and stimulating local enterprise development. However, cumulative effects include wage disparities, dependence on a single sector, and volatility linked to lithium price cycles. Women and youth remain less represented in mining employment. Project-related and cumulative regional changes may significantly reshape the socioeconomic landscape, creating both opportunities and risks for local communities:

- Expansion of the Economically Active Population (EAP): Demographic growth, rising education levels, and new employment opportunities will expand the labour force. While this can support economic diversification and broaden workforce participation — including for women, youth, and rural populations — it may also strain local systems if job creation does not keep pace. Without coordinated regional planning, increased competition for employment may lead to underemployment and pressure on social services.
- Labour Market Saturation: Population influx and limited formal job growth may intensify competition for work, contributing to the expansion of lower-quality informal employment. Barriers related to education, language, or skills may prevent new entrants from securing adequate jobs, resulting in underutilised human capital and reduced socioeconomic resilience.
- Rising Cost of Goods and Services: Greater demand for housing, food, transport, and basic services may drive price increases, disproportionately impacting low-income households. Economic exclusion and social tension could emerge as affordability declines. Local small-scale producers may struggle to compete with larger firms better equipped to absorb rapid market shifts.

The Project is implementing a comprehensive set of actions to manage socioeconomic risks, prevent influx-related pressures, strengthen labour standards, and support equitable, culturally appropriate community development. To address these risks, the Project will:

- Foster Local Employment & Economic Inclusion:
  - Prioritise hiring within the Project's Direct and Indirect AoIs, then the wider Province of Salta, in line with legislation.
  - Communicate transparently about job numbers, duration, and conditions to avoid inflated expectations.
  - Strengthen local supply chains by training local suppliers and promoting women's participation in mining to enhance workforce diversity.

- Develop a Gender Risk Assessment and Implement a Gender Action Plan:
  - Establish clear, confidential pathways for reporting gender-based violence, SEA/SH, bullying, and intimidation.
  - Ensure safe, gender-sensitive response protocols and protect individuals from retaliation.
  - Provide ongoing training, communication, and monitoring, integrating systems such as MyVoice for accessible reporting.

- Provide Labour Rights and Supply Chain Oversight:
  - Monitor forced-labour indicators aligned with International Labour Organization (ILO) standards, covering issues such as intimidation, withheld wages, document retention, excessive overtime, and abusive working conditions.
  - Conduct regular site inspections, develop a supplychain map, and monitor subcontractors to ensure compliance with labour and human rights standards.-chain map, and monitor subcontractors to ensure compliance with labour and human rights standards.

- Foster Indigenous Peoples Engagement and Economic Empowerment:
  - Conduct meaningful engagement using final socio-economic data and clear disclosure of employment expectations.
  - Map community skills and transparently share job requirements and contractual expectations.
  - Develop medium-term career pathways and upskilling programs — including technical roles — to maximise Indigenous employment and local procurement benefits.
  - Explore post-mining investments to support long-term livelihoods and inform the Indigenous Peoples Plan (IPP) and Livelihood Restoration Pland (LRP) development.

- Reduce Economic Vulnerability Through Strategic Partnerships:
  - Establish formal alliances with Provincial and local institutions and other mining/energy operators to coordinate employment, infrastructure development, and access to essential services.
  - Evaluate public service organizations' capacities to identify gaps in supporting vulnerable populations.
  - Deliver targeted capacity-building programs to improve service delivery, administrative performance, and institutional resilience.

- Conduct Public Awareness & Community Strengthening - Launch culturally appropriate public-awareness campaigns to build understanding of economic vulnerability, promote inclusive development, and encourage community participation in mitigation measures.

*VEC-6: Provision of Health Services*

Health posts in the Direct AoI have limited staffing, intermittent medical presence, medication shortages, and no pharmacies. The regional hospital in San Antonio de los Cobres operates with increasing demand — including from non-resident workers — creating cumulative risks of service saturation. As mining expands, the system faces a high likelihood of service saturation, resulting in overcrowding, longer wait times, increased referrals, and diminished quality of care. Cumulative pressures include:

- Strain on emergency response capacity and rotating specialists.
- Increased consumption of medications and supplies.
- Higher incidence of trauma, occupational injuries, and outpatient demand.
- Pre-existing health burdens — such as respiratory infections, diarrheal diseases, chronic conditions, traffic accidents, and rising mental health concerns (alcoholism, adolescent suicide, gender based violence (GBV), teen pregnancy) — further heighten system fragility.

Overall, the region's health infrastructure lacks the resilience to absorb additional population and workforce-related pressures without targeted mitigation and investment. To address the limited resilience of local health services and prevent cumulative pressures from mining-related population influx, the Project will

- Implement a Comprehensive Package of Investments, Partnerships, and Community-Focused Programs:
  - Health system strengthening:
    - Invest in local health infrastructure, including clinics, hospitals, and mobile medical units.
    - Recruit and train additional medical personnel.
    - Improve supply chains for medicines, equipment, and emergency resources.
    - Integrate occupational and environmental health monitoring.
    - Deliver community health education and mental-health support initiatives.
  - Form partnerships with Provincial and local health institutions and other regional projects to coordinate system-wide improvements.
  - Assess the capacity of local health organisations — particularly for respiratory illnesses, trauma, and mental-health response.
  - Provide targeted technical assistance and capacity-building programs to strengthen service delivery.
  - Conduct public awareness campaigns on health risks associated with mining and best practices for prevention and early response.

- Implement an Influx Management Plan: an IFC-aligned Influx Management Plan addressing population growth, health pressures, and GBV risks, including prevention, monitoring, and survivor-centred grievance pathways.
- Establish a Community Emergency and Response Plan: for traffic incidents, hazardous material spills, natural disasters, and GBV, with clear protocols and coordination mechanisms.
- Implement a Comprehensive Community Health and Safety Management Plan: covering disease-transmission risks, transport-related impacts, exposure pathways, and community engagement to build resilience.

**Low-Priority VECs**

*VEC-5: Educational Services*

Schools operate in mixed, multi-grade formats with limited teacher housing and connectivity constraints. Cumulative demand may increase but remains manageable with targeted support and partnerships such as virtual education centres. Projected demographic growth and cumulative mining-related changes may strain already limited educational services in the region, creating significant risks for access, quality, and equity:

- Overcrowding and Limited Access: Schools may become overwhelmed as demand increases, resulting in larger class sizes, reduced teacher-to-student ratios, and insufficient physical infrastructure or learning materials. Enrollment pressures could lead to waiting lists and exclusion of vulnerable students, particularly in underserved communities.

- Decline in Educational Quality: Overburdened or undertrained teachers, inconsistent curriculum delivery, and inadequate support systems may reduce learning quality. Resource shortages and overcrowded environments can negatively affect student engagement, academic performance, and long-term educational outcomes.

- Broader Social Consequences: Unequal access to education may widen disparities between urban and rural areas or between public and private institutions. Rising pressure on secondary and vocational programs may hinder workforce readiness. Community frustration over limited educational opportunities could contribute to social tension and reduced social cohesion.

To address these risks, the Project is already building strategic partnerships with government and private entities through initiatives such as the Social Mining Round Table to enhance regional development capacity:

- Collaborative Agreements: establish formal partnerships with public institutions in the Department of Los Andes and with other mining and energy projects to jointly strengthen educational capacity.
- Capacity-Building for Schools and Training Centers: co-design and implement technical assistance programs aimed at improving the administrative, pedagogical, and infrastructure capabilities of educational institutions.
- Shared Resources and Joint Initiatives: coordinate resource sharing, joint training, curriculum development, and monitoring frameworks to raise the quality, accessibility, and relevance of education across the region.

These measures aim to reinforce the education system's ability to respond to demographic change and support long-term regional development.

*VEC-7: Road Infrastructure*

National Route 51 (RN 51), RN 52, and Provincial Route 27 (RP 27) experience cumulative pressure from mining, local transport, and tourism. Maintenance deficits pose risks but ongoing upgrades and public-private coordination reduce long-term concerns. Project-related and cumulative traffic growth will place significant pressure on already limited and multifunctional road corridors in the region, creating safety, mobility, and maintenance challenges:

- Infrastructure Strain and Traffic Conflicts: roads used by the Project are also essential for Indigenous and rural communities, tourism, international freight, and access to health and education. Increased heavy-vehicle traffic heightens conflict between mixed vehicle types, causes dust and visibility issues, lengthens travel times, and increases emissions — while also affecting culturally significant mobility patterns.
- Accelerated Roadway Deterioration: heavy trucks and equipment will accelerate wear on pavements, bridges, and drainage systems. With limited route redundancy and constrained maintenance budgets, road degradation could lead to more frequent closures, delays, and reduced regional connectivity.
- Road Safety and Public Health Risks: Higher traffic volumes and poor infrastructure conditions increase accident risks, especially where signage, lighting, and controls are inadequate. Rising collisions would further strain emergency services and health facilities. Pedestrians and cyclists face elevated safety risks.
- Community Isolation and Reduced Service Access: communities rely on these same routes for access to health care, schools, food and supply transport, tourism income, and local commerce. Congestion, closures, and poor road conditions may worsen isolation and reduce resilience for already vulnerable populations.

The Project is already taking multiple steps to avoid negative impacts on existing road infrastructure. These include respecting legal load limits, coordinating continuously with Salta's road authorities, planning routes to minimise congestion and deterioration, avoiding travel during extreme weather, enforcing speed and safety controls, and reducing trips through shared transport and logistics optimisation. To further minimise and mitigate risks, the Project will:

- Limit Vehicle Stops: to reduce community safety concerns identified during 2024 consultations and establish fixed rest times (15 minutes every two hours, 30 minutes for lunch).

- Train all Project Drivers: through an internal certification program (Rio Tinto Driver's License) and provide road safety and critical risk management training for transport workers, including specialised training for the escort company handling incidents.

- Build Collaborative Frameworks: with public institutions and other regional mining/energy projects to strengthen local transport systems, support capacity building, and improve institutional resilience.

- Maintain Regular Engagement: with communities along direct and indirect transport routes using a risk-based approach, ensuring communication on transportation risks, emergency procedures, conduct expectations, and access to grievance and GBV referral mechanisms.

- Develop and Formalise Emergency Response and Risk Management Plans: that assess community vulnerabilities along transport routes, clearly define responsibilities, communication protocols, and include regular joint training and drills.

**Summary of Management and Mitigation Commitments**
Project commitments include:

- Adaptive Water Management Plan (2026).

- Biodiversity Management Plan and Biodiversity Management & Evaluation Program and Trigger–Alert–Response Plans (TARPs) for water, biodiversity, and ecosystem services (2026).

- Influx Management Plan, Indigenous Peoples Plan, and Livelihood Restoration Plan (2026).

- Biodiversity Action Plan & Offset Management Plan (2027–2028).

- Regional coordination with government and communities.

Together, these measures provide a robust framework to identify, monitor, and manage cumulative effects throughout the life of the Project.

# 1 Introduction

This Cumulative Impact Assessment (CIA) was prepared for assessing the cumulative impacts and risks of the mining activities planned for the Rincon Project (hereinafter the Project) with respect to the surrounding human activities and environmental and social drivers, 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. This document was prepared to analyse:

- 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 Valued Environmental and Social Components (VECs) over time.

- Define short, mid and long-term framework to to monitor, avoid, reduce, or mitigate such cumulative impacts and risk to the extent possible.

This document 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. Below is the list of documents comprising the Project's Disclosure Package:

- Environmental and Social Impact Assessment — in Spanish (Rio Tinto, 2024).

- Project Disclosure Summary (Rio Tinto, 2025a).

- Stakeholder Engagement Plan (communities and puesteros) — in Spanish (Rio Tinto, 2025b).

- Supplemental Social Baseline (puesteros) — in Spanish (Rio Tinto, 2025c).

- Preliminary Social Impact Assessment (Puesteros) — in Spanish (Rio Tinto, 2025d).

- Preliminary Puesteros Management Plan — in Spanish (Rio Tinto, 2025e).

- Assessment of Brine & Water Resources (Rio Tinto, 2025f).

- Critical Habitat Assessment (Rio Tinto, 2025g).

- Project Execution Environmental Management Plan (Rio Tinto, 2025h).

- Updated Conceptual Closure Plan (Rio Tinto, 2025i).

- Responses to the 2024 ESIA Comments — in Spanish (Rio Tinto, 2025j).

- Offset Conceptual Feasibility Study (Rio Tinto, 2026).

## 1.1 Background

Rio Tinto finalised the acquisition of the Project in March 2022. The main milestones over the 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. Its Pilot Plant Project was later approved under Resolution 071/2020.

- In December 2022, already under Rio Tinto management, an Addendum to the Pilot Plant Project ESIA was submitted. Its purpose was to adapt existing facilities to operate a 3Ktpa commercial demonstration plant, with Direct Lithium Extraction (DLE) methodology, known as the Rincon 3000 (R3000) Plant.

- In April 2024, an IIA (Informe de Impacto Ambiental) — or ESIA — for the Rincon 50Ktpa Commercial Plant was submitted to Salta's Mining Authority. It considers 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.

Although the 2024 ESIA is based on in-depth baseline studies and extensive stakeholder consultation, and included information that exceeded the local legal requirements, it was not developed with the intent to fully

comply with the requirements of the IFC's *Performance Standards on Environmental and Social Sustainability* (IFC, 2012) and the *World Bank Group Environmental, Health, and Safety Guidelines for Mining* (EHS Guidelines, 2007).

Thus, with the intent of attaining IFC financing and increase the Project´s Environmental and Social Governance (ESG) performance, the Project's Disclosure Package presented in Section 1 was developed. This significantly advanced the understanding of environmental and social risks associated with the Project, allowing for a more robust determination of mitigation measures.

### 1.2 Project Description

The Project is described in detail in Chapter 3 of the 2024 ESIA (Rio Tinto, 2024), and updated in the Project Disclosure Summary (Rio Tinto, 2025a). The following overview is provided for context.

The Project will extend across the mining properties and easements, covering a total of 86,781.5 hectares (ha); however, the physical Project footprint is only 3.8% of the mining property or 3,300ha.

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

Li-rich brine will be extracted from a wellfield consisting of 139 wells installed through the LoM. The first set of wells consist of 12 wells which will be sufficient for the first 8-10 operational years. Brine will be transported via pipeline to the processing plant, where it will be stored in dedicated tanks, feeding then to the Process Plant. The primary waste streams generated by the process include spent brine and solid residues filtered from the Process Plant – for an updated description of the Project and waste facilities refer to the Project Disclosure Report (Rio Tinto, 2025a).

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

- 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 are shown in Table 1.

Table 1. Reagent and raw water consumption

| Reagent | Unit | Quantity |
|---|---|---|
| Sulphuric Acid ($H_2SO_4$) | Ktpa (100 percent (%) concentration basis) | 18.60 |
| Hydrochloric acid (HCl) | Ktpa (100% basis) | 1.03 |
| Sodium hydroxide (NaOH) | Ktpa (100% basis) | 3.70 |
| Sodium Carbonate ($Na_2CO_3$) | Ktpa (100% basis) | 45.32 |
| Raw water | GL/a | 1.77 |

To support the overall operation, the Project includes 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 1,500-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 1,500-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 and identified).
- 2 Quarries – one of fine and the other of coarse material.
- Temporary concrete plant.*

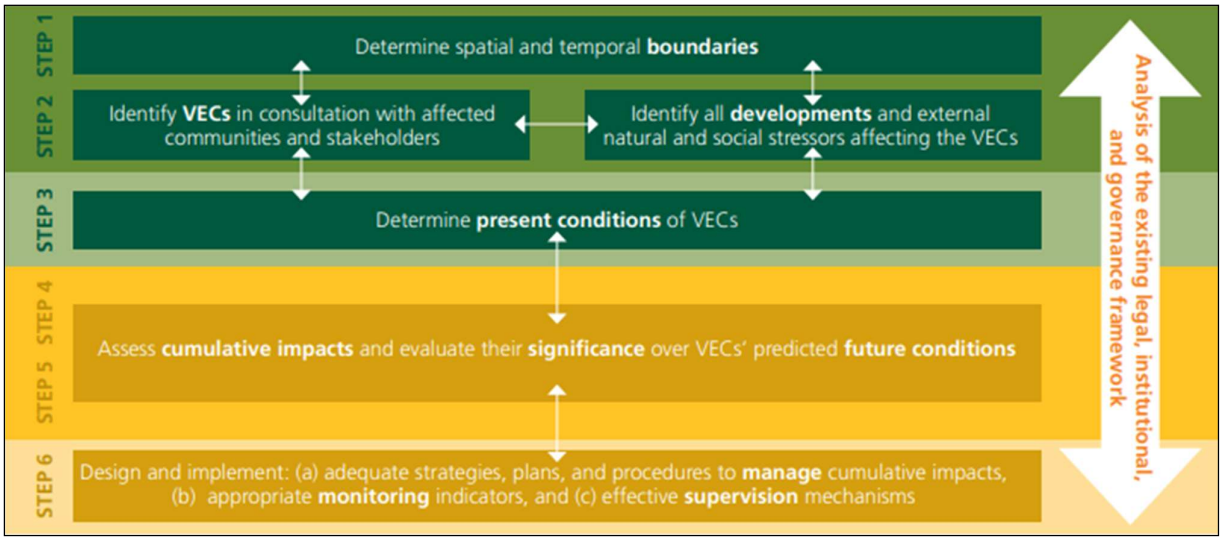
At peak activity, approximately 2,300 workers will be on site, with a total roster of over 4,200 personnel on roster excluding the crew to operate the R3000 plant.

The primary waste streams generated by the process is spent brine and solid residues filtered from the process plant.

# 2 Cumulative Impact Assessment

## 2.1 Methodology

The methods for undertaking the CIA follow the Rapid Cumulative Impact Assessment (RCIA) approach (IFC, *Good Practice Handbook, Cumulative Impact Assessment and Management: Guidance for the Private Sector in Emerging Markets*, 2013). The RCIA process is a six-step process as shown Figure 1.




Source: IFC, p.8, *Good Practice Handbook, Cumulative Impact Assessment and Management: Guidance for the Private Sector in Emerging Markets*, 2013.

Figure 1: RCIA six-step approach

The aim of the RCIA is to assess VECs. VECs are the environmental and social attributes that are important in assessing cumulative impacts that may be directly or indirectly affected by a specific venture or activity, and they often are also affected by the cumulative effects of several ventures or activities.

## 2.2 Location and Mineral Resources

The Project is located in the Province of Salta, approximately 270 kilometres (km) to the 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 and 67°02'16.3" West.

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, which is connected to the Site by internal earth roads.

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 2 illustrates the Project's location and access routes.

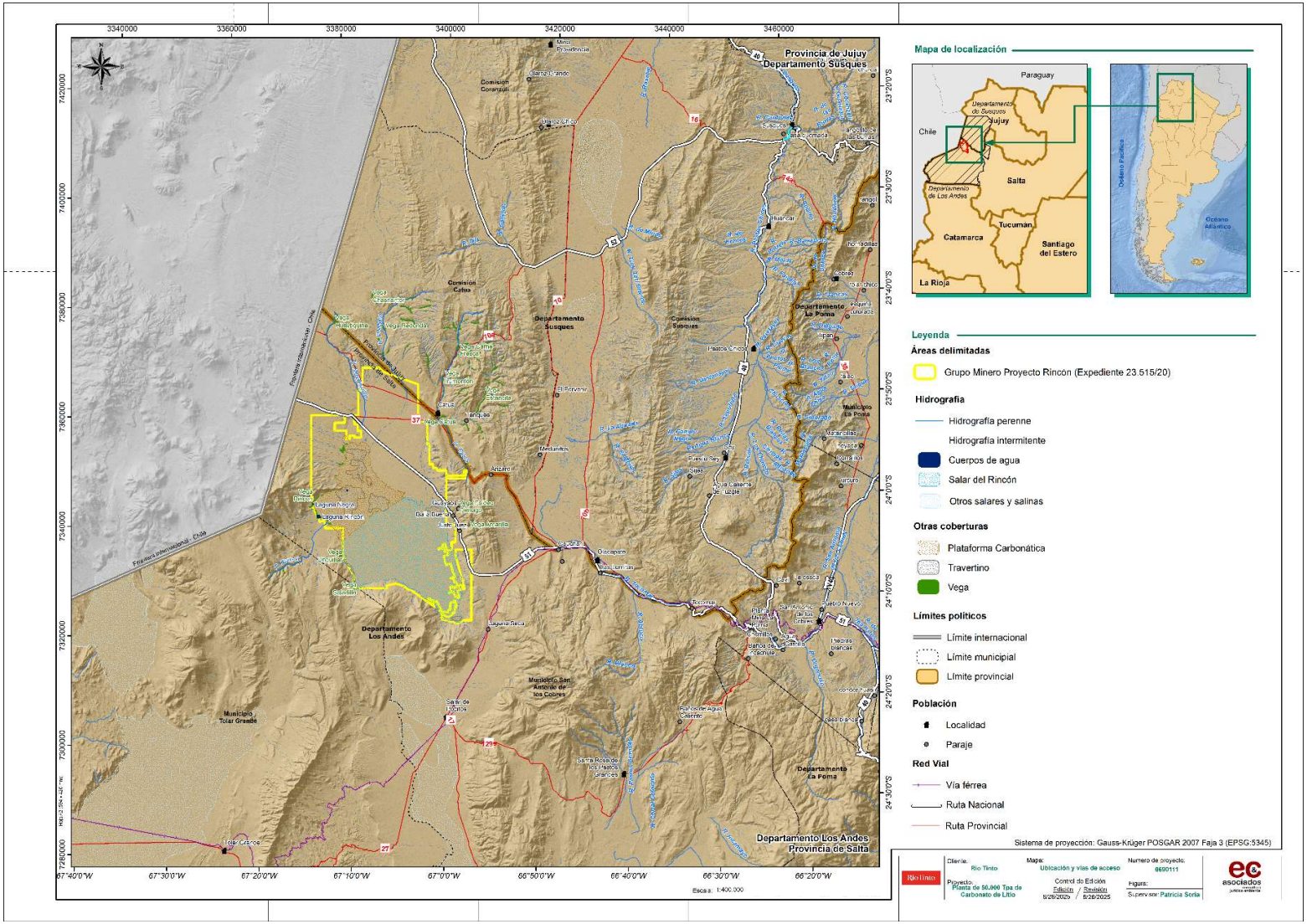



Figure 2: Project location map

## 2.3 Scoping Rationale

The following sections present each of the six steps of the CIA — for each step, the relevant information for each of the VECs is provided as follows:

- Section 2.2. Step 1: Spatial Boundaries and Temporal Scales.
- Section 2.3. Step 2: Identify VECs, Other Ventures, and Activities, and External Stressors.
- Section 2.4. Step 3: Determine Present Conditions of VECs.
- Section 2.5. Step 4: Assess the Predicted Cumulative Impacts on Each VEC.
- Section 2.6: Step 5: Assess Predicted Cumulative Impacts on the Sustainability of the VECs.
- Section 2.7: Step 6: Potential Strategies for Controlling Cumulative Impacts.

Rincon notes that Step 5 of the CIA presents a quantitative assessment of cumulative impacts for VEC-1: Water Resources and VEC-2: Terrestrial Biodiversity and Ecosystems. The CIA assesses cumulative impacts on social VECs using quantitative information where possible. For example, current and forecasted population, migration trends, influx estimates, variability in the Economically Active Population (EAP), temporary and permanent workforce requirements, number of educational institutions, education levels achieved, educational services provided, number and type of health facilities, health facilities' coverage area and population served, health conditions and health plan coverage, traffic volume projections, sources of traffic, planned transport upgrades, annual trips by project stage, percentage of families maintaining puestos, shifts in pastoral activities, etc., have been included. While certain cumulative impacts are ultimately characterised qualitatively, this is consistent with international best practice when data limitations or uncertainty preclude numerical aggregation. In these cases, the CIA uses quantitative data to support and substantiate the qualitative assessment. Accordingly, the CIA evaluates the combined magnitude and interaction of multiple activities on social VECs, using both quantitative and qualitative methods appropriate to the available information.

The assessment incorporates past and anticipated changes associated with other projects and regional activities. These data inputs inform the cumulative impact predictions, where the assessment explicitly considers the overlapping effects of multiple contributors on each social receptor. The assessment examines the drivers of change, potential impacts, and predicted sustainability outlook of the VECs, rather than establishing quantitative thresholds for determining when cumulative impacts become significant. These thresholds are currently being drafted as part of the mitigation and management plans under development (refer to Table 47).

The VECs assessed in this CIA are summarised in Table 2, providing the following for each VEC:

- Definition.
- Spatial Boundary and Temporal Scale.
- Potential Impacts Identified.
- Reference Documents where additional information can be sourced.

## 2.4 Step 1: Spatial Boundaries and Temporal Scales

### 2.4.1 Spatial Boundaries

Each VEC has its own spatial boundary. 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. Therefore, the spatial boundaries selected for the CIA are as follows:

- VEC-1: Water Resources and VEC-2: Terrestrial Biodiversity and Ecosystems – considers the Salar del Rincon Basin watershed. We note that for VEC-2, The Rincon Basin watershed was selected as the Environmentally Appropriate Area of Assessment (EAAA), which overlaps with protected areas and conservation sites.

Table 2. Valued Environmental Components

| VEC No. | Definition | Spatial Boundary and Temporal Scale | Potential Impacts Identified | Reference Documents for Additional Information |
|---|---|---|---|---|
| VEC-1: Water Resources | • Groundwater resources.<br>• Surface water resources, including springs, vegas, lagoons and rivers (Huaytiquina, Catua and Pompón Rivers).<br>• Brine reserves. | • Rincon Basin.<br>• LoM (40 years) and post-closure until there are no residual impacts from the Project on water resources. | • Impact to groundwater and/or surface water flows, levels and/or quality due to raw water abstraction.<br>• Impact to groundwater and/or surface water flows, levels and/or quality due to lithium brine abstraction.<br>• Impact to groundwater and/or surface water flows, levels and/or quality due to infiltration from evaporation and/or concentration ponds.<br>• Impact to groundwater resources from exploration drilling, particularly in areas in the immediate vicinity or hydraulically upgradient of sensitive receptors.<br>• Impact to groundwater resources from Puna Mining operations in southeastern area of Rincon Basin (independent of proposed Rincon operation).<br>• Impact to water resources from climate change projections, including reduced annual rainfall and more frequent extreme events (independent of proposed Rincon operation). | • Project Disclosure Summary (Rio Tinto, 2025a).<br>• Assessment of Brine and Water Resources (Rio Tinto, 2025f).<br>• Project Execution Environmental Management Plan (Rio Tinto, 2025h).<br>• Updated Conceptual Closure Plan (Rio Tinto, 2025i).<br>• Environmental and Social Impact Assessment — in Spanish (ESIA, 2024).<br>• Responses to the 2024 ESIA Comments — in Spanish (Rio Tinto, 2025j). |
| VEC-2: Terrestrial Biodiversity and Ecosystems | • Designated protected areas and conservation sites.<br>• *Liolaemus* spp., a Critical Habitat-triggering species. | • Rincon Basin, i.e., the Environmentally Appropriate Area of Assessment (EAAA)<br>• LoM (40 years) and post-closure until there are no residual impacts from the Project on terrestrial ecosystems. | • Impacts to protected areas and conservation sites.<br>• Loss of habitat for *Liolaemus* spp., a Critical Habitat-triggering species, *Liolaemus* sp. A, *Liolaemus* sp. C, *Liolaemus multicolour, Liolaemus porosus, Liolaemus scrocchi*, and *Liolaemus* sp. AC, which may possibly be two distinct species: *Liolaemus* sp. A and sp. C or subspecies. These are endemic (native and restricted-range) lizard species found in the Salar del Rincon Basin.<br>• Habitat fragmentation.<br>• Disturbance due to noise, dust, human presence.<br>• Collisions due to traffic, roads, and transmission lines. | • Project Disclosure Summary (Rio Tinto, 2025a).<br>• Critical Habitat Assessment (Rio Tinto, 2025g).<br>• Project Execution Environmental Management Plan (Rio Tinto, 2025h).<br>• Updated Conceptual Closure Plan (Rio Tinto, 2025i).<br>• Environmental and Social Impact Assessment — in Spanish (ESIA, 2024).<br>• Responses to the 2024 ESIA Comments — in Spanish (Rio Tinto, 2025j). |
| VEC-3: Demographic Structure | • A group of people who inhabit the same geographical area.<br>• 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 EAP and the masculinity index (i.e., the sex ratio, or number of males per 100 females). | • Catua, Estación Salar de Pocitos, Olacapato, and San Antonio de los Cobres.<br>• 10 years.* | • Migration of foreign population.<br>• Return of local residents who have previously left, especially in smaller towns. | • Project Disclosure Summary (Rio Tinto, 2025a).<br>• Stakeholder Engagement Plan (communities and puesteros) — in Spanish (Rio Tinto, 2025b).<br>• Supplemental Social Baseline (puesteros) — in Spanish (Rio Tinto, 2025c).<br>• Preliminary Social Impact Assessment (Puesteros) — in Spanish (Rio Tinto, 2025d). |

| VEC No. | Definition | Spatial Boundary and Temporal Scale | Potential Impacts Identified | Reference Documents for Additional Information |
|---|---|---|---|---|
| VEC-4: Socioeconomic Structure | • Economic, sociological, and labour variables that make up the organisation and distribution of wealth, resources, and opportunities within a population.<br>• Variables include formal employment levels, household income, purchasing power, and living costs. | • Catua, Estación Salar de Pocitos, Olacapato, and San Antonio de los Cobres.<br>• 10 years.* | • Generation of direct and indirect employment.<br>• Revitalisation of the local economy.<br>• Generation of taxes and royalties. | • Preliminary Puesteros Management Plan — in Spanish (Rio Tinto, 2025e).<br>• Project Execution Environmental Management Plan (Rio Tinto, 2025h).<br>• Updated Conceptual Closure Plan (Rio Tinto, 2025i).<br>• Environmental and Social Impact Assessment — in Spanish (ESIA, 2024).<br>• Responses to the 2024 ESIA Comments — in Spanish (Rio Tinto, 2025j). |
| VEC-5: Educational Services | • Factors associated with the availability, accessibility, quality and responsiveness of the formal and informal education system in a given territory.<br>• 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. | • Catua, Estación Salar de Pocitos, Olacapato, and San Antonio de los Cobres.<br>• 10 years.* | • Acquisition of skills and abilities by the local population.<br>• Additional pressure on educational infrastructure. | |
| VEC-6: Provision of Health Services | • Biological, environmental, social and cultural factors that determine the physical and mental state of the population in a given territory.<br>• Variables include the coverage, accessibility, and quality of health services. | • Catua, Estación Salar de Pocitos, Olacapato, and San Antonio de los Cobres + other communities along shared transport corridors.<br>• 10 years.* | • Additional pressure on health services. | |
| VEC-7: Road Infrastructure | • Public infrastructure to accommodate the safe, efficient and comfortable transit of people and goods between different parts of a territory.<br>• 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. | • Catua, Estación Salar de Pocitos, Olacapato, and San Antonio de los Cobres.<br>• 10 years.* | • Impact and pressure on existing road infrastructure.<br>• Inconvenience from vehicular traffic. | |
| 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.<br>• Variables include work such as extensive livestock, the production of natural fibres, handicrafts, the collection and extraction of resources such as salt, among others. | • Catua, Estación Salar de Pocitos, Olacapato, and San Antonio de los Cobres.<br>• 10 years.* | • Modification of land use, affectation of traditional ways of life and use of ecosystem services, i.e., changing of culture.<br>• Movement from traditional livelihoods to mining. | |

* As this VEC was assessed based on government census information produced in 2022, and the census is undertaken every 10 years, a 10-year temporal scale for VEC-3 through VEC-8 was established.

- VEC-3: Demographic Structure, VEC-4: Socioeconomic Structure, VEC-5: Educational Services, VEC-6: Provision of Health Services, VEC-7: Road Infrastructure, and VEC-8: Traditional Productive Activities – considers the Direct and Indirect Social AoI for the Project, including Catua, Estación Salar de Pocitos, Olacapato, and San Antonio de los Cobres.

- VEC-7: Road Infrastructure – considers other communities and projects identified along the transport corridors will be assessed for VEC-7: Road Infrastructure, as the region is considered to receive impacts of a more extended and shared, complex road network of other ventures and activities.

#### 2.4.2 Temporal Scales

Each VEC has its own temporal scale. The temporal scales for the CIA were established in line with IFC's *Good Practice Handbook, Cumulative Impact Assessment and Management: Guidance for the Private Sector in Emerging Markets*, 2013:

- VEC-1: Water Resources - water resources represents the greatest potential for cumulative impact based on brine, groundwater, and raw water drawdown. The groundwater numerical model considers the cumulative impact of the operation of the Rincon Project + Argosy's Puna Mining (refer to Section 2.6.1.2. Scenario Planning – Water Level Drawdown) + climate change for the LoM (40 years) and post-closure until there are no residual impacts from the Project on water resources. Therefore, the temporal scale corresponds to the life cycle of the Project for this VEC.

- VEC-2: Terrestrial Biodiversity and Ecosystems - considers the outcomes of the numerical modelling, and broader mining-related changes to water availability, habitat loss and degradation, habitat fragmentation and microhabitat alteration, thermal and hydrological changes, conservation integrity and management challenges, and access and barriers to dispersal for the LoM (40 years) and post-closure until there are no residual impacts from the Project on terrestrial biodiversity and ecosystems. Therefore, the temporal scale corresponds to the life cycle of the Project for this VEC.VEC-3: Demographic Structure, VEC-4: Socioeconomic Structure, VEC-5: Educational Services, VEC-6: Provision of Health Services, VEC-7: Road Infrastructure, and VEC-8: Traditional Productive Activities - considers the potential impacts to Catua, Estación Salar de Pocitos, Olacapato, and San Antonio de los Cobres related to increased mining activities in the region and induced effects of those developments. As this information was assessed based on government census information produced in 20221, and the census is undertaken every 10 years, a 10-year temporal scale for VEC-3 through VEC-8 was established.

### 2.5 Step 2: Identify VECs, Other Ventures and Activities, and External Stressors

#### 2.5.1 Identification of VECs

The identification of VECs is a fundamental step in establishing a robust baseline and adequately guiding the assessment of cumulative impacts. Its objective is to identify VECs relevant to the Project's AoI, considering their sensitivity, their importance for environmental and local communities and their susceptibility to cumulative impacts. The 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 (e.g., protected areas and critical habitats), affected people and natural resource–dependent livelihoods, cultural and ethnic archaeology and heritage, etc.

The following sections provide the rationale for the selection of the VECs. VEC selection is mainly based on the identification of environmental and social impacts carried out for the Project within the framework of the ESIA for the 50Ktpa lithium carbonate plant, as well as on the studies available for the Rincon West Project. Likewise, the main impactful actions from mining projects that could develop in the future and that, together, have the potential to affect various dimensions of the social, economic, political, and cultural environment were considered.

[1] The most recent census was delayed 2 years based on the COVID pandemic; Argentina adheres to suggestions from international organisations to carry out the census in years ending in 0, so to comply it likely would revert to 2030.

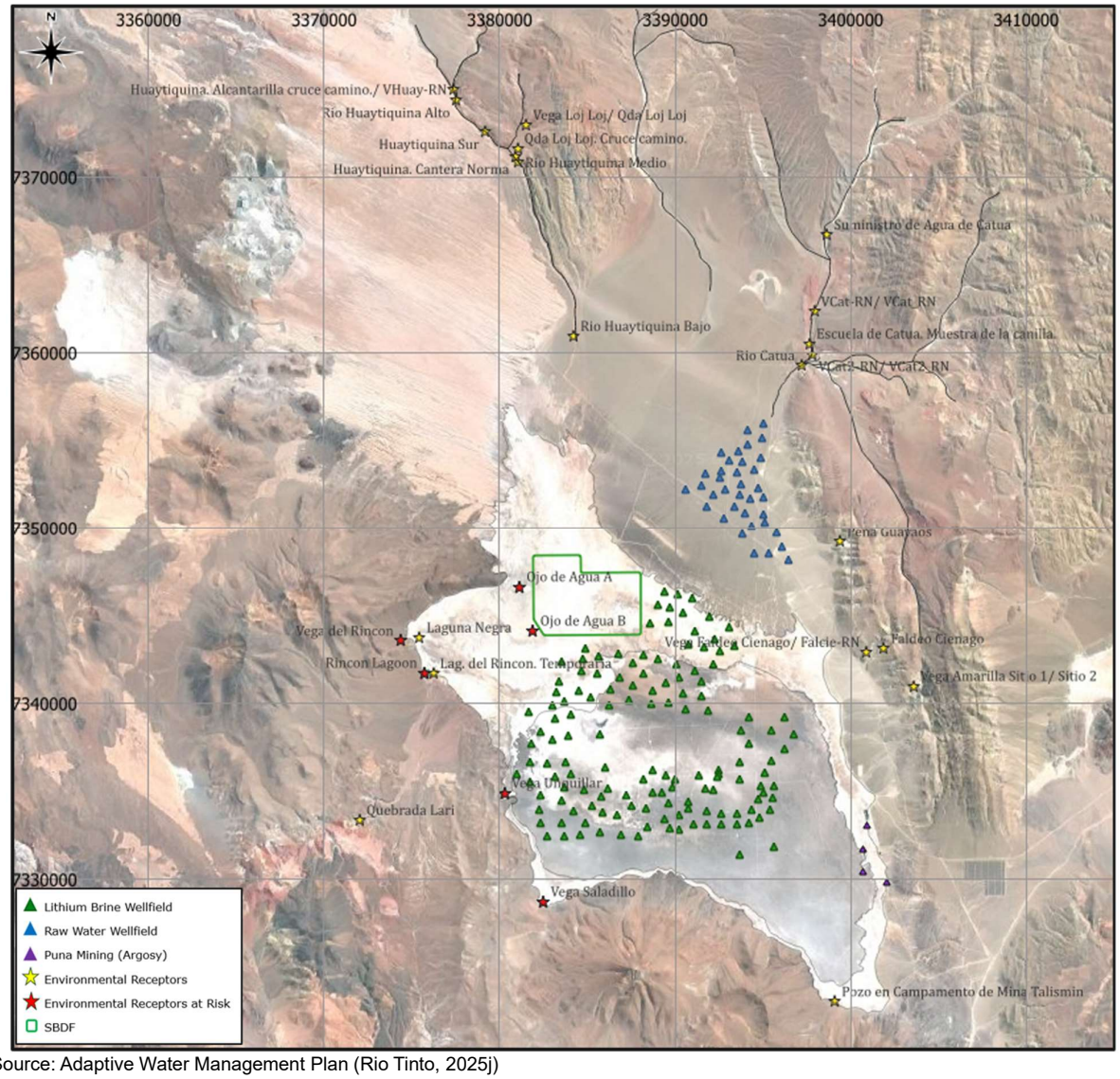
#### 2.5.1.1. VEC-1: Water Resources

*Groundwater Resources, Surface Water Resources, and Brine Reserves*

The Project area comprises a closed hydrologic basin that includes Salar del Rincon, which is typical of a closed basin salt lake in the Altiplano-Puna region. The Project area is a highly complex hydrogeological setting, characterised by a salar nucleus situated at the centre of the basin, surrounded by extensive alluvial fans, colluvial deposits and low permeability bedrock. The processing of the lithium-rich brine will require a raw (industrial) water supply. Extensive wellfields will be installed in the Salar and Catua Alluvial Fan to abstract the lithium-rich brine and raw water, respectively. There are many groundwater and surface water linked features within the Rincon Basin, including rivers, springs, vegas, lagoons, Ojos de Agua, water supplies (puesteros' wells) and grazing areas which are shown in Figure 3. The location of the Spent Brine Disposal Facility (SBDF), raw water wellfield and lithium brine wellfield are also shown in Figure 3.

The CIA considers the following environmental receptors as potentially being at risk:

- Groundwater resources.
- Surface water resources, including springs, vegas, lagoons and rivers (Huaytiquina, Catua and Pompón Rivers).
- Brine reserves.




Source: Adaptive Water Management Plan (Rio Tinto, 2025j)

Figure 3: Location of environmental receptors and mine infrastructure

*Ojos de Agua*

The following scenarios have the potential threaten aquatic and semi-aquatic habitats of the Ojos de Agua, where EMEs are found:

- Lowering of the water table and desiccation of surface water bodies due to groundwater extraction and brine management.

- Infiltration of mixed liquids from the SBDF --- designed to receive liquid effluents generated during the lithium extraction process --- could alter the chemical composition of the Ojos de Agua, affecting factors relevant to EMEs such as salinity (and therefore, conductivity), pH, nutrient availability, and the concentration of metals and/or chemical compounds. According to the groundwater numerical model presented in the Project's Environmental and Social Impact Assessment — in Spanish (Rio Tinto, 2024), an infiltration in the order of ~4% of the annual volume to be disposed in this infrastructure is expected.

- Ingress of particulate matter --- The construction and progressive development of the SBDF could lead to a significant increase in the emission of suspended particulate matter (dust), primarily due to vehicle traffic, soil removal, earthworks, and the incremental elevation of this infrastructure, and deposition in the Ojos de Agua.

Nonetheless, EMEs were not specifically assessed as a VEC as part of the CIA. It is important to note that although the EMEs are unique and locally significant, their small extent and isolated location make them more susceptible to localised risks and Project impacts rather than cumulative impacts. As such, the potential for broader cumulative effects is expected to be very limited to negligible.

That said, the Project's groundwater modelling incorporates Argosy's Puna Mining operations, and their combined lowering of the water table is not expected to cumulatively impact EMEs. In addition, a permit condition of the Declaración de Impacto Ambiental (DIA) for the Project prohibits impacts to EMEs. Further, RINCON is currently undertaking studies to: 1) evaluate the microbiome dynamics and seasonal variability of EMEs; and 2) assess the resilience of these ecosystems to potential Project-related stressors.

The scope of the ongoing EMEs studies, and the linkage between these studies and mitigation and management planning, are detailed further in Section 4.3.1.

#### 2.5.1.2. VEC-2: Terrestrial Biodiversity and Ecosystems

Changes to terrestrial biodiversity and ecosystems have been identified as potential impacts within the Salar del Rincon Basin. These features are described in detail in the Environmental and Social Impact Assessment —in Spanish (Rio Tinto, 2024), Project Disclosure Summary (Rio Tinto, 2025a), Critical Habitat Assessment (Rio Tinto, 2025g), and Offset Conceptual Feasibility Study (Rio Tinto, 2026). Refer to Section 2.5.2 for the baseline presentation for VEC-2: Terrestrial Biodiversity and Ecosystems. While there are a number of terrestrial biodiversity and ecosystems features, the CIA considers the following environmental receptors as potentially being at risk:

- Protected areas and conservation sites.

- *Liolaemus* spp., a Critical Habitat-triggering species.

*Protected Areas and Conservation Sites*

Protected areas and conservation sites were considered under VEC-2 because the Project is located within a major Provincial protected area — the Reserva Provincial de Fauna Los Andes (RPFLA) — and lies within a landscape that hosts multiple overlapping conservation designations, sensitive habitats, and species of conservation concern. These areas collectively represent high ecological value and high sensitivity to cumulative disturbance.

**Presence of Multiple, High-Value Conservation Designations**

The Project area and surrounding region encompass or are adjacent to several nationally and internationally recognised conservation sites, including:

- RPFLA – a large, protected landscape created to safeguard threatened Andean fauna and diverse high-Andean habitats. 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. It represents biotic

and abiotic conservation values which are relevant and have special value, particularly for local communities.

- Zona de Reserva de la Vicuña --- established to recover Vicuña populations and protect key grazing habitats, i.e., pajonal (high-altitude, grass-dominated areas), esporal (mixed grass and shrub communities with moderate plant cover), and vegas (wet meadows with permanent or semi-permanent water sources, supporting lush vegetation and biodiversity).

- Reserva Provincial Altoandina de la Chinchilla --- critical for the Endangered *Chinchilla chinchilla*.

- Sistema de Lagunas de Vilama-Pululos --- designated as a Ramsar Site, Key Biodiversity Area (KBA), and Important Bird Area (IBA), supporting globally significant Flamingo populations.

- Reserva Provincial de Fauna y Flora Olaroz–Cauchari --- protecting high-Andean ecosystems and Threatened mammals and birds.

These overlapping designations indicate the regional concentration of biodiversity importance, making conservation integrity a legitimate VEC consideration.

**Sensitivity of High-Andean Ecosystems to Hydrological Change**

Protected wetlands, vegas, and lagoons depend on delicate groundwater-fed hydrology. Mining-related groundwater abstraction by multiple operators introduces potential cumulative risks of reduced water availability, altered salinity regimes, and degradation of feeding and breeding habitats for Flamingos, Rheas, Vicuñas, and other specialist species. Given their reliance on stable hydrological systems, these ecosystems exhibit low resilience to cumulative disturbance.

**Importance for Endangered and Endemic Species**

The protected areas support *Chinchilla chinchilla* (Endangered), *Leopardus jacobita* (Andean cat), *Phoenicoparrus andinus* and *P. jamesi* (Andean and James's flamingos), and numerous migratory and endemic birds. These species trigger various Critical Habitat criteria, reinforcing the need to consider protected areas as a VEC component.

**Socio-Ecological and Cultural Value**

Local communities rely on vegas, pastures, and wetlands for transhumant grazing of llamas and sheep and cultural stewardship practices. Disturbances that affect water availability or habitat quality may also generate cultural and livelihood impacts, elevating their importance in the CIA.

**Management Complexity Under Multiple Mining Projects**

The presence of various mining operations increases fragmentation pressures, challenges in enforcement of conservation objectives, and risks of cumulative ecological degradation. These landscape-scale pressures require a VEC-level assessment.

*Liolaemus spp.*

*Liolaemus* lizards were included as a VEC component because the basin hosts multiple endemic, restricted-range, and potentially undescribed species that meet Critical Habitat Criterion 2 thresholds. Their ecology makes them highly vulnerable to habitat disturbance and fragmentation typical of mining development, as follows:

**Presence of *Liolaemus* spp., a Critical Habitat-Triggering Species**

Field surveys recorded at least four, possibly five *Liolaemus* species, including:

- *Liolaemus* sp. AC / sp. A / sp. C – newly discovered, restricted-range species, not yet formally described.

- *Liolaemus multicolour*, *L. porosus*, *L. scrocchii* – endemic, restricted-range species.

All known or potential *Liolaemus* species meet Critical Habitat Criterion 2 due to highly localised distributions and small ranges.

**Habitat Diversity and Significant Project Footprint**

Project activities will disturb multiple habitat types where *Liolaemus* spp. occur, including peladar (dry, barren areas of land with little or no vegetation), shrub steppe (areas dominated by drought-resistant shrubs and sparse grasses), salt crust transitions, tolar (areas characterised by small, woody shrubs), and hydric grasslands (grass-dominated ecosystems that occur on soils that are permanently or seasonally saturated). Because these habitats are directly intersected by the Project footprint, the likelihood of direct mortality, habitat loss, and microhabitat degradation is high.

***Liolaemus* Ecology Increases Sensitivity to Disturbance**

These species exhibit low mobility, strong site fidelity, small home ranges, and high dependence on specific microhabitats for thermoregulation and shelter. As a result, they have low potential for recolonisation, making localised habitat loss potentially irreversible.

**Cumulative Pressures from Regional Mining**

Across the Salar del Rincon Basin and adjacent salars, multiple mining projects contribute cumulative pressures such as linear infrastructure causing habitat fragmentation, soil compaction, dust deposition, and vegetation removal altering microclimates, barriers to dispersal reducing gene flow, and an increased risk of vehicle strikes and predation. Given their limited dispersal capability, cumulative impacts may significantly affect *Liolaemus* spp. population viability.

#### 2.5.1.3. VEC-3: Demographic Structure

Demographic Structure is included as a VEC because human population characteristics and dynamics in the Project's Direct and Indirect AoI are highly sensitive to change, and mining-related activities may significantly alter local socio-economic conditions, service demand, and community cohesion. The demographic profile of the region, marked by small, young, predominantly Indigenous communities with varied mobility patterns, makes population-related impacts both material and cumulative in nature, as follows. Demographic Structure is described in detail in the Environmental and Social Impact Assessment — in Spanish (Rio Tinto, 2024), Project Disclosure Summary (Rio Tinto, 2025a), and Supplemental Social Baseline (puesteros) — in Spanish (Rio Tinto, 2025c). Refer to Section 2.4.3 for the baseline presentation for VEC-3: Demographic Structure.

*Small, Unevenly Distributed Populations Highly Sensitive to Change*

The settlements within the AoI vary substantially in scale, i.e., from very small communities like Estación Salar de Pocitos and Olacapato to larger regional centers like San Antonio de los Cobres. These differences imply that 1) a relatively small influx of workers can noticeably alter the demographic profile of the smallest settlements; and 2) uneven rates of population growth across localities may exacerbate pre-existing disparities in service provision and infrastructure quality.

*Predominantly Young Population with Implications for Labour, Services, and Social Stability*

Across all communities, the age-distribution profiles indicate a notably large share of children and teenagers and a reduced representation in the older cohorts, reflecting out-migration of young adults pursuing schooling and job opportunities. This predominantly youthful demographic: 1) points to future demands on education systems, housing availability, and local labour markets; and 2) indicates that mining activities may affect pathways from schooling into employment and influence longer-term population dynamics.

*High Levels of Indigenous Self-Identification and Strong Community Affiliation*

The AoI includes settlements with substantial Indigenous populations, notably communities identifying as Kolla and Atacameño. Residents maintain strong connections to local Indigenous institutions and associations, such as Quewar-Kolla and Coquena Catua. Significant inward migration or changes in the composition of the resident population can influence social cohesion, alter territorial identity and customary livelihood practices, and place additional strain on collective governance structures. Because Indigenous groups are particularly sensitive to demographic change, this cultural dimension forms an essential component of the cumulative impact assessment.

*Mixed Spatial Distribution Influences Service Access and Impact Absorption Capacity*

Towns in the Direct AoI, such as Olacapato and Estación Salar de Pocitos, have mixed urban–rural settlement patterns with dispersed households and limited infrastructure. This affects: 1) capacity to absorb rapid population growth; 2) ability to provide equitable access to services (education, health, transport); and 3) vulnerability to social pressures driven by workforce influx. Spatial configuration, therefore, directly shapes cumulative impact potential.

*Varied and Rapidly Changing Population Growth Trends*

Population dynamics indicate substantial expansion in San Antonio de los Cobres and a decline in Olacapato. These patterns point to: 1) mobility driven by access to services and job opportunities; 2) the growing role of mining activity in shaping settlement choices; and 3) a trend toward greater population concentration in urban hubs. This variability generates both potential benefits and emerging vulnerabilities, underscoring the need to track these dynamics within a VEC-based monitoring approach.

*Dynamic Migration Processes Likely to Intensify with Mining Expansion*

Migration is a longstanding feature of Andean socio-cultural systems, but recent trends show and increased rural-to-urban mobility within Los Andes and Susques Departments. Movement is driven by education needs, lack of rural services, and job availability. In addition, higher population turnover is experienced in certain localities. Mining development intensifies these processes through: 1) attraction of foreign and non-local workers; 2) stimulating return migration; and 3) increasing dual-residency patterns. These dynamics can create service bottlenecks, housing pressures, and changes to community composition.

#### 2.5.1.4. VEC-4: Socioeconomic Structure

Socioeconomic Structure is included as a VEC because mining development in the Salar del Rincon region has a direct and transformative influence on local labour markets, income levels, productive systems, and household economic strategies. These dynamics — combined with high dependency on mining, wage differentials, and emerging local enterprises — mean that socioeconomic changes can be significant, cumulative, and difficult to reverse. Socioeconomic Structure is described in detail in the Environmental and Social Impact Assessment — in Spanish (Rio Tinto, 2024), Project Disclosure Summary (Rio Tinto, 2025a), and Supplemental Social Baseline (puesteros) — in Spanish (Rio Tinto, 2025c). to Section 2.4.4 for the baseline presentation for VEC-4: Socioeconomic Structure.

*Sensitivity of Local Economies to Mining-Driven Employment*

Within the Direct AoI, labour force participation varies considerably by community. This indicates that: 1) even relatively small changes in job availability can have outsized impacts on these small and economically fragile communities; 2) employment linked to the mining sector plays a central role in household economic stability; and 3) each locality's ability to accommodate shifts in employment demand differs significantly, making the structure of the local economy an essential element to examine in impact assessments.

*Mining as the Dominant Source of Employment and Income*

Within the Direct AoI, mining accounts for up to half of the active workforce, making it the dominant source of employment. The industry has expanded significantly since 2014 in both Salta and Jujuy, altering the composition of the regional labour market. Participation by local workers remains uneven, and women continue to be under-represented. Because the broader economy is now increasingly dependent on mining activity, any growth, slowdown, or fluctuation in mineral prices produces immediate ripple effects across jobs, supply networks, and household income. These underlying economic dependencies support the designation of Socioeconomic Structure as a VEC.

*Wage Levels and Purchasing Power Create Strong Incentives for Labour Shifts*

Within the Provincial economy, mining and quarrying provide the highest remuneration, reaching 3 times the average Canasta Básica Alimentaria, i.e., Basic Food Basket (BFB) in Salta and offering substantially higher pay than other sectors. This wage advantage: 1) pulls workers away from other industries; 2) can siphon labour from long standing livelihood activities; 3) may exacerbate income gaps between households engaged in mining and those outside the sector; and 4) shapes decisions about mobility and household economic planning. Amid high inflation and declining real earnings across most sectors, mining wages exert a disproportionately strong effect on local socioeconomic conditions.outsized influence on socioeconomic conditions, reinforcing why this aspect is considered under this VEC.

*Transformation of the Local Productive Structure*

Mining expansion stimulates growth in service sectors (logistics, catering, cleaning, accommodation, transport), emergence of family-run and micro-entrepreneurial ventures aligned with mining demand, and shifts away from traditional livelihoods toward mining-based economic activity. While this diversification presents opportunities, it also increases: 1) dependency on mining cycles; 2) vulnerability to global price fluctuations; and 3) pressure on local suppliers to scale rapidly. Due to these structural shifts — and their potential for long-term change — the productive base of local communities must be monitored as an aspect of this VEC.

*Local Entrepreneurship as a Key Impact Pathway*

Across all communities in the Direct AoI, mining activity has spurred the development of numerous small, locally operated businesses, including lodging and food services, laundry and cleaning providers, transport and logistics operations, shops and vendors supplying personal protective equipment (PPE) and other goods, and workshops offering basic mechanical and repair services. These enterprises: 1) offer valuable avenues for diversifying household income; 2) enhance the degree of local participation in the economy; and 3) yet remain closely tied to fluctuations in mining-related demand. Because these small businesses are highly sensitive to changes in mining activity and often have limited capacity to expand or buffer downturns, they form a key element of the socioeconomic impact pathway.

*Exposure to Market Volatility and Sectoral Risks*

With lithium prices having fallen significantly since 2023, a range of activities now face heightened unpredictability, including exploration programme, contracting prospects, the financial viability of local suppliers, and household expectations around income and job security. As a result, communities whose economies are highly dependent on mining-related employment and service provision face increased financial vulnerability. This reinforces the importance of recognising socioeconomic resilience as a component of this VEC.

*Cumulative Effects Across Multiple Projects*

The area is currently receiving investment from several lithium operations, other metal-mining ventures,, and a growing number of mining service firms. Together, these activities generate combined effects, including: 1) heightened demand for labour and increased competition for qualified workers; 2) upward pressure on wages and potential price inflation for local goods and services; 3) rapid expansion of supplier networks, stretching the capacity of local businesses; and 4) widening economic gaps between households connected to mining and those that are not. Because these dynamics span multiple operators and projects, coordinated management is essential, further reinforcing the need to designate Socioeconomic Structure as a VEC.

#### 2.5.1.5. VEC-5: Educational Services

Educational Services were selected as a VEC because educational capacity, accessibility, and quality are structurally limited in the Project's AoI, and mining-driven demographic, social, and economic changes have the potential to directly and cumulatively affect educational demand, infrastructure pressure, and long-term skills development. These factors make education both sensitive to Project impacts and essential for sustainable local development, as follows. Educational Services are described in detail in the Environmental and Social Impact Assessment — in Spanish (Rio Tinto, 2024) and Project Disclosure Summary (Rio Tinto, 2025a). Refer to Section 2.4.5 for the baseline presentation for VEC-5: Educational Services.

*Sparse and Uneven Education Provision Across the AoI*

The AoI contains 16 schools overall, yet only six are situated within the Direct AoI. Post-secondary options are minimal — limited to a teacher-training institute in San Antonio de los Cobres and a recently created virtual university node in Olacapato. Most settlements depend on full-day, multigrade primary schools staffed by very small teams. The implication is that installed capacity is limited, especially in small, mixed rural-urban centres. Any population growth, return migration, or workforce relocation places immediate strain on the system.

*Youth-Heavy Demographics Drive Demand for Basic Education*

Direct AoI communities (Olacapato, Catua, Estación Salar de Pocitos) have predominantly young populations, with children and adolescents representing a large share. Consequently, over 80% of enrolment is concentrated in primary and secondary levels, while few students continue to tertiary/university due to distance, cost, and limited local offerings. The implication is that even small enrolment increases can significantly stress the education system.

*Facility Limitations and Quality Challenges*

Schools in the Direct AoI exhibit multiple operational constraints: 1) multigrade classes, shared facilities, and insufficient staffing; 2) secondary grades often co-locate with primary, reducing usable classroom space; 3) teacher housing shortages --- exacerbated by mining-driven rent inflation --- have forced staff to live inside school buildings, occupying former classrooms; 4) weak internet hampers participation in virtual programs and affects learning quality; and 5) heating and maintenance problems persist at several sites. These bottlenecks limit capacity to absorb cumulative enrolment growth and constrain skills development aligned with labour-market needs.

*Low Attainment and Limited Access to Higher Education*

In the Direct AoI, up to 20% of residents never attended school, and completion rates are low at primary and secondary, with elevated dropout risk. Only 1–2% have completed university. Pathways beyond secondary are curtailed by costs, distance, and scarce local options. These systemic barriers reduce local participation in skilled jobs linked to mining, underscoring the need to track education services as a VEC.

*Education Under Pressure from Mining-Driven Change*

Mining development affects education services via: 1) in-migration and return migration, which repopulate small towns and raise enrolment; 2) growing demand for skilled labour, which local institutions are not yet positioned to supply; 3) potential rises in early school leaving, as adolescents enter mining-related work; and 4) community expectations for technical/vocational training aligned with mining. Without targeted planning and investment, these combined pressures may surpass current capacity.

*Schools as Anchors of Cohesion and Youth Development*

Beyond instruction, schools in the AoI provide nutrition, social supports, and safe spaces for young people, anchor community identity and aid school-to-work transitions, and rely on educators and administrators with deep local knowledge who are central to community networks. Because schools play a core social role, service disruptions or infrastructure stress can produce wider community impacts, further validating education services as a VEC.

#### 2.5.1.6. VEC-6: Provision of Health Services

Provision of Health Services was selected as a VEC because the health system in the Project's AoI is limited, fragile, and already operating under structural constraints, making it highly sensitive to additional pressures from population growth, increased mobility, and mining-related workforce demands. Health service availability, accessibility, and quality directly affect community well-being, safety, and resilience—making this a critical component for cumulative impact assessment. The Provision of Health Services is described in detail in the Environmental and Social Impact Assessment — in Spanish (Rio Tinto, 2024) and Project Disclosure Summary (Rio Tinto, 2025a). Refer to Section 2.4.6 for the baseline presentation for VEC-6: Provision of Health Services.

*Uneven and Limited Health Infrastructure Throughout the AoI*

Health services in the AoI depend on: 1) three Level I posts located in Olacapato, Estación Salar de Pocitos, and Catua; 2) a single Level II facility in San Antonio de los Cobres, which handles all advanced and emergency care; and 3) very limited medical staffing, supplemented by periodic specialist rotations.[2] As a result, permanent medical professionals are lacking at most sites, diagnostic capabilities are extremely restricted, and most urgent and specialised cases require referral outside the community. With such a minimal starting point, the health system is highly susceptible to increases in demand.

*Major Gaps in Personnel, Equipment, and Emergency Capacity*

In the Direct AoI health posts, typically only one nurse or health agent serves each locality with physicians providing monthly or bi-weekly visits. Medication supplies cover only 2–3 days, and communities like Olacapato lack pharmacies entirely. Facilities lack essential equipment, from desks and medical instruments to reliable heating. The San Antonio Hospital also deals with severe ambulance shortages (only one functioning vehicle out of three), too few physicians for an area of roughly 34,000 km², and budget limitations that hinder repairs, equipment upgrades, and procurement of supplies. These system-wide deficits reduce emergency readiness and heighten the chance of service overload.

*High Levels of Respiratory, Chronic, and Mental Health Conditions*

Common health issues across the AoI include acute respiratory infections (intensified by altitude, cold temperatures, and dust exposure), gastrointestinal and diarrheal diseases, chronic conditions such as diabetes and hypertension, trauma cases (including those linked to mining-related road incidents), and mental health concerns such as alcohol misuse, adolescent suicide, gender-based violence, and teen

[2] The Ramón Carrillo Health Plan of the Ministry of Public Health of the Province of Salta organizes the health service into four levels of care: Level I, which includes outpatient services divided into health centers, health posts and fixed posts; Level II, made up of Operational Area head hospitals with basic inpatient care, laboratory, and radiology services; Level III, consisting of head hospitals that provide diagnostic support and medium complexity treatment; and Level IV, composed of high complexity hospitals capable of resolving nearly all medical care needs.

pregnancy. These complex conditions require stable, well-equipped services, which the AoI currently cannot provide sustainably.

*Additional Pressure from Mining Workers and Mobile Populations*

Health facilities — both local posts and the San Antonio Hospital — serve not only residents but also mining personnel, transport workers and travellers, and people arriving from neighbouring Provinces (e.g., Jujuy and Catamarca). These groups are not included in census counts, meaning actual demand is significantly higher than formal estimates and will likely continue rising with ongoing mining expansion. This discrepancy increases the likelihood of unexpected strain on infrastructure, staffing, and medication supplies.

*Barriers to Access and Gaps in Health Coverage*

Despite relatively high rates of health insurance/prepaid plans, notable shortcomings persist. Smaller settlements face additional challenges due to the absence of pharmacies, ambulance services, and daily medical care, which intensify the cumulative impacts of population growth or increased mobility.

*Fragility of Health Services Heightens Vulnerability to Cumulative Impacts*

Key sources of cumulative pressure include rising numbers of emergency and outpatient cases, greater demand for medication, more frequent referrals to San Antonio, higher workloads for rotating specialists, increased need for trauma and occupational health response, and escalating mental health and substance-use burdens. With multiple mining projects active across the region, the probability of exceeding system capacity is high.

#### 2.5.1.7. VEC-7: Road Infrastructure

Road Infrastructure was included as a VEC because the transport network that serves the Project area is limited, strategically important, and highly sensitive to increases in mining-related traffic, making it vulnerable to cumulative pressure, safety risks, and reduced accessibility for communities. This infrastructure underpins regional mobility, economic activities, and access to essential services; the wider region contains 17 operating mining projects in Salta, 21 in Jujuy, and additional sites in exploration, construction, or production phases. Many rely on exactly the same access roads as the Project. As these projects scale up, cumulative impacts include higher volumes of heavy trucks and machinery, accelerated erosion of gravel and unpaved segments, rising accident likelihood, additional strain on Provincial road budgets, and more frequent closures or delays affecting all road users. This shared dependence turns the regional road system into a critical cumulative impact pathway. Road Infrastructure is described in detail in the Environmental and Social Impact Assessment — in Spanish (Rio Tinto, 2024) and Project Disclosure Summary (Rio Tinto, 2025a). Refer to Section 2.4.6 for the baseline presentation for VEC-7: Road Infrastructure.

*Critical Reliance on a Small Set of Key Transport Routes*

The Project is heavily dependent on a handful of national and Provincial corridors—RN 51, RN 52, RP 27, and RP 70 — which link remote Puna settlements with Salta, Jujuy, Chile, and other inter-Provincial nodes. These routes are vital for: 1) moving mining materials, outputs, and heavy machinery, 2) transporting workers, contractors, and service providers, 3) allowing local residents to travel for supplies, schooling, and medical care; and 4) sustaining tourism and cross-border trade via Paso de Jama and Paso de Sico. Because the region has very limited alternative routing, any closure, delay, or bottleneck on these roads can substantially disrupt logistics, safety, and overall connectivity.

Traffic monitoring identifies a clear east–west gradient with heavy and growing traffic levels through San Antonio de los Cobres, Cauchari, and Paso de Sico. The vehicle mix includes mining haul trucks, utility pickups and support vehicles, cargo transport, tourist buses and vans, and local movements linked to schools, shops, and health services. Mining remains the dominant contributor to freight, with pickups and heavy trucks most common near project access points. Continued growth in mining, tourism, and logistics is increasing cumulative pressure on the network.

*Infrastructure Gaps and Maintenance Challenges Heighten Sensitivity to Traffic Increases*

Many essential Puna routes are unpaved, including large stretches of RN 51 and RP 27. Roads are in a deteriorated or inconsistent condition, with subsidence, cuts, dust, and maintenance delays, and are seasonally exposed to landslides, washouts, and temporary shutdowns (notably along RN 52). Recent observations highlight significant maintenance arrears on RN 51, slow upgrades and community concerns regarding RP 27, repeated closures and emergency works on RN 52, and chronic underfunding of national and Provincial road authorities. These constraints make the system highly sensitive to rising mining, industrial, and tourism traffic, increasing accident risk, delays, and faster road degradation.

*Multiple Uses of the Same Roads Create Overlapping Pressures and Safety Concerns*

These corridors are essential for the daily mobility of Indigenous and rural households, major tourism destinations (Salinas Grandes, Cuesta de Lipán, Tren a las Nubes), international freight traffic, and access to healthcare, emergency response, education, and government services. Their multi-purpose nature heightens risks of conflicts between heavy and light vehicles, accidents linked to dust, limited visibility, and mixed traffic types, and interruptions to community mobility and basic service access. Because many routes pass through or near Indigenous territories, increased traffic can also affect traditional mobility patterns and local land-use practices.

*Community Isolation and Access to Essential Services Hinges on Road Conditions*

Local residents depend on these corridors for reaching health posts and the hospital in San Antonio de los Cobres, obtaining food, goods, and fuel, school attendance and teacher travel, and supporting commerce, tourism, and small enterprises. Poor upkeep, periodic closures, and congestion worsen isolation and reduce the resilience of communities already facing geographic and service-access limitations.

#### 2.5.1.8. VEC-8: Traditional Productive Activities

Traditional Productive Activities were included as a VEC because livestock herding, fibre use, artisanal weaving, and associated land-use practices remain central to cultural identity, subsistence, and community resilience in the Puna region. These activities are highly sensitive to changes driven by mining development, demographic shifts, climate variability, and land-use transformation. Their vulnerability — and their importance for Indigenous cultural continuity — makes them a critical component in cumulative impact assessment. Traditional Productive Activities are described in detail in the Environmental and Social Impact Assessment — in Spanish (Rio Tinto, 2024), Project Disclosure Summary (Rio Tinto, 2025a), Supplemental Social Baseline (puesteros) — in Spanish (Rio Tinto, 2025c), Preliminary Social Impact Assessment (Puesteros) — in Spanish (Rio Tinto, 2025d), and Preliminary Puesteros Management Plan — in Spanish (Rio Tinto, 2025e). Refer to Section 2.4.6 for the baseline presentation for VEC-7: Road Infrastructure.

*Traditional Livelihoods are Culturally Foundational and Historically Significant*

Extensive livestock husbandry (llamas, sheep, goats), fibre processing, and weaving form the core of ancestral Andean livelihoods, shaping social organisation and land-use patterns. Communities maintain strong cultural value through practices such as hacienda signs (offerings to Pachamama), natural dyeing, and seasonal shearing traditions. Traditional productive activies serve as vehicles of intergenerational knowledge transmission, particularly among women. Because these practices are deeply embedded in Indigenous identity, any disruption poses risks to cultural heritage and community cohesion.

*Traditional Productive Activities Contribute to Household Resilience and Food Security*

Despite increasing access to wage labour, there is an ongoing socioeconomic relevance of traditional activities, even as mining becomes a dominant employer.

*Livestock Production and Land Use are Spatially Extensive and Environmentally Dependent*

Livestock herding relies on seasonal mobility across grazing territories, vegas, and high-Andean pastures. A network of puestos (rural production units), many of which remain in active or partial use even when uninhabited. This reflects a dynamic land-use system that can be disrupted by Project activities, access restrictions, dust, and increased traffic.

*Traditional Activities Face Structural Pressures and are at Risk of Decline*

Surveyed communities report: 1) reduced rainfall, degraded grazing pastures, and loss of native vegetation; 2) increasing need to purchase feed — previously uncommon; 3) fewer family members residing at puestos due to sedentarisation and migration to towns; 4) declining youth participation, especially in pastoralism and weaving; and 5) weakening institutional support (e.g., fewer veterinary campaigns, poor infrastructure). These pressures heighten the sensitivity of traditional productive systems to any additional external change, including mining.

*Economic Transformation Driven by Mining May Accelerate Livelihood Shifts*

As mining expands, there is growing local participation in wage labour, mining services, and associated economic opportunities. This shift reduces time available for herding, fibre processing, and weaving, weakens intergenerational transfer of pastoral and textile knowledge, creates trade-offs between wage employment and traditional livelihoods, and alters land-use patterns and mobility cycles. Such transformations, if cumulative, could lead to irreversible loss of ancestral practices.

*Ageing Pastoral Population Threatens Activity Sustainability*

There is a strong reliance on older adults, with insufficient generational replacement in most localities. There is a significant risk of intergenerational discontinuity without targeted support. Catua shows some youth involvement, but Estación Salar de Pocitos and Olacapato show pronounced demographic ageing among pastoralists.

*Fibre Use and Weaving Persist but are Declining*

Most families still use animal fibres, however, market demand is low, time for traditional weaving is scarce due to wage labour, and collective marketing and support networks are limited. This reinforces the need to protect traditional knowledge pathways.

### 2.5.2 Participatory Process for the Preliminary Identification of VECs

The Project has maintained, since its early stages, a sustained process of engagement and feedback with the communities within the Area of Influence. This has enabled the continuous collection of their perceptions, concerns, and priorities. In addition to documenting this input, the Project conducted a retrospective and systematic analysis of these records to inform the initial identification and prioritization of social VECs, applying explicit technical criteria such as: community dependence on the resource or service, social and cultural sensitivity, potential magnitude and spatial extent of impact, irreversibility or difficulty of restoration, relevance for vulnerable groups, potential for cumulative effects with other projects, and the frequency and consistency of issues raised across participatory instances. Although specific validation instances exclusively for the selection of VECs have not yet been carried out, the preliminary definition of VECs was also informed by the systematic records generated throughout multiple opportunities for meaningful dialogue, during which communities expressed observed territorial trends, recent changes, sensitivities to certain topics, and concerns regarding potential impacts.

Within this framework, the community engagement history of the Project reflects an ongoing process of consultation, participation, trust-building, and institutional strengthening, primarily with the communities of Catua, Estación Salar de Pocitos, and Olacapato. These interactions have enriched the understanding of the social and environmental context, providing critical information that was considered in the preliminary selection of VECs, as shown in Table 3.

During the evaluation of the 50Ktpa lithium carbonate plant, Open Houses were held in January and February 2024 in the communities within the Area of Influence. These spaces facilitated accessible explanations of project components, identified impacts, and proposed measures. Community members provided feedback that was incorporated into the environmental and social assessment, particularly regarding water resources, infrastructure, traffic, employment, and traditional land uses. In addition, in compliance with the Indigenous Peoples' right to Free, Prior, and Informed Consent (FPIC) recognised under national and international legislation, formal consultation processes were conducted with the following communities:

- Comunidad Aborigen Coquena de Catua.
- Comunidad Aborigen Kolla de Estación Salar de Pocitos.
- Comunidad Kolla Quewar de Olacapato.

These processes included participation from community authorities, women, men, youth, elders, puesteros, and local suppliers, as well as technical and managerial representatives from Rio Tinto and consulting teams from ERM and EC & Asociados. Throughout 2025, components associated with the 50Ktpa Plant, the 33kV Medium-Voltage Transmission Line, and the 1,500-person Camp were presented through technical presentations, visual materials, printed documents, and audiovisual tools specially adapted to facilitate community understanding. Attendance records were kept to evidence participation profiles and social representativeness of the consultation spaces.

Complementarily, as part of the project's socio-environmental studies, the Puesteros Study (Supplementary Social Baseline) was conducted between November 2024 and May 2025. This included an exhaustive survey of productive-use areas and several participatory community validation activities through Open Houses held in March and April 2025. A central participatory dynamic was the "Change Station," where participants identified transformations observed in recent years across topics such as public services, employment, businesses, traffic, culture, flora, fauna, and livestock raising.

Table 3. Community engagament

| Process of Engagement | Date | Place | |
|---|---|---|---|
| Open Houses 50Ktpa Lithium Carbonate Plant | January and February 2024 | • Estación Salar de Pocitos.<br>• Olacapato. | Th<br>ex<br>id |
| FPIC, Rincon Project 50Ktpa + 33kV Transmission Line + 1,500-person Camp | July and September 2024 | • Comunidad Aborigen Kolla del Estación Salar de Pocitos.<br>• Comunidad Kolla Quewar de Olacapato.<br>• Comunidad Aborigen Coquena de Catua. | To<br>co<br>m |
| Public Hearing – Rincon Project 50Ktpa Plant | July 2025 | • Olacapato (general public). | Er<br>In |
| Public Hearing - 33kV Medium-Voltage Transmission Line | February 2025 | • Estación Salar de Pocitos (general public). | Er<br>In |
| Social Work Tables | 2025 | • Estación Salar de Pocitos.<br>• Olacapato. | Sp<br>co<br>go<br>co |
| Puesteros Study (Supplementary Social Baseline) | November 2024 and May 2025 | • Rural zone. | So<br>po |
| Open Houses – Puesteros Study Validation | March and April 2025 | • Catua.<br>• Olacapato.<br>• Estación Salar de Pocitos. | Pa<br>su |
| Community Training Workshops | October 2025 | • Area of Influence. | Tr<br>im<br>m |

This activity enabled the systematisation of local perceptions of trends, sensitivities, and risks, helping to recognize cumulative territorial trends and progressive risks — key inputs for cumulative impact assessment and for selecting VECs that are sensitive to multiple concurrent pressures.

Additionally, Community Training Workshops were conducted by the consulting firm Socionaut, providing tools to understand the projects, their impacts, and the environmental and social management mechanisms. During these sessions, held in October 2025, ERM carried out activities aimed at incorporating community perspectives into the identification, prioritization, and management of ecosystem services.

Public Hearings for the first 33kV Transmission Line emphasised the importance of improving communication mechanisms, prioritising local labour, and reviewing agreements with local suppliers. Furthermore, participation by communities and the company in the Social Roundtables organised by the Mining Secretariat helped strengthen a continuous, institutionalised, and bidirectional dialogue process.

In conclusion, although the Project still has pending the establishment of a specific space dedicated to validating cumulative impacts and confirming the final selection of VECs, it has made significant progress in clearly communicating Project impacts and systematically incorporating local knowledge. The feedback gathered through Open Houses, Free, Prior, and Informed Consent (FPIC) processes, workshops, and participatory studies — including perceptions of territorial changes, social sensitivities, and community priorities — has been a key input for the preliminary selection of VECs and for shaping the approach of this study. This process provides a solid foundation for advancing toward formal and specific validation in subsequent stages.

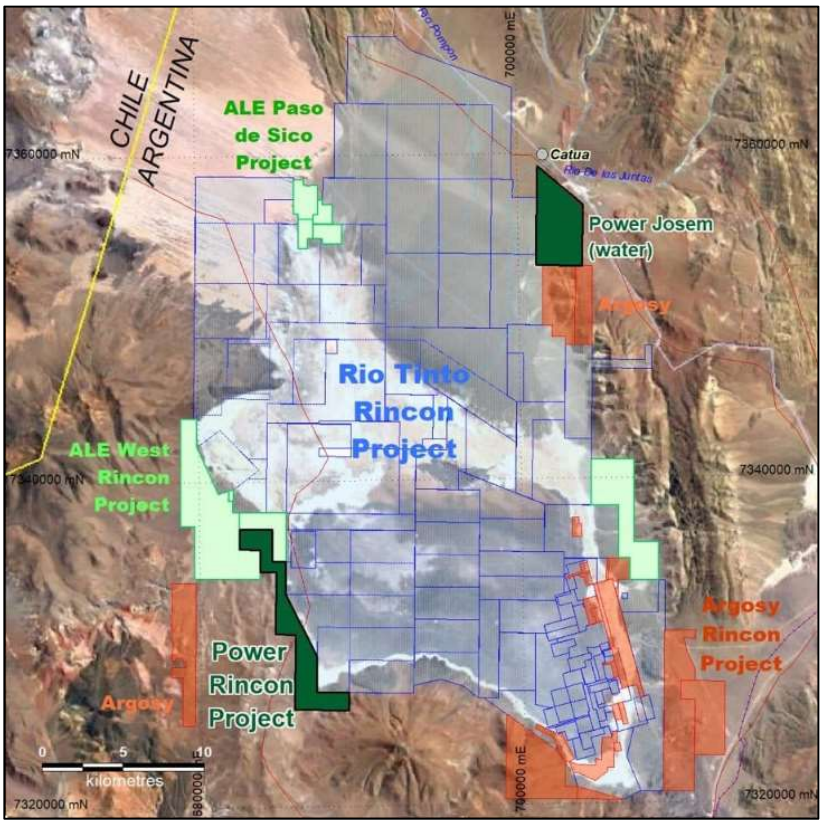
### 2.5.3 Other Ventures and Activities

IFC's Good Practice Handbook recommends "*reference to local, regional, or national development plans and generally recommends that a short time horizon be considered (e.g., three to four years in the European Union) owing to uncertainty about longer term developments.*" Where development plans are not available, IFC guidance recommends that "*emphasis be given to identifying other projects in the planning stage or formal approval process (e.g., through preparation of ESIA documents or permit submissions)*". Therefore, a temporal scale of 3 years from the time of this writing was selected for identifying reasonably foreseeable developments for inclusion in the CIA:

- For VEC-1 and VEC-2, Argosy's Puna Mining Project is the only other project considered in the CIA within the Salar del Rincon Basin, as it was previously in the exploitation phase and it is confirmed that the impacts and risks related to these VECs are geographically-bounded with the watershed (i.e., water use and direct impacts of the Li extraction). The Ministry of Mining and Energy of Salta approved the Environmental Impact Statement by Resolution 026/24 allowing Argosy's Puna Mining to move forward with the third stage of its project for the construction of a plant of up to 10Ktpa, and the possibility to move on to the marketing phase of up to 12Ktpa. Argosy's Puna Mining Project is currently on hold, and what may occur in the next three years is not known. However, the groundwater numerical model consider the combined effects of the Project and Argosy's Puna Mining across its LoM if it is reactivated.

- Two other companies currently hold exploration interests in the Salar del Rincón Basin: 1) Argentina Lithium (Rincón West Project, Paso de Sico Project, and an additional unnamed prospect); and 2) Power Minerals (Rincón Lithium Project). These projects were not included in the CIA because they remain in the early exploration phase and have not released any project development documents, feasibility-level studies, or defined project descriptions. To date, only preliminary resource statements are available. In accordance with CIA methodology, exploration-phase activities conducted by third-party companies are assumed to have negligible or inconsequential social impacts, given their limited duration, small scale, and minimal interaction with social receptors. As such, current or future impacts from these exploration programs cannot be reasonably characterised, nor would it be appropriate to hypothesize potential development scenarios without publicly available information. For these reasons, exploration stage projects were not incorporated into the cumulative impact analysis. Should any of these prospects advance to a defined project stage in the future, they will be considered in subsequent CIA updates as relevant information becomes available.

The locations of the above mentioned projects within the Salar del Rincon Basin are shown in Figure 4.




Source: Power Minerals, https://www.powerminerals.com.au/rincon-lithium-project.

Figure 4: Locations of other projects within the Salar del Rincon Basin

- With the exception of VEC-7: Road Infrastructure, no other regional ventures and activities are considered in the CIA, i.e., to contribute to pressures on VEC-3 through VEC-8. Other regional ventures and activities are considered for VEC-7, as the region is expected to receive impacts from the more extended and complex road network shared by the Project and other regional projects. These projects are presented in Table 4.

- The REMSA Mining Logistics Hub located in Olacapato along Route 51 is incorporated as a foreseeable future development. The project, advanced through a public–private collaboration and financed by Fonplata, the World Bank, and the IDB, has been described in official news releases from the Government of Salta. These reports indicate that the hub will include an industrial area, transfer yard, a dedicated railway station for the C-14 line, a facility for mining and heavy-metal waste, as well as service infrastructure such as a health centre, lodging, commercial area, public and private offices, service station, and 24-hour secure parking.

### 2.5.4 External Stressors

External drivers are those environmental and social factors that may have an impact on a VEC, including environmental processes such as landslide, earthquake, or climate change, and social elements such as regional economic growth and development or tourism. The assessment is limited to consideration of the external, mining-related drivers that can reasonably be expected:.

- VEC-1 and VEC-2:
  - Changes to water availability.
  - Habitat loss and degradation.
  - Habitat fragmentation and microhabitat alteration.
  - Thermal and hydrological changes.
  - Access and barriers to species dispersal.

Table 4. Other regional ventures

| Province | Project | Primary mineral | Company / Operator | Location | Current stage | Start of production (year) | Estimated production capacity |
|---|---|---|---|---|---|---|---|
| Salta | Arizaro | Lithium | Argentina Lithium & Energy (ARLI S.A.) | Arizaro | Advanced Exploration | 2027 | 25Ktpa |
| Salta | Ratones Centenario | Lithium | Eramine Sudamérica S.A. (Eramet) | Centenario Ratones | Production | 2024 | 24Ktpa |
| Salta | Diabillos | Silver | AbraSilver Resource Corp. | Limite Salta Catamarca | Advanced Exploration | N/A | 44 thousand ounces (koz) of gold per year and 14.5 million ounces (Moz) of silver |
| Salta | El Quevár | Silver | Argenta Silver Corp. | El Quevar | Preliminary Economic Assessment | N/A | N/A |
| Salta | Hombre Muerto Norte | Lithium | Lithium South | Salar del Hombre Muerto | Preliminary Economic Assessment | N/A | 15Ktpa |
| Salta | Lindero | Gold | Fortuna Silver Mines (Mansfield Minera) | Arizaro | Production | 2020 | 133,776 oz Au/year |
| Salta | Mariana | Lithium | Ganfeng Lithium | Llullaillaco | Production | 2025 | 20Ktpa |
| Salta | Mina Sísifo-Mina Patilla | Lithium | Power Minerals Ltda. | Arizaro | Advanced Exploration | N/A | N/A |
| Salta | Pozuelos - Pastos Grandes (PPG) | Lithium | Lithium Argentina Corp. + Ganfeng Lithium (JV) | Pastos Grandes / Pozuelos | Feasibility | 2026 | 25Ktpa |
| Salta | Pular | Lithium | Salta Lithium | Estación Salar de Pocitos | Advanced Exploration | N/A | N/A |
| Salta | Rio Grande | Copper | Aldebaran Resources Inc. | Rio Grande | Advanced Exploration | N/A | N/A |
| Salta | Rio Grande | Lithium | Pluspetrol Resources Group | Rio Grande | Advanced Exploration | N/A | N/A |
| Salta | Sal de la Puna | Lithium | Lithium Argentina Corp. + Ganfeng Lithium (JV) | Pastos Grandes / Pozuelos | Advanced Exploration | N/A | N/A |
| Salta | Sal de los Ángeles | Lithium | Potasio y Litio Argentina S.A. (PLA S.A.) | Salar de Diablillos | Construction | 2026 | 10Ktpa |
| Salta | Salar Tolillar | Lithium | Tecpetrol (Alpha Lithium) | Salar del Tolillar | Preliminary Economic Assessment | N/A | 30Ktpa |
| Salta | Taca Taca | Copper | First Quantum Minerals | Taca Taca | Feasibility | 2030 | 275 thousand metric tonnes (kt) of fine copper, 125koz of gold, and 3.5kt of molybdenum |
| Jujuy | La Providencia | Silver | Hanaq Group | Olaroz Chico | Production | 2023 | 3.6Ktpa |
| Jujuy | Cauchari JV | Lithium | Rio Tinto | Salar Cauchari–Olaroz | Pre-Feasibility | 2027 | 25Ktpa |
| Jujuy | Caucharí Olaroz | Lithium | Minera Exar S.A. (JV: Ganfeng 46,66% – Lithium Argentina 44,84% – JEMSE 8,5%) | Salar Cauchari–Olaroz, Dpto. Susques (Jujuy) | Production | 2023 | 35Ktpa |

Source: Developed using the official project list from the Open Community Information System on Mining Activity in Argentina (SIACAM; https://www.argentina.gob.ar/economia/mineria/siacam/en), along with publicly available information from company websites and news sources regarding production start dates and estimated capacities.

- For VEC-2, specifically Protected Areas and Conservation Sites:
  - Conservation integrity and management challenges.
  - Unsustainable grazing practices in vegas, leading to habitat degradation.
  - Soil degradation associated with mining activities.
- VEC-3 through VEC-8 considers the potential impacts to Catua, Estación Salar de Pocitos, Olacapato, and San Antonio de los Cobres related to increased mining activities in the wider region:
  - Demographic shifts, such as in-migration of foreign population, return migration by the local population, and changes in age structure.
  - Labour market effects, including employment creation, workforce availability, wage changes and purchasing power, and gender/inclusion dimensions.
  - Educational and health service strain, with increased demand, capacity constraints, and staffing challenges.
  - Infrastructure development and links to induced changes to regional economic growth, including road congestion, maintenance needs, multifunctional corridor conflicts, and service demand (energy provision, schools, hospitals).
  - Socioeconomic restructuring, influencing livelihoods, land use, grazing territories (puestos), economic resilience, and cultural continuity.
  - Community cohesion impacts, including changes to ethnic composition, identity, and intergenerational cultural practices.
  - Infrastructure development and links to induced changes to demographics and demand on services (schools, hospitals, energy provision, etc.).
  - Transition and retention risks.

## 2.6 Step 3: Determine Present Conditions of VECs

### 2.6.1 VEC-1: Water Resources

The assessment of baseline is based on the Environmental and Social Impact Assessment — in Spanish (Rio Tinto, 2024), as supplemented by Updated Water Resources Roadmap & Strategy (ERM, 2025a), Assessment of Brine & Water Resources (Rio Tinto, 2025f), the Adaptive Water Management Plan (Rio Tinto, 2025j), and assumptions developed for future conditions of VECs.

There are various components of the water resources of the Salar del Rincon Basin which could potentially be impacted by the activities of the Project and Puna Mining. For further analysis, the following water resources variables were selected to describe the spatial boundary and temporal scale established for VEC-1:

- Groundwater resources.
- Surface water resources, including springs, vegas, Ojos de Agua, 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 infiltration from evaporation and concentration ponds.

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 the Disclosure Summary (Rio Tinto, 2025a). 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 the Disclosure Summary (Rio Tinto, 2025a). 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, 2025f).

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.

#### 2.6.1.1. Groundwater Resources

The Salar del Rincon Basin functions as a closed hydrological system, with the generally accepted theory that groundwater recharge is approximately balanced by evaporation losses. Under these conditions, the water resources of the basin are highly sensitive to both climatic variability and anthropogenic interaction.

The hydrogeological units and lithologies across the basin and the degree of hydraulic interconnection between the different units/lithologies varies considerably. The hydraulic properties of the different lithologies varies considerably, ranging from highly permeable sands and gravels to low permeability clays. The different lithologies are interbedded in many parts of the basin, in many locations the low permeability clays confine or hydraulically isolate the more permeable aquifer units. The key groundwater resources generally exist in the more permeable lithologies which occur throughout the basin, particularly in the extensive alluvial fans which surround the nucleus of the Salar.

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 mineralised.
- Exists very close to ground level (less than 0.5m depth).
- 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 are associated with these Salar brines (note: 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 <500mg/l to brackish 30,000mg/l water), particularly in the upper part of the groundwater body.
- Often at a considerable depth below ground level (generally linked to topography, being shallow <0.5m in the lower parts of the Salar to be hundreds of metres deep in higher surrounding hills).
- Occurs within high permeability zones (e.g., alluvial/colluvial sand and gravel horizons and fractured zones within the bedrock) often hydraulically isolated by 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 Catua Alluvial 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 (including the communities or puesteros), 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 around the margin of the Salar nucleus 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 most of the alluvial fans across the Basin as a result of recharge from rainfall and surface water infiltration. In some places these fresh groundwater resources are likely hydraulically connected to surface water features (e.g., vegas and lagoons) and/or provide baseflow to rivers (e.g., the upper reaches of the Catua River). 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.

#### 2.6.1.2. 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 Alluvial Fan, river flows typically infiltrate rapidly into the subsurface. Although discrete drainage channels associated with each river extend across the Catua Alluvial 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 localised 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 localised 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 Negra) 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, specialised 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 are located within the carbonate platform interzone on the northwestern margin of the Salar nucleus, 700m to the western edge of 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 characterised 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 1mgbl.

**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 survey, borehole drilling, hydraulic testing, well installation, 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 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, and as such this aspect has been a key focus of the site investigations/monitoring completed to date as described in Assessment of Brine & Water Resources Report (Rio Tinto, 2025f).

### 2.6.2 VEC-2: Terrestrial Biodiversity and Ecosystems

The assessment of baseline is based on the Environmental and Social Impact Assessment — in Spanish (Rio Tinto, 2024), as supplemented by the Critical Habitat Assessment (Rio Tinto, 2025g), the Framework Biodiversity Action Plan (ERM, 2025b), and the Conceptual Offset Feasibility Study (Rio Tinto, 2026), and assumptions developed for future conditions of VECs. Changes to terrestrial biodiversity and ecosystems have been identified as potential impacts within the Salar del Rincon Basin.

The following terrestrial biodiversity and ecosystems variables were selected to describe the spatial and temporal scale established for VEC-2:

- Protected Areas and Conservation Sites.
- *Liolaemus* spp., a Critical Habitat-triggering species.

#### 2.6.2.1. Protected Areas and Conservation Sites

- The Project area is located within the Sustainable Use Zone - Special Management Zone - Salt Flats Sector of the RPFLA. Key vegetation types include:
  - Pajonal: Grass-dominated areas with species like *Festuca orthophylla* and *Stipa* spp., preferred by Vicuñas for foraging.[3]
  - 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 IBA. The Sistema de Lagunas de Vilama-Pululos is a remarkable high-Andean wetland complex, located primarily within the Province of Jujuy and within the Reserva Provincial Altoandina de la Chinchilla. It is recognised internationally for its ecological importance and biodiversity. It features 12 major lagoons, including:

[3] 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.

- 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 Sistema de Lagunas de Vilama-Pululos IBA is classified as a KBA, Ramsar Wetland of International Importance, and is habitat for the following species:

- Birds:
  - Andean flamingo (*Phoenicoparrus andinus*).
  - James's flamingo (*Phoenicoparrus jamesi*).
  - Horned coot (*Fulica cornuta*).
  - Numerous Central and South America migratory species.
- 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, who graze llamas and sheep. This area is recognised under Ramsar criteria for its ecological representativeness and role in regional hydrology and biodiversity.

- 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*). Note: the Chinchilla has not been recorded within the Project's Direct AoI.

  These species have faced threats from habitat loss and poaching.

  The Reserve is categorised as an IBA due to its avian richness. Notable bird 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 is located within the Sustainable Use Zone – Special Management Zone – Salt Flats Sector of the RPFLA. With multiple mining projects (i.e., Argosy's Puna Mining, three projects belonging to Argentinian Lithium, and one project belonging to Power Minerals) operating or exploring in proximity, cumulative impacts may include:

- Encroachment into sensitive habitats, such as vegas, pajonales, and shrub steppes.

- Habitat fragmentation and disruption of ecological corridors used by species such as *Vicugna vicugna* (Vicuña), *Leopardus jacobita* (Andean cat) and *Liolaemus* spp.

**Hydrological Alteration Affecting Wetlands and Lagoons**

Mining activities, including 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 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*): Vulnerable to habitat loss.

- Andean flamingo (*Phoenicoparrus andinus*) and James's flamingo (*Phoenicoparrus jamesi*): Dependent on stable lagoon ecosystems.

- *Liolaemus* spp.: Critical species and sensitive to microhabitat changes and habitat loss that could potentially be impacted by habitat fragmentation.

- Cumulative impacts from multiple projects may exceed thresholds of ecological resilience, leading to population declines or local extinction.

**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.

#### 2.6.2.2. *Liolaemus* spp., a Critical Habitat-Triggering Species

At least four, and possibly five known *Liolaemus* species occur within the Salar del Rincon Basin and trigger Critical Habitat as per Criterion 2 thresholds. *Liolaemus* sp. AC is an endemic and restricted-range lizard that may be a new species. It was recorded in the Salar del Rincon Basin during field studies conducted 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) or subspecies:

- *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.

The Project facilities will directly impact a range of habitat types known to support *Liolaemus* spp., totalling approximately 401.2ha. The affected habitats include:

- Peladar: 325.5ha.

- Shrub Steppe: 55.8ha.

- Halophytic Transition Vegetation (referred to in the Dynamik report (2025) as “Saline Vega”): 6.9ha.

- Salt Crust Edge: 0.7ha.

- Tolar: 7.2ha.

- Hydric Grassland: 5.1ha.

*Consideration of Cumulative Impact Potential on Liolaemus spp*

The Project footprint and its broader Direct and Indirect AoIs intersect with the known or potential ranges of several *Liolaemus* species. These overlaps suggest that multiple species could be affected by direct habitat disturbance, edge effects, and indirect environmental changes.

**Conservation Status and Data Gaps**

Three recognised and one to two newly described *Liolaemus* species have been identified within and around the Project area, including:

- Recognised species: *Liolaemus multicolour* (Least Concern), *L. porosus* (Least Concern), and *L. scrocchii* (Least Concern).

- 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 and specialised habitat requirements. However, geographic distribution and data on microhabitat preference is incomplete. This data deficiency may increase 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 in the basin, *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.

- Habitat fragmentation and barriers to dispersal, reducing gene flow and increasing the risk of local extirpation.

These pressures may impact *Liolaemus* lizards, which are highly localised, thermally sensitive, and ecologically specialised.

**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 recolonise 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.

Project-specific risks are similar to cumulative pressures from mining activities:

- A total of 400.18ha of *Liolaemus* spp. 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, reducing gene flow and increasing the risk of local extinction.

- 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.

### 2.6.3 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 demographic structure to describe the spatial and temporal scale established for VEC-3:

- Total population.

- Distribution by sex and age.

- Ethnic self-identification.

- Spatial distribution.

- Population growth.

- Migration processes.

- Masculinity index (i.e., the sex ratio, or number of males per 100 females).

The VEC analysis is based on the spatial boundary established for VEC-3, the distribution of which is presented in Table 5.

Table 5. Localities within the spatial boundary for VEC-3

| Province | Department | Localities |
|---|---|---|
| Salta Province | Los Andes | Olacapato |
| | | Estación Salar de Pocitos |
| | | San Antonio de Los Cobres |
| Jujuy Province | Susques | Catua Municipal Commission |

2.6.3.1. 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.

This distribution shows a marked contrast between densely populated centres and small settlements, allowing anticipation of potential differential effects from the arrival of foreign populations or the return of local residents, especially in smaller towns.

The population by locality is presented in
Table 6.

Table 6. 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 |

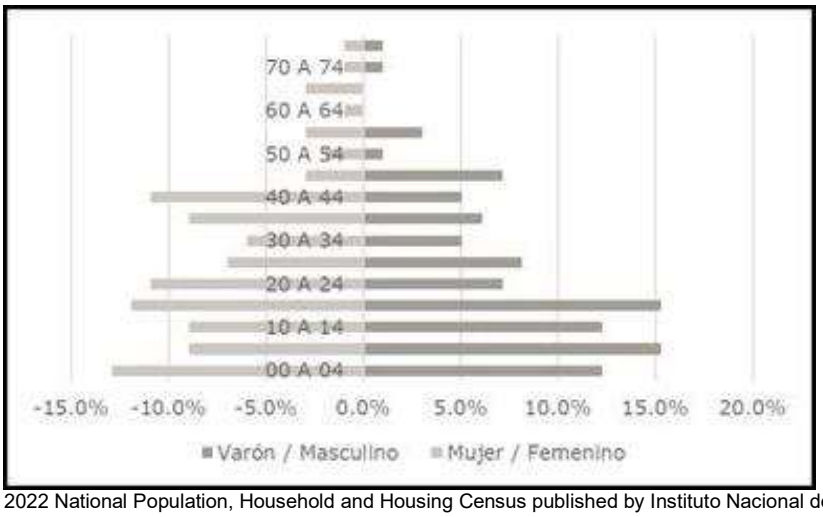
Source: Based on the 2022 National Population, Household and Housing Census

2.6.3.2. Distribution by Sex and Age

The sex and age distribution in the localities within the Project's Direct and Indirect AoI provides understanding of current demographic dynamics and allowing anticipation of 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 5.




Source: Based on the 2022 National Population, Household and Housing Census published by Instituto Nacional de Estadística y Censos (INDEC).

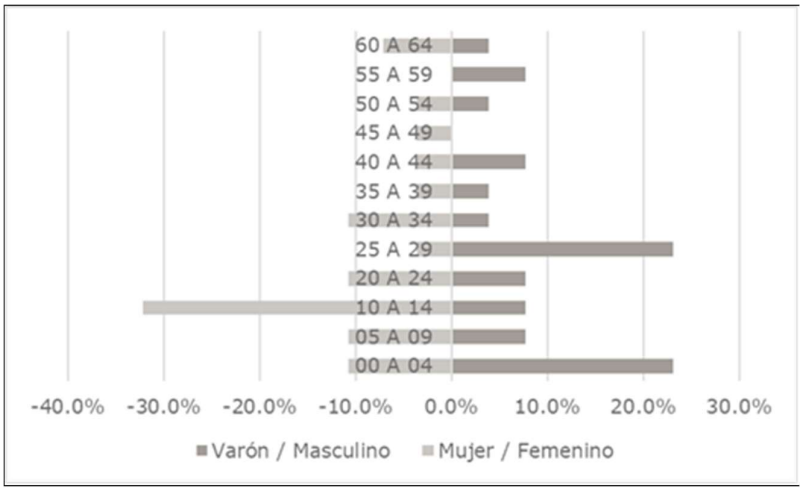
Figure 5: Population pyramid of Olacapato 2022

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.

The Olacapato 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 **Error! Reference source not found.**. 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.

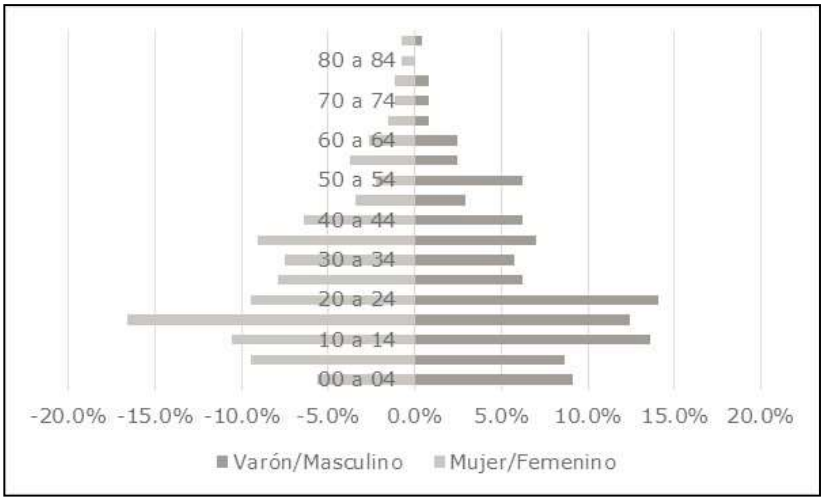



Source: Based on the 2022 National Population, Household and Housing Census published by INDEC.

Figure 6: Population pyramid of Estación Salar de Pocitos 2022

*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 7.



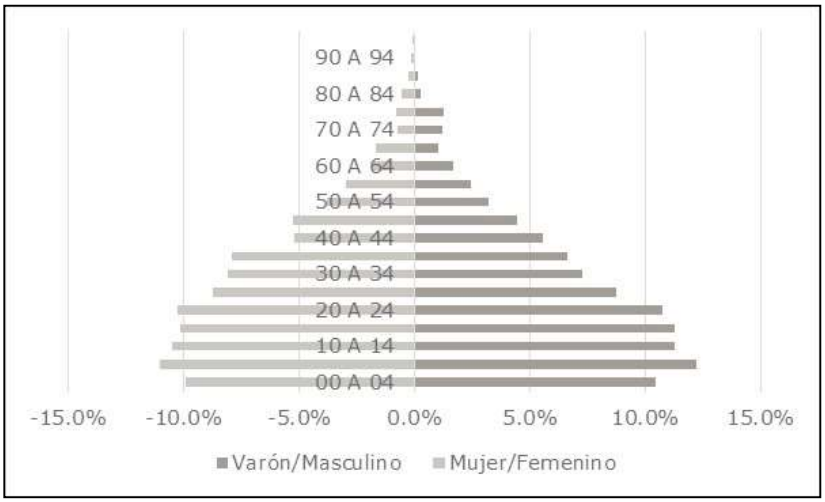

Source: Based on the 2022 National Population, Household and Housing Census published by INDEC.

Figure 7: Population pyramid of Catua 2022

The under-14 male age group represents 31.4% of the population. Adolescents and young adults aged 15 to 19 represent 12.4%, and young adults aged 20 to 24 represent 14%. Adults over 54 represent less than 5% in both cases. In relation to the 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 8. This sector does not present drastic changes in representation from the age of 15 (EAP), which could be indicative of the existence of sufficient job opportunities to avoid a strong youth emigration, differentiating itself from smaller towns.




Source: Based on the 2022 National Population, Household and Housing Census published by INDEC.

Figure 8: Population pyramid of San Antonio de los Cobres 2022

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.

#### 2.6.3.3. Ethnic Self-Identification

According to the 2022 Census, self-perception refers to a person's right to be recognised 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 7. **Error! Reference source not found.**

Table 7. Population identifying 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: 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.

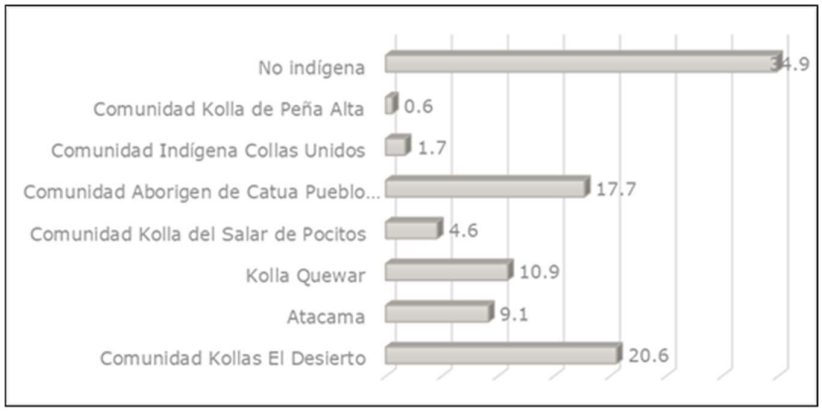
In the Project's AoI, 65.1% of the population identifies as Indigenous, while 34.9% do not. This data comes from an exploratory survey conducted in 2022, which covered 175 households in San Antonio de los Cobres (Indirect AoI) and 75 households in the Direct AoI, distributed in Catua (35 households), 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 Aborigen de Catua Pueblo; 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 8**Error! Reference source not found.**.

Table 8. Indigenous affiliation by locality

| Community | Direct AoI | | | Indirect AoI | Total |
|---|---|---|---|---|---|
| | Olacapato | Estación Salar de Pocitos | Catua | San Antonio de los Cobres | |
| Non-Indigenous | 9.5% | 28.6% | 22.5% | 46% | **34.9%** |
| Kollas de Peña Alta | - | | - | 1% | **0.6%** |
| Collas Unidos | - | - | - | 3% | **1.7%** |
| Aborigen de Catua Pueblo | - | - | 77.5% | - | **17.7%** |
| Kolla del Estación Salar de Pocitos | - | 57.1% | - | - | **4.6%** |
| Kolla Quewar | 90.5% | - | - | - | **10.9%** |
| Atacama | - | 14.3% | - | 14% | **9.1%** |
| Kollas El Desierto | - | - | - | 36% | **20.6%** |

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 organisational 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 organisational structure, as shown in Figure 9.




Source: 2024 ESIA

Figure 9: Ethnic affiliation in the Project's AoI

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.

#### 2.6.3.4. 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 Direct 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 urban areas, with only 12.8% of the population living in rural areas. A similar trend is observed in San Antonio de los Cobres in the Indirect AoI, where 97.3% of the population lives in urban areas and 2.7% live in rural 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 **Error! Reference source not found.**Table 9.

Table 9. 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: 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.

2.6.3.5. 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 characterised 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 for Estación Salar de Pocitos.

Population growth is shown in **Error! Reference source not found.**Table 10 and Figure 10.

Table 10. 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

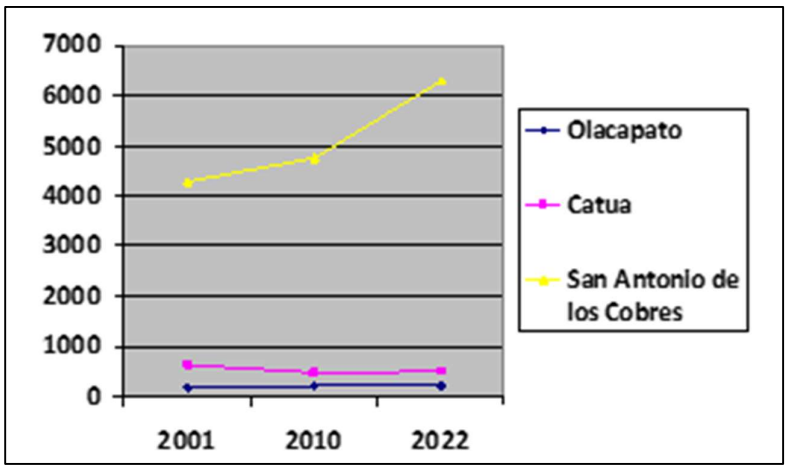



Figure 10: Population growth 2001 – 2022

In general terms, population growth in the towns within the 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. Short-term projections confirm this upward trend, with the population expected to reach approximately 6,823 inhabitants in 2025 and 7,320 in 2028, assuming the current growth rate continues.

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. Projections for Catua indicate slow but steady growth, with the population estimated at 513 inhabitants in 2025 and 521 in 2028, consistent with the trend observed in recent years.

Olacapato 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. If current trends persist, Olacapato's population may continue to gradually decline, reaching 213 inhabitants in 2025 and 208 in 2028.

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 the 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. Projections are made up to the year 2028, in line with the temporal scope defined for this study and provide valuable input for anticipating future demands and guiding territorial planning.

#### 2.6.3.6. 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 11.

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 and potentially change community dynamics, especially in localities with Indigenous populations, where social cohesion may be more sensitive to rapid demographic shifts.

Table 11. 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: Based on the 2022 National Population, Household and Housing Census published by INDEC.

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.

2.6.3.7. Consideration of Cumulative Impact Potential on Demographic Structure

*Population Dynamics and In-Migration/Return Migration*

Mining expansion and associated services in the Direct and Indirect AoI (Catua, Estación Salar de Pocitos, Olacapato, and San Antonio de los Cobres) can drive:

- Foreign in-migration linked to project employment, contractors, and service suppliers.
- Return migration of local residents — especially in smaller towns such as Estación Salar de Pocitos — repopulating localities with recent mobility.
- Urban concentration in San Antonio de los Cobres, a Departmental capital with stronger service offerings, accelerating growth (2010–2022: +32.4%).

*Age Structure and Labour Supply*

- Predominantly young population bases in the Direct AoI (e.g., large shares of <24 year olds in Olacapato; high child/adolescent proportions in Estación Salar de Pocitos and Catua) indicate future growth but also pressure on services.
- The presence of youth and young adults expands the local labour pool, interacting with mining demand, yet may intensify school-to-work transitions and risk of school dropout where higher education access is limited.

*Ethnic Composition and Community Cohesion*

- High levels of Indigenous self-identification (Los Andes 49.9%; Susques 81.3%) and strong community affiliation (Quewar-Kolla; Kolla–Estación Salar de Pocitos; Aborigen de Catua Pueblo) suggest sensitivity to rapid demographic shifts in mixed or small settlements.

- Cumulative population growth — driven by multiple ventures and induced economic development — could exceed the installed capacity of urban services and alter community dynamics, particularly in Indigenous contexts.

### 2.6.4 VEC-4: Socioeconomic Structure

For VEC-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, the following socioeconomic structure variables were selected to describe the spatial and temporal scale established for VEC-4:

- EAP.
- Sources of employment.
- Salary remuneration (nominal and actual).
- Evolution of salaries by sector.
- Local entrepreneurships.

#### 2.6.4.1. Economically Active Population

The EAP 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 12In many cases, the EAP 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.

Table 12. .

In many cases, the EAP 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.

Table 12. 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: Based on the 2022 National Population, Household and Housing Census published by INDEC.

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 13.

Table 13. 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% | 1,904 | 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%** | **4,687** | **100%** |

Source: Prepared based on the 2022 National Population, Household and Housing Census published by INDEC.

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 EAP population is only studying.

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.

#### 2.6.4.2. 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 14.

Table 14. Type of work carried out

| 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 15.
Table 15. S

Table 15. 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 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 EAP. Of this total, only 9.7% are women, highlighting the low level of female participation in the sector, as shown in Table 16. Table 16.

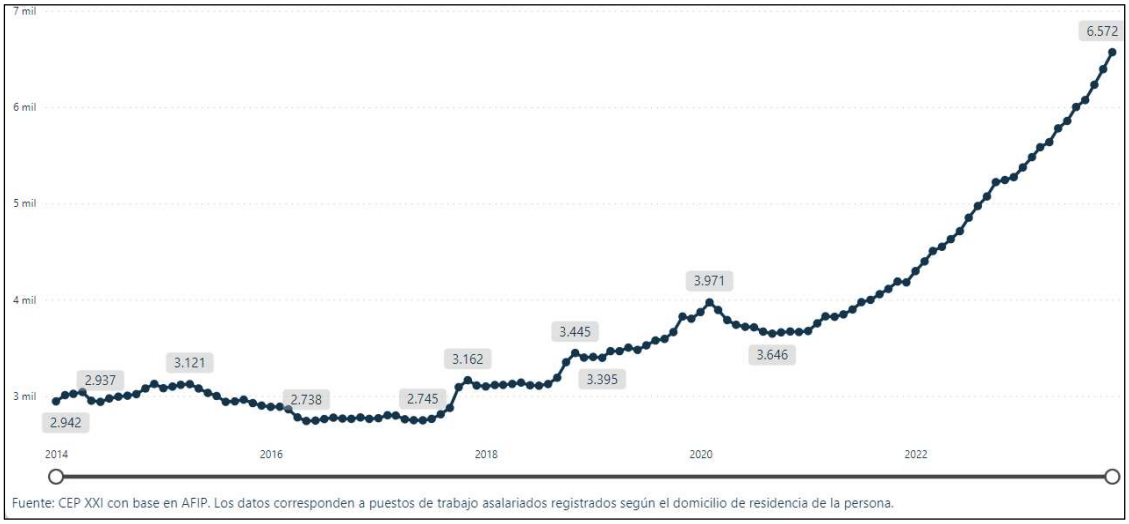
Table 16. Distribution of local labour by mining sector - Department of Los Andes

| Description | 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 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 11.



Source: Ministry of Economy, last updated 03/25/2024

Figure 11:Registered employment in mining and oil in Salta Province, 2014 – 2023

However, this graphic presents data only up to 2023. Therefore, it should be used not only to illustrate past growth, but also to discuss recent market shifts and their implications. The sharp drop in lithium prices — over 80% since early 2023 — has led to a slowdown in exploration activities, especially among smaller projects with limited financial backing. In contrast, larger and more consolidated ventures have managed to remain active.

This restructuring of the sector suggests a shift in the investment landscape, with increased interest in mergers and acquisitions and a focus on financially robust projects. As a result, the pace of job creation and new project launches may decelerate in the short term, although expectations remain high for a recovery in production and exports toward the end of the decade.

It is important to note that many of the data presented here refer only up to 2023, due to the availability of official information provided by government sources.

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 17.Table 17.

Table 17. Mining sector jobs by sector and gender - Salta Province - September 2023

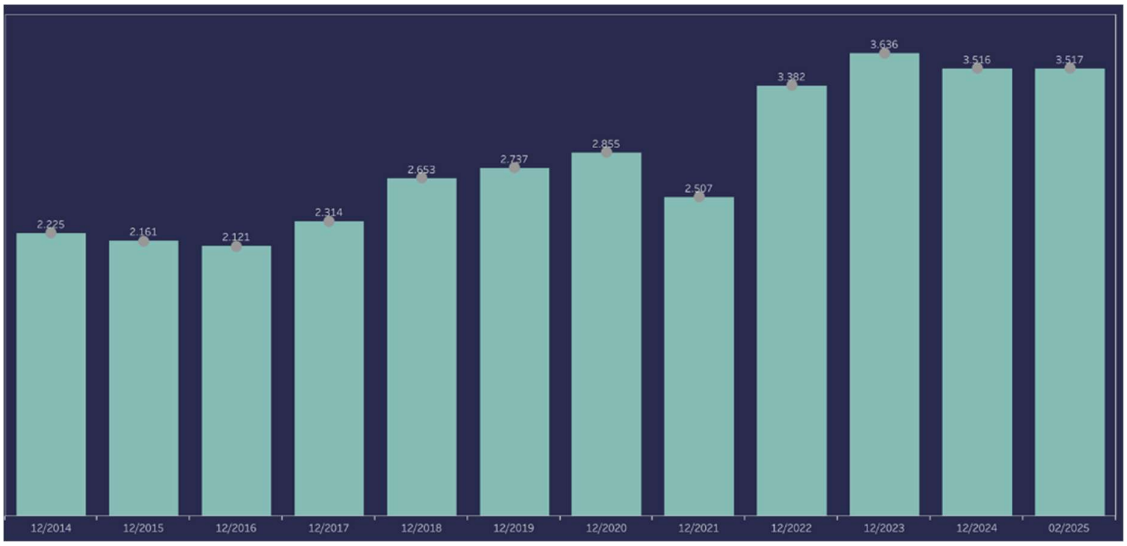
| Sector/sex | Female | Female in % | Male | Male in % | Total |
|---|---|---|---|---|---|
| Mining services and related activities | 260 | 12.1% | 1,884 | 87.9% | 2,144 |
| Metalliferous: exploration and financing | 25 | 39.7% | 38 | 60.3% | 63 |
| Metalliferous production | 153 | 17% | 746 | 83% | 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)[4], 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.

[4] Monthly Report: Employment by Province in the Argentine Mining Industry, January 2024. National Directorate of Mining Promotion and Economy, Ministry of Mining Development.

Historically, as in Salta, the Province of Jujuy has shown sustained growth since 2014, emphasising 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 12.




Source: Ministry of Economy, last updated 04/07/2025

Figure 12: Registered employment in mining in Jujuy Province, 2014-2025

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 EAP 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.

#### 2.6.4.3. 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 Consumer Price Index (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 Argentine pesos (ARS). 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. 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 18.

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 BFB 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.

Table 18. Nominal and real remuneration by activity category – Salta Province

| Areas of activity | Nominal remuneration (ARS) | | 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 based on data from the Ministry of Economy.

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 ARS. 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.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 ARS, representing a 20.7% drop compared to the national average of $174,300 ARS. 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 19, 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 19. Average remuneration of registered private sector workers, branch of activity, Jujuy Province

| Branch of activities | March 2024 (ARS) | March 2025 (ARS) |
|---|---|---|
| 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 20**Error! Reference source not found.Error! Reference source not found.**.

Table 20. Average remuneration of registered private sector workers, by mining and quarrying activity, Jujuy Province

| Mining and Quarrying | March 2024 (ARS) | March 2025 (ARS) |
|---|---|---|
| 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.

#### 2.6.4.4. Evolution of Salaries in the Main Sectors

Between 2015 and 2023, wages in Salta showed a marked decline when expressed in U.S. dollars, reflecting the impact of currency depreciation despite nominal increases in local currency:

- The average salary across all sectors fell from $1,209.24 USD in 2015 to $808.30 USD in 2018 and $605.47 USD in 2023.
- Mining and oil, historically the highest-paying sector, decreased from $2,606.30 USD in 2015 to $1,623.75 USD in 2018 and $1,188.52 USD in 2023.
- Electricity, gas, and water also saw a sharp drop, from $1,922.99 USD in 2015 to $939.28 USD in 2023.

- Other sectors such as agriculture, trade, and construction experienced similar downward trends, with agriculture falling from $520.50 USD to $276.74 USD and construction from $613.60 USD to $385.39 USD.

These figures illustrate a significant erosion of purchasing power in dollar terms across all sectors, as shown Table 21.

Table 21. Average monthly salaries in USD for the main sectors in Salta*

| Sector | Average Salary in 2015 (USD) | Average Salary in 2018 (USD) | Average Salary in 2023 (USD) |
|---|---|---|---|
| Agriculture, livestock and fishing | $520.50 | $386.96 | $276.74 |
| Mining and oil | $2,606.30 | $1,623.75 | $1,188.52 |
| Industry | $1,082 | $724.38 | $474.65 |
| Trade (retail and wholesale) | $858.27 | $560.97 | $380.49 |
| Services | $861.12 | $560.90 | $593.25 |
| Electricity, gas and water | $1,922.9 | $1,349.18 | $939.28 |
| Construction | $613.6 | $451.93 | $385.39 |
| **Total Average** | **$1,209.24** | **$808.30** | **$605.47** |

Source: Prepared 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.

Note: All salary values are expressed in U.S. dollars using official exchange rates for each year. This approach was adopted to provide a consistent basis for comparison and an approximate measure of purchasing power over time. Converting salaries to USD minimises distortions caused by inflation estimation and allows for a standardized reference across years.

* 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 ARS, even above the national average ($1,184,029 ARS), as shown in Table 22**Error! Reference source not found.Error! Reference source not found.Error! Reference source not found.**.

Table 22. Gross monthly nominal salary in mining by sector in Salta and Argentina – September 2023

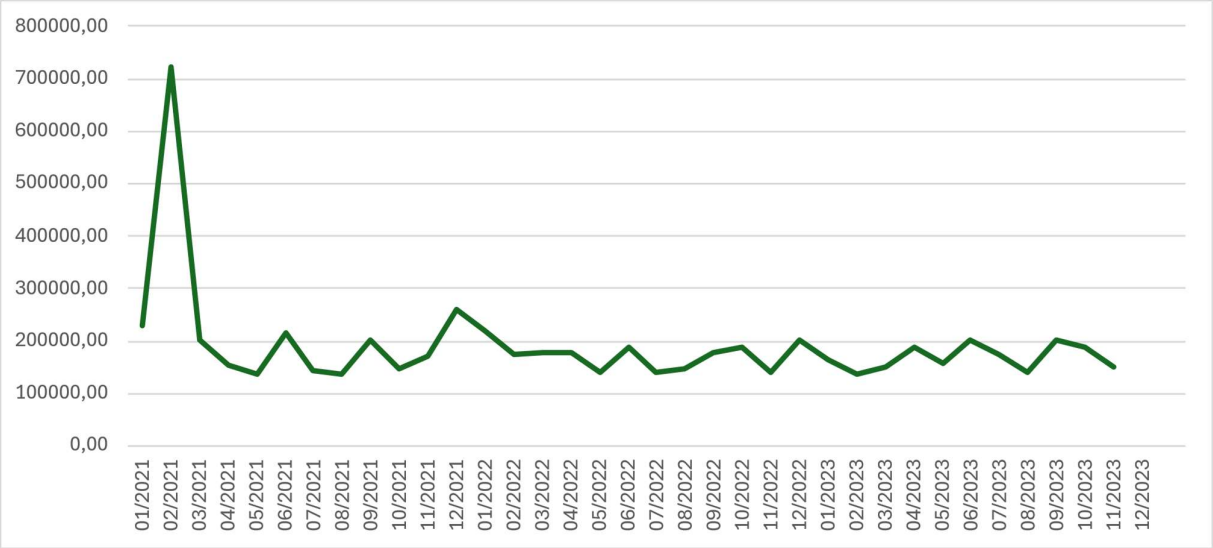
| Sector | Salta (ARS) | Argentina (ARS) | Variation |
|---|---|---|---|
| Mining services and related activities | $385,230 | $498,791 | -23% |
| Metalliferous: exploration and financing | $833,938 | $950,104 | -12% |
| Metalliferous production | $1,020,100 | $1,185,026 | -14% |
| Lithium: exploration 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

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 ARS, slightly lower than the national average ($807,997 ARS).

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.

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 Figure 13.[5]




Source: Argentina Data Portal, 2023

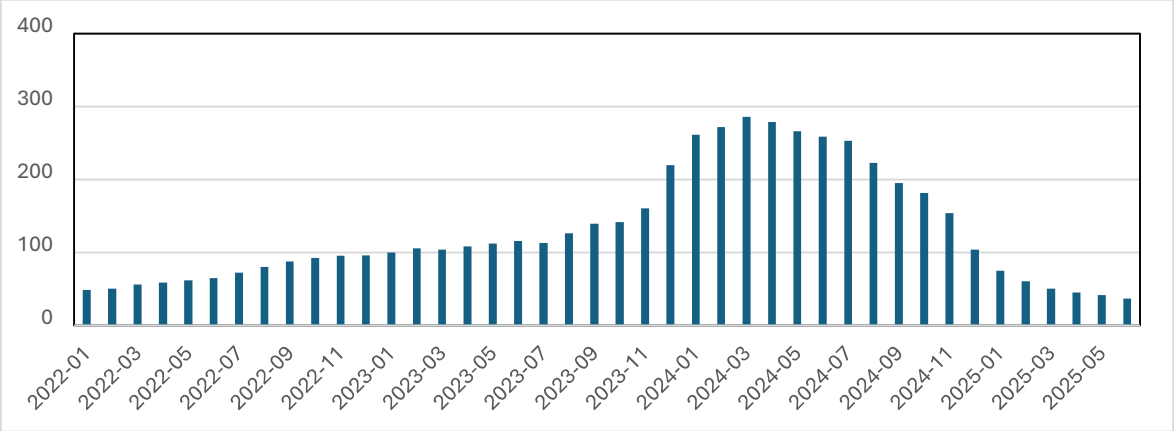
Figure 13: Historical evolution of the average salary in Jujuy Province, private sector, mining and quarrying

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.

#### 2.6.4.5. 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 14.

[5] Figures are presented in Argentine pesos adjusted for inflation, expressed in constant January 2021 values. Based on the Economic Activities Classifier (CLAE).




Source: National Institute of Statistics and Census (2025)

Figure 14: Consumer Price Index in the northwest region, by year-on-year frequency (2022-2025)

#### 2.6.4.6. 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 23.

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 systematised by the Communities and Social Performance (CSP) 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.

#### 2.6.4.7. Consideration of Cumulative Impact Potential on Socioeconomic Structure

*Employment Generation and Productive Restructuring*

Mining development and associated services in the Direct and Indirect AoI can lead to: 1) increased direct and indirect employment opportunities, with local participation already observed in lithium and metalliferous projects.

- Transformation of the productive matrix, shifting from traditional activities toward mining and service provision.
- Emergence of family-managed ventures (e.g., transport, catering, lodging, cleaning, laundry, bakery, PPE sales) responding to mining demand.

Table 23. 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. |

*Wage Differentials and Purchasing Power*

- Mining and quarrying sectors offer nominal salaries significantly above Provincial averages (e.g., Salta Sept-2024: mining wages equivalent to 27 BFBs versus 9.1 BFBs as the general average).
- Sustained inflation and CPI volatility affect real purchasing power, creating disparities between mining-linked sectors and others such as education or social services.
- Multiple projects operating or planned in the region can intensify economic concentration in mining, reinforcing wage gaps and structural inequalities

*Gender and Inclusion Dimensions*

Female participation in mining remains low (17.2% overall in Salta; higher relative presence in exploration phases), indicating cumulative opportunities for targeted inclusion and training.

*Market Volatility and Economic Resilience*

- Lithium price fluctuations since 2023 introduce uncertainty for small ventures and local suppliers, increasing vulnerability to sectoral shocks.
- Dependence on mining as a primary economic driver may limit diversification and amplify risks during downturns.

### 2.6.5 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, the following educational services variables were selected to describe the spatial and temporal scale established for VEC-5:

- Offer of educational levels.
- Educational infrastructure.
- Educational level.

#### 2.6.5.1. Offer of Educational Levels

A total of 16 educational institutions is located in the Direct and Indirect AoIs, offering primary, secondary, technical, higher, and adult education, as shown in Table 24.

In the Direct AoI, six educational institutions have been identified. In Olacapato, there are two with primary and technical education; in the town of Estación Salar de Pocitos, there are two institutions that provide primary and secondary 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.

Table 24. Educational institutions in the Direct and Indirect AoIs

| Locality | Level Directions | Number | Total |
|---|---|---|---|
| *Direct AoI* | | | |
| Olacapato | Primary school address | 1 | **2** |
| | Secondary school management[6] | 1 | |
| Estación Salar de Pocitos | Primary school address | 1 | **2** |
| | Secondary school management[7] | 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.

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 25.

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. 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.

[6]The secondary school operates in the primary school building.

[7] The primary school and the secondary school share the same building.

Table 25. 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 | Secondary School No. 5193 | Dispersed Rural | Olacapato | San Jose s/n°, (a4413) | Secondary school |
| 3 | May 7 EX No. 521 | Dispersed Rural | Estación Salar de Pocitos | Provincial Route No. 27 – Estación Salar de Pocitos, (a4413) | Primary school |
| 4 | Secondary School No. 5193 | Dispersed Rural | Estación Salar de Pocitos | Provincial Route No. 27 – Estación Salar de Pocitos, (a4413) | Secondary school |
| 5 | Andes Pass No. 389 | s/n | Catua | s/n | Initial address |
| 6 | 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.

2.6.5.2. Education 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, characterised 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 26.

Table 26. Educational level they are studying in the Direct and Indirect AoIs

| 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 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.

#### 2.6.5.3. 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 15.


Source: 2024 ESIA

Figure 15: 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 the Principal.

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 16.

Source: 2024 ESIA

Figure 16. Secondary school classroom used simultaneously for taking exams and as a teacher's residence

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 “7 de Mayo”, operates on a summer calendar that begins in August and ends in June. It employs a multi-grade system from 1$^{st}$ to 7$^{th}$ grade, with full-day classes from 8 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 17.

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.


Source: 2024 ESIA

Figure 17: Primary School No. 4332, Estación Salar de Pocitos Station

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.

Paso de los Andes School N° 389 is a boarding school thar operates during the summer season and offers full-day classes from 8:50 am to 5:50 pm. Based on interviews conducted in February 2026, the primary school has a total enrollment of 68 students: 21 in early education and 47 in primary education (Figure 18).


Source: 2024 ESIA

Figure 18: Primary school, Catua

The teaching staff is composed of 15 teachers, including the management team. The school has seven grades, each led by a dedicated teacher. At the early education level, one teacher is responsible for the 3- and 4-year-old classrooms, and another for the 5-year-old classroom. Additionally, the institution has five special-subject teachers (Music, English, Agricultural Techniques, and Physical Education). Regarding General Services Personnel (PSG), seven individuals work at the school, although two of them provide services at the secondary level.

Afterward, some students remain for a period known as '*Tiempo Hogar*,' which extends until 6 pm. However, this service is only offered to the number of students that the boarding facilities can accommodate. Currently, the institution has space to house 12 children; however, the boarding service is suspended due to the malfunction of the solar water heater, which has left the school without hot water supply.

The building of Secondary School No. 20, inaugurated in 2022, was constructed with national funding in the amount of 33 million ARS, invested through the Rural Education Improvement Program (PROMER II), financed by the Inter-American Development Bank (IDB). The institution includes classrooms, teachers rooms, a preceptor's office, a covered courtyard, restrooms, a dining hall, a kitchen, workshops, a laboratory, a multipurpose room, a library, and other facilities required for the development of educational activities. Based on interviews conducted in February 2026, the school operates in the morning shift, offers a specialization in Humanities and Social Sciences, and reports an enrollment of 44 students.

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 are no official statistics on the enrolment threshold required to prevent saturation of the educational system in each locality. Howerer, during February 2026, interviews were conducted with the principals of the educational institutions within the Project's AoI.

In the case of Catua, the principal of the Primary School indicated that the infrastructure has limitations due to the age of the building and the need for constant maintenance. She explained: "*The facilities are very old, and sometimes things stop working. Staff from the Ministry come when requested, but they make temporary fixes that only last for a while.*" She also noted that the school's capacity to receive new students is limited and depends on enrollment trends in early education: "*The infrastructure could receive more children, but only within certain limits. It will not absorb a large number. The school needs several improvements. We have classrooms, but we don't have a covered yard, and temperatures here are extreme.*" She added that heating in winter is limited, which forces the school to group students in small spaces when firewood is available.

In contrast, the principal of the Secondary School described a different situation. He stated: "*The school has its own infrastructure. The building was inaugurated four years ago, so it is relatively new.*"

In summary, the analysis of VEC-5 shows that, although the Project's AoI has recorded improvements in educational services, structural gaps persist that limit the system's capacity to guarantee quality education. Educational institutions show specific advances (partly due to contributions from the private sector), such as the construction of new classrooms and the refurbishment of buildings. However, these improvements coexist with persistent limitations, including aging infrastructure requiring frequent maintenance, insufficient heating systems to withstand extreme weather conditions, the absence of covered recreational areas, and basic services that depend on the availability of hot water and energy.

Teachers' working and living conditions constitute another critical factor, compounded by limited digital connectivity. Regarding curricular offerings, although the AoI includes early childhood, primary, secondary, and technical levels, a gap remains between the available academic tracks and emerging employment opportunities, particularly those linked to mining activities. Community demand for training pathways better aligned with the productive context is not yet fully addressed.

Finally, although there are no official statistics on saturation thresholds within the educational system, interviews with school leadership teams reveal concrete limits in absorption capacity — especially in early grades and in institutions that share spaces or depend on boarding-type infrastructure.

#### 2.6.5.4. 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 socialisation 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 secundary. 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 (Table 27).

Table 27. 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 | |
| | No. | % | No. | % | No. | % | No. | % |
| Without instruction | 37 | 18.6% | 10 | 18.5% | 65 | 12.8% | 1,027 | 16.3% |
| Incomplete primary education | 43 | 21.6% | 18 | 33.3% | 126 | 24.9% | 1,491 | 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% | 1,264 | 20% |
| Complete secondary education | 26 | 13.1% | 11 | 20.4% | 84 | 16.6% | 1,024 | 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%** | **6,306** | **100%** |

Source: Prepared based on the 2022 National Population, Household and Housing Census

In the town of Estación Salar de Pocitos, there Are also two institutions: one primary and one secondary. 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 27Table 27. H, 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.

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. 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 twor are enrolled 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 organising 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. This is particularly relevant when considering the current installed capacity of the educational system versus the projected demographic and labor demands associated with the project's development.

#### 2.6.5.5. Consideration of Cumulative Impact Potential on Educational Services

*Demand Pressure and Capacity Constraints*

- Predominantly compulsory-level enrolment (>80% in the Direct AoI), combined with young age pyramids, could increase enrolments in small, mixed localities with limited installed capacity.
- Sparse higher education offerings in the Direct AoI and connectivity limitations constrain skills development aligned with mining labour demand.

*Infrastructure and Quality Challenges*

- Multi-grade schools and shared facilities (secondary using primary classrooms) reveal fragility in absorptive capacity.
- Teacher accommodation shortages have led to improvised housing within school buildings, reducing classroom availability and affecting learning conditions.
- Private sector contributions (e.g., classroom additions, virtual university centre agreements) help but may be insufficient to meet cumulative increases in demand.

*Transition and Retention Risks*

- School-to-work transitions driven by mining opportunities can increase dropout risk, especially where technical/vocational pathways are limited.
- Lack of dropout rate data hinders monitoring of cumulative impacts; establishing resilience thresholds (classrooms, teacher numbers, shifts) via institutional consultation is critical.

Growth of mining and service sectors across multiple ventures can outstrip educational infrastructure, depress higher-education continuity, and misalign training profiles with labour market needs, unless coordinated investment and technical education expansion occur.

### 2.6.6 VEC-6: Provision of Health Services

For VEC-6: Provision of Health Services, additional pressure on health services has been identified as a potential impact. For further analysis, the following health services variables were selected to describe the spatial and temporal scale established for VEC-6:

- Health infrastructure.
- Treatments (number and type) – main diseases.
- Accessibility and quality of services.

#### 2.6.6.1. Health Infrastructure in the Project's Direct and Indirect AoI

Four healthcare centers are identified within the project's AoI: three Level I[8] health posts located in Olacapato, Estación Salar de Pocitos, and Catua (Direct AoI), and one Level II Dr. Nicolás C. Pagano Hospital in San Antonio de los Cobres (Indirect AoI), as shown in Table 28Table 28. 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 specialised 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 28. 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 | Dr. Nicolás C. Pagano Hospital | Level II |

Source: Prepared based on an interview in Primary Health Care at the Dr. Nicolás C. Pagano Hospital in San Antonio de los Cobres Hospital.

At the local level, in Olacapato, and regarding access, the health centre does not have an ambulance (Figure 19). Some internal transfers are handled with police assistance, as well as accident treatment. For all other cases (emergencies and complex care), the Dr. Nicolás C. Pagano Hospital in San Antonio de los Cobres handles the transfers. Until 2022, they had one ambulance; however, due to mechanical failures, it was sent to the Dr. Nicolás C. Pagano Hospital and never returned.


Source: 2024 ESIA

Figure 19: Olacapato Health Post

[8] The Ramón Carrillo Health Plan of the Ministry of Public Health of the Province of Salta organises the health service into four levels of care: Level I, which includes outpatient services divided into health centres, health posts and fixed posts; Level II, made up of Operational Area head hospitals with basic inpatient care, laboratory, and radiology services; Level III, consisting of head hospitals that provide diagnostic support and medium-complexity treatment; and Level IV, composed of high-complexity hospitals capable of resolving nearly all medical care needs.

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 the Dr. Nicolás C. Pagano Hospital in San Antonio de los Cobres 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 from the Dr. Nicolás C. Pagano Hospital, since the town does not have a pharmacy.

In the case of Estación Salar de Pocitos (Figure 20
Figure 20), accessibility remains a challenge. In 2025, Rio Tinto donated an ambulance under an agreement with the Health Ministry of Salta to be primarily used in Estación Salar de Pocitos, improving emergency response capacity. 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 20: Health Post at the Estación Salar de Pocitos

In Catua, the health centre also provides primary care (Figure 21). The building is in good condition, and the staff includes ahealth agent who cares for local families, as well as the dispersed rural population. Based on interviews conducted in February 2026, the Catua Health Center is administratively dependent on the Susques Hospital. The building has five consultation rooms and a vaccination room, and provides daily care from 8 am to 12 pm and from 1 pm to 9 pm.


Source: 2024 ESIA

Figure 21: Catua Health Post

The services is staffed by two health agents who work under a 15 X 15 rotation schedule. Once a week, a physician, a dentist, and laboratory personnel arrive. In addition, every two or three months, other specialists — such as an orthopedist, cardiologist, and gynecologist — visit the locality as part of scheduled outreach rounds. Health Center services focus on prevention and health promotion activities, including the delivery of medications and monitoring the health status of children.

In San Antonio, Dr. Nicolás C. Pagano Hospital (Figure 22), 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)[9]. 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.


Source: 2024 ESIA

Figure 22: 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 Direct AoI 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 Dr. Nicolás Pagano Hospital.

To understand the current capacity of the health facilities in the Project's Direct AoI, interviews were conducted in February 2026 with staff from the Dr. Nicolás Pagano Hospital in San Antonio de los Cobres Hospital and the Catua Health Center. The Catua Health Center depends on the Susques Hospital.

[9] 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.

The doctor from the Dr. Nicolás C. Pagano Hospital in San Antonio de los Cobres said that "*The professional staff is not enough for the population we have and for how dynamic the area is. We try to make the health service reach everyone, and we organize trips to the rural areas. There are many health posts and fixed posts that depend on the Hospital and are 70km, 80km, and 150km away. In Tolar Grande, even though they have their own doctor, once a month the nutritionist, social worker, and psychologist provide support.*" About infrastructure improvements, the doctor said that "*The vehicle fleet has grown not only in the SAC base but also in nearby areas.*" She also added that "*There is a new expansion project that includes a CT room and a more complete sterilization room with sterilizers, something we do not have now. It is a large expansion. Having imaging diagnostics means that the movement and the human and physical resources will change. The expansion project is planned for this year. The project and the budget are already approved, and a public tender should be called.*"

Regarding the capacity of the Catua Health Center, the Health Agent said that in 2020 the building was expanded, and a room for the on-duty health agent was added. According to her testimony, "*We can always respond to people's needs. We also attend tourists.*"

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.

Specialised 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 Dr. Nicolás Pagano Hospital because the clinics lack ambulances. Regarding resources, although the Olacapato and Estación 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 Dr. Nicolás Pagano 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 the Dr. Nicolás Pagano Hospital 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 ESIA (Rio Tinto, 2024). 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 29.

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 specialised 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.

Table 29. Access and quality of health facilities

| Locality | Staff | | Accessibility | Quality |
|---|---|---|---|---|
| | **Fixed** | **Visit** | | |
| *Direct AoI* | | | | |
| Olacapato | 1 nurse and 1 health agent | 1 doctor and 1 obstetrician (every month) | • They have not had an ambulance since 2022. They receive police support for transportation.<br>• Complex and emergency care is referred to San Antonio. | • No stock of medications for treatments for more than 2 days.<br>• There are no pharmacies in the town, access is through the post or through the Dr. Nicolás C. Pagano Hospital in San Antonio de los Cobres. |
| Estación Salar de Pocitos | 1 nurse | 1 doctor (every 15 days) | • There is an ambulance.<br>• Emergencies are handled from San Antonio. | Spaces:<br>• Hospitalisation room (capacity: 2 patients)<br>• An infirmary.<br>• Medical consultation room.<br>• Dental office.<br>• Waiting room. |
| Catua | 1 health agent | 1 doctor, 1 dentist (every month) other specialists (every three months) | • There is no ambulance.<br>• Emergences are handled from Susques. | • Stock of medications<br><br>Spaces:<br>• Medical consultation room. |
| *Indirect AoI* | | | | |
| Dr. Nicolás C. Pagano Hospital in San Antonio de los Cobres | 91 people, of which 5 are general practitioners or clinicians (3 staff and 1 contracted) | 1 doctor in Tolar Grande | • It has 1 ambulance for emergency transfer. | Services:<br>• Ultrasound.<br>• Pharmacy.<br>• Laboratory.<br>• X-rays.<br>• Outpatient clinics.<br>• Adult protective services (APS).<br>• 24-hour security.<br><br>Spaces:<br>• Inpatient rooms<br>• Abbreviated hospitalisation.<br>• Delivery room.<br><br>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

#### 2.6.6.2. 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 Estación Salar de Pocitos, it only reaches 61.8%.

Furthermore, state health programs or plans have less than 10% coverage in the Project's Direct AoI, with Estación 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 Estación Salar de Pocitos; 31.2% in Catua; and 29.2% in Olacapato, as shown in Table 30Table 30. 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 30. Health coverage 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 Programa de Atención Médica Integral (PAMI)) | 157 | 69.5% | 34 | 61.8% | 341 | 67.3% | 3,118 | 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% | 2,982 | 47.3% |
| **Total** | **226** | **100%** | **55** | **100%** | **507** | **100%** | **6,306** | **100%** |

Source: Prepared based on the 2022 National Population, Household and Housing Census

#### 2.6.6.3. 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 Environmental and Social Impact Assessment (Rio Tinto, 2024). However, there is no data on how many such services are provided to better characterise 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 the Dr. Nicolás C. Pagano Hospital in 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 (ARIs).

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 Dr. Nicolás C. 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 Dr. Nicolás C. Pagano 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.

#### 2.6.6.4. Consideration of Cumulative Impact Potential on Provision of Health Services

*Service Saturation and Accessibility*

- Health provision relies on Level I health posts (Olacapato, Estación Salar de Pocitos, Catua) and a Level II hospital (Dr. Nicolás C. Pagano Hospital in San Antonio de los Cobres) covering a vast area (~34,000km²) with limited ambulances and rotating medical presence.

- It is reported that non-resident mining workers use public services, adding demand not reflected in census-based coverage statistics.

*Resource and Staffing Constraints*

- Health posts face shortages of medications, lack of equipment, and absence of local pharmacies, forcing transfers to San Antonio for prolonged treatments.

- Staffing gaps: only one nurse or health worker per locality and intermittent physician visits; services remain inactive during staff rest periods.

*Health Burden Profile*

- High incidence of respiratory and diarrheal diseases, chronic conditions (diabetes, hypertension), traffic-related trauma, and mental health issues (alcoholism, suicide).

- Environmental factors (altitude, low temperatures, dust from traffic) and transport limitations exacerbate risk.

Increased population and mobility due to multiple projects may raise demand for primary care, emergency transfers, and medication supply.

### 2.6.7 VEC-7: Road Infrastructure

For VEC-7: Road Infrastructure, potential impacts have been identified as pressure on the existing infrastructure and disruptions caused by vehicular traffic. For further analysis, the following road infrastructure variables were selected to describe the spatial and temporal scale established for VEC-7:

- 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 characterisation of the road infrastructure status in the Project area, anticipating risks, inter-institutional coordination needs, and potential cumulative effects resulting from increased traffic.

#### 2.6.7.1. 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. Characterising 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 authorised 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 characterised 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 31
Table 31
Table 31summarises the works carried out during the 2024-2025 period for RN 51.

Table 31. 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 (www.salta.gob.ar)

RP 27 connects with RN 51 and connects to the Estación Salar de Pocitos; 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) (Figure 23).


Source: 2024 ESIA.

Figure 23: RP 27 - Start in Cauchari

RP 27 is a gravel road, and its maintenance is managed by the Provincial Highway Department. In recent years, it has received investments to optimise 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 32Table 32 Table 32 summarises the most recent progress and complaints.

Table 32. Update on works on RP 27

| Date / Period | Situation / Progress | Section / Location |
|---|---|---|
| April 2022 – August 2023 | Completion of 38.6km of optimised 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.

In February 2021, the construction of a Mining Logistics Hub (NLM) was announced, to be located in Olacapato Chico, approximately 70km from San Antonio de los Cobres. The project was formalized through a lease agreement that granted REMSA (Recursos Energéticos y Mineros de Salta S.A.) a parcel of land. The site was selected based on strategic criteria: its connection to the Sico Pass, which provides access to the Pacific Ocean, and its proximity to national and Provincial routes (NR 51 and RP 27), as well as to the C-14 railway branch and the Puna gas pipeline.

The project includes an industrial area, a transfer yard, an exclusive railway station for the C-14 branch, and a treatment plant for mining waste and heavy metals. It also envisions the construction of a health center, lodging facilities, a commercial area, public and private offices, a service station, and parking. All of this will be supported by basic services such as electricity, gas, water, internet, and 24-hour comprehensive security.

In December 2025, following the renewal of Provincial authorities under the administration of Gustavo Sáenz, the Ministry of Production and Mining — now led by Ignacio Lupión — and the Secretariat of Mining, headed by Gustavo Carrizo, reaffirmed the importance of moving forward with pending strategic projects, among which the Mining Logistics Hub remains a priority.

*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 33 Table 33 Table 33presents the Jujuy towns near RN 52 and their distances to the Project, to illustrate the route's use for both mining and tourism.

Table 33. 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 34 Table 34. summarises the main updates to RN 52 in Jujuy, including works, closures, and interventions carried out in recent years.

Table 34. Updates to RN 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 ARS $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 24).


Source: Casa Rosada, 2016.

Figure 24: Branch C14 reactivated

In November 2017, this branch line began handling cargo exclusively to and from Chile for the company Arcadium Lithium, now acquired by Rio Tinto, which has a transfer station in the Estación 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 2 million tonnes per annum (Mta) through public and private investment.

There is no passenger transportation, and various communities have expressed the importance of reactivating the passenger transportation system.

*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 – Now acquired by Rio Tinto), 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.).

#### 2.6.7.2. Means of Transport

Regarding public transportation, the only company serving the area is Ale Hnos (www.alehnos.com.ar), 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 pm, departing from the Salta Capital bus terminal and connecting the intermediate towns of Olacapato and Estación Salar de Pocitos.

Table 35 shows the distances of the aforementioned towns from the Project and their respective distances.

Table 35. Distances between the localities and their access

| Localities | Distance to the Project (~km) | Access | 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/RP 27 with regular maintenance, RN 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.

#### 2.6.7.3. 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 25 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 (INAI).

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.

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.

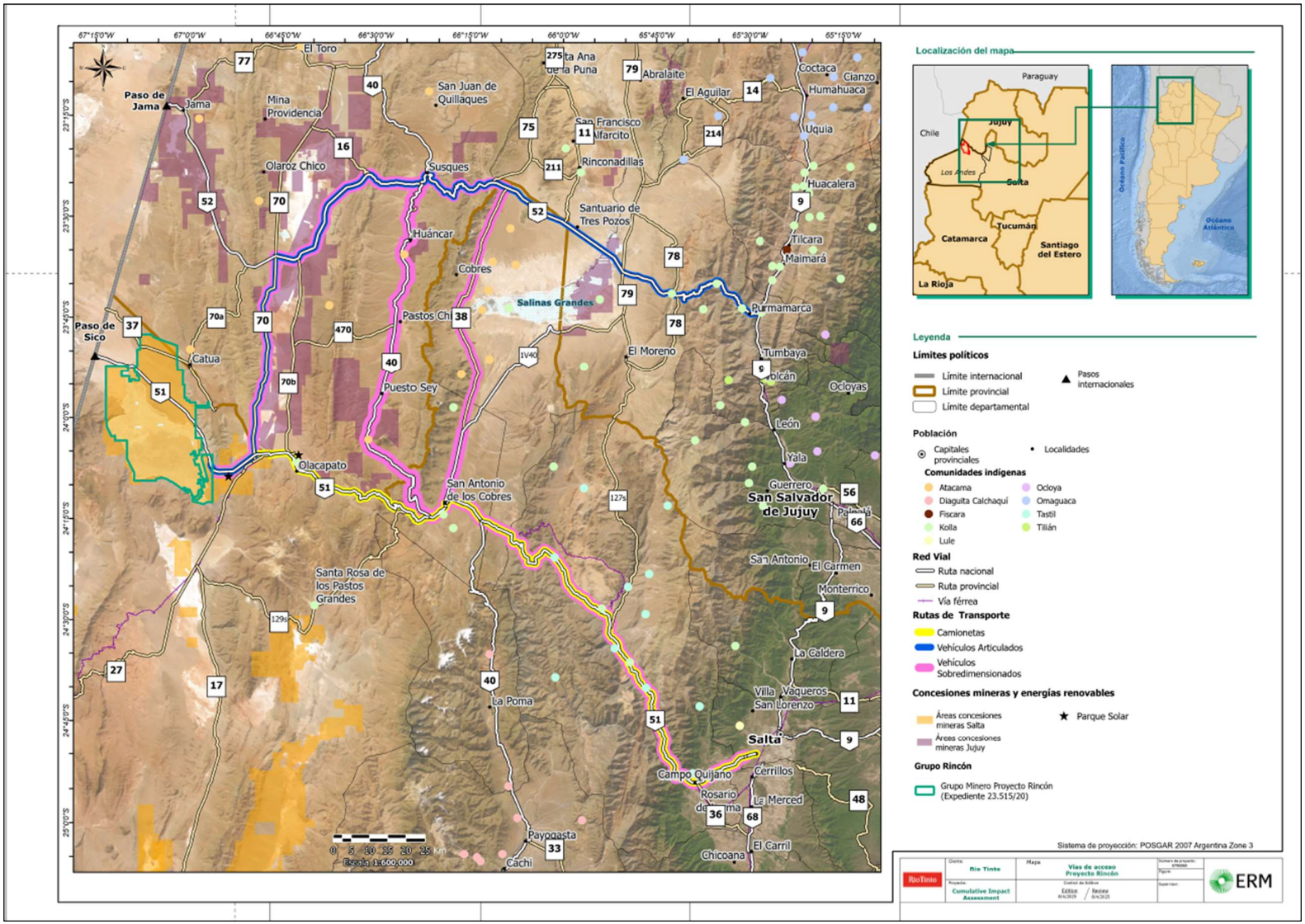



Figure 25: Map of routes used in the project and location of Indigenous communities

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 36Table 36.

Table 36. Routes overlapping Indigenous communities

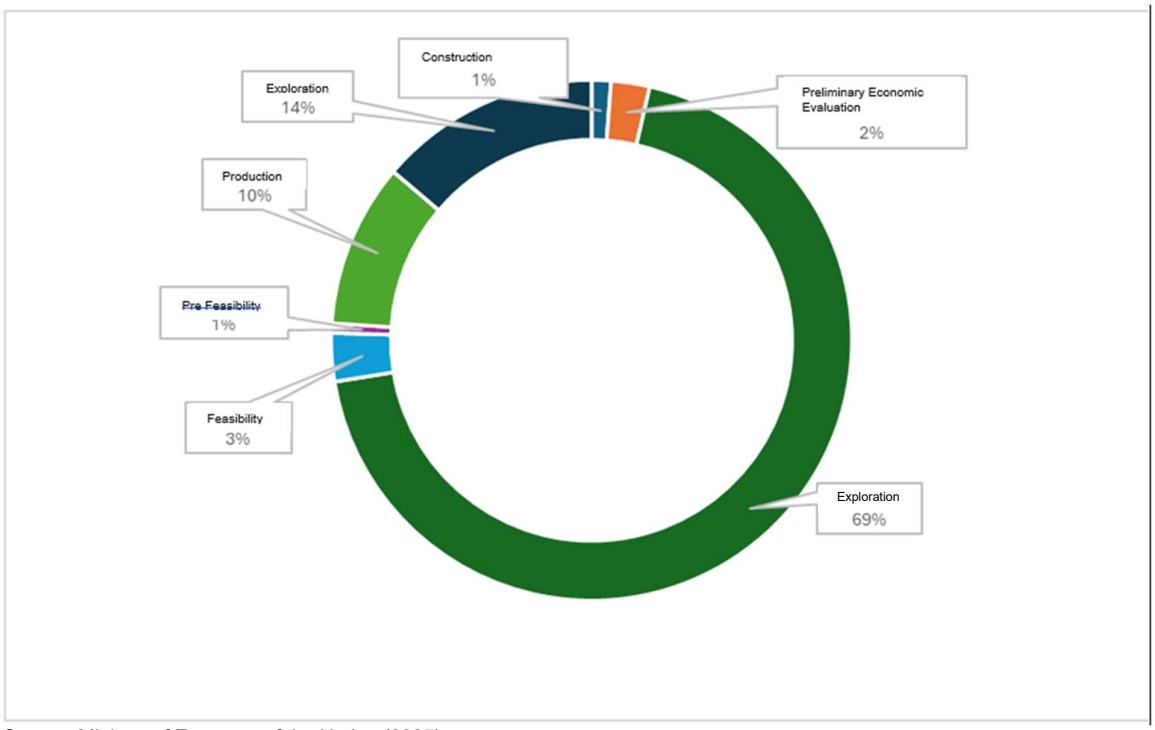
| Type of Road Network | Route | Indigenous Community |
|---|---|---|
| National | RN 51 | • Comunidad Aborigen de Catua Pueblo.<br>• Comunidad Kolla Quewar de Olacapato.<br>• Comunidad Indígena Kollas Unidos.<br>• Comunidad Indígena de Hurcuro.<br>• Comunidad Kolla El Desierto.<br>• Comunidad Indígena Las Cuevas.<br>• Comunidad Kolla Pacha Inti. |
| | RN 52 | • Comunidad Aborigen Paso de Jama (route to Chile).<br>• Comunidad Aborigen de Olaroz Chico.<br>• Comunidad Aborigen Pórtico de Los Andes de Susques.<br>• Comunidad Nativa Antigales de Lipán.<br>• Comunidad Indígena Purmamarca.<br>• Comunidad Indígena Coquena. |
| | RN 40 | • Atacama communities of Puesto Sey, Pastos Chicos and Huáncar. |
| | RN 9 | • Comunidad Yaqui Pampa.<br>• Comunidad Aborigen El Chañi.<br>• Comunidad Aborigen de la Bnada del Pueblo Tilían.<br>• Comunidad Indígena de El Angosto.<br>• Comunidad Aborigen de San Roque. |
| | RN 34 | • No communities are identified. |
| Provincial | RP 70 | • Comunidad Aborigen de Catua Pueblo. |
| | RP 70A | • Atacama communities of Puesto Sey, Pastos Chicos and Huáncar (Cauchari Salar). |
| | RP 70B | • Comunidad Aborigen de Catua Pueblo. |

Source: Indigenous Peoples Plan (ESIA, 2024)

Figure 26 and Figure 27 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.

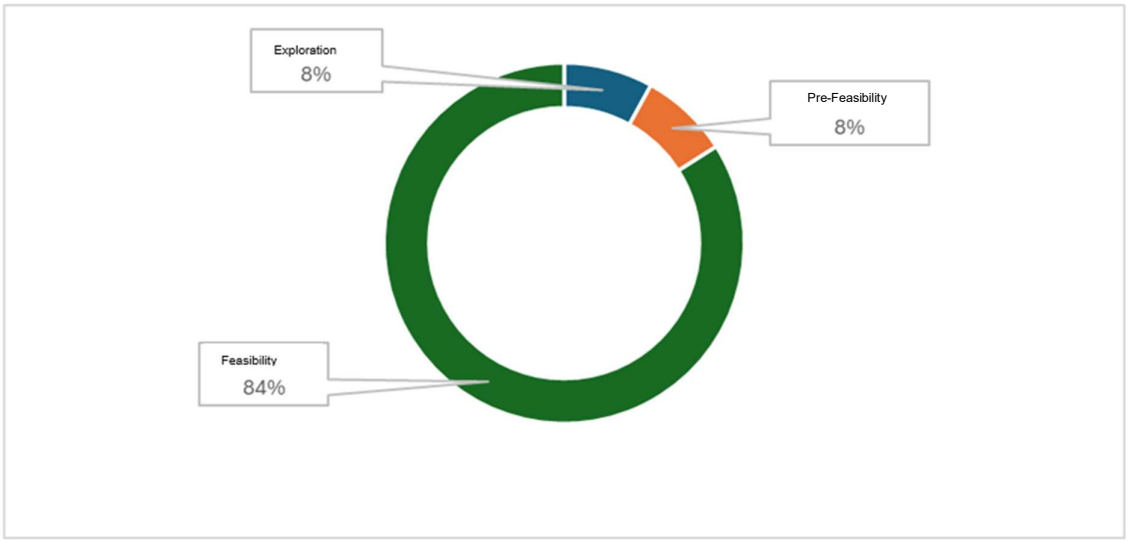
Regarding production status, according to data from the Ministry of Mining (2025), there are currently 17 projects in operation in the Province of Salta — three of them metal and lithium projects — while in Jujuy the number rises to 21, nine of which fall into these same categories. This overview is detailed in Table 37, 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.




Source: Ministry of Economy of the Nation (2025)

Figure 26: Distribution of mining projects by stage in the Province of Salta




Source: Ministry of Economy of the Nation (2025).

Figure 27: Distribution of mining projects by stage in the Province of Jujuy

Table 37. 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 ($B_2O_3$) | 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 ($B_2O_3$) | 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. |
| | | Córdoba | Santa Maria Mining Company SA |

| Province | Main Mineral | Name | Controller |
|---|---|---|---|
| | | Mina Catalina II | Spirit of the Andes Inc. |
| | Silver | La Providencia | Hanaq Group |
| | | Puna Operation (Chinchillas - Pirquitas) | SSR Mining Inc. |
| | Lead | Aguilar | Integra Group |
| | Lithium, Lead, Zinc and Silver Carbonate | Mina Puma Norte | Bragantini Jorge Alberto |
| | Aggregates | 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

#### 2.6.7.4. Use of Road Infrastructure

*National Road Information*

To characterise 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[10] and April 2023[11] 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 RN 51: Trends and Critical Points*

Historical AADT measurements conducted by the National Roads Authority between 2006 and 2022 show sustained growth in San Antonio de los Cobres, 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 (VPD), driven by mining and energy development and tourism (Tren a las Nubes). 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 contrast, the Sico Pass, at the border's extreme end, maintains limited and variable traffic. Between 2009 and 2015, it stabilised at around 70 VPD, 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.
In the 2023 census, an increasing gradient of traffic pressure is observed from west to east, as shown in Table 38.

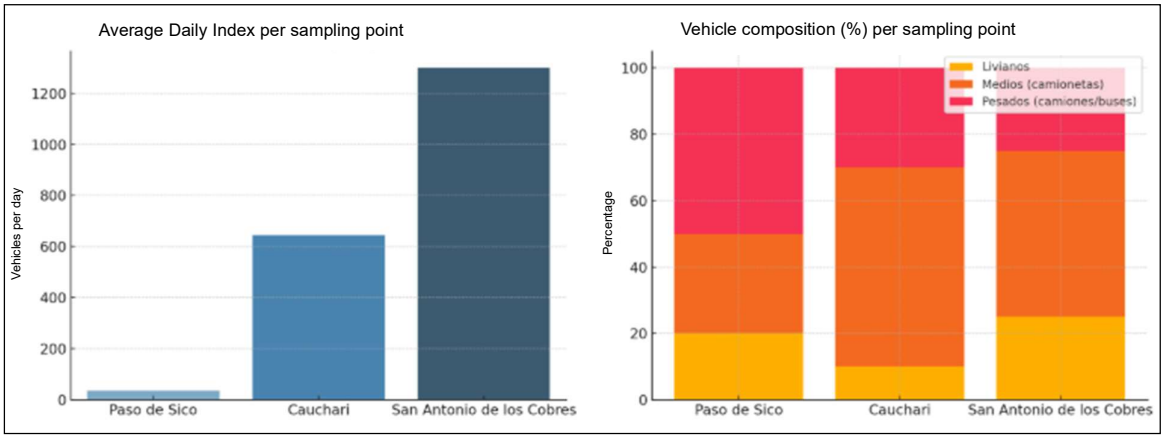
The traffic mix confirms that mining and logistics traffic is the main source of road freight, complemented by tourism and local transportation. Unpaved sections to the west present a greater risk due to dust and low visibility, while bypass routes, such as RP 27, handle heavy traffic without being adequately prepared.

[10] 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.
[11] During the days of April 4, 5 and 6, 2023, a vehicle census was carried out on RN 51.

Table 38. ADT 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 | 1,300 | Vans, local transport, tourism and buses |

Figure 28 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 28: 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 VPD, almost all of them heavy trucks authorised for international cargo transport.
- Cauchari had an intermediate flow, with 644 VPD; 57% were mining trucks, followed by cargo trucks.
- San Antonio de los Cobres had the most activity, with 1,300 VPD, 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 Estación 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 Estación 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 Estación 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.

#### 2.6.7.5. Consideration of Cumulative Impact Potential on Road Infrastructure

*Network Pressure and Traffic Composition*

- RN 51 shows an east–west pressure gradient (San Antonio de los Cobres: ~1,300 vehicles/day; Cauchari: ~644 vehicles/day; Paso de Sico: ~36 vehicles/day), with predominance of mining trucks, utility vehicles, tourism, and local transport.

- Secondary routes (RP 27) bear heavy traffic without adequate design, increasing risks due to dust, low visibility, and accidents.

*Condition and Maintenance Constraints*

- Unpaved sections and maintenance deficits (e.g., subsidence in Campo Quijano–Alfarcito; slow progress on RP 27 works) increase logistical risks and travel times.

- Seasonal vulnerability: landslides and closures on RN 52 affect corridor reliability for mining and tourism.

*Conflicts in Multifunctional Corridors*

- Corridors serve multiple functions: mining, tourism (Salinas Grandes, Cuesta de Lipán, Tren a las Nubes), community mobility, and international trade (Paso de Jama and Paso de Sico).

- The presence of Indigenous communities along routes requires traffic management sensitive to cultural contexts.

Concurrent growth of multiple projects intensifies freight and passenger flows, accelerating road deterioration and increasing risks of incidents and service disruptions. Cumulative pressures could compromise safety, service access, and regional economic integration.

### 2.6.8 VEC-8: Traditional Productive Activities

In VEC-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 further analysis, the following traditional productive activities variables were selected to describe the spatial and temporal scale established for VEC-8:

- 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.
- Utilisation of animal fibres for spinning and weaving.

#### 2.6.8.1. 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 organisation 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 commercialisation. 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.

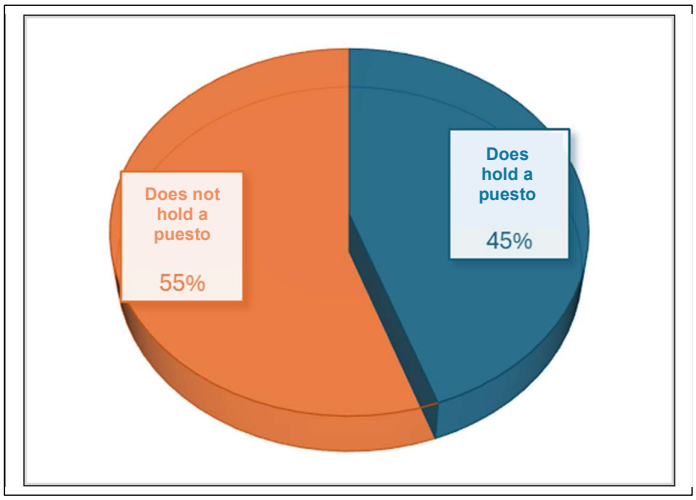
In communities like Catua, livestock farming has traditionally been the predominant economic and cultural activity. Since the 1970s — a time referred to by the community as “la época de los abuelos” or “the grandparents' era" — significant changes have occurred in the productive and social dynamics of 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, characterised 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 ESIA (Rio Tinto, 2024), 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 puesto, 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 29
Figure 29.




Source: 2024 ESIA

Figure 29: Possession of puestos

Catua and San Antonio de los Cobres are the towns where the most families still maintain livestock puestos, as shown in Table 39. In Estación Salar de Pocitos and Olacapato, only a few indicated that they still have them.

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.

Table 39. Ownership of puestos by locality

| Locality | Does the Family own a puesto 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

2.6.8.2. Puestos 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 recognised 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 40Table 40.

Table 40. Number of Catua puestos and corrals according to usage status reported by their puesteros

| Catua | No. | Current use | Seasonal | In disuse |
|---|---|---|---|---|
| Number of puestos identified | 94 | 45 (47.9%) | 19 (20.2%) | 30 (31.9%) |
| Use of the puestos' 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.

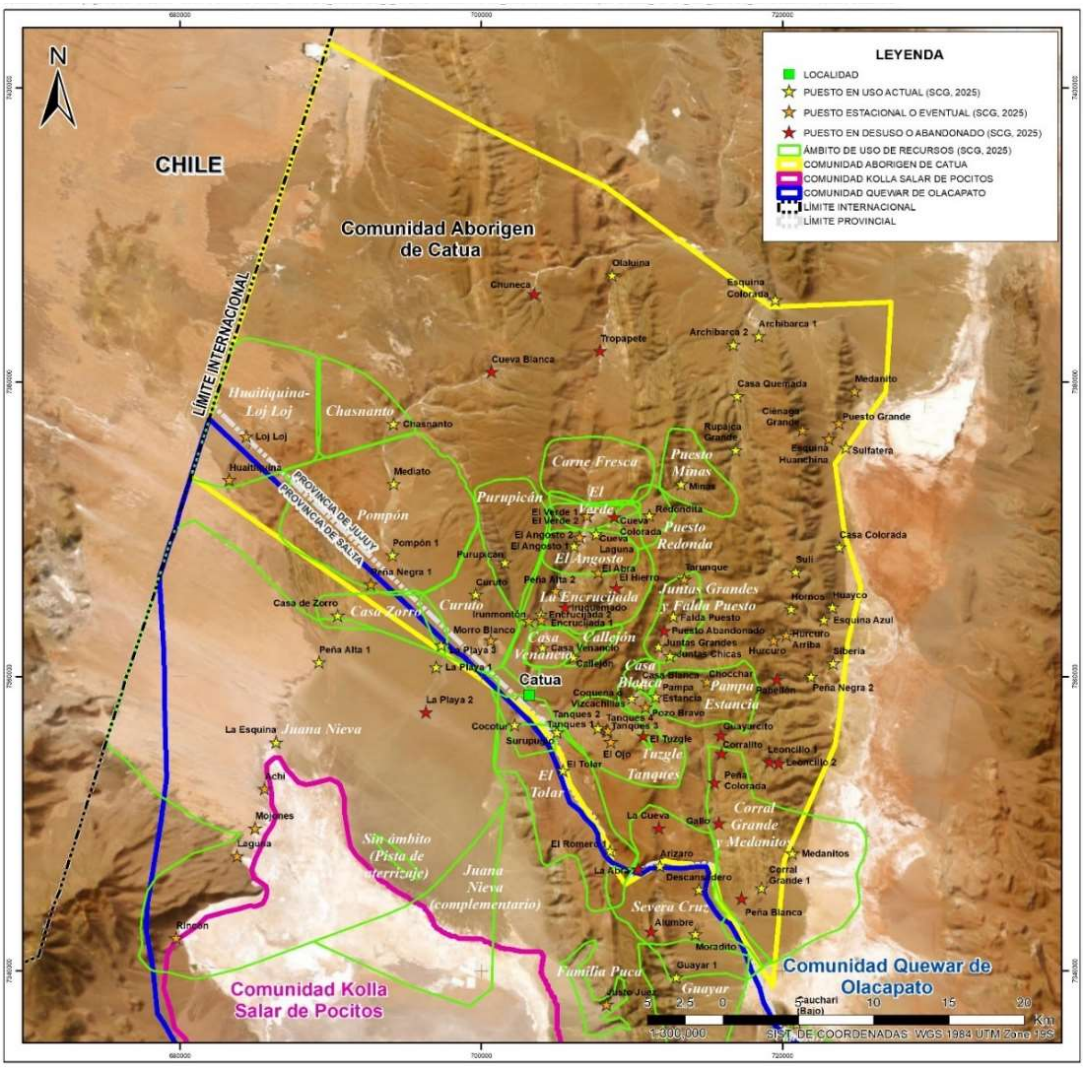
These puestos are distributed among 36 families, some of whom are responsible for more than one production unit. Of the total registered, 64 puestos (68.1%) are habitable and are currently operating:

- 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 30 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 puestos, of which 26 (68.4%) are active in different modalities:

- 21 have permanent use and habitable conditions.
- 5 are used sporadically or seasonally.




Source: SCG, 2025.

Figure 30: Location of puestos and their areas of use in Catua

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 its owner, as well as Corral Colorado, Traspuesto, Casa Banda, and another puesto near Cruz del Pueblo, all linked to the late owner (OP 11[12]), considered one of the town's founders.

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 a Catua puesto, Escolástica Condori's Minas (OP 03), and an old puesto in Vega de Olacapato Chico (OP 09). 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 the 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.

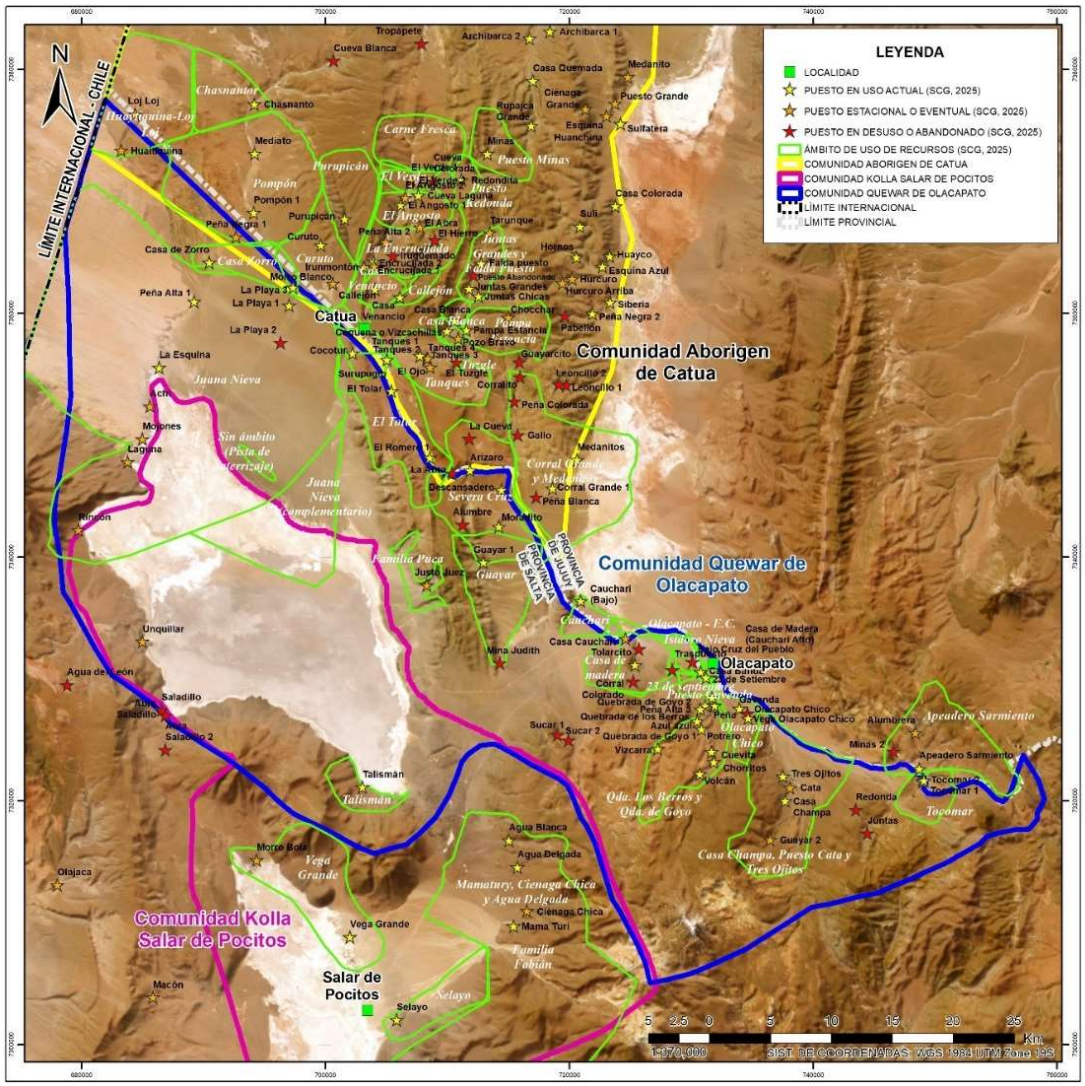
Considering the use of associated grazing territories, 32 of the 38 puestos (84.2%) continue to be used fully or partially, while only 6 are completely unused, as shown in Table 41Table 41Table 41.  and Figure 31.

[12] Coding of puesto owners provided to preserve anonymity.

Table 41. 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 puestos identified | **38** | 21 (55.3%) | 5 (13.2%) | 12 (31.6%) |
| Use of the puestos' 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 31: 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 (PP 01), which are currently uninhabited but continue to be used as grazing areas, especially during rainy summers. In total:

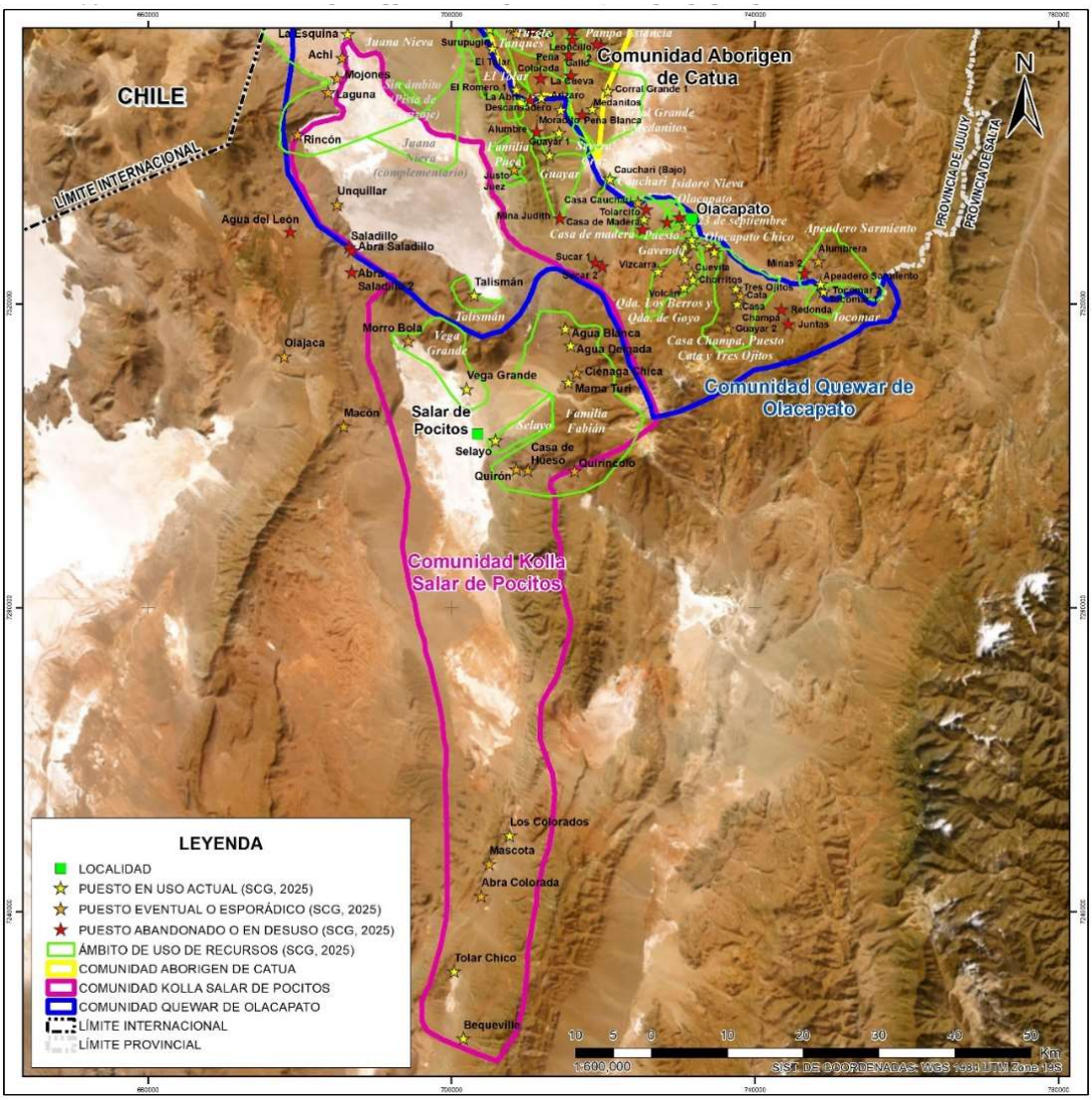
- 13 puestos have permanent grazing areas.
- 4 are used occasionally or seasonally.
- 4 are completely inactive.

The study also identified two corrals located within the urban area of Estación Salar de Pocitos, with the same owner. Only one of these corrals is currently in operation, as shown in Table 42 and Figure 32.

Table 42. Puestos and corrals at the Estación Salar de Pocitos by usage status reported by puesteros

| Estación Salar de Pocitos | No. | Current use | Seasonal | In disuse |
|---|---|---|---|---|
| Number of puestos identified | 21 | 8 (38.1%) | 5 (23.8%) | 8 (38.1%) |
| Use of the puestos 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.




Source: SCG, 2025.

Figure 32: Location of puestos and their areas of use in Estación Salar de Pocitos

#### 2.6.8.3. 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 43Table 43. .

Table 43. 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** |
| Estación Salar de 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 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.

Catua (including its urban corrals) is the locality with the highest percentage of people who recognise 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 Estación Salar de 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 could not do it, they would not 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.

2.6.8.4. Age Distribution of People Engaged in Shepherding

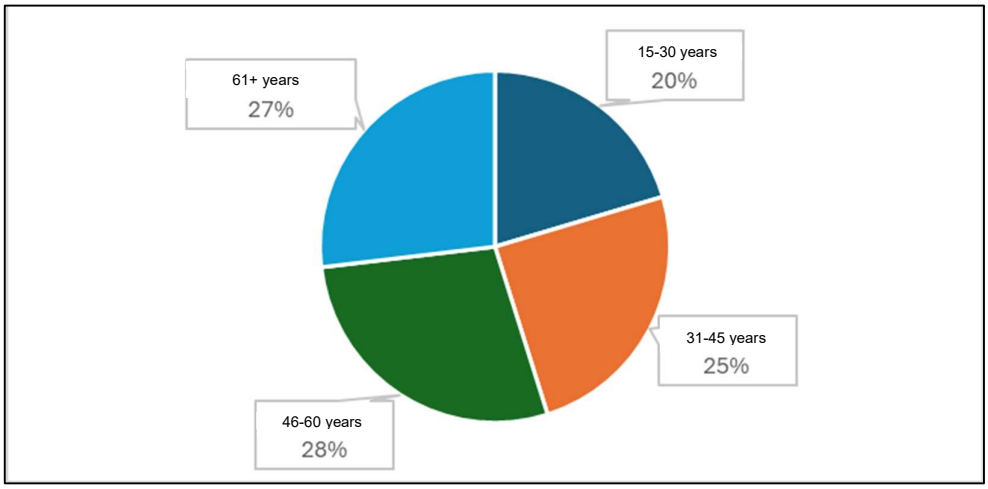
Knowing the age of those involved in traditional productive activities, such as herding, is essential for understanding the current dynamics of this practice and anticipating its future sustainability. Within the framework of analysing potential impacts on these activities, this variable allows us to 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 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 33 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 using data from SCG, 2025.

Figure 33: 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.

#### 2.6.8.5. Utilisation 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 44. 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.

Table 44. 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 using data from SCG, 2025.

#### 2.6.8.6. 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 emphasise 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 organisation, 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.

#### 2.6.8.7. 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.

#### 2.6.8.8. 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 characterisation 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 ESIA (Rio Tinto, 2024), 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.

#### 2.6.8.9. Consideration of Cumulative Impact Potential on Traditional Productive Activities

*Livelihood Shifts and Land Use*

- Expansion of mining and associated services may drive a transition from traditional activities (extensive livestock, fibre production, handicrafts) to wage employment, modifying land use and time allocation.
- Partial sedentarism and dual-residence patterns persist, but increased urban permanence may reduce transhumant mobility and alter productive cycles.

*Puestos and Grazing Territories*

- Although some puestos are inactive, grazing areas remain in use (e.g., Olacapato: 84.2% of areas used fully or partially; Catua: 71.3%).
- Seasonal use and multi-puesto management maintain a dynamic relationship with vegas and high-Andean pastures.

*Economic Dependence and Resilience*

- Livestock activity is secondary for most families (58.1%) but primary for a significant share (27.9%), acting as economic and food security backup, especially during crises (e.g., COVID-19).

- Low demand and reduced prices limit commercialisation, although the cultural value of fibre use and weaving remains high.

*Intergenerational Continuity*

- Activity is sustained mainly by older adults (46–60 and 61+ predominant), with limited youth participation except in Catua, indicating aging risk and potential generational discontinuity.

*Cultural Practices and Identity*

- Practices such as hacienda signs (gratitude to Pachamama) and natural dyeing reflect strong cultural attachment, vulnerable to access restrictions, time constraints, or environmental changes.

- Concurrent project growth and induced changes may reduce time dedicated to traditional activities, increase competition for resources (water, pastures), and strain cultural transmission. Cumulative impacts could erode cultural identity and local economic resilience.

## 2.7 Step 4: Assess the Predicted Cumulative Impacts on Each VEC

Step 4 of the IFC's CIA methodology is to assess cumulative impacts on VECs, which involves identifying potential environmental and social impacts and risks, analysing how they could interact with each other, and evaluating their potential effects on the long-term sustainability of a VEC. This step requires assessing potential cause-effect relationships and identifying additive, counteracting, or synergistic effects.

While the overall assessment for VEC-3 through VEC-8 remains primarily qualitative due to data limitations, the scenario analysis incorporates quantitative estimations wherever the baseline allowed it. Specifically, the CIA assesses the predicted cumulative impacts on social VECs using quantitative information where possible. For example, current and forecasted population, migration trends, influx estimates, variability in the EAP, temporary and permanent workforce requirements, number of educational institutions, education levels achieved, educational services provided, number and type of health facilities, health facilities' coverage area and population served, health conditions and health plan coverage, traffic volume projections, sources of traffic, planned transport upgrades, annual trips by project stage, percentage of families maintaining puestos, shifts in pastoral activities, etc., have been included.

While certain predicted cumulative impacts are ultimately characterised qualitatively, this is consistent with international best practice when data limitations or uncertainty preclude numerical aggregation. In these cases, the CIA uses quantitative data to support and substantiate the qualitative assessment. Accordingly, the CIA evaluates the combined magnitude and interaction of multiple activities on social VECs, using both quantitative and qualitative methods appropriate to the available information.

For VEC-8, given the nature of traditional livelihoods and the demographic structure of pastoralist households, the analysis adopted a range-based approach, presenting lower- and upper-bound scenarios of continuity or decline rather than fixed numerical projections. Across all VECs, scenario development draws on observed trends, internal system sensitivities, and professional judgment regarding baseline capacity versus foreseeable pressures, ensuring consistency and proportionality in the interpretation of cumulative change.

The assessment incorporates past and anticipated changes associated with other projects and regional activities. These data inputs inform the cumulative impact predictions, where the assessment explicitly considers the overlapping effects of multiple contributors on each social receptor. The assessment examines the drivers of change, potential impacts, and predicted sustainability outlook of the VECs, rather than establishing quantitative thresholds for determining when cumulative impacts become significant. These thresholds are currently being drafted as part of the mitigation and management plans under development.

### 2.7.1 VEC-1: Water Resources

The water resources of the Rincon Basin faces multiple pressures associated with current and proposed future mining activities, climate variability, and potential for inappropriate water management practices.

These pressures affect both groundwater and surface water systems, including sensitive features such as vegas, lagoons, Ojos de Agua, and associated ecosystems.

#### 2.7.1.1. Predicted Cumulative Impacts

*Impacts from Raw Water Abstraction*

**Alteration of Natural Groundwater Flows and Levels**

The extraction of raw water for industrial use will disrupt the hydrological balance, reducing groundwater levels, altering groundwater flow directions, and reducing flow contributions to other adjacent groundwater bodies or surface water features.

**Degradation of Groundwater Quality**

Raw water abstraction may cause the vertical up-coning or lateral ingress of higher salinity water, impacting the water quality of shallower groundwater within the groundwater body, and also may impact the quality of any groundwater or surface water body which receives contributions from the aquifer from which the raw water is being abstracted.

*Impacts from Lithium Brine Abstraction*

**Alteration of Groundwater/Brine Flows and Levels**

The extraction of lithium brine will lower groundwater/brine levels and alter groundwater/brine flow paths, which also has the potential to affect the water levels and quality of hydraulically linked springs, vegas/wetlands, and Ojos de Agua, and any dependent ecosystems, including post closure.

*Impacts from Spent Brine Infiltration*

**Alteration of Groundwater/Brine Flows and Levels**

Infiltration of brine from evaporation or spent brine ponds may lead to rises in groundwater/brine levels, which may cause localised flooding and increases in water levels in water features in the immediate vicinity (e.g., Ojos de Agua) which could affect any dependent ecosystems.

**Alteration of Groundwater/Brine Quality**

Infiltration of brine from evaporation or spent brine ponds may lead to changes in groundwater/brine quality within the aquifers, which may cause affect water features and associated ecosystems in the immediate vicinity (e.g., Ojos de Agua).

#### 2.7.1.2. Scenario Planning – Water Level Drawdown

The simultaneous activities of the Rincon Project, Puna Mining (if reactivated), and other exploration projects (e.g., Argentina Lithium - Rincon West Project, Paso de Sico Project, and an unnamed Project; and Power Minerals - Salta Lithium Brine Project) along the western margin of the Salar could exert cumulative pressure on:

- Lithium-bearing aquifers.
- Groundwater and surface water systems.
- Linked ecosystems, including wetlands and springs.

*Modelling Results - Potential Future Impacts – Adjacent Property Wells*

To assess water level drawdown, RINCON modelled the Project's brine wellfield. In addition, the model included pumping at adjacent property wells (Argosy's Puna Mining project) in the southeastern portion of the Salar, in both the fractured halite and black sand (Figure 34 and Figure 35), to consider the cumulative impact of the two projects operating simultaneously:

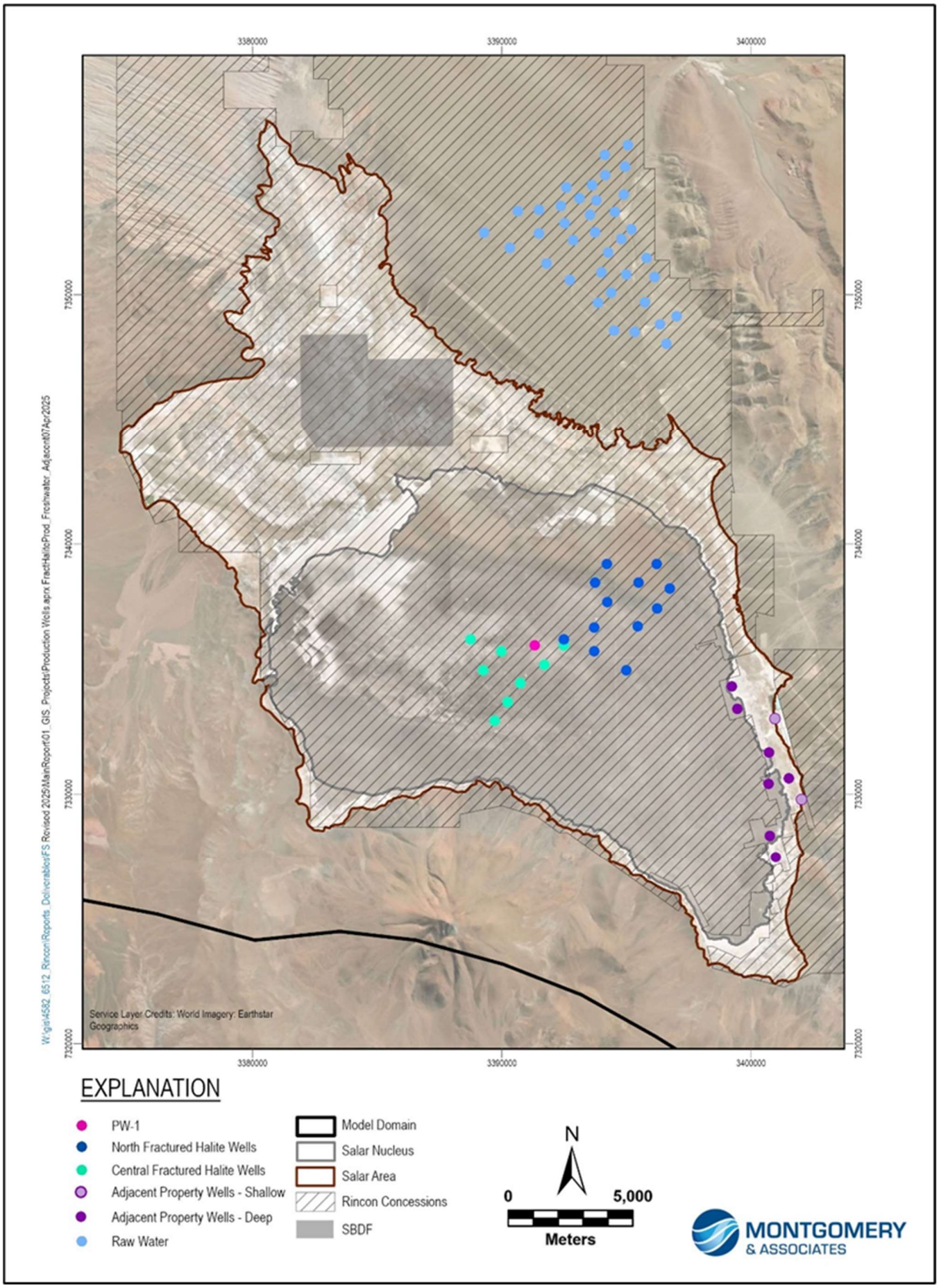



Figure 34: Locations of Project simulated fractured halite production wells and Argosy's Puna Mining wells

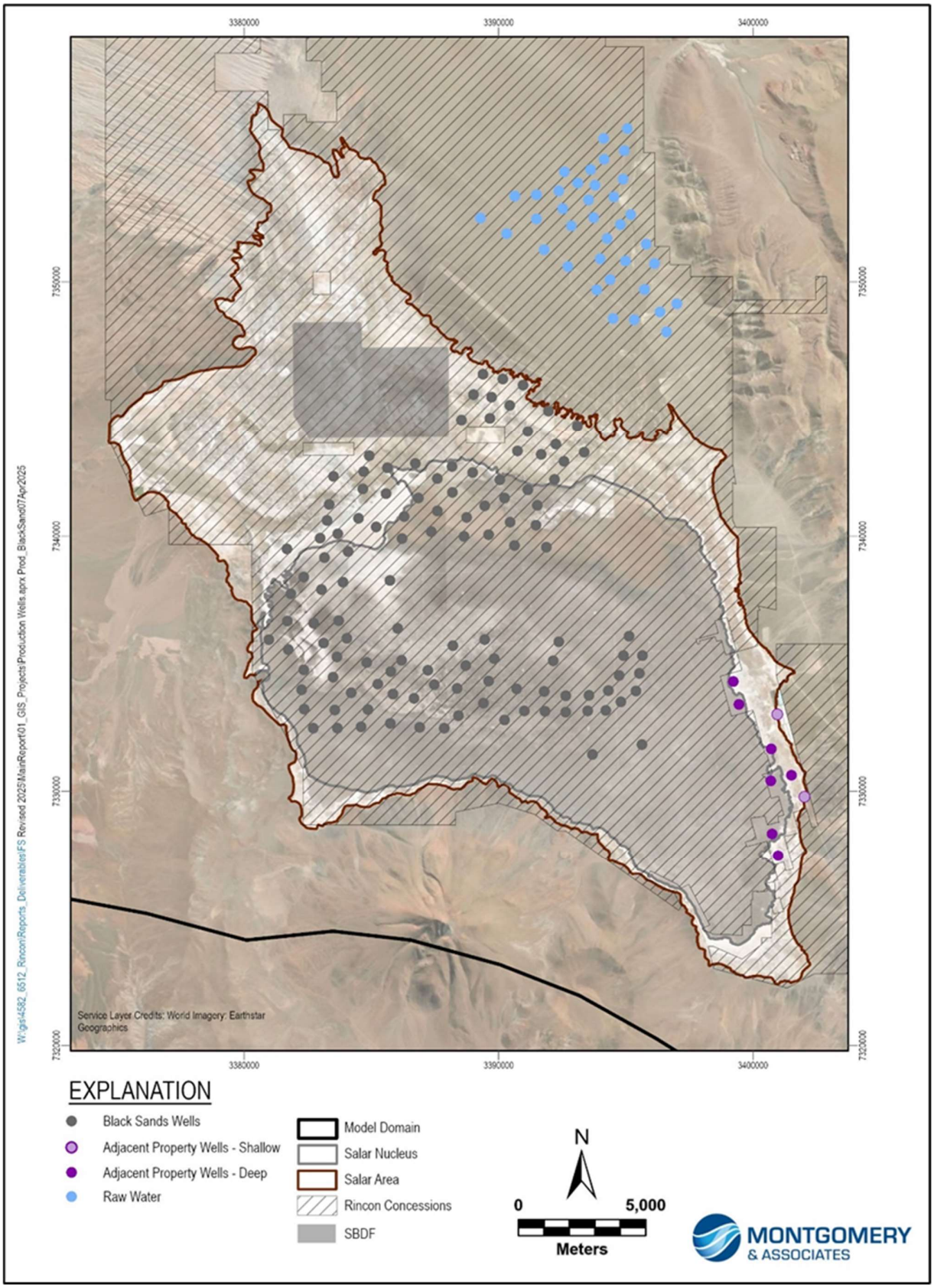



Figure 35: Locations of simulated Project black sand production wells and Argosy's Puna Mining wells

- The extraction rates for the Puna Mining wells were determined by a model run to simulate the flows needed to reach a projected production target of a worse case scenario, 12Ktpa LCE, and assuming a processing efficiency for evaporation ponds. Argosy received a DIA to increase production from 2 to 12Ktpa LCE in 2024.[13] Note: Argosy's Puna Mining is currently on hold.

- The maximum drawdown after 10 years of simulation (Figure 36) is approximately 26mbgl on the Argosy property. The maximum drawdown in the northern fractured halite wells is approximately 8.8mbgl.

- By Year 20 (Figure 37), the fractured halite wells have already passed their maximum flow rates, are showing dilution, and have begun to decrease in flow rates. The model shows a maximum drawdown of 47mbgl at the Argosy property, and a maximum drawdown of 18mbgl in the fractured halite, but this is after some recovery of more diluted water and equilibrating from the maximum usage in Year 15. The back sand wells are now active in the northwest part of the Salar and show a maximum drawdown of 22mbgl south of the SBDF.

- After 30 years (Figure 38) the maximum drawdown is 45mbgl and is focused on the western edge of the Salar area at the black sand wells. The drawdown contours show the progression of black sand wells being added from the northwest Salar area to the southwest Salar area based on the areas with the largest drawdown. The asymmetrical drawdown is attributed to different flow rates being applied to the wells and differences in hydraulic parameters which shape the drawdown cone. The influence of the SBDF and its mounding is apparent by the reduced drawdown in the adjacent area despite pumping.

- At 40 years of simulation (Figure 39) the maximum drawdown is approximately 67.3mbgl 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. The presence of one northern fractured halite well at the end of the predictive period was retained as there may be some potential minor use, although the projected contribution of mass is negligible.

The model predicts significant drawdown. However, the Puna Mining project is not active and Argosy has not indicated when construction works will start. Therefore, the simulated cumulative aquifer drawdown is conservative. Additionally, should other pumping begin at other projects in the Salar, this could also provide some risk and uncertainty to the future wellfield.

*Modelling Results - Potential Future Impacts – Climate Change*

Predictions of future climate change across the Project area have been completed (CLIMsystems, 2022). The predictions suggest:

- Reduced Recharge: Decreased rainfall and prolonged droughts may lower natural recharge rates, exacerbating the impacts of water abstraction.

- Increased Vulnerability: Ecosystems and water users across the Rincon Basin may face heightened risks due to reduced water availability and increased competition.

The monthly mean precipitation will decrease over time, however, the amount of precipitation during extreme precipitation events will increase over the same time period. A linear relationship of the mean values provided was developed and the data from 2020 to 2062 suggested an approximate 8% reduction in monthly mean precipitation. The predicted progressive reduction in rainfall recharge was used as input data for the numerical modelling completed.

The model ran scenarios both with and without the influence of climate change included in order to be able to assess the specific impact of the projected climate change on model predictions as the base case and therefore is considered to be conservative.

[13] Note: The location of the Puna Mining wellfield, planned pumping distribution within their concessions, and processing efficiency from the fractured halite and black sands (60%) were assumed from only a few drillholes, and therefore, poses some uncertainty in regard to the potential impacts this may have on RINCON's planned wellfield.

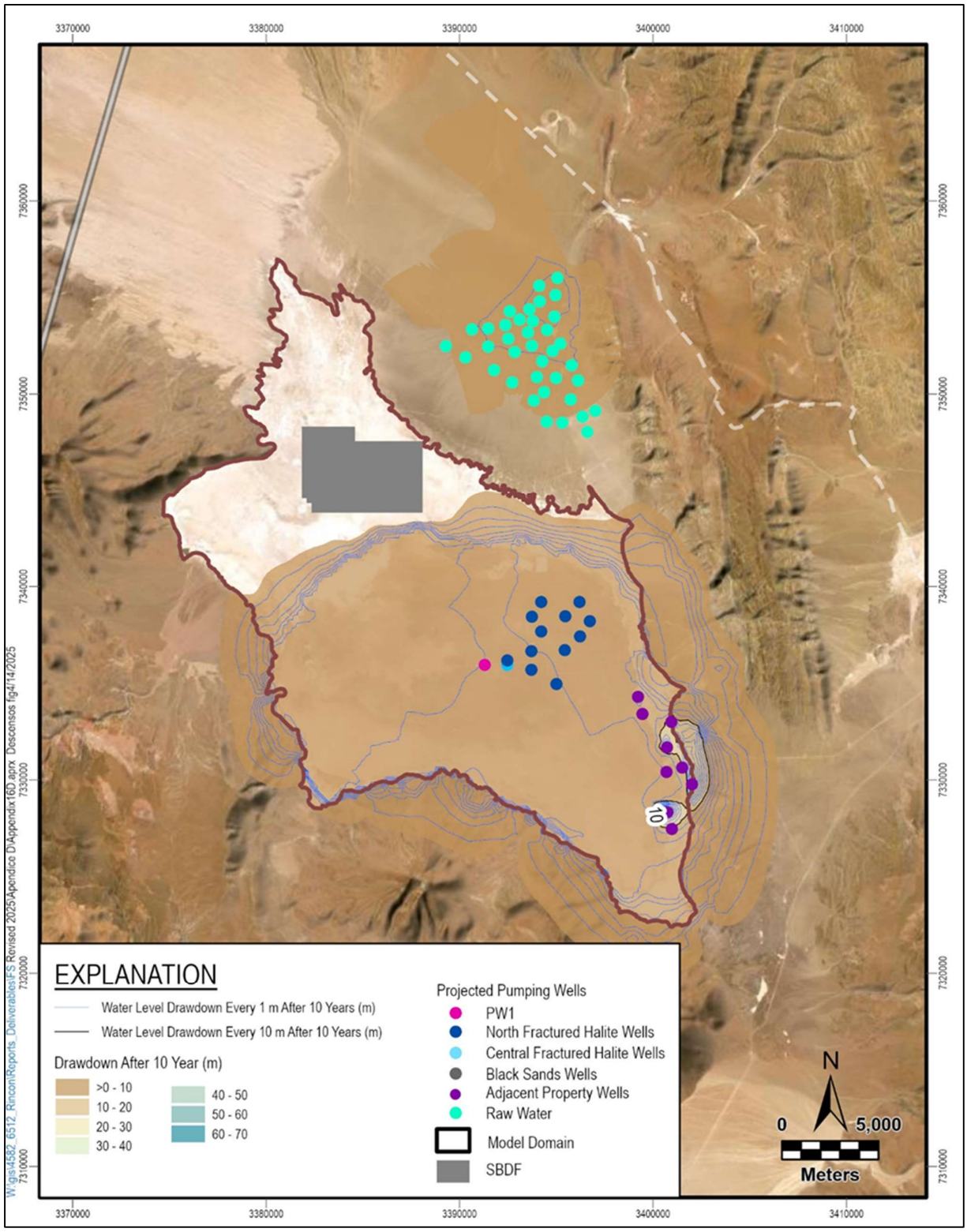



Figure 36: Model Predictions - Water level drawdown after 10 years

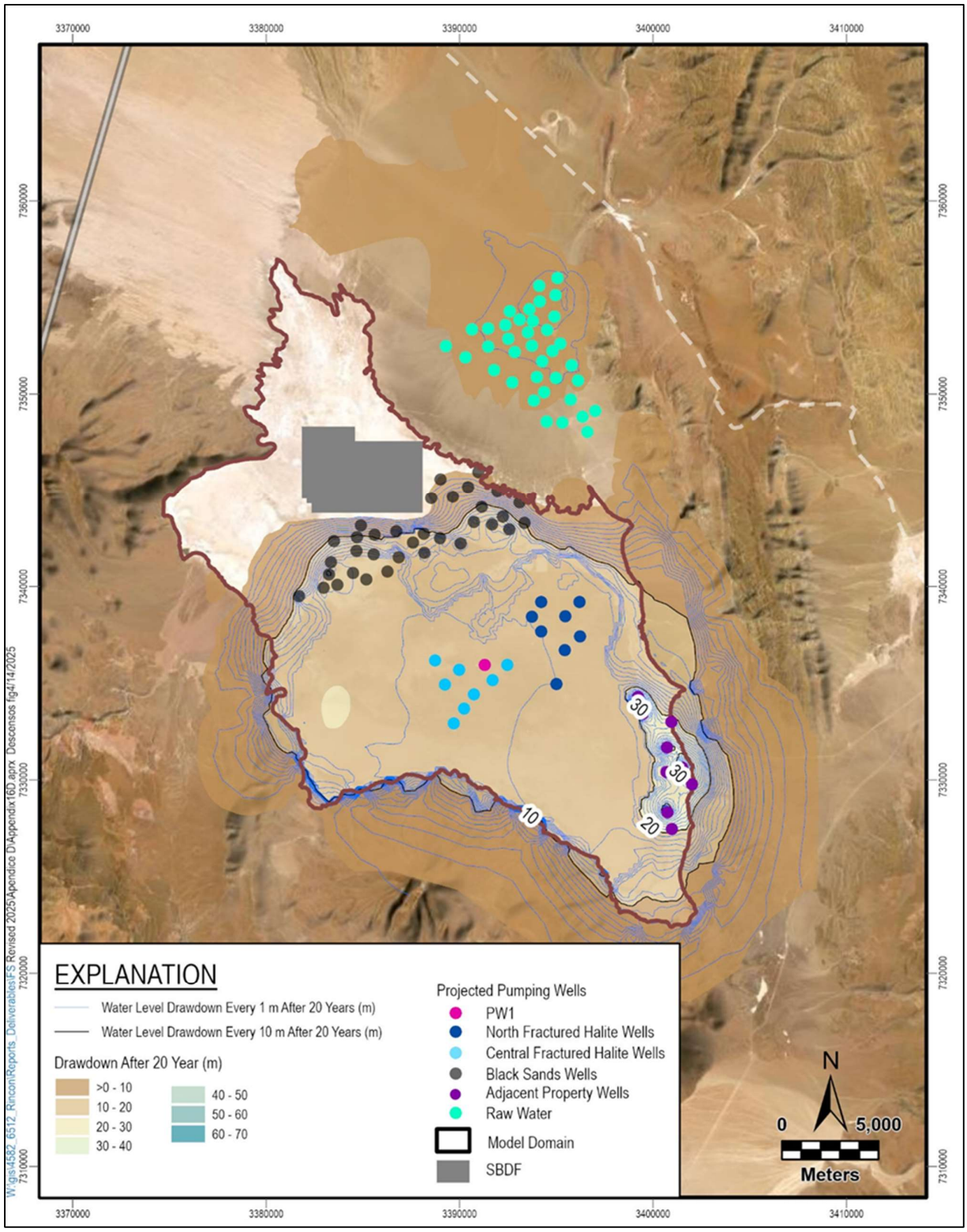



Figure 37: Model Predictions - Water level drawdown after 20 years

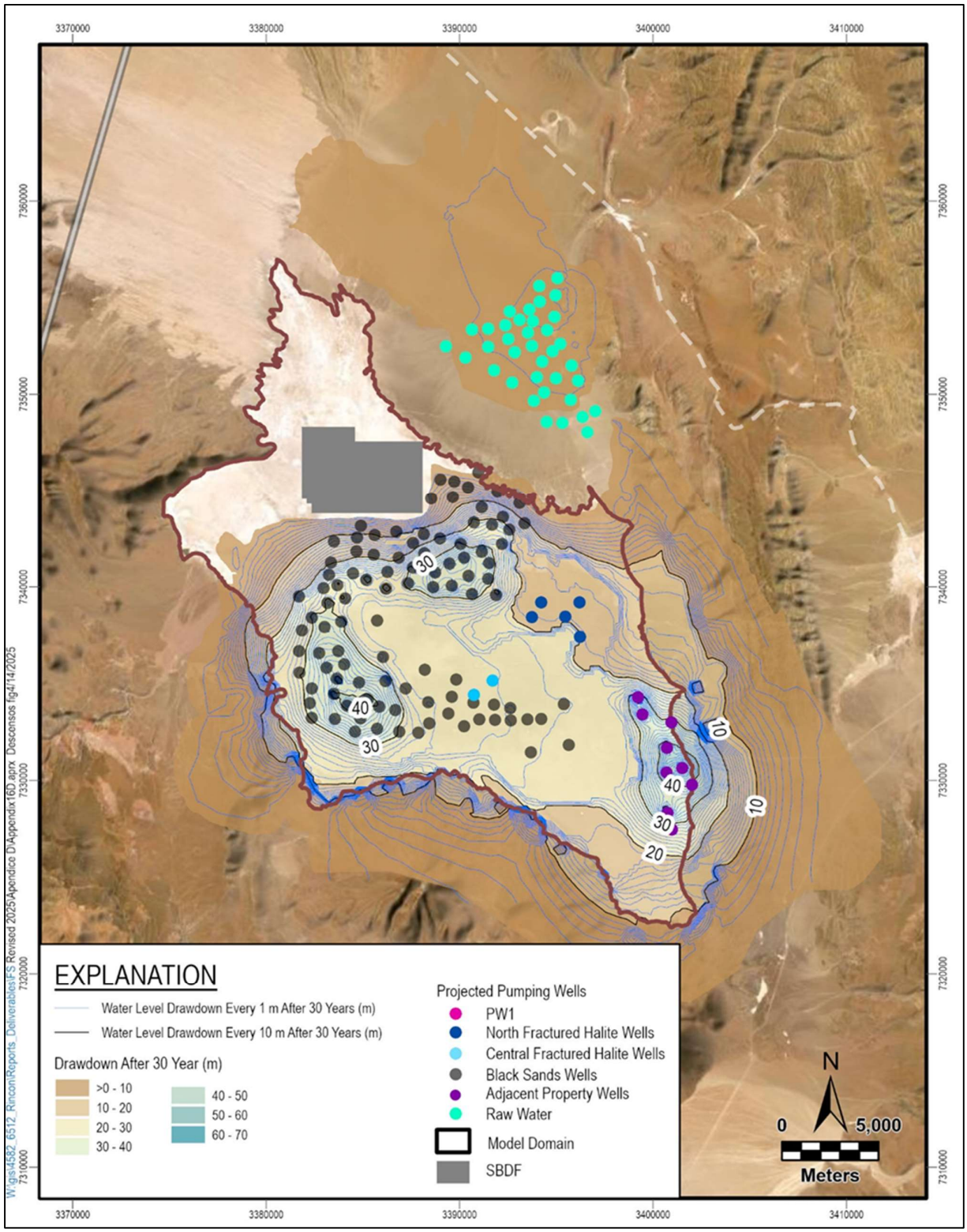



Figure 38: Model Predictions - Water level drawdown after 30 years

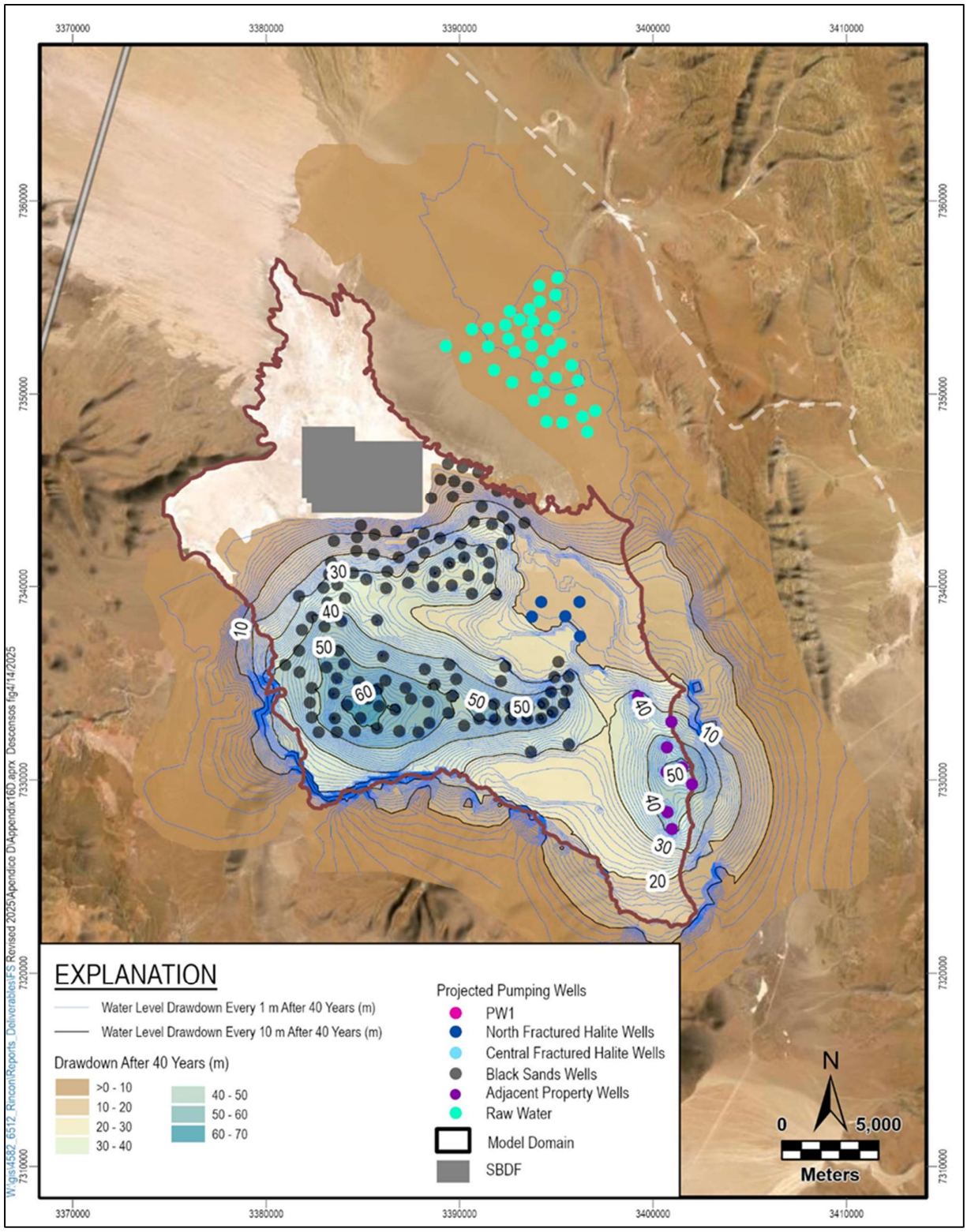



Figure 39: Model Predictions - Water level drawdown after 40 years

### 2.7.2 VEC-2: Terrestrial Biodiversity and Ecosystems

The Rincon Basin is home to a variety of threatened, endemic, and migratory species, as well as sensitive ecosystems that are increasingly vulnerable to anthropogenic pressures. Mining and infrastructure development, combined with cumulative regional activities and climate variability, pose risks to biodiversity and ecological integrity. Construction and operational activities associated with mining, roads, and support infrastructure result in the permanent removal of native vegetation and disruption of ecological zones. This reduces the availability of shelter, food, and breeding grounds for local fauna, particularly species with restricted ranges.

#### 2.7.2.1. Predicted Cumulative Impacts

The Project components and associated development due to migration and growth may include the following:

*Habitat Loss*

Project components and associated development due to in migration and growth may result in land-use change and loss of habitat.

*Habitat Fragmentation*

Linear infrastructure such as roads, pipelines, and transmission lines can divide habitats, isolating wildlife populations and impeding movement, gene flow, and access to critical resources. Fragmentation increases vulnerability to predation, disease, and environmental stress. Groundwater drawdown and surface water depletion due to mining activities may result in hydrological stress on aquatic micro-endemic communities could, resulting in loss, particularly in isolated or poorly monitored habitats.

*Disturbance to Fauna*

Disturbance related to noise, artificial lighting, and dust generated during construction and operations can alter the behaviour of wildlife, including feeding, mating, and migration patterns. Migratory birds and nocturnal species are especially sensitive to these disturbances, which may lead to displacement or reduced reproductive success.

*Increased Vehicular Traffic*

The increase in vehicular traffic will heighten the risk of fauna being struck, particularly in areas where roads intersect natural movement corridors. Slow-moving species and those active during dawn or dusk are most at risk. Migratory birds may collide with transmission line cables.

*Population Decline of Endemic Reptiles*

Species such as *Liolaemus multicolour* and *Liolaemus* AC, which exhibit high levels of endemism, are vulnerable to habitat loss and fragmentation. Habitat loss and fragmentation may reduce their overall population size and genetic diversity, increasing susceptibility to environmental changes and stochastic events.

*Impacts in Reserva Provincial de Fauna Los Andes*

Although the Project footprint and its Direct AoI are located entirely within the RPFLA (6.4ha), representing approximately 7.5% of the reserve, for this CIA, the protected area has been considered in its entirety as a single conservation unit, rather than restricting the analysis to the overlap areas. Evaluating cumulative impacts across the entire RPFLA the assessment ensures that conservation objectives are aligned with the reserve's foundational purpose and that mitigation measures address both direct and indirect threats to biodiversity and ecosystem resilience.

The RPFLA was established to ensure the proper functioning of key ecosystems — particularly wetlands (vegas), salt flats (salares), and extremophile habitats — and to restore and maintain viable populations of species representative of the Puna region, including Vicuñas, Guanacos, the Puna frog, and Flamingos. According to the Reserve's Management and Development Plan, the RPFLA faces several ongoing pressures that threaten its biodiversity and ecosystem integrity, including the introduction of exotic species for livestock production, which disrupts native ecological dynamics; unsustainable grazing practices in vegas, leading to habitat degradation; soil degradation associated with mining activities.

Regarding the other protected areas, given that they are located within a different watershed, no impacts are anticipated on these ecosystems.

#### 2.7.2.2. Scenario Planning – Habitat Loss

The Project footprint will directly affect 3,300.62ha, of which 2,900.44ha correspond to Natural Habitat (NH), primarily located within the salt crust interior (2,435ha). The salt crust interior is largely devoid of vegetation cover and does not support Priority or Critical biodiversity values.

Critical habitat loss for *Liolaemus* spp. is estimated at 400.18ha.

The construction and operation of mines within the Salar del Rincon Basin and associated development (i.e., additional traffic and road improvements/construction, transmission lines, and additional mining projects, along with demographic shifts in human populations (see VEC-3)), may contribute to:

- Land-use change and result in habitat loss and fragmentation for *Liolaemus* species and within protected areas, most notably the RPFLA.
- Habitat loss and fragmentation may lead to population decline and genetic erosion in endemic species, i.e., reduced gene flow and genetic bottlenecks, weakening species' resilience to disease, climate variability, and other stressors.
- A steady reduction in natural habitat across the basin, diminishing biodiversity and ecosystem services.

### 2.7.3 VEC-3: Demographic Structure

The demographic dynamics of a region can significantly influence its social, economic, and environmental stability. Rapid population growth, migration, and urbanisation often lead to complex challenges that affect both infrastructure and community well-being. The localities within the AoI range from very small settlements (Estación Salar de Pocitos: 54 residents; Olacapato: 199) to larger service hubs (San Antonio de los Cobres: 6,306). Such disparities mean that:

- Demographic change can disproportionately affect small populations, population size, and structure.
- Even modest in-migration of workers can significantly shift population composition in smaller towns.
- Differential growth patterns may amplify existing inequalities in access to services and infrastructure.

Across all communities, the age-distribution profiles indicate high proportions of children and adolescents, including >50% under age 14 in some cases. At the same time, communities have experienced declines in older cohorts reflecting out-migration of young adults pursuing schooling and job opportunities. This predominantly youthful demographic points to future demands on education systems, housing availability, and local labour markets and indicates that mining activities may affect pathways from schooling into employment and influence longer-term population dynamics.

The AoI hosts communities with 65% Indigenous identification, including Kolla and Atacama peoples. Strong affiliations to local Indigenous organisations (e.g., Quewar-Kolla; Coquena Catua). These characteristics make demographic change a culturally significant issue. Rapid in-migration or shifts in local population composition can, influence community cohesion, affect territorial identity and traditional livelihoods, and create pressures on communal governance systems.

Towns in the Direct AoI, such as Olacapato and Estación Salar de Pocitos, have mixed urban–rural settlement patterns with dispersed households and limited infrastructure. This affects their:

- Capacity to absorb rapid population growth.
- Ability to provide equitable access to services (education, health, transport).
- Vulnerability to social pressures driven by workforce influx.

Population trends demonstrate:

- Rapid growth in San Antonio de los Cobres (+32.4% between 2010–2022).
- Recovery after a decline in Catua (+5.6% in the same period).
- Recent depopulation in Olacapato (–8.7%).

These shifts reflect migration for services and employment, emerging influence of mining development, and increasing concentration in urban centres.

Migration is a longstanding feature of Andean socio-cultural systems, but recent trends show an increased rural-to-urban mobility within Los Andes and Susques Departments, movement driven by education needs, lack of rural services, and job availability, and a higher population turnover in certain localities (e.g., Estación Salar de Pocitos: only 49% lived there five years ago). Mining development intensifies these processes through the attraction of foreign and non-local workers, stimulating return migration, and increasing dual-residency patterns. These dynamics can create service bottlenecks, housing pressures, and changes to community composition.

#### 2.7.3.1. Predicted Cumulative Impacts

The Project-related and cumulative changes in demographic structure could lead to the following:

*Saturation of Public Services*

Essential services such as water supply, sanitation, electricity, fuel distribution, and telecommunications may become strained, leading to reduced quality and reliability.

*Rising Crime Rates and Changes to Perception of Safety*

High population density and social inequality may contribute to rising crime rates and a general sense of insecurity. The arrival of non-local workers may also affect the perception of safety in communities that have historically lived in peaceful environments, leading to changes in daily habits and quality of life.

*Pressure on Housing Availability*

Increased pressure on housing availability may lead to the expansion of informal settlements or inadequate housing solutions. These conditions can result in overcrowding, deterioration of the urban environment, and social tensions, affecting community cohesion and increasing the vulnerability of certain groups.

*Pressure on Local Health Services*

Increased pressure on local health servies may limit access to sexual and reproductive healthcare, potentially leading to higher rates of sexually transmitted infections, unplanned pregnancies, and reduced access to family planning. These potential impacts could disproportionately affect young women and other vulnerable population groups.

*Social Disintegration*

Progressive weakening of community cohesion caused by rapid demographic, economic, or cultural changes may lead to increased rates of alcoholism, drug use, and related health issues.

*Cultural Erosion*

Migration and modernisation can dilute traditional cultural practices, languages, and community structures. Younger generations may become disconnected from ancestral heritage and Indigenous identity, leading to a weakening of cultural resilience and identity.

#### 2.7.3.2. Scenario Planning

The most likely scenario for the next ten years indicates that demographic changes within the Direct and Indirect AoIs will remain moderate but highly uneven across localities, due to their small population size, predominantly youthful age structure, and high proportion of Indigenous residents. The communities display population pyramids with a large base of children and adolescents, while the working-age cohorts appear weakened as a result of intra-Departmental and intraregional mobility driven by education and employment. This leaves localities with very few adults available to sustain productive activities, community roles, caregiving responsibilities, and organisational participation.

In this context, even small variations in the number of adults — such as the temporary presence of contractor teams during peak mining activities — can generate noticeable changes in community dynamics. This sensitivity is explained by the fact that the communities are highly Indigenous (65% of the total AoI population), show strong social and cultural cohesion, have very youthful demographic profiles, and exhibit dispersed settlement patterns with limited capacity to absorb additional population present. Their small demographic base means that fluctuations involving only a few individuals can have a proportionally significant impact.

A key baseline finding is that population mobility does not originate primarily from outside the region but rather occurs among localities within the Department of Los Andes or the broader Puna region (Salta–Jujuy). This means that, although these populations are sensitive due to their age structures and Indigenous composition, demographic variations tend to occur among people with similar cultural and social characteristics, which partially moderates potential cultural friction. However, this internal mobility still affects the local age balance: when young people and adults move for education or employment, the resident adult population diminishes further, reinforcing dependence on external workers to fill productive roles in mining projects.

Additionally, official INDEC projections estimate that the Department of Los Andes will reach approximately 7,674 inhabitants by 2035, indicating moderate growth at the Departmental scale.

The analysis indicates that, although this represents a +6.9% increase between 2022 and 2035, local trends show more pronounced variations:

- In San Antonio de los Cobres, the population increased from 4,763 inhabitants in 2010 to 6,306 in 2022, equivalent to a 32.4% rise. Applying the compound annual growth rate for that period (2.4% per year) and projecting it to 2036, the 10-year temporal horizon for VEC-3, results in an estimated increase of approximately 38%.

- Catua shows a more moderate trend (5.6% growth between 2010 and 2022), which, when projected using its annual rate (0.45%), suggests an increase of around 6% by 2036.

- Olacapato, in contrast, maintains a declining trend: it lost 8.7% of its population between 2010 and 2022 and, applying its negative annual rate (–0.8%), could decrease by approximately 11% by 2036.

- Since Estación Salar de Pocitos has no census data prior to 2022 and considering its extremely small size (54 inhabitants) together with a very high level of recent mobility (only 49% lived there five years before the census), demographic projections cannot rely on historical rates. Consequently, and following methodologies applicable to very small populations, a probable variation range is adopted, equivalent to the entry or exit of 5 to 10 people, which represents an estimated demographic fluctuation between –10% and +20% by 2036.

These projections are summarised in
Table 45.

Table 45. Demographic Projections

| Locality | Historical trend | Method | Estimated variation by 2036 |
|---|---|---|---|
| Estación de la Salar de Pocitos | No prior data (54 inhabitants in 2022) | Variation due to scale and mobility | –10% to +20% |
| Catua | 2010–2022: +5.6% | Compound annual rate 0.45% | +6% |
| Olacapato | 2010–2022: –8.7% | Compound annual rate –0.8% | –11% |
| San Antonio de los Cobres | 2010–2022: +32.4% | Compound annual rate 2.4% | +38% |

With respect to mining activity, the region is expected to continue experiencing temporary population fluctuations associated with projects already in production and others anticipated to begin operations before 2036, according to the project identification carried out for this assessment. The projects already in production include:

- Lindero (2020).

- Ratones–Centenario (2024).
- Mariana (2025).
- Cauchari–Olaroz (2023).
- La Providencia (2023).

The projects expected to begin production before 2036 include:

- Pozuelos–Pastos Grandes (2026).
- Sal de los Ángeles (2026).
- Arizaro (2027).
- Cauchari JV (2027).
- Taca Taca (2030).

These initiatives do not increase the resident population, but they do generate higher levels of regional mobility and temporary workforce presence, particularly during construction and expansion phases. Overall, the most likely scenario is that future demographic changes will be incremental but noticeable at the local scale, with differentiated effects depending on the size and absorptive capacity of each community. Internal mobility patterns, youth out-migration, and variations in the population present associated with regional economic activities are expected to continue shaping demographic dynamics across the AoI.

### 2.7.4 VEC-4: Socioeconomic Structure

Changes in demographic patterns, particularly due to immigration and urban expansion, can significantly reshape the socioeconomic landscape of a region. These shifts often bring both opportunities and challenges, especially in terms of labour markets, cost of living, and institutional integrity.

The EAP in the Direct AoI shows high variability, ranging from full employment in Estación Salar de Pocitos (83.87%) to much lower activity in Catua and Olacapato (around 50–55%). This demonstrates the sensitivity of local economies to mining-driven employment:

- Even modest shifts in employment demand can disproportionately affect small, fragile labour markets.
- Mining-related jobs have a major influence on the economic well-being of households.

Localities differ widely in their capacity to absorb labour demand, making socioeconomic structure a critical aspect for impact assessment.

Across the Direct AoI, mining employs 27–53% of working residents, making it the primary economic driver. The sector has grown rapidly since 2014 in both Salta and Jujuy, reshaping the regional labour structure. Local labour participation in mining remains uneven, and female participation is low (about 10–17%). Because the regional economy is increasingly shaped by mining, any expansion, contraction, or price fluctuation in the sector has immediate spillover effects on employment, supply chains, and household livelihoods.

Mining and quarrying offer the highest salaries in the Provincial economy, in some cases equivalent to 27 BFBs in Salta versus a 9.1 BFBs average --- substantially higher nominal wages relative to sectors like education, health, and commerce. This wage premium:

- Attracts workers from other sectors.
- Can lead to labour drain from traditional livelihoods.
- Risks widening income inequality between mining and non-mining households.
- Influences migration decisions and household economic strategies.

Given the inflationary context and erosion of real wages across the economy, mining salaries have outsized influence on socioeconomic conditions, resulting in purchasing power and creating strong incentives for labour shifts.

The expansion of mining activity drives growth across support and service industries such as logistics, food services, cleaning, accommodation, and transport, the rise of small family-run businesses and micro-enterprises that orient their services toward mining-related needs, and a gradual shift away from customary livelihood practices, with more economic activity becoming tied to the mining economy. Although this broadening of the local economic base creates new avenues for income generation, it also heightens: 1) dependence on mining sector performance, 2) exposure to international commodity price swings; and 3) pressure on local suppliers to expand capacity quickly to meet fluctuating demand.

In all Direct AoI localities, mining has catalysed the rise of small, locally managed enterprises, including accommodation and catering, laundry and cleaning, transport and logistics, retail and PPE sales, and workshop and basic repair services. These ventures provide: 1) important income diversification; 2) strengthen local economic participation; and 3) but remain highly dependent on mining-related demand.

Lithium prices have dropped sharply since 2023, creating uncertainty for exploration activities, contracting opportunities, local supplier stability, and income and employment expectations. Communities that rely heavily on mining employment and services are therefore economically exposed.

The region is experiencing simultaneous investment from multiple lithium projects, metalliferous mining, and mining service companies. This leads to cumulative effects such as: 1) increasing labour demand and competition for skilled workers; 2) rising local wages and potential inflation in goods and services; 3) expansion of supplier networks, stressing local capacity; and 4) growing disparities between mining-linked and non-mining households.

#### 2.7.4.1. Predicted Cumulative Impacts

The Project-related and cumulative changes in socioeconomic structure could lead to the following:

*Expansion of the Economically Active Population*

The expansion of the EAP refers to the growth in the number of individuals who are either employed or actively seeking employment within a given region. This trend is often driven by a combination of demographic shifts, increased educational attainment, urbanisation, and economic development initiatives that create new job opportunities. The expansion of the EAP may reflect a growing labour force capable of supporting new industries and contributing to economic diversification. It can also indicate improved access to employment for historically underrepresented groups, such as women, youth, or rural populations. If the growth of the EAP is not accompanied by a proportional increase in job opportunities and infrastructure, it may lead to greater competition for limited employment, underemployment, and increased pressure on social services. This highlights the need to align workforce development strategies with regional planning to ensure that economic growth translates into sustainable livelihoods.

*Labour Market Saturation*

Immigration and population growth increase the number of individuals seeking employment, intensifying competition for available jobs. Inadequate formal job creation may lead to the expansion of informal labour markets, often characterised by low wages, poor working conditions, and lack of social protections. New entrants may face barriers due to language, education, or certification gaps, resulting in underutilisation of human capital. Mismatch between skills and job requirements may hinder the integration of new workers and reduce socioeconomic resilience.

*Rising Cost of Local Goods and Services*

Market inflation. Increased demand for housing, food, transportation, and basic services can drive up prices, disproportionately affecting low-income households. Local populations may struggle to afford essential goods and services, leading to economic exclusion and social tension. Small-scale producers and service providers may face challenges competing with larger entities that can better absorb demand shocks.

#### 2.7.4.2. Scenario Planning

The most likely scenario for the next ten years indicates that the socioeconomic structure of the AoI will remain highly sensitive to relatively moderate variations in labour demand, given the limited economic

diversification, small labour markets, and the high dependence on mining-related activities. This sensitivity is particularly pronounced in localities where the EAP is small and fluctuating, meaning that even minor changes in employment opportunities have immediate effects on household income and local economic dynamics.

Based on the actual workforce requirements of the Project (900 direct workers during construction and 281 during operation for a 50Ktpa plant), it is possible to more accurately estimate the magnitude of future labour demand associated with projects that have confirmed operational start dates in the region.

Applying the same employment-to-production capacity ratio, the Arizaro (25Ktpa, operation in 2027), Pozuelos–Pastos Grandes (25Ktpa, 2026), Cauchari JV (25Ktpa, 2027), and Sal de los Ángeles (10Ktpa, 2026) projects will require between 180 and 450 workers during construction and between 56 and 140 permanent workers during operation. Taken together, the construction peaks projected for 2026–2027 could concentrate around 1,000 additional workers in the region, while by 2036 the consolidated operational labour demand of the projects that actually enter production would amount to approximately 600–700 permanent jobs.

These variations represent temporary increases of 10% to 20% in local economic activity during construction, followed by estimated reductions of 30% to 50% when shifting to operation, with direct impacts on local suppliers, service providers, and family-run enterprises dependent on worker mobility. In this context, the evolution of the mining sector will be decisive. Activity peaks associated with construction phases — such as Sal de los Ángeles (2026) and Arizaro (2027) — will generate temporary increases in labour and service demand, followed by contractions at the onset of commercial operations. This construction-to-operation pattern creates a scenario in which communities, particularly those with fragile economic structures and strong dependence on worker flows, will face significant fluctuations in activities tied to the movement of personnel.

This is further compounded by the presence of advanced exploration or pre-feasibility-stage projects, whose potential transition to construction will depend on technical decisions and market conditions, especially in a context marked by lithium price volatility since 2023. From a cumulative impact planning perspective, these projects should be considered as potential drivers of new temporary activity peaks, although not as guaranteed sources of sustained employment.

Overall, the future scenario anticipates incremental but perceptible transformations in the socioeconomic structure of the AoI, driven mainly by the transition from construction to operation phases, the possible entry of new projects, and the evolution of the international lithium market. It is reasonable to expect continued internal labour mobility, a progressive reorientation of households toward mining-related activities, and an increasing dependence on the operational stability of active projects — factors that will continue to shape the economic resilience of the territory.

### 2.7.5 VEC-5: Educational Services

The capacity and quality of educational services are vital indicators of social development and long-term resilience. Rapid demographic changes, particularly due to migration and population growth, can place significant pressure on formal education systems.

The Direct and Indirect AoIs contains 15 educational institutions, but only five are located in the Direct AoI. Higher education offerings are limited to one teacher training institute in San Antonio de los Cobres and a recently established virtual university centre in Olacapato. Most localities rely on multi-grade, full-day primary schools with minimal staff. This means the educational system has low installed capacity, particularly in small, mixed rural-urban settlements. Any increase in population, return migration, or worker relocation can create immediate pressure on these institutions.

Localities in the Direct AoI (Olacapato, Catua, Estación Salar de Pocitos) have predominantly young age structures, with children and adolescents making up a large share of the population. As a result, the young population structure drives high demand for compulsory education: 1) over 80% of enrolment is concentrated in primary and secondary school; and 2) few students progress to tertiary or university levels due to distance, costs, and lack of local offer. This demographic profile makes the education system highly sensitive to even small increases in enrolment.

Schools in the Direct AoI show multiple infrastructure and operational vulnerabilities:

- Multi-grade classrooms, shared spaces, and limited staff.
- Secondary schools often share classrooms with primary schools, reducing usable space.
- Teacher housing shortages caused by mining-driven rental inflation have forced educators to live inside school buildings, occupying former classrooms.
- Weak internet connectivity limits participation in virtual programs and learning quality.
- Heating and maintenance issues persist in several schools.

These constraints significantly reduce the ability of existing institutions to absorb cumulative increases in enrolment or support skills development aligned with labour market needs.

Across the Direct AoI, only 15–20% of residents have never attended school, primary and secondary completion rates are low, and dropout risk is high. Only 1–2% of the population has completed university education and higher education pathways are constrained by costs, distance, and lack of local offerings. These structural barriers limit the ability of local populations to benefit from skilled employment opportunities associated with mining.

Mining development influences educational services through: 1) in-migration of a foreign population and return migration of the local population, repopulating small settlements and increasing school enrolment (e.g., Estación Salar de Pocitos grew from 8 to 29 students in 5 years); 2) rising demand for skilled labour, which local educational institutions are not yet equipped to supply; 3) potential increases in school dropout, as adolescents may leave education early to take up mining-related work; and 4) community expectations for technical and vocational training aligned with mining opportunities. These cumulative pressures may exceed current system capacity without targeted planning and investment.

Schools in the Direct and Indirect AoIs serve broader community functions beyond academics:

- They provide nutrition, social support, and safe spaces for youth.
- They anchor community identity and support transitions into the labour market.
- Teachers and administrators often have deep local knowledge and play key roles in community networks.

Because of this central social role, disruptions to educational services — or increased pressure on infrastructure — can have broader social and community impacts.

#### 2.7.5.1. Predicated Cumulative Impacts

To identify predicted cumulative impacts, and as a complement to the Project's baseline information, primary sources were used because there are no official records with the required level of detail. In this context, data were collected through interviews with the principal of the primary school in Catua and the principal of the secondary school in the same locality. In the cases of San Antonio de los Cobres, Olacapato, and Estación Salar de Pocitos, several attempts were made to contact key representatives from the education sector, but no responses were received.

Project-related and cumulative changes in educational services could lead to the following:

*Overcrowded Schools*

Existing facilities may become overwhelmed, leading to larger class sizes, reduced teacher-to-student ratios, and diminished learning environments. This could extend to limited access to enrolment, with increased demand resulting in waiting lists, reduced availability of school placements, and exclusion of vulnerable populations, particularly in underserved areas. Physical infrastructure (classrooms, libraries, laboratories) and educational materials (books, technology, supplies) may be insufficient to meet growing needs.

*Decline in Educational Quality Created by Underqualified or Overburdened Staff*

Teachers may face excessive workloads, limited training opportunities, and inadequate support, affecting the quality of instruction. Rapid expansion may lead to inconsistencies in curriculum delivery, especially in areas

with diverse linguistic or cultural backgrounds. Overcrowding and resource limitations can negatively impact academic outcomes, student engagement, and long-term educational attainment.

*Broader Social Implications*

Broader social implications may include: 1) inequality in education access (disparities may widen between urban and rural areas, or between public and private institutions, exacerbating social inequality); 2) Pressure on higher education and vocational training (secondary and tertiary institutions may also face increased demand, affecting capacity for skill development and workforce readiness); and 3) potential for social tension (frustration over limited educational opportunities can contribute to community dissatisfaction and reduced social cohesion).

#### 2.7.5.2. Scenario Planning

The most likely scenario for the next ten years indicates that the educational system in the Direct and Indirect AoIs will remain highly sensitive to small variations in enrolment, due to its young demographic structure, limited installed capacity, and marked differences between localities. Absorptive capacity will also remain uneven across educational levels.

In Catua, the primary school is constrained by its old infrastructure and recurring material issues, while the secondary school has a more recent building and available capacity. These conditions at the primary level are also observed in Olacapato and Estación Salar de Pocitos, where the combination of limited infrastructure, restricted connectivity, and rapid changes in enrolment (such as the increase from 8 to 29 students in Estación Salar de Pocitos over five years) point to a system that is highly vulnerable to short-term fluctuations associated with regional economic dynamics. In San Antonio de los Cobres, even with greater infrastructure, the limited availability of technical and tertiary education may generate growing pressure.

Given that the AoI has a very young population, it is likely that over the next decade demand will shift toward the secondary level, especially in small localities where secondary education does not have its own building or shares facilities with primary schools, as in Olacapato and Estación Salar de Pocitos. In these areas, the growth of the large cohorts currently in primary school could become the main source of future saturation. In San Antonio de los Cobres, additional pressure may arise from increased intraregional mobility toward its secondary institutions.

Teacher availability will remain a critical factor: small teams, difficulties in filling specialised subjects, and connectivity issues that limit the use of virtual or technical training programmes. Even small variations in staffing — such as leave, transfers, or vacancies — can create significant gaps in educational provision, particularly in multigrade or remote schools.

The educational system will also continue to play a central role in community cohesion, particularly in localities where schools provide daily meals, additional learning support, and safe spaces for children and adolescents. For this reason, pressures related to enrolment, infrastructure, or staffing may translate into broader impacts on community wellbeing and family dynamics.

Overall, the scenario anticipates incremental but clear changes in the demand and functioning of the AoI's educational system. The following trends are expected to persist:

- High sensitivity to small increases in enrolment.
- Greater vulnerability of schools with ageing infrastructure.
- A progressive increase in pressure on the secondary level as cohorts advance.

### 2.7.6 VEC-6: Provision of Health Services

The availability and quality of health services are essential for maintaining public well-being, especially in the context of demographic growth, migration, and urban expansion. These pressures can significantly affect the performance and resilience of healthcare systems. Health services in the region are overstretched, relying on small Level I posts and the single Level II Dr. Nicolás C. Pagano Hospital in San Antonio de los Cobres to cover a vast territory with minimal staff and limited ambulances. Facilities face medication and equipment shortages, and care is often interrupted due to staffing gaps and rotating medical presence. Communities experience high rates of respiratory and diarrheal illness, chronic diseases, trauma, and mental health issues, all worsened by harsh environmental conditions and transport constraints. Demand is further

increased by non-resident mining workers, and ongoing project-related population growth and mobility are expected to place additional pressure on primary care, emergency response, and medication supply.

#### 2.7.6.1. Predicted Cumulative Impacts

To identify predicted cumulative impacts under the 10-year timeframe for VEC-6, there are no official records available with the required level of detail. In this context, interviews were conducted with key representatives of the health system in the localities within the Project's Direct and Indirect AoIs. In the case of San Antonio de los Cobres, an interview was held with a doctor who, at the time of the consultation, was temporarily covering a management position at the institution. In Catua, information was obtained from one of the Health Agents working at the local Health Center.

The Project-related and cumulative changes in the provision of health services could lead to the following:

*Limited and Uneven Health Infrastructure Across the AoI*

The AoI relies on three Level I health posts (Olacapato, Estación Salar de Pocitos, Catua), one Level II hospital (Dr. Nicolás C. Pagano Hospital in San Antonio de los Cobres) providing all higher-level and emergency care, and sparse medical staffing and rotating specialist coverage. These facilities lack full-time medical personnel, have minimal diagnostic capacity, and depend on referrals for most emergency and specialised care. Given this minimal baseline, the health system is highly vulnerable to any increase in service demand.

*Saturation of Health Infrastructure*

Across Direct AoI health posts, only one nurse is typically available per locality and doctors visit monthly or bi-weekly. Health posts lack ambulances, relying on police vehicles or San Antonio transfers. Medication stocks are limited to 2–3 days of treatment and towns like Olacapato have no pharmacies. Facilities lack essential equipment (e.g., desks, medical instruments, functioning heating).

The Dr. Nicolás C. Pagano Hospital also faces limited ambulance availability (only one operational out of three), insufficient numbers of physicians for a territory covering ~34,000km², and budget constraints for repairs, equipment, and supplies. These systemic weaknesses limit response capacity and heighten the risk of service saturation.

Health posts and the Dr. Nicolás C. Pagano Hospital provide services not only to residents but also to mining workers, travelers and transport operators, and residents from surrounding Provinces (Jujuy, Catamarca). These users are not captured in census statistics, meaning real service demand is significantly higher than estimated and likely to grow with mining expansion. Hospitals, clinics, and primary care centers may experience overcrowding, leading to longer wait times, reduced patient throughput, and diminished quality of care.

The added emergency and outpatient demand increases the risk of key cumulative impacts including:

- Unanticipated strain on facilities, with the need for more frequent referrals to the Dr. Nicolás C. Pagano Hospital.
- Greater load on personnel, including rotating specialists. Increased demand can outpace the availability of trained healthcare professionals, medications, and essential equipment, compromising service delivery.
- Pressure on drug supply and higher medication consumption.
- Amplified response needs for trauma and occupational health issues.

With multiple mining projects operating simultaneously in the region, the likelihood of exceeding system capacity is substantial. Rural and marginalised urban communities may face even greater challenges in accessing timely and adequate healthcare services.

*High Prevalence of Health Conditions Requiring Treatment*

Common health burdens across the AoI include:

- Acute respiratory infections, exacerbated by altitude, low temperatures, and dust.
- Diarrheal diseases and digestive conditions.
- Chronic illnesses: diabetes, hypertension.
- Traumatic injuries, including mining-related traffic accidents.
- Growing mental health challenges, including alcoholism, adolescent suicide, gender-based violence, and teenage pregnancy.

The complexity of these conditions requires consistent, well-equipped services that the AoI currently lacks.

*Constraints in Accessibility and Health Coverage*

Despite relatively high rates of social security/prepaid coverage (60–70% in the Direct AoI), significant gaps remain:

- 30–35% of the Direct AoI population has no coverage.
- State health plans reach less than 10% of residents.
- No private health services exist outside of San Antonio de los Cobres.

In smaller towns, lack of pharmacies, ambulance services, and daily medical attention creates substantial accessibility barriers. These conditions magnify the potential cumulative effects of increased population or mobility.

*Broader Public Health Implications*

The broader implications include the following:

**Health Inequities**

Disparities in access and quality of care may widen, particularly affecting low-income, migrant, and Indigenous populations. Inequities in access to healthcare services may disproportionately affect vulnerable populations, widening social gaps.

**Pressure on Public Health Programs**

Immunisation campaigns, maternal health services, and chronic disease management programs may be disrupted or deprioritised.

**Risk of Systemic Collapse**

Without adequate investment and planning, sustained pressure on health infrastructure can lead to systemic failures, undermining public trust and resilience.

#### 2.7.6.2. Scenario Planning

The most likely scenario for the next ten years indicates that the health system across the Direct and Indirect AoIs will continue to be characterised by limited structural capacity, strong dependence on rotating personnel, and increasing pressure derived from population mobility associated with regional mining development. Although demographic growth is expected to remain moderate, fluctuations in the population present — particularly non-resident mining workers, transport operators, and travellers — will generate disproportionate effects on service demand due to the very low baseline capacity of Level I health posts and the structural dependence on the Dr. Nicolás C. Pagano Hospital in San Antonio de los Cobres.

In the Direct AoI localities (Olacapato, Estación Salar de Pocitos, and Catua), the current service model is likely to remain unchanged: one nurse or health agent per locality, intermittent physician presence, limited medication stocks, and no pharmacies. Despite recent infrastructure improvements, particularly in Estación Salar de Pocitos, interviews and baseline data do not anticipate increases in the number of health professionals or the availability of equipment. These constraints imply that even small variations in regional mobility — such as increases in contractor teams during construction or expansion phases of mining projects — could generate recurrent saturation episodes, especially during winter months when respiratory illnesses peak and road conditions hinder transfers.

At the Dr. Nicolás C. Pagano Hospital, the planned expansion—including diagnostic imaging and improvements in sterilisation capacity — could strengthen response capabilities if implemented according to schedule. However, the hospital will continue to face structural challenges: only one operational ambulance, insufficient medical specialists for a vast territory of approximately 34,000km² and increasing demand from non-resident mining workers who rely on the public system for outpatient consultations, road-traffic injuries, and emergency care. Since these users are not reflected in census statistics, real demand will increasingly exceed projections based solely on the resident population.

Over the next decade, the cycles associated with mining activity — both projects already in operation and new developments expected to begin before 2036 — will generate temporary peaks in service demand, particularly during construction and expansion periods. These increases will coincide with an already complex epidemiological profile, including respiratory and digestive illnesses, chronic diseases, mental health conditions, and transport-related trauma. As a result, sustained increases in referrals from Direct AoI posts to San Antonio de los Cobres can be expected, reinforcing long-term dependence on the Dr. Nicolás C. Pagano Hospital for higher-complexity cases.

Overall, the most likely scenario is one of progressive and chronic saturation of the Aoi's health system, driven by persistent structural vulnerabilities, limited improvements in installed capacity, and increasing mobility associated with mining development. Without substantial and sustained investment in human resources, equipment, medication supply, and medical transport, the system's resilience may erode over time, with rural and Indigenous communities facing the greatest territorial and economic barriers to timely and adequate healthcare.

### 2.7.7 VEC-7: Road Infrastructure

The condition and capacity of road infrastructure are critical to regional mobility, safety, and economic activity. Population growth, industrial expansion, and increased vehicular traffic — particularly heavy transport — can place significant stress on existing road networks.

The Project depends almost entirely on a limited set of national and Provincial routes — RN 51, RN 52, RP 27, and RP 70 — which connect remote Puna localities to Salta, Jujuy, Chile, and inter-Provincial hubs. The region hosts 17 active mining projects in Salta, 21 in Jujuy, and additional projects currently in the exploration, construction, or production phases, and these corridors are essential for transporting mining inputs, outputs, and heavy equipment, mobilising workers and contractors for community travel for goods, education, and health services, and supporting regional tourism and international trade (Paso de Jama, Paso de Sico).

Roads are already carrying high and increasing traffic loads. Traffic counts show a clear east–west gradient of pressure caused by ~1,300 vehicles/day through San Antonio de los Cobres, ~644 vehicles/day through Cauchari, and ~36 vehicles/day through Paso de Sico. The vehicle mix includes mining trucks, utility vehicles and pickups, cargo transport, tourism buses and vans, and vehicles used for local mobility (schools, commerce, health service travel). Mining is the principal source of freight traffic, with pickup trucks and heavy vehicles dominating movement near project access points. Growth in regional mining, tourism, and logistics is increasing cumulative pressure.

Many key routes in the Puna are unpaved (large segments of RN 51 and RP 27), and are in poor or irregular condition characterised by subsidence, cuts, delayed maintenance, dust generation, and are seasonally vulnerable to landslides, washouts, and closures (especially on RN 52). Recent reports show maintenance backlogs on RN 51, slow progress and community complaints about RP 27, recurrent closures and emergency repairs on RN 52, and chronic under-financing of roadworks at both the Provincial and National level. These weaknesses make the current network highly sensitive to additional mining, industrial, and tourism traffic, with elevated risks of accidents, delays, and accelerated road deterioration.

In response to growing demand, authorities may initiate road widening, resurfacing, and new construction projects to improve capacity and safety. While beneficial in the long term, infrastructure works can temporarily disrupt traffic flows, access to services, and local businesses. However, such improvement projects present an opportunity to incorporate climate-resilient and inclusive design features, such as green corridors, bike lanes, and smart traffic systems.

#### 2.7.7.1. Predicted Cumulative Impacts

The Project-related and cumulative changes in road infrastructure could lead to the following:

*Infrastructure Limitations with Increased Sensitivity to Traffic Growth*

The multipurpose use of roads creates cumulative conflicts and safety risks, with the same corridors to be used by the Project also essential for daily travel of Indigenous and rural communities, tourism flows to Salinas Grandes, Cuesta de Lipán, and Tren a las Nubes, heavy international cargo movements, and access to health, emergency services, and education.

This multifunctionality increases the likelihood of conflicts between heavy and light traffic, safety hazards from dust, low visibility, and mixed vehicle types, with disruptions to community mobility and service access. Increased traffic flows and travel times lead to longer commute times, reduced productivity, and increased fuel consumption. Regional connectivity may suffer as intercity routes become congested, affecting logistics, tourism, and emergency response times. In addition, prolonged idling and stop-and-go traffic contribute to higher emissions and noise pollution. Further, because these routes pass through or near numerous Indigenous territories, increased traffic may also affect culturally significant movement patterns and local-use rights.

*Deterioration of Existing Roadways*

Increased heavy truck and equipment movement contribute to faster degradation of pavement surfaces, bridges, and drainage systems, additional pressure on Provincial maintenance budgets, and more frequent delays or closures affecting the entire region. Because the region has low route redundancy, disruptions or congestion on any segment can significantly affect logistics, public safety, and regional connectivity. Existing maintenance programs may be insufficient to keep pace with the rate of deterioration, leading to potholes, erosion, and structural failures that compromise safety and efficiency.

*Road Safety and Public Health Risks*

Increased traffic volumes and deteriorating road conditions raise the likelihood of collisions, particularly in areas lacking adequate signage, lighting, or traffic control measures. Road accidents may result in more frequent injuries and fatalities, placing additional pressure on emergency services and healthcare systems. Inadequate infrastructure for non-motorised transport will increase risks for pedestrians and cyclists.

*Community Isolation and Service Access Depend on Road Quality*

Local populations rely on the same roads for access to health posts and the Dr. Nicolás C. Pagano Hospital, transport of goods, food, and supplies, school attendance and teacher travel, and economic activity (commerce, tourism, local enterprises). Poor maintenance, intermittent closures, and traffic congestion worsen isolation and reduce resilience of communities already facing geographic and service-access constraints.

#### 2.7.7.2. Scenario Planning

The most likely scenario for the next ten years anticipates a significant and sustained increase in pressure on the road infrastructure within the Area of Influence, driven by the set of mining projects that will advance toward construction and operation over the CIA's temporal horizon. This pressure will be particularly evident on corridors RN 51, RN 52, and RP 27, which already experience high traffic levels and accumulated maintenance deficits.

Based on the logistics data from the Project — 4,439 trips during its 30-month construction period and approximately 5,711 annual trips during operation — it is possible to develop a reasonable semiquantitative estimate of the additional road traffic that may be generated by the projects with confirmed operational start dates (Arizaro 2027, Pozuelos–Pastos Grandes 2026, Sal de los Ángeles 2026, and Cauchari JV 2027).

Using the logistical pattern observed at the Project (approximately 147 monthly trips during construction and 476 monthly trips during operation for a 50Ktpa plant), and adjusting proportionally according to each project's production capacity, projections indicate between 70 and 220 additional monthly trips per project during construction, and between 150 and 300 monthly trips per project during operation.

In cumulative terms, the construction peaks projected for 2026–2027 — when Arizaro, Sal de los Ángeles, and Pozuelos–Pastos Grandes overlap — could generate between 2,500 and 3,500 additional trips per month, equivalent to a 20% to 35% increase over current traffic levels circulating through Cauchari (644 vehicles/day) and up to 10% additional traffic over the consolidated flow in San Antonio de los Cobres (1,300 vehicles/day). Once in operation, the confirmed projects would contribute a stabilised flow of approximately 6,000 - 8,000 additional trips per year, representing a sustained 15% to 20% increase over current heavy-traffic levels on RN 51 and RP 27.

Although these variations would be distributed across different corridors, they will be especially concentrated on RN 51 between Campo Quijano and San Antonio de los Cobres and on RP 27 between Cauchari and Estación Salar de Pocitos, where pre-existing deterioration and irregular maintenance amplify risks related to dust, low visibility, road hazards, and higher incident rates. The mixed-use pattern on RN 52 will also experience cumulative increases associated with Cauchari JV, affecting both mining transport and tourism flows to Salinas Grandes and Cuesta de Lipán.

The future scenario also suggests a rise in interruptions, detours, and delays, derived from both accelerated deterioration and recurrent weather-related events (summer rains, landslides, washouts). On routes with no functional redundancy, such as RP 27 and the unpaved segments of RN 51, even moderate increases in truck traffic can disproportionately affect community mobility, limiting access to essential services in San Antonio de los Cobres, increasing travel times for education and healthcare, and reducing commercial integration among Olacapato, Estación Salar de Pocitos, and urban centers.

Overall, the combination of multiple construction phases, continuous operations, and the limited absorption capacity of the existing road network creates a scenario of high and sustained sensitivity. Cumulative pressure is expected to intensify particularly between 2026 and 2028, with relative stabilisation toward 2030, although at levels significantly above the baseline due to the consolidated annual volume of operational transport. In this context, institutional response capacity, maintenance programs, and interjurisdictional coordination will be critical to prevent road infrastructure from becoming a structural bottleneck for the region.

### 2.7.8 VEC-8: Traditional Productive Activities

Traditional productive activities, such as artisanal crafts, subsistence agriculture, fishing, and Indigenous resource management, are vital to cultural heritage, local economies, and environmental stewardship. Traditional livelihoods are culturally foundational and historically significant. Extensive livestock husbandry (llamas, sheep, goats), fibre processing, and weaving:

- Form the core of ancestral Andean livelihoods, shaping social organisation and land-use patterns.
- Maintain strong cultural value through practices such as hacienda signs (offerings to Pachamama), natural dyeing, and seasonal shearing traditions.
- Serve as vehicles of intergenerational knowledge transmission, particularly among women.

Because these practices are deeply embedded in Indigenous identity, any disruption poses risks to cultural heritage and community cohesion. These practices are increasingly threatened by demographic, economic, and environmental pressures, as follows.

Traditional productive activities contribute to household resilience and food security. Despite increasing access to wage labour, 44.5% of surveyed families maintain at least one livestock puesto, livestock farming remains a primary activity for ~28% of households and a secondary safety net for ~58%, and during periods of crisis (e.g., COVID-19 pandemic), animal husbandry provided critical subsistence and economic backup. This demonstrates the ongoing socio-economic relevance of traditional activities, even as mining becomes a dominant employer.

Fibre use and weaving persist but are declining. Most families still use animal fibres:

- Catua: 82%.
- Olacapato: 73%.
- Estación Salar de Pocitos: 50%.

However, communities noted: 1) market demand is low; 2) time for traditional weaving is scarce due to wage labour; and 3) collective marketing and support networks are limited. This reinforces the need to protect traditional knowledge pathways.

Livestock herding relies on seasonal mobility across grazing territories, vegas, and high-Andean pastures. A network of puestos, many of which remain in active or partial use even when uninhabited. Puesto surveys reveal:

- Catua: 94 puestos, 68% in use; grazing areas used in 71% of cases.
- Olacapato: 38 puestos, 84% of grazing areas in use.
- Estación Salar de Pocitos: 21 puestos, 62% of grazing areas in use.

Nonetheless, surveyed communities report:

- Reduced rainfall, degraded grazing pastures, and loss of native vegetation.
- Increasing need to purchase feed — previously uncommon.
- Fewer family members residing at puestos due to sedentarisation and migration to towns.
- Declining youth participation, especially in pastoralism and weaving.
- Weakening institutional support (e.g., fewer veterinary campaigns, poor infrastructure).

These pressures heighten the sensitivity of traditional productive systems to any additional external change, including mining. This reflects a dynamic land-use system that can be disrupted by Project activities, access restrictions, dust, and increased traffic.

As mining expands, there is growing local participation in wage labour, mining services, and associated economic opportunities. This shift reduces time available for herding, fibre processing, and weaving, weakens intergenerational transfer of pastoral and textile knowledge, creates trade-offs between wage employment and traditional livelihoods, and alters land-use patterns and mobility cycles. This trend is exacerbated by the ageing of the pastoral population that threatens the sustainability of traditional productive activities. The age distribution of active shepherds (93 individuals):

- 46–60 years: 28%.
- 61+ years: 27%.
- 15–30 years: 20%.

This indicates a strong reliance on older adults, insufficient generational replacement in most localities, and a significant risk of intergenerational discontinuity without targeted support. Catua shows some youth involvement, but Estación Salar de Pocitos and Olacapato show pronounced demographic ageing among pastoralists. Such transformations, if cumulative, could lead to irreversible loss of ancestral practices.

#### 2.7.8.1. Predicated Cumulative Impacts

The Project-related and cumulative changes in traditional productive activities could lead to the following.

*Abandonment of Traditional Knowledge and Practices*

**Cultural Disconnection**

Younger generations may be less exposed to ancestral knowledge, leading to the erosion of techniques, rituals, and values tied to traditional livelihoods. The loss of traditional knowledge and practices may weaken cultural identity and affect sustainable resource management.

**Economic Pressures**

The shift toward modern employment and market-driven production can marginalise traditional activities, making them economically unsustainable. The lack of generational renewal and institutional support may compromise the continuity of traditional productive activities.

**Loss of Biodiversity and Ecological Wisdom**

Traditional practices often involve sustainable resource use and ecological knowledge that may be lost with their decline. Many traditional activities rely on older generations, with few successors trained to carry on the work.

**Shortage of Skilled Labour**

The movement of labour toward urban centers reduces the availability of workers in rural and Indigenous communities. The lack of formal support limits access to training and funding, and institutional recognition hinders the transmission and viability of traditional skills.

#### 2.7.8.2. Scenario Planning

The most likely scenario for the next ten years indicates that traditional productive activities in the Area of Influence — particularly camelid, sheep, and goat herding, the use of puestos, and seasonal mobility — will continue to experience gradual weakening. This process is directly linked to a broader trend of rural depopulation observed in Puna localities, where youth outmigration, the decline in families residing at puestos, and the concentration of population in town centres affect the continuity of productive systems. In this context, traditional practices will remain culturally central but increasingly fragile as productive systems and as mechanisms of intergenerational transmission.

The estimation of abandonment risk is based on three key empirical dimensions of the baseline: the age structure of pastoralists, youth participation in pastoral and textile activities, and the growing competition for time derived from wage labour. These dimensions also align with the existing trend of rural depopulation in the area, where the reduction of active population living in the territory decreases the capacity to sustain pastoral circuits. The combination of these dimensions allows for deriving a prudent range of households potentially exposed to discontinuing their practices within the 10-year horizon.

*Demographic Fragility: More than 50% of Pastoralists are in Older Age Groups*

Among the 93 individuals active in pastoral roles, 28% are between 46 and 60 years old and 27% are over 61, meaning that 55% of those who sustain the local pastoral system belong to an age group that is likely to reduce its activity in the coming decade. This demographic structure creates a direct vulnerability for the continuity of puestos, as herding requires significant dedication, mobility, and continuous physical presence — conditions that are difficult to maintain at advanced ages.

*Low Youth Participation: Insufficient Generational Replacement*

Only 20% of pastoralists fall within the 15–30 age range. This reflects a low replacement rate, reduced youth involvement in livestock activities, and an increasing tendency to prioritise education or wage employment. When comparing the proportion of youth (20%) with that of older adults (55%), the “effective generational replacement” is roughly one third, revealing a demographic structure incapable of sustaining the activity without external intervention. This generational gap is consistent with patterns of rural depopulation that reduce the number of young families living in pastoral areas.

*Competition for Time: Mining Employment Displaces Traditional Activities*

The baseline shows a steady increase in mining- and service-sector employment, reduced time available for herding, shorter stays at puestos, and a weakening of practices such as collective shearing, seasonal mobility, and fibre processing. This competition for time does not imply voluntary abandonment, but rather a growing incompatibility between wage-labour rhythms and the demands of the pastoral system. In areas already showing rural depopulation, this displacement of time further reduces the presence of people in the territory, accelerating the erosion of traditional practices.

It is important to note that many older adults tend to resume some traditional activities as they reduce their participation in wage labour; however, this return is not guaranteed and is insufficient to sustain a productive system that requires mobility and continuous livestock monitoring. It therefore acts as a mitigating factor but does not eliminate structural risk.

Based on the baseline data, the risk of activity loss can be constructed by combining three observed proportions:

- Approximately 30% of puestos already show inactivity or partial use.
- Within the remaining 70%, more than half are sustained by pastoralists in older age groups (55%).
- Youth participation is low (20%), indicating insufficient generational replacement relative to the proportion of older adults.

When these risks overlap, the cumulative risk is expressed as a range:

- Under a possible best case scenario, approximately 25% of households with a puesto could face difficulties sustaining the activity over the next ten years.

- Under a possible worst case scenario, the convergence of prior inactivity, ageing of the productive backbone, and lack of youth replacement raises this proportion to approximately 40%, reflecting the structural vulnerability of the pastoral system under current trends. This range is also consistent with rural depopulation dynamics that reduce the number of residents available to sustain traditional livelihoods in pastoral areas.

Taken together, this scenario suggests that the pastoral system in the AoI faces a significant risk of losing intergenerational continuity, driven by internal pressures that interact with each other: ageing, migration, reduced youth participation, competition for time with mining employment, and environmental deterioration. In a context of progressive rural depopulation, the decline in active population living in the territory intensifies systemic vulnerability and limits community resilience.

Although the partial return of older adults serves as a cultural buffer, it does not compensate for the absence of structural generational replacement; thus, without targeted cultural-strengthening measures, technical assistance, and institutional support, these cumulative processes could lead to the progressive and irreversible loss of ancestral practices, community knowledge, and traditional forms of territorial management.

### 2.8 Step 5: Assess Predicted Cumulative Impacts on the Sustainability of the VECs

Step 5 of the IFC's CIA methodology is a qualitative assessment[14] of cumulative impacts on VECs, including prioritisation under a ranking system of High, Medium, and Low, as shown in Table 46.

Table 46. Prioritisation of VECs

| High Priority VECs | Medium Priority VECs | Low Priority VECs |
|---|---|---|
| VEC-1: Water Resources | VEC-4 Socioeconomic Structure | VEC-5 Educational Services |
| VEC-2: Terrestrial Biodiversity and Ecosystems | VEC-6: Provision of Health Services | VEC-7: Road Infrastructure |
| VEC-3: Demographic Structure | | |
| VEC-8: Traditional Productive Activities | | |

The prioritisation was qualitatively assigned by examining the following:

- Ecological Importance
  - High: Species or habitats that are critical for ecosystem functioning (e.g., keystone species, rare habitats).
  - Medium: Components that contribute to biodiversity but are not essential for ecosystem stability.
  - Low: Common species or habitats with minimal influence on ecosystem processes.
- Conservation Status
  - High: Listed as endangered, threatened, or of special concern under federal/state/Provincial legislation.
  - Medium: Regionally sensitive or declining populations without formal legal protection.
  - Low: Stable populations with no conservation designation.

[14] RINCON acknowledges that Step 5 of this CIA presents a qualitative assessment of cumulative impacts rather than establishing quantitative thresholds for determining when cumulative impacts become significant. These thresholds are currently being drafted as part of the draft Adaptive Water Management Plan, the Biodiversity Action Plan, and the Indigenous Peoples Plan.

- Cultural and Socioeconomic Value
  - High: VECs with strong Indigenous cultural significance, recreational importance, or economic reliance.
  - Medium: Moderate cultural or economic relevance.
  - Low: Limited or no recognised cultural or economic value.
- Sensitivity to Project Activities, Other Ventures and Activities, and External Stressors
  - High: Highly sensitive to disturbance (e.g., climate change, habitat fragmentation).
  - Medium: Some resilience but still affected by cumulative impacts.
  - Low: Highly resilient or adaptable to change. the sensitivity of the VEC, the degree of potential impact on the resource/receptor,

### 2.8.1 High Priority VECs

#### 2.8.1.1. VEC-1: Water Resources

The VEC-1 water resources of the Project area are intrinsically hydraulically interconnected across the Rincon Basin. The water resources are host to the lithium resources being exploited, the proposed source of the raw water required for lithium processing (and other mine water demands), support a diverse, sensitive and critically important ecological ecosystem, and are fundamental for the existence of the local communities. A comprehensive and adaptive management approach is required to address the potential high-risk impacts identified as relating to this VEC.

*Drivers of Change*

The Project will involve the abstraction of lithium brine, the abstraction of raw water and seepage of spent brine into the underlying groundwater/brine environment. These activities have the potential to impact groundwater/brine levels, groundwater/brine flow directions, groundwater/brine quality and the interaction between groundwater and surface water throughout the Rincon Basin.

The VEC-1 water resources are delicately balanced and highly interrelated across the Rincon Basin and the proposed Project activities have the potential to offset this balance. The water resources are inherently linked to the biodiversity, ecosystem and social elements of the Basin and as such changes to the water resources has the potential to correspondingly negatively impact, stress and compromise the sustainability of these three associated components.

The cumulative impact of other projects in the Rincon Basin has the potential to exacerbate impacts on the water resources across the Basin.

In addition, lower precipitation rates modelled from climate change predictions mean that impacts on the water resources can be relatively slow to recover.

*Potential Impacts*

The abstraction of lithium brine, raw water and the seepage of spent brine associated with the Project and other operations within the Rincon Basin has the potential to impact VEC-1. The impacts are predicted to vary both spatially across the Basin and temporally throughout the LoM and post closure. The water resources impacts predicted include modifications of the following aspects with regards to current natural baseline conditions:

- Groundwater/brine levels, with level reductions expected in the vicinity of the lithium brine/raw water abstraction wells and operational phase level increases where spent brine infiltration occurs.
- Groundwater/brine flow directions, in response to pumping and infiltration.
- Groundwater/brine quality, in response to the pumping induced mixing of different water types/qualities and spent brine infiltration.
- Groundwater contributions (baseflow) to surface water bodies (including vegas, lagoons and rivers).
- Surface water levels, flows and quality as a result of the above mentioned changes to groundwater levels, flow directions, quality and contributary inflows.

- These potential impacts on the water resources have the potential to negatively affect biodiversity, ecology, and social aspects fundamentally linked to the water resources of the Rincon Basin.

The impact specifically related to the Project operation will be centred on the lithium brine wellfield, the raw water supply wellfield, and the SBDF. Impact from Puna Mining will be focused on the southeastern part of the Rincon Salar, although in the southeastern and eastern areas of the Salar there is a predicted combined impact from both the Project and Puna Mining operations. The impact of potential future projects along the western boundary of the Salar have not been evaluated at this stage (as they are only at exploration stage), but if these projects were to progress to operational, then the impacts associated with these projects would be focused along the western area of the Salar and would combine with the predicted impact caused by the Project operation.

Even without the potential impact arising from lithium brine operations within the Rincon Basin, climate change projections would naturally impact and alter the water resources of the basin. The projected natural reductions in annual rainfall and increases in the frequency of extreme events will influence and impact the water resources of the Rincon Basin.

*Sustainability Outlook*

The sustainability of the VEC-1 water resources is impacted by the proposed exploitation of the brine and raw water and the associated potential impact that it's exploitation may have on associated biodiversity, ecology and social aspects. Monitoring and impact mitigation actions accross the water resources across the Rincon Basin is critical to avoid and minimise negative impacts and ensure the sustainability of the water resources.

*Qualitative Assessment of VEC-1*

Rating: High Priority

This classification is based on the highly sensitive nature of the water resources and it's links with biodiversity (including the critical extremophile bacteria) and the local communities. It is vital that a robust baseline data set is established for all water resources across the Rincon Basin and to establish a strong understanding of the hydrogeological setting and hydraulic mechanisms within the water environment. The arid climate means that impacts on the water resources may take a long time to recover and as such it is crucial to mitigate prior to any irreversible impacts occur. The ongoing monitoring and studies will advance the understanding of the water resources and facilitate the establishment of a robust baseline on which to establish appropriate triggers, thresholds, and site-specific mitigation measures.

*Assessment of the Need for Mitigation*

A Preliminary Management Response Plan is provided in Appendix B of the Adaptive Water Management Plan (Rio Tinto, 2025j) which details the key environmentally sensitive receptors across the Rincon Basin, the water monitoring which will be undertaken associated with each of these receptors, and on what basis (trigger value/observation) a mitigation measure may be deemed as being needed. The Preliminary Management Response Plan also details proposed mitigation measures which may be implemented to address any potential negative impact observed.

The AWMP is a "live" document, and it will be updated regularly based on the advancement of understanding, new monitoring data, and new insights as they become available; this will include the appropriate update of the specific monitoring and metrics to be used to assess the potential need for the implementation of any mitigation measures and the selection of appropriate site specific mitigation measures to be adopted.

#### 2.8.1.2. VEC-2: Terrestrial Biodiversity and Ecosystems

The Project is located within a mosaic of high-Andean habitats and multiple overlapping conservation designations (Ramsar, KBA, IBA, Provincial reserves), each supporting sensitive species and ecological processes. These factors elevate the Project's potential sensitivity to disturbance, particularly for fauna with restricted ranges or specific habitat dependencies.

*Drivers of Change*

The Project and the construction and operation of mines within the Salar del Rincon Basin and associated development (i.e., additional traffic and road improvements/construction, transmission lines, and additional mining projects, along with demographic shifts in human populations (see VEC-3)), may contribute to habitat loss, fragmentation, and wildlife disturbance, particularly from infrastructure, groundwater drawdown, noise, lighting, and increased traffic. Endemic reptiles (*Liolaemus* spp.) face population and genetic decline due to

shrinking and isolated habitat. Within the RPFLA, cumulative impacts are assessed across the entire area, which already faces pressures from livestock, grazing, and mining. Scenario planning shows direct impacts on 3,300ha, including 2,900ha of natural habitat and 400ha of critical *Liolaemus* habitat, with basin-wide declines in biodiversity and ecosystem services expected.

*Potential Impacts*

- Impacts such as habitat loss and fragmentation may result in population decline and reduced genetic variability for *Liolaemus* spp.
- Disturbances associated with development may result in displacement and fragmentation of species.
- Road and transmission lines may cause collisions with terrestrial fauna and birds.
- All the above impacts may occur in Protected Areas within the EAAA.

Project impacts will mostly be in the northeast portion of the Salar, while impacts from Puna Mining will likely occur in the southeastern portion. The impacts of potential future projects along the western boundary of the Salar have not yet been evaluated but would combine with the predicted impact caused by the Project operation.

*Sustainability Outlook*

The conservation of *Liolaemus* species and biodiversity values within the RPFLA can be managed if appropriate sustainable development planning and mitigation occurs within the Salar del Rincon Basin. Measures being implemented by the Project (i.e., a Biodiversity Management Plan (BMP) and Biodiversity Action Plan (BAP) with specific mitigation measures), once adopted at a basin-wide level, will assist in significantly mitigating impacts. Measures to reduce threats within the RPFLA, could contribute to the conservation of biodiversity values.

The Project is currently conducting additional studies to refine the taxonomy of *Liolaemus* and to assess population density and habitat use. In parallel, a program has been implemented for the rescue and relocation of individuals, which are marked with microchips and transferred to areas previously defined by experts within the project's work fronts. At the same time, habitat enrichment measures have been carried out in the relocation zones to ensure that *Liolaemus* individuals have access to adequate shelters and favourable conditions for survival. Personnel in the operations area received training sessions covering the rationale and procedures for lizard rescue, emphasizing their ecological importance. The sessions also addressed the Project's mitigation and prevention strategies.

*Qualitative Assessment of VEC-2*

Rating: High Priority

This classification is based on the restricted range status of *Liolaemus* lizards, resulting in high sensitivity to habitat loss and fragmentation, that could result in reduced persistence and resiliency of *Liolaemus* spp. populations within the Salar. Regarding the RPFLA, biodiversity native to the Andean Puna and of cultural relevance are prioritised for conservation. The RPFLA's intact ecosystems, which include Ojos de Agua and wetlands, are important for ecosystem services they provide. Disruption to hydrogeological regimes and habitat loss could put at risk both biodiversity and ecosystem services found within the RPFLA.

*Assessment of Need for Mitigation*

The Project prepared an initial Framework BAP (ERM, 2025b) that summarises mitigation measures for Natural Habitat and Critical Biodiversity Values. Critical species management and monitoring protocols are being developed in collaboration with species experts. The full Biodiversity Action Plan is a "live" document that will be updated as additional information is obtained. The BAP will also include offset measures for both natural and critical biodiversity values as needed. The Project will monitor the effectiveness of mitigation measures as well as progress toward biodiversity No Net Loss (NNL) and Net Gain (NG) objectives and targets via the Project Biodiversity Monitoring and Evaluation Program (BMEP).

#### 2.8.1.3. VEC-3: Demographic Structure

The AoI has very high levels of Indigenous self-identification (50–80%), with strong cultural, territorial, and community affiliations:

- Quewar-Kolla.
- Kolla – Estación Salar de Pocitos.
- Aborigen de Catua Pueblo.

In these contexts, rapid demographic influx — particularly of non-local workers — can:

- Affect community cohesion and cultural continuity.
- Increase the risk of social fragmentation, especially in smaller or mixed settlements.
- Strain local governance structures that rely on community-based decision-making.
- Shift local power dynamics if population growth outpaces traditional organisational systems.

These communities are therefore highly sensitive to cumulative population growth, especially when driven by multiple mining ventures and indirect economic development, and it is concluded that this component may experience significant stress, potentially compromising its sustainability in the short term.

*Drivers of Change*

- The recruitment of local labour by the Project and other concurrent developments, combined with infrastructure improvements — particularly transportation links — are expected to facilitate both the return of local residents and the immigration of external workers. These factors are likely to accelerate demographic shifts across the Department.
- RINCON's activities alone could potentially increase the immigration rate, placing pressure on public services and infrastructure in the localities within the spatial boundary during Project construction. The town of San Antonio de los Cobres, as the Departmental capital and the locality with the highest recent population growth, is expected to absorb the bulk of this influx. While San Antonio de los Cobres has a relatively greater capacity to accommodate new residents, the towns of Olacapato, Estación Salar de Pocitos, and Catua — with more limited infrastructure and public service provision — may experience disproportionate impacts.
- In particular, Olacapato, which has shown evidence of negative population growth, may be especially vulnerable. A sudden increase in population could strain already limited resources and disrupt the social fabric of the community.

*Potential Impacts*

The anticipated demographic changes may exceed the adaptive capacity of local systems, leading to:

- Saturation of Public Services: Including waste management, water and sanitation, healthcare, education, and public safety.
- Social Stressors: Overcrowding, increased crime rates, and the proliferation of social vices such as alcoholism, drug use, and violence. Notably, alcoholism has already been identified as a prevalent issue among youth in several localities in the Direct AoI, suggesting that further population growth could exacerbate existing vulnerabilities.
- Cultural Erosion: Rapid demographic shifts may lead to the dilution or loss of traditional cultural practices and Indigenous identity, particularly in smaller communities with strong cultural heritage.
- Logistics and transportation: truck movements near local communities pose risks including traffic accidents, dust emissions, animal collisions and disruption to daily life. Additionally, increased transient populations and road activity may exacerbate risks of gender-based violence, particularly in areas with limited security infrastructure and social services.

Given the scale and pace of projected demographic changes, and the limited resilience of local infrastructure and social systems, the potential impacts on VEC-3 are considered high priority. An Influx Management Plan will be developed which will proactively promote partnership with government and other development

institutions to facilitate investment in public services, and culturally sensitive community engagement to mitigate these risks and support sustainable development.

*Sustainability Outlook*

The sustainability of the VEC-3 faces short-term challenges, particularly in San Antonio de los Cobres, where the projected pace and scale of demographic growth exceed the current response capacity of local systems. In other localities along the corridor, growth is more moderate, though it still warrants attention to prevent future tensions. Without proper planning and containment measures, negative impacts on social cohesion, public safety, and quality of life could arise. Implementing an Influx Management Plan[15], along with strategic investments in infrastructure and services, will be key to mitigating these risks and strengthening community resilience across the territory.

*Qualitative Assessment of VEC-3*

Rating: High Priority

This classification is based on the high sensitivity of the demographic component to accelerated changes in population structure, particularly in localities with limited infrastructure. The baseline indicates that population growth driven by mining projects may exceed the adaptive capacity of local systems, leading to service saturation, social tensions, and risks to community safety. Additionally, differentiated impacts by gender and age have been identified, such as increased perceptions of insecurity and exposure to violence in contexts of population influx. These factors, along with evidence of structural vulnerability in certain localities, justify the high priority assigned to VEC-3.

*Assessment of Need for Mitigation*

The Project will develop an Influx Management Plan that will identify key social receptors, establish a demographic monitoring system, and define thresholds that indicate when mitigation measures should be activated. The Plan will include coordinated actions with public institutions to strengthen local services and manage social risks associated with population growth, such as pressure on infrastructure, public safety concerns, and community cohesion.

The Plan will operate as a dynamic, adaptive document, updated as new information becomes available on population movements, service demand, and community feedback. Continuous evaluation of these indicators will allow timely adjustments to preventive and corrective measures, ensuring that demographic changes do not exceed the adaptive capacity of the localities within the AoI.

#### 2.8.1.4. VEC-8: Traditional Productive Activities

Traditional productive activities — such as subsistence agriculture, livestock rearing, artisanal practices, and Indigenous resource management — have historically formed the backbone of local economies and cultural identity of the localities in the Direct AoI. However, these activities are increasingly vulnerable to socioeconomic and environmental pressures, particularly those associated with large-scale mining development.

*Drivers of Change*

Over the past several decades, there has been a marked decline in the number of individuals engaged in traditional productive activities. This trend is accompanied by a weakening of intergenerational transmission of Indigenous knowledge and practices. The decline is largely attributed to:

- Socioeconomic shifts driven by the expansion of extractive industries.
- Labour migration toward mining and related sectors.
- Reduced access to natural resources, particularly water of sufficient quality for traditional uses.

Despite this decline, traditional activities continue to have a significant presence in several localities within the AoI, both economically and culturally. For example:

[15] A structured strategy used to manage and mitigate the impacts of in-migration. Key components include: 1) Assessment of influx drivers; 2) Capacity analysis to determine how much influx can be sustained without negative impacts; 3) Mitigation measures; 4) Communication and educations; and 5) Monitoring and adaptive management.

- In Catua, 71.8% of surveyed families maintain at least one active livestock post, and 35.7% consider livestock farming their primary economic activity, demonstrating a strong territorial and functional connection to these practices.

- In Estación Salar de Pocitos and Olacapato, although the proportion of active posts is lower, seasonal and strategic use of the territory — especially during rainy periods — reflects an adaptive persistence of traditional practices.

*Potential Impacts*

The cumulative impacts of mining projects — such as the Project and others — are likely to accelerate the decline of traditional productive activities through:

- Labour displacement: Mining offers higher wages and more stable employment, drawing workers away from traditional sectors and reducing the labour pool available for these activities.

- Water resource competition: Increased abstraction and potential and potential effects on the water resources of the basin may limit access to clean water, which is essential for agriculture and livestock.

- Cultural erosion: As fewer individuals engage in traditional practices, the transmission of Indigenous knowledge and cultural values may be interrupted, leading to long-term loss of identity and heritage.

The weakening of traditional economic systems may result in:

- Economic vulnerability for households that rely on these activities, especially if they are unable to transition to alternative livelihoods.

- Loss of cultural continuity, which could undermine community cohesion and resilience.

*Sustainability Outlook*

Given the current trajectory and the scale of projected impacts, the sustainability of VEC-8 is at significant risk. Without targeted interventions to support and preserve traditional productive activities, the region may experience irreversible socioeconomic and cultural losses.

*Qualitative Assessment of VEC-8*

Rating: High Priority

This classification is based on the territorial and cultural persistence of traditional productive activities, especially in localities such as Catua, where over 70% of families maintain active livestock posts. Despite the transition toward more urban lifestyles, these practices continue to serve as both an economic and symbolic pillar, functioning as a safety net in times of crisis. Additionally, the baseline reveals a concerning trend of aging among shepherds, with limited youth participation in areas such as Estación Salar de Pocitos, representing a concrete risk of intergenerational loss. Pressure on natural resources, lack of basic infrastructure, and competition with extractive activities further reinforce the vulnerability of VEC-8, justifying its high priority and the urgent need for interventions to prevent irreversible impacts on the economic, social, and cultural sustainability of the communities, i.e., productive strengthening, water management, cultural transmission, basic infrastructure, and interinstitutional coordination for technical support and productive programs.

*Assessment of Need for Mitigation*

The Project will manage risks associated with traditional productive activities through instruments already under development, including the Technical Assistance Program (TAP), the participatory survey of puesteros, and measures under the Ecosystem Services Management Plan. These mechanisms enable the identification of key receptors and establish the criteria for activating support measures when signs of productive decline, cultural loss, or pressure on strategic natural resources emerge.

Given the high sensitivity of this VEC — marked by declining intergenerational transmission of herding practices and the vulnerability of natural resources used by communities — the management framework will be dynamic and updated with new information on land use, water and forage availability, livestock health conditions, and community feedback. The Project's participation in local multisector platforms, including the Social Mining Roundtables, will facilitate early detection of emerging risks and enable timely adjustments to cultural and productive strengthening actions.

### 2.8.2 Medium Priority VECs

#### 2.8.2.1. VEC-4: Socioeconomic Structure

The Direct AoI demonstrates high sensitivity to demographic and economic change, driven by its small, variable labour markets and strong dependence on mining. Key sensitivities include:

- Sensitivity to demographic change.
- Fragile and uneven labour markets.
- Heavy dependence on the mining sector.
- Wage pressures and inequality risks.
- Growing reliance on mining-linked enterprises.

*Drivers of Change*

- The socioeconomic structure of the localities in the Direct AoI is currently robust, characterised by high employment rates and a significant proportion of the population engaged in mining-related activities.
- Given the generally positive economic contributions of mining projects in the Province, it is concluded that the VEC-4 Socioeconomic Structure is unlikely to be affected beyond its carrying capacity, allowing it to remain sustainable under current and projected conditions.
- While the overall outlook for the socioeconomic structure remains positive, the presence of localised vulnerabilities and governance risks warrants attention.

*Potential Impacts*

- The increase in demand for labour — driven by the Project and other concurrent developments — is expected to result in higher wages for both local residents and incoming workers. This wage growth may help offset the rising cost of goods and services in local markets, which is a common consequence of increased economic activity and population growth.
- While most of the population will benefit from improved employment opportunities, a small segment — comprising individuals not employed in the mining sector, including some locals and immigrants — may face challenges due to the increased price barrier. This group may experience reduced purchasing power and economic exclusion. Therefore, a comprehensive and inclusive socioeconomic strategy is recommended to mitigate potential vulnerabilities and ensure equitable development.
- One potential negative impact concerns the risk of increased corruption in public institutions, particularly in small and rural localities. As mining projects contribute higher revenues to local treasuries through royalties and taxes, there is a possibility that these funds may not be managed transparently or equitably. In communities where residents rely heavily on public services — such as energy, water, sanitation, security, and education — any erosion of institutional legitimacy could undermine public trust and service delivery.
- Without a robust governance framework and transparent mechanisms for revenue allocation and oversight, the socioeconomic structure could be negatively affected, especially in areas with limited administrative capacity.
- The potential for economic exclusion among non-mining populations and the risk of institutional corruption highlight the need for:
  - Inclusive employment and training programs.
  - Transparent and accountable public financial management.
  - Community engagement in decision-making processes.

*Sustainability Outlook*

While the current socioeconomic structure is solid — characterised by high employment levels and strong integration with mining-related activities — future pressures could test its resilience. The projected increase

in economic activity and population inflows could exacerbate existing inequalities, particularly affecting non-mining populations, who may face rising living costs and limited access to new opportunities. Additionally, the risk of institutional corruption in small and rural localities could compromise the equitable distribution of mining revenues and weaken public trust. To ensure long-term sustainability, it will be essential to implement inclusive socioeconomic strategies, strengthen local governance, and promote transparent and accountable public financial management.

*Qualitative Assessment of VEC-4*

Rating: Medium Priority

This assessment reflects a generally favourable baseline, with high employment levels and strong economic integration with the mining sector. However, the presence of localised vulnerabilities — such as the risk of economic exclusion for non-mining populations — introduces uncertainty regarding the long-term resilience of the system. These risks are particularly relevant in areas with limited administrative capacity. While current conditions are stable, proactive measures are needed to ensure that future growth is inclusive and that governance mechanisms are prepared to manage increased demands.

*Assessment of Need for Mitigation*

The Project will implement a socioeconomic management approach that will be formalized through the existing plans — such as the Labour Management Plan, the Gender Management Plan, and supply chain oversight mechanisms — which will identify key socioeconomic receptors, vulnerability indicators, and the criteria for triggering mitigation actions. These plans will define the associated monitoring system, including indicators related to economic wellbeing, service access and perceptions, risks of exclusion, and institutional governance performance.

Given that socioeconomic conditions in the area of influence evolve with mining activity cycles and the entry of new projects, these instruments will operate as “living” documents, updated with new information, monitoring results, and stakeholder feedback. This adaptive approach will allow the Project to anticipate risks such as economic exclusion of certain groups, increases in living costs, or governance gaps, and to activate corrective measures when indicators signal emerging pressures.

It is also important to note that the Project already participates in official channels shared between mining companies, local authorities, and government agencies — such as the social roundtables established in each locality. These platforms provide opportunities for dialogue, coordination, and transparency, which can help mitigate governance risks and strengthen institutional capacity over time. The continued use of these multi-stakeholder mechanisms will support the early identification of emerging pressures and the activation of appropriate corrective measures when needed.

#### 2.8.2.2. VEC-6: Provision of Health Services

Health services in the region are highly sensitive to additional demand and demographic change due to limited infrastructure and chronic resource shortages. Care is delivered primarily through small Level I health posts and the single Level II Dr. Nicolás C. Pagano Hospital, all of which operate with minimal staff, few ambulances, and frequent interruptions in medical coverage. Persistent shortages of medications and equipment further weaken system resilience.

Communities already experience high burdens of respiratory and diarrheal diseases, chronic conditions, trauma, and mental health challenges, which are intensified by harsh environmental conditions and long travel distances for care. The presence of non-resident mining workers and ongoing population growth resulting from project-related mobility place additional pressure on primary healthcare, emergency response capacity, and medication supply. As a result, the regional health system is overstretched and highly vulnerable to increased demand associated with mining expansion and population influx.

*Drivers of Change*

The health service provision in the localities within the spatial boundary is currently characterised by significant limitations in infrastructure, medical personnel, equipment, and access to essential medicines. These constraints pose a serious challenge to the system’s ability to respond to increased demand resulting from mining-related activities and associated demographic changes. Baseline assessments have identified prevalent patterns of morbidity in the region, including:

- Traffic-related injuries, exacerbated by limited emergency response capacity.
- Mental health issues, including alcoholism, which is notably prevalent among the youth population.

These health challenges are compounded by the limited capacity of local health facilities, which are often under-resourced and geographically isolated.

*Potential Impacts*

The expansion of mining operations — such as the Project and other concurrent projects — along with the development of transportation infrastructure, is expected to:

- Increase population density, both through immigration and local population growth.
- Elevate exposure to environmental health risks, including dust emissions, noise pollution, and traffic accidents.
- Intensify demand for health services, potentially overwhelming existing facilities and personnel.

*Sustainability Outlook*

The current health system in the area is fragile, with significant limitations in infrastructure, medical personnel, equipment, and access to essential medicines. These constraints reduce the system's capacity to respond to the anticipated increase in demand resulting from mining-related activities and demographic growth. Without a strategic plan to strengthen local health services, cumulative pressures could lead to deteriorating health outcomes, including increased morbidity and mortality, longer wait times, and reduced access to care — particularly for vulnerable populations.

However, it is important to note that mining workers receive most of their health care within the projects, which helps reduce direct pressure on local facilities. Additionally, several projects provide support to local communities in health and emergency matters, as identified in the baseline. Examples include donations such as the Project's contribution of an ambulance for use in Estación Salar de Pocitos.

These measures partially mitigate the projected impacts and represent opportunities for collaboration between companies and local health authorities. To ensure long-term sustainability, it is essential to implement a comprehensive health system strengthening strategy that includes infrastructure investment, workforce development, and improved coordination between local and Provincial health authorities.

*Qualitative Assessment of VEC-6*

Rating: Medium Priority

This assessment reflects the current fragility of the local health system and the magnitude of projected impacts associated with mining expansion and population growth. While the system is not yet overwhelmed, it operates with limited capacity and is vulnerable to increased demand and health risks related to development, such as exposure to environmental pollutants and a rise in traffic accidents. These risks are particularly critical in remote areas with restricted access to emergency services and specialised care.

However, it is important to note that mining workers receive most of their health care within the projects, reducing direct pressure on local facilities. In addition, several projects, according to baseline information, provide support to local communities in health and emergency matters. Examples include donations such as the Project's contribution of an ambulance for use in Estación Salar de Pocitos. These factors partially mitigate the projected impacts, but they do not eliminate the need for a comprehensive health system strengthening strategy.

*Assessment of Need for Mitigation*

The Project will strengthen its health-management approach through formal agreements with public institutions, other mining projects, and Provincial authorities, which will enable the identification of critical health receptors, capacity gaps, and the criteria for triggering mitigation measures. Given the limited infrastructure, staffing, and response capacity of health facilities within the AoI, this approach will operate as a dynamic mechanism, continuously updated with new information on service demand, emergency incidents, mental health, respiratory conditions, and feedback from health authorities.

The Project's participation in multisector coordination platforms, such as the local social roundtables, will further support early detection of pressures on the health system and facilitate timely coordination of preventive and corrective actions.

### 2.8.3 Low Priority VECs

#### 2.8.3.1. VEC-5: Educational Services

The current state of VEC-5 in the localities within the spatial boundary reveals existing limitations in terms of infrastructure, staffing, and access to quality education. These constraints are likely to be exacerbated by projected demographic changes resulting from mining activities and associated infrastructure development.

*Drivers of Change*

- Population Growth and Immigration: The influx of workers and their families — driven by employment opportunities in mining and improved transportation access — will increase demand for educational services. This includes early childhood, primary, secondary, and potentially vocational education.

- Pressure on Existing Infrastructure: Schools may face overcrowding, shortages of qualified teachers, and insufficient educational materials. These conditions can lead to a decline in the quality of education and an increase in dropout rates, particularly among vulnerable populations.

*Potential Impacts*

- Mining projects are expected to generate positive economic impacts, including increased public revenues through royalties and taxes. These resources offer an opportunity to strengthen educational services through targeted investments and improved coordination between stakeholders.

- However, rapid population growth and migration may lead to the saturation of existing educational infrastructure. Schools could face overcrowding, limited availability of placements, and shortages of materials and space, particularly in remote or underserved areas.

- These pressures may also affect the quality of education. Overburdened or underqualified teachers, limited training opportunities, and inconsistent curriculum delivery could reduce learning outcomes and increase dropout rates, especially among vulnerable groups.

*Sustainability Outlook*

To ensure that educational services remain sustainable and responsive to changing needs, a comprehensive management approach is required. While the direct negative impacts of mining projects on educational services are limited, the indirect and cumulative effects — particularly those related to population growth — could strain the system if not proactively managed.

*Qualitative Assessment of VEC-5*

Rating: Low Priority

This assessment reflects a relatively stable baseline for educational services, despite existing limitations in infrastructure, staffing, and access to quality education. While these constraints are expected to be exacerbated by population growth and increased demand linked to mining activities, the direct negative impacts of the projects on the education system are considered limited. Moreover, the anticipated increase in public revenues from mining royalties and taxes presents a strategic opportunity to strengthen the sector. However, without integrated planning and targeted investment, there is a risk that educational services may become overstretched, particularly in early childhood and secondary education. Therefore, although the current priority level is low, proactive measures are recommended to ensure that the system remains inclusive, resilient, and capable of supporting long-term social development.

*Assessment of Need for Mitigation*

The Project will strengthen its approach to managing educational service risks through existing institutional partnerships and coordination mechanisms — such as the Social Mining Roundtables and collaboration agreements with public and private entities — which enable the identification of key educational receptors, capacity gaps, and criteria for triggering mitigation measures. These platforms facilitate information exchange, alignment of priorities, and early detection of pressures related to infrastructure, teaching staff availability, and enrolment demand.

Given the low installed capacity of the educational system in the AoI and its high sensitivity to even small variations in enrolment, the approach adopted will function as a dynamic mechanism, updated with new information on student enrolment, teacher availability, infrastructure conditions, connectivity, and feedback from educational authorities. This framework will allow the Project to adjust support measures and activate corrective actions when indicators signal saturation or emerging risks.

#### 2.8.3.2. VEC-7: Road Infrastructure

Overall, the transport network's limited capacity, multifunctional use, low redundancy, and location within Indigenous territories make the region highly sensitive to increases in mining-related traffic. Even moderate growth in vehicle volumes can trigger compounding effects on safety, mobility, service access, public health, and community well-being.

*Drivers of Change*

- The current condition of road infrastructure in the region presents both challenges and opportunities in the context of increased mining activity and associated development.
- Based on the initial baseline and the cumulative impacts identified, it is concluded that the sustainability of VEC-7 is not compromised within the current timeframe, provided that planned improvements are implemented effectively.

*Potential Impacts*

The anticipated increase in vehicular traffic — particularly heavy transport linked to mining operations — is expected to place additional stress on existing roadways. However, this increase coincides with significant infrastructure upgrades, most notably:

- Paving of NR 51, the primary access route to the Project and a key corridor in Salta Province.
- Enhancements to road safety features, including improved signage, construction of overpasses, and potential traffic management systems.

These improvements are expected to enhance the overall capacity and safety of the road network, mitigating the short-term impacts of increased usage.

*Sustainability Outlook*

While traffic volumes will rise, particularly during peak construction and operational phases, the planned infrastructure works are designed to accommodate this growth. The Project will be undertaking road maintenance across section of NR 51 and 70B. As such, the road infrastructure is not expected to experience degradation beyond its carrying capacity in the short term. Moreover, improved connectivity may yield secondary benefits, such as:

- Enhanced access to services and markets for local communities.
- Reduced travel times and improved logistics for mining operations.
- Opportunities for regional economic development.

Given the alignment between increased traffic and planned infrastructure upgrades, the potential cumulative impacts on VEC-7 are considered low priority. Continued monitoring and maintenance will be essential to ensure long-term sustainability, especially as mining activities expand.

*Qualitative Assessment of VEC-7*

Rating: Low Priority

This assessment reflects a generally favourable outlook for road infrastructure in the area. While increased traffic — particularly from heavy vehicles linked to mining operations — may place additional pressure on existing routes, these impacts are expected to be mitigated by planned infrastructure upgrades. The paving of NR 51 and the implementation of road safety improvements are aligned with projected growth and are likely to enhance the system's capacity and resilience. Given this alignment, the risk of degradation beyond the system's carrying capacity is considered low in the short term. Moreover, improved connectivity may generate positive spillover effects, such as better access to services and markets for local communities.

*Assessment of Need for Mitigation*

The Project will manage road-infrastructure risks through existing operational controls and ongoing coordination with Provincial road authorities and other mining projects. These mechanisms enable the identification of sensitive road segments, monitoring of traffic-related pressures, and the definition of thresholds that may trigger corrective actions. Given the expected increase in vehicle flows and the current programme of public road upgrades — including the paving of NR 51 — this approach will function as a

dynamic system, updated with information on traffic volumes, road conditions, incidents, and community feedback.

The Project's continued participation in local coordination spaces, including the Social Roundtables, will also support early detection of concerns related to road safety, congestion, and emergency response. These platforms will help ensure that mitigation actions are aligned with local priorities and can be activated promptly when indicators signal emerging risks.

### 2.8.4 Validation of VEC Prioritisation with Stakeholders

This prioritisation of VECs with stakeholders is planned for the first trimester of 2026.

## 2.9 Step 6: Potential Strategies for Controlling Cumulative Impacts

Step 6 suggests potential measures intended to mitigate the Project's specific contributions to effects on VECs. It is important to note that the effectiveness and scope of these measures are currently constrained by the availability and quality of data at the time of writing. Further, the ultimate responsibility for managing cumulative impacts is a shared one — involving government, industry, and communities.

### 2.9.1 Project Level

The effective application of the mitigation hierarchy (avoid, reduce, and remedy) to manage individual contributions to potential cumulative impacts will be recommended as best practice. RINCON has incorporated Project design features that include physical or procedural controls to avoid and reduce possible impacts that are planned as part of the Project. These are considered from the very start of the impact assessment process as part of the Project and are factored into the pre-mitigation impact significance ratings.

RINCON is currently preparing documents for the development and implementation of mitigation measures in alignment with the Environmental and Social Action Plan (ESAP), as summarised in Table 47.

As such, the CIA remains a "live" document and will be updated as new information becomes available. In particular, future revisions (refer to Section 4.4) will address the outcomes of the ESAP and incorporate additional data collection efforts aimed at filling existing information gaps. These updates will enhance the robustness of mitigation strategies and ensure that the assessment reflects the most current understanding of cumulative effects.

### 2.9.2 Regional Level

While the ultimate responsibility for managing cumulative impacts lies with government authorities and regional planning bodies, developers are encouraged to engage relevant stakeholders and promote collaborative approaches to manage the combined effects of multiple developments within their areas of influence (IFC, 2013; Franks et al., 2010). This includes collaborating with other companies and government authorities, regional planning bodies, agencies on mitigation strategies and supply chain issues where possible.

In alignment with these principles, the development and implementation of a multi-stakeholder collaborative management framework is already in place, including:

- A roundtable with other mining companies in the region.
- Local, National and International Civil Society Organisations (CSOs).
- Community relations with Catua, Olacapato, Estación Salar de Pocitos, San Antonio de los Cobres, the Kolla Aboriginal Community of Estación Salar de Pocitos, and the Quewar Community of the Kolla Ethnic Group of Olacapato.
- Government and the RPFLA.

Table 47: Summary of Mitigation and Management Plans under Development

| Year | Description |
|---|---|
| 2026 | |
| January | Adaptive Water Management Plan (AWMP) to to provide a summary of the proposed water management plan for the Project and a framework whereby appropriate adaptative management measures can be implemented when / if required, in response to circumstances or events that are predicted or not fully expected at this stage. |
| March | • Biodiversity Management and Monitoring Plan (BMMP) composed of:<br>• Biodiversity Management Plan (BMP) to set out methods to avoid, minimise, restore, and/or offset impacts.<br>• Biodiversity Monitoring and Evaluation Plan (BMEP) to define all mitigation measures for construction and operations, and details monitoring activities to evaluate the effectiveness of such measures.<br>• July 2026 - *Liolaemus* spp. Sub-Plan to monitor and assess the effectiveness of the relocation species, effectiveness of mitigation measures and general monitoring of priority biodiversity values to understand trends. |
| March | Community Emergency Response & Preparedness Plan to detail practical, implementable, and include clear roles, responsibilities, communication protocols, and periodic training and drills involving both the company and affected communities. |
| March | Community Health, Safety, and Security Management Plan (including traffic impacts) (CHSSMP) to include an analysis of risks to all social receptors in the Direct and Indirect AoI. |
| March | Construction Environmental and Social Management Plan to outline the procedures and controls to manage environmental and social risks during construction. |
| March | Construction Environmental and Social Monitoring Program to define monitoring locations, parameters, frequencies, etc., which will be regularly reviewed and adjusted as required. The monitoring program will establish 'Trigger, Alert and Response Plans' (TARPs) for sensitive components, including groundwater, surface waters, key biodiversity components, and priority ecosystem services, defining conditions that activate an alert, alert values thresholds, response plans that outline the actions to be taken when an alert is triggered, including an E&S Participatory Monitoring Program. |
| March | Cultural Heritage Management Plan (CHMP) for tangible and intangible cultural heritage, including a Chance Finds Procedure. |
| March | Site Emergency Response & Preparedness Plan to detail practical, implementable, and include clear roles, responsibilities, communication protocols, and periodic training and drills involving RINCON and principal contractors. |
| March | Stakeholder Engagement Plan update with enhanced stakeholder prioritisation and analysis, taking into account regulatory obligations, FPIC agreements and CSO commitments (particularly in sensitive areas like procurement, employment, biodiversity and Indigenous rights). |
| March and June | Workers Grievance Mechanism (and related training program) to establish a more accessible, confidential first contact point for worker-related grievances and develop procedures to connect corporate-level mechanisms with a gender responsive and survivor-centered approach implemented by trained personnel, ensuring accessibility for both direct employees and third-party workers. |
| April | Gender Risk Assessment and associated Gender Action Plan to manage Project risks and enhance gender opportunities. |
| May | Community Grievance Mechanism to include a gender responsive and survivor-centered approach and develop appropriate plans for implementation, training and dissemination of the mechanism across the relevant communities, designed to avoid revictimisation, support survivors and refer them to specialised GBV and/or child protection services duly mapped in the Project area, and develop of a CGM flowchart and response timeline so that communities are clear on who receives each type of complaint and principles of confidentiality, anonymity, and non-retaliation. |
| May | Screening Level Human Rights Risk Assessment to identify all key actors, from extraction to end use, in order to assess risks of human rights abuses, forced labour, and environmental harm, and responsible sourcing practices. |
| June | Livelihood Restoration Plan, to include a) evidence documenting the implementation of the Livelihood Restoration Plan (June 2026) and b) evidence of regular monitoring of livelihoods implications of any changes to water bodies by CSP team (March 2027), with compensation at full replacement cost and livelihood restoration to pre-Project levels, including transitional allowances as per PS5. |
| July | Influx Management Plan to monitor and mitigate influx and potential GBV-related impacts. |
| September | Indigenous Peoples Plan (IPP) to detail RINCON's commitment to conducting ongoing, culturally appropriate engagement as part of the FPIC process and outline monitoring processes for continuous evaluation of the implementation of the IPP (note: a Preliminary Puesteros Management Plan is currently in place). |
| 2027 | |
| December | Biodiversity Action Plan (BAP) to achieve NNL for Natural Habitat and NG for Critical Habitat species. |
| December | Operation Environmental and Social Management Plan (OESMP) consistent with IFC PSs, national requirements, and all relevant E&S obligations. |
| December | Operation Environmental and Social Monitoring Program to define monitoring locations, parameters, frequencies, etc., which will be regularly reviewed and adjusted as required. The monitoring program will establish TARPs for sensitive components, including groundwater, surface waters, key biodiversity components, and priority ecosystem services, defining conditions that activate an alert, alert values thresholds, and response plans that outline the actions to be taken when an alert is triggered. |
| December | Viability of Mitigation Options to include an assessment for each of the identified potential mitigation measures for groundwater impacts, confirming their viability, and permitting requirements (for their implementation). Should the mitigation measures be deemed unfeasible, RINCON will propose alternate measures. |
| 2028 | |
| December | Offset Management Plan directly linking residual impacts and demonstrating equivalence, permanence, and additionality (note: A Conceptual Offset Feasibility Study is currently being finalised – January 2026). |

RINCON plays a constructive role in fostering this collaboration by participating in working groups, forums, and government-led initiatives focused on the management of cumulative impacts on regional resources. Engagement is pursued where practicable, with the aim of contributing to shared understanding, data exchange, and the development of regionally appropriate mitigation strategies. This proactive involvement not only supports broader sustainability goals but also demonstrates RINCON's commitment to responsible development of the Project.

### 2.9.3 VEC-1: Water Resources

To effectively manage water resources-related risks and ensure compliance with environmental and social standards, RINCON will undertake the following actions, in alignment with the mitigation hierarchy.

#### 2.9.3.1. Avoid

Project designs have been developed with a key focus on avoidance of impact, including:

- Positioning of lithium brine abstraction wells as far away as possible from sensitive surface water features and their associated ecosystems (e.g., vegas, lagoons, Ojos de Agua, and springs).
- Location, design and management of the SBDF to avoid direct interference with Ojos de Agua that host extremophile microbial communities. In addition, establishment of 700m buffer zones around the Ojos focussed on preserving the ecological integrity of these sensitive environments.
- Maintain surface water flow from the river and major drainages into the Salar, Ojos de Agua and Laguna Rincon.

#### 2.9.3.2. Minimise/Mitigate

*Measures*

Investigations to date (including a specifically focussed, extensive shallow piezometer drilling program) suggest a potential hydraulic separation between key environmental receptors and the deeper lithium hosting brine systems being pumped (reducing/removing the potential risk of impact from lithium abstraction). However, with a view to avoiding impact a precautionary approach is being adopted, with the Project progressing based on a worst-case scenario assuming that there is hydraulic connection between the shallow/surface water-linked features and the deeper brine aquifers, and full hydraulic connectivity between the Ojos de Agua and surrounding aquifers. As such, management measures will be in place should there be a hydraulic connection, including:

- Implement a continuous monitoring program to track key environmental and social indicators. This includes real-time data monitoring where feasible, periodic field assessments, and integration of community-based observations.
- Monitor Puna Mining, Rincon West, etc., to ensure that whenever they are operating or applying for a permit, the numerical model is appropriately updated to reflect any proposed additional lithium brine abstraction.
- Conduct additional studies to refine and expand the existing baseline, ensuring it captures seasonal variability, cumulative pressures, and site-specific sensitivities. A robust baseline is essential for accurate impact prediction and adaptive management. Ongoing studies are focused on advancing understanding of these sensitive receptors (especially with respects to resilience/sensitivity and current baseline conditions) and it is with this advanced understanding that appropriate mitigation measures will be derived.
- Draft Adaptive Water Management Plan: Developed to facilitate inclusion of new knowledge as it become available and to provide a framework for continuous upgrade of Project designs, operation and management to avoid and/or minimise any potential Project-related impact:
  - Design and implement tailored and site-specific mitigation strategies that address localised risks. These measures will be flexible and scalable, allowing for rapid response to emerging issues.
  - Carry out an assessment of level and quality alert levels per water body, taking into account seasonal variations, in order to support a Trigger Alert Response Plan (TARP) for water impacts.

  - Define scientifically sound and context-specific triggers and thresholds for critical parameters (e.g., water levels, water quality, biodiversity indicators, social service capacity). These thresholds will serve as early warning signals to prevent irreversible impacts.
  - Develop criteria for interpreting E&S monitoring results, including alert thresholds and response protocols.
  - Regularly review monitoring results and update management plans to reflect new data, technological advances, and stakeholder feedback. Adaptive management ensures that mitigation remains effective under changing conditions.

- Mitigation options are currently being evaluated should it be predicted that the Project may impact some of the key environmentally sensitive water related receptors. Appropriate mitigation measures will be different for different sites and will depend on the site-specific characteristics, existing hydraulic mechanisms, sensitivity/resilience and other factors. A range of viable potential mitigation measures for the lagoons, vegas, and extremophile ecosystems has been devised and include the following:
  - Reduction or cessation of abstraction from lithium brine wells in the immediate vicinity of the environmentally sensitive receptor to maintain conditions within site-specific threshold levels..
  - Controlled reinjection of compatible brine into the strata in the immediate vicinity of the receptor or directly into the feature in the case of the Ojos de Agua to form a hydraulic barrier, maintain piezometric balance and reduce net abatement, and maintain favourable groundwater/brine levels and/or its quality. Combined hydrogeochemical modelling, continuous monitoring, and activation of the aforementioned adaptive measures (reinjection or extraction reduction) if deviations exceed defined thresholds.
  - Construction of a physical low permeably barrier to act as a hydraulic barrier to reduce the risk of dropping groundwater levels (if injection failed or was not suitable).
  - Irrigation and/or surface water flow augmentation to maintain saturated conditions at the ground surface (particularly applicable to the vegas).

- Complete additional phases of the reinjection trials (three phases already completed).

- Groundwater numerical model updates including:
  - Reinjection simulation based on field trial results.
  - Consideration of the current natural water level and quality variations at key environmental receptors and potential impacts on these aspects as a result of SBDF infiltration and lithium abstraction.
  - Review transmissivities in the model assigned to the upper and mid aquifer.
  - Consider variable infiltration rates and potential dilution of brine from the SBDF.
  - Predictive assessment of chemistry variability of the brine seepage from the SBDF and the mixing of this seepage with the current brine environment and potential impact on the Ojos de Agua brine quality.

- Conduct an internal assessment of the post-closure condition of the area of influence against the baseline condition.

- Develop a contingency plan for the closure plan, that provides a means of protecting sensitive water bodies and wetlands from a deficit of groundwater supply.

*Assessment of Effectiveness of Mitigation Measures*

Preliminary field investigation trials and groundwater modelling completed to date suggests that re-injection may be an effective method of mitigating potential negative groundwater level and quality impacts at key environmental receptors which may occur during the operation and/or closure phases of the Project.

Ongoing and future planned specific field trials and confirmatory groundwater modelling is being undertaken/is proposed to further evaluate the potential effectiveness of proposed mitigation measures. Mitigation measures will only be considered if they can be demonstrated to be effective on a pilot scale. If mitigation measures are required to be implemented during the operation or closure phase, then it will be critical to ensure that the mitigation measures being adopted are effective in mitigating the negative impact occurring.

The effectiveness of any mitigation measure, should it need to be implemented, would be monitored through intensive water, ecology and/or social monitoring. Criteria will be established with which to assess the effectiveness of the mitigation measures proposed and alternative mitigation measures will be identified should the initially proposed mitigation measure prove not to be effective.

### 2.9.4 VEC-2: Terrestrial Biodiversity and Ecosystems

To effectively manage terrestrial biodiversity and ecosystems-related risks and ensure compliance with environmental and social standards, RINCON will undertake the following actions, in alignment with the mitigation hierarchy. Actions will be outlined in the Project BAP and BMP. Biodiversity will be monitored via the implementation of an adaptively managed BMEP. As these measures are in development, RINCON is not currently in a position to present a post-mitigation scenario and/or changes to a post-mitigation strategy.

#### 2.9.4.1. Avoid

- Prioritise avoidance of impacts on critical habitats or sensitive species through siting and planning adjustments, using expert guidance and sensitive habitat mapping tools.

#### 2.9.4.2. Minimise/Mitigate

*Measures*

- The Project will implement a systematic and long-term biodiversity monitoring program covering key species, habitats, and ecological processes. Monitoring will include seasonal variations and incorporate cumulative impacts (i.e., changes in land-use) from additional projects.
- Define scientifically sound and context-specific triggers and thresholds for critical parameters. The thresholds for biodiversity values will be established and linked to corrective measures and will serve as early warning signals to prevent irreversible impacts. The definition of thresholds will be supported by monitoring programs aimed at characterizing natural variability with specialists guidance.
- The Project will develop and implement a BMP (for contractors) and BAP (which will outline No Net Loss/Net Gain actions and indicators) that will include the following measures:
  - A restoration plan with a schedule for restoring disturbed areas not needed for operational purposes once restoration experiments have identified viable restoration techniques.
  - Expert-led management and monitoring plans are being developed for *Liolaemu*s species, with clear responsibilities, indicators, and thresholds.
  - *Liolaemus spp*. are the subject of further research. Surveys are being conducted to define: i) geographic range; ii) microhabitat preferences; and iii) population density. New disturbances to critical habitat and natural will be minimised to the extent possible, and areas with low or no *Liolaemus* density will be prioritised to reduce impacts on restricted-range species. Where *Liolaemus* spp. habitat cannot be avoided, an expert-led protocol for species rescue and relocation will be implemented.
  - The Project actions will be consistent with areas identified as Critical Habitat as well as the restricted use and intangible areas of the RPFLA.
  - The Project will continue with the seedbank development and expansion as required to sustain restoration efforts.

The implementation of mitigation measures, including restoration and microhabitat enrichment for *Liolaemus* spp., in combination with biodiversity offset, will lessen the Project's contribution to cumulative impacts. In addition, collaboration with RPFLA will substantially strengthen efforts to mitigate threats within the area.

*Assessment of Effectiveness of Mitigation Measures*

The BAP and BMEP will be based on an adaptive management framework and will provide guidance on environmental management for critical habitat features, including thresholds and corrective actions:

- The BMEP will validate the accuracy of predicted impacts and risks to biodiversity and the effectiveness of the management actions. It will include clear, science-based thresholds and early warning indicators

for biodiversity health (e.g., species diversity, population density, habitat fragmentation indices). These will serve as triggers for adaptive management actions.

- The BMEP will be implemented using expert-led monitoring protocols for Critical species (i.e., *Liolaemus* spp.) as well as priority species (these include Flamingos). Collisions with the transmission line will be mitigated by placing bird-flight diverters on the transmission line cables and flamingos will be monitored using a protocol designed by a species expert and surveys will be timed with regional surveys to better understand any observed population fluctuations and contribute to the regional program.

- The BAP will include stakeholder engagement activities with the RPFLA and determine feasibility of including and implementing programs to strengthen conservation activities within the RPFLA.

#### 2.9.5 VEC-3: Demographic Structure

To effectively manage demographic structure-related risks and ensure compliance with environmental and social standards, RINCON will undertake the following actions, in alignment with the mitigation hierarchy.

##### 2.9.5.1. Avoid

To prevent significant demographic pressures and associated social risks, the Project is already implementing the following measures:

- Meet workforce demands by hiring skilled or unskilled labour identified within the Project's Direct and Indirect AoI first, and then from the rest of the Province of Salta, thus complying with Provincial legislation.

- Minimise the creation of employment expectations by adequately and appropriately informing the real labour demand needs, their temporary nature, and contract conditions.

- Ensure that any temporary accommodations for workers are self-sufficient and do not create additional pressure on local housing or public services.

- Promote local supply chains: Strengthen local procurement and service provision to minimise the external influx of companies and associated personnel.

- Monitor demographic trends and population dynamics in coordination with local authorities and other regional projects, in order to anticipate cumulative pressure on services and infrastructure and adjust labor and housing strategies accordingly.

##### 2.9.5.2. Minimise/Mitigate:

*Measures*

- Establish an Influx Management Plan:[16] Develop formal agreements and collaborative frameworks with public institutions in Salta Province and the Department of Los Andes. These partnerships should also extend to other mining and energy projects operating in the region to coordinate and strengthen immigration management efforts, including periodic assessment of cumulative population trends, service capacity thresholds, and early warning indicators of saturation. Joint initiatives may include data sharing, policy alignment, and coordinated service delivery to address the social and infrastructural impacts of population influx.

- Conduct a Perception and Expectations Study: Undertake a study to assess public perceptions and expectations regarding Project impacts.

- Design and Implement Capacity Building Programs: Based on the findings of the institutional capacity assessment, develop targeted technical assistance and training programs for organisations with limited

[16] Its objectives include preventing and mitigating potential impacts caused by an influx of workers, contractors, and opportunistic settlers into the project area. Typical content comprises baseline studies, assessment of potential impacts, identification of management measures (e.g., local hiring policies, accommodation protocols), stakeholder engagement, and monitoring mechanisms.

utility management capabilities. These programs should aim to enhance service delivery, improve operational efficiency, and build long-term resilience in local institutions.

- Develop Public Awareness Campaigns on Immigration Impacts: Create and roll out information campaigns to raise awareness among residents of the Province of Salta about the potential positive and negative impacts of immigration. These campaigns should promote informed public discourse and encourage best practices in community engagement, integration, and social cohesion.

- Establish Demographic and Social Pressure Indicators (e.g., population growth, service demand, housing availability): To monitor cumulative impacts over time and inform adaptive management measures.

*Assessment of Effectiveness of Mitigation Measures*

Preliminary assessments and institutional capacity reviews suggest that the proposed mitigation measures — particularly the Influx Management Plan, coordination with public institutions, and initiatives to manage expectations and service demand — are likely to be effective in reducing demographic pressures during peak Project activities.

The effectiveness of these measures will be evaluated through continuous monitoring of key demographic indicators, such as population movements, service utilization rates, community perceptions, and security-related data. These indicators will inform whether the implemented measures are achieving the intended outcomes or if corrective actions are required.

Clear thresholds and qualitative indicators will be established within the Influx Management Plan to assess performance and trigger adjustments when needed. Should any mitigation measure prove insufficient, alternative or strengthened measures will be developed in coordination with local authorities and community representatives to ensure that demographic changes do not exceed the adaptive capacity of the affected localities.

#### 2.9.5.3. Compensate/Offset

RINCON will identify, design, and manage the necessary compensation/offset measures in case it is not possible to avoid, minimise/mitigate, and/or restore any potential impact related to the Project. These activities will be guided by the Indigenous Peoples Plan (IPP) and the compensation strategy agreed with community.

### 2.9.6 VEC-4: Socioeconomic Structure

To effectively manage socioeconomic structure-related risks and ensure compliance with environmental and social standards, RINCON will undertake the following actions, in alignment with the mitigation hierarchy.

#### 2.9.6.1. Avoid

To prevent significant demographic pressures and associated social risks, the Project is already implementing the following measures:

- Cover workforce demands by hiring skilled or unskilled labour identified within the Project's Direct and Indirect AoIs first, and then from the rest of Salta Province, thereby complying with Provincial legislation.

- Communicate clear and transparent information about the scope of the project, the estimated number of positions, their duration, and employment conditions to prevent social tensions.

- Train local suppliers on the standards required by the company to close capability gaps and facilitate access to bidding opportunities, while promoting diversification of services to reduce dependency on mining-related demand.

- Promote gender equity by hiring women in the mining industry, fostering equal opportunities and contributing to workforce diversification.

2.9.6.2. Minimise/Mitigate:

*Measures*

- Develop a Gender Risk Assessment and develop and implement an associated gender action plan aimed at managing Project risks as well as enhancing gender opportunities. A Gender Action Plan will include and will not be limited to the following:
  - Adapt existing process to clearly incorporates a GBV, SEAH, bullying and intimidation referral pathway tailored to the Project's operational context, ensuring accessibility for both direct employees and third-party workers.
  - Establish a dedicated and confidential protocol for addressing cases of violence or harassment with a gender-sensitive approach, ensuring safe reporting, appropriate response, and protection of all parties involved.
  - Ensure effective communication, training, and regular monitoring of the mechanism, to strengthen awareness, trust, and continuous improvement.
  - Clearly connect existing mechanisms such as MyVoice with the site level system that assures personal and more accessible first contact point.
  - Ensure principles of confidentiality, anonymity and no retaliation.
- Actively monitor indicators of forced labour (ILO) as part of employee surveys, workers interviews (direct and third party workers), and overall PS2 monitoring (using Minexus). Indicators of forced labour to be monitored by the Project will include:
  - Abuse of vulnerability.
  - Deception.
  - Restriction of movement.
  - Isolation.
  - Physical and sexual violence.
  - Intimidation and threats.
  - Retention of identity documents.
  - Withholding of wages.
  - Debt bondage.
  - Abusive working and living conditions.
  - Excessive overtime.
- Conduct site inspections by qualified Project staff across the supply chain, develop a supply chain map, and implement a program of periodic inspections for subcontractors not directly managed by the Project.
- Engagement with Indigenous Peoples:
  - Undertake meaningful engagement with Indigenous peoples (as part of SEP or FPIC negotiations) providing accurate and final information on project impacts and mitigation using the final socio-economic baseline and impact assessment.
  - Thereafter continue to engage on E&S monitoring and mitigation progress: Identify and map detailed skills and competencies, as well as most up to date (conservative) estimates of roles that will be required for the Project construction and operation and disclose to communities. Also clearly communicate contractual rights and obligations under an employment contract and the difference between priority access to employment in comparison to guaranteed employment.
  - Develop a medium-term Career Plan to build capacity and up-skill local communities, in order to maximise communities' access to employment or procurement contracts and services generated by the project. The career plan should not only focus on unskilled opportunities but also on technical roles where time is available to develop competences.

  - Explore post-mining community investment initiatives that can foster local employment and economic development to inform IPP and if appropriate Livelihood Restoration Plan (LRP) in consultation with local communities.

- Forge Strategic Partnerships to Mitigate Economic Vulnerability: Establish formal agreements and collaborative alliances with public organisations in Salta Province and the Department of Los Andes, as well as with other mining and energy projects operating in the region. These partnerships should aim to coordinate efforts, share resources, and implement joint initiatives that reduce economic vulnerability among local populations, particularly in scenarios of fluctuating labour demand or post-construction workforce contraction. Areas of collaboration may include employment generation, infrastructure development, and access to essential services.

- Evaluate the Capacities of Public Service Organisations: Assess the operational capacity, service delivery effectiveness, and resource constraints of public organisations tasked with supporting economically vulnerable individuals and families. This evaluation will help pinpoint areas where institutional strengthening is needed and guide the design of support programs.

- Develop and Implement Capacity Building Programs: Based on the institutional assessment, design tailored technical assistance and capacity building initiatives for public organisations with limited capabilities. These programs should focus on improving service delivery, enhancing administrative efficiency, and building long-term resilience in managing economic vulnerability.

- Design and Launch Public Awareness Campaigns: Create and implement information campaigns aimed at raising awareness among residents of Salta Province about the causes and consequences of economic vulnerability. These campaigns should promote inclusive development, encourage community participation, and highlight best practices for supporting vulnerable populations. Messaging should be culturally appropriate and accessible to diverse audiences.

- Periodically Assess Local Labour Market Conditions (including employment saturation, informal employment trends, and skills mismatch): Consider cumulative demand from other mining and energy projects in the region.

*Assessment of Effectiveness of Mitigation Measures*

Preliminary assessments indicate that the proposed measures — including gender actions, labour oversight, supplier development, and coordination with public institutions — have the potential to effectively reduce socioeconomic vulnerabilities and promote inclusive economic conditions.

Effectiveness will be evaluated through continuous monitoring of indicators such as local employment participation, trends in prices and service access, supply-chain audit results, ILO-aligned forced-labour indicators, progress in women's workforce participation, and the performance of public organisations supporting vulnerable groups. These indicators will help determine whether the measures are achieving the intended outcomes.

The Project's participation in the Social Mining Roundtables provides an additional mechanism to assess and validate the effectiveness of mitigation measures in real time. These platforms offer direct access to local authorities and community representatives, enabling regular feedback and rapid adjustment of actions when pressures emerge.

Associated management plans will define criteria for activating corrective measures. If any measure proves insufficient, alternative or enhanced actions will be implemented in coordination with authorities and communities to ensure that economic growth associated with the Project does not exceed the adaptive capacity of local socioeconomic systems.

#### 2.9.6.3. Compensate/Offset

RINCON will identify, design, and manage the necessary compensation/offset measures in case it is not possible to avoid, minimise/mitigate, and/or restore any potential impact related to the Project. These activities will be guided by the IPP and the compensation strategy agreed with community.

### 2.9.7 VEC-5: Educational Services

To effectively manage educational services-related risks and ensure compliance with environmental and social standards, RINCON will undertake the following actions, in alignment with the mitigation hierarchy.

#### 2.9.7.1. Avoid

The Project has already initiated the consolidation of strategic alliances with governmental and/or private entities responsible for the design and execution of development projects and is actively participating in projects driven by the Social Mining Roundtables.

#### 2.9.7.2. Minimise/Mitigate

*Measures*

- Establish Collaborative Agreements to Strengthen Educational Capacity: Develop formal agreements and strategic alliances with public organisations in the Department of Los Andes, as well as with other mining and energy projects operating in the region.

- These partnerships should focus on the joint design, implementation, and evaluation of technical assistance and capacity-building programs aimed at strengthening educational institutions. The objective is to enhance the quality, accessibility, and relevance of education in the region by supporting schools, vocational training centers, and other learning organisations in improving their administrative, pedagogical, and infrastructural capacities.

- Collaborative efforts may include resource sharing, joint training initiatives, curriculum development, and monitoring frameworks to ensure continuous improvement and alignment with regional development goals, and addressing cumulative pressures associated with population growth and workforce mobility.

- Support the assessment of baseline capacity and cumulative demand on educational services, including enrolment trends, teacher availability, and infrastructure constraints, to inform prioritisation of capacity strengthening measures.

*Assessment of Effectiveness of Mitigation Measures*

Preliminary assessments and prior experience with inter-institutional coordination suggest that the proposed measures — including collaborative agreements, institutional strengthening, and technical support for schools and training centers — have the potential to effectively reduce vulnerabilities within the educational system and increase its resilience to growing demand.

Effectiveness will be evaluated through continuous monitoring of indicators such as changes in enrolment, availability and stability of teaching staff, functionality of school infrastructure, access to connectivity, student participation, and the degree of coordination between educational institutions and public actors. Information generated through the Social Mining Roundtables will serve as an additional mechanism to validate results and adjust actions in real time.

The associated agreements and plans will define criteria for activating corrective measures if signs of school saturation, declines in educational quality, or critical capacity gaps are observed. Should any measure prove insufficient, alternative or strengthened actions will be implemented in coordination with local authorities, educational institutions, and other projects in the region, ensuring that educational demand linked to regional development does not exceed the adaptive capacity of the system.

### 2.9.8 VEC-6: Provision of Health Services

To effectively manage provision of health services-related risks and ensure compliance with environmental and social standards, RINCON will undertake the following actions, in alignment with the mitigation hierarchy.

#### 2.9.8.1. Avoid

- Investment in health infrastructure (clinics, hospitals, mobile units).

- Recruitment and training of medical personnel.

- Improved supply chains for medicines and equipment.

- Integration of occupational and environmental health monitoring.

- Community health education and mental health support programs.

2.9.8.2. Minimise/Mitigate

*Measures*

- Make agreements and alliances with public organisations in Salta Province and the Department of Los Andes, as well as other mining or energy projects in the area, in order to improve the health system of the localities.

- Diagnose the capacities of local health organisations, with an emphasis on the capacities to address respiratory diseases, trauma emergencies and mental health.

- Design, implement, and evaluate technical assistance and capacity building programs in health organisations, with an emphasis on respiratory diseases, traumatology, and mental health, including current utilisation rates and cumulative demand associated with regional mining activity.

- Carry out information and awareness campaigns for the population on the potential health impacts of mining and energy projects in the area, as well as the best citizen practices to control them and the channels to address them.

- Develop an Influx Management Plan: Aligned with IFC PSs, to monitor and mitigate influx and potential GBV-related impacts. The plan will consider i) awareness-raising activities for prevention and addressing GBV for community members, local authorities, and project workers; ii) monitoring procedures and KPIs to monitor impacts; and iii) survivor-centred grievance procedures, with mapped referral pathways to local GBV specialised services. Furthermore, the Influx Management Plan will consider measures for monitoring, preventing, mitigating, and compensating for impacts to community members that there is reasonable evidence are caused or linked to the Project´s activities or the Project development.

- Develop a Community Emergency and Response Plan: To establish a comprehensive, community-informed emergency and response plan to address potential risks from Project activities, including traffic accidents, hazardous material spills, natural disasters, and GBV. The plan will include clear protocols, communication channels, training, and coordination with local authorities and health services.

- Develop and implement a Comprehensive Community Health and Safety Management Plan (CCHSMP): Including the risk assessments for E&S risks associated to transport, risk assessments for disease transmission (especially respiratory or vector-borne diseases), protocols for monitoring potential exposure pathways, and community engagement measures to inform and build resilience. The CCHSMP will include an analysis of all social receptors in the Direct and Indirect AoI.

- Establish Health System Pressure Indicators (e.g. emergency response times, service utilisation, referral capacity): To monitor cumulative impacts and trigger adaptive support measures.

*Assessment of Effectiveness of Mitigation Measures*

Preliminary assessments indicate that the proposed measures — including institutional strengthening, cooperative agreements, community emergency planning, and health-focused capacity building — have the potential to enhance the resilience of the local health system in the face of increased demand associated with regional development.

Effectiveness will be evaluated through continuous monitoring of indicators such as demand for consultations and emergency care, response times, staffing availability, prevalence of respiratory and mental-health conditions, and the capacity of facilities to maintain essential supplies and equipment in stock. The company has prior experience demonstrating effective support to community health services — for example, the donation of an ambulance for use in Estación Salar de Pocitos, which improved local emergency response capacity. Insights gained through these initiatives, together with information generated in the local social roundtables, will help validate results and inform timely adjustments.

Associated plans will define thresholds and criteria for activating corrective measures if signs of system saturation, declining service quality, or critical capacity gaps are detected. Should any measure prove insufficient, alternative or reinforced actions will be implemented in coordination with health authorities, other regional projects, and affected communities to ensure that health-service demand does not exceed the adaptive capacity of the system.

#### 2.9.8.3. Compensate/Offset

RINCON will identify, design, and manage a modern emergency facility that can and will be used by the local communities. RINCON have also agreed with communities that RINCON's ambulances are at their disposal.

### 2.9.9 VEC-7: Road Infrastructure

To effectively manage road infrastructure-related risks and ensure compliance with environmental and social standards, RINCON will undertake the following actions, in alignment with the mitigation hierarchy.

#### 2.9.9.1. Avoid

The Project is already implementing actions aimed at preventing impacts on road infrastructure:

- Respecting the load capacity of existing roads, avoiding the transit of vehicles that exceed the limits established by regulations.
- Maintaining continuous communication with the road authorities of Salta Province, informing them about the transportation schedule and any preventive maintenance needs.
- Planning routes and schedules to minimise congestion and road deterioration, prioritising the use of existing tracks and avoiding the opening of unnecessary new roads.
- Avoiding transit during extreme weather conditions (heavy rains, snowfalls) that could accelerate infrastructure deterioration.
- Implementing speed controls and safety protocols to reduce accident risks and damage to roads.
- Promoting shared transportation and logistics optimisation to reduce the number of trips and pressure on the road network.

#### 2.9.9.2. Minimise/Mitigate:

*Measures*

- Reduce the number of stops (limited to one or two per trip) to help address community safety concerns. According to 2024 community consultations, residents associate frequent stops and unfamiliar vehicles with potential criminal activity. Optimised logistics helps build trust and reduce risk perception.
- Establish stop times: 15 minutes every two hours of travel and 30 minutes for lunch.
- Train 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.
- Provide critical risk management training for each transportation company employee. The centralised escort company is trained and responsible for managing incidents during transportation or stops.
- Establish Collaborative Frameworks for Local Transport System Strengthening: Develop formal agreements and strategic alliances with public organisations in the Department of Los Andes, as well as with other mining and energy projects operating in the region, to support the effective management of local transport systems. These partnerships will aim to jointly design, implement, and evaluate technical assistance and capacity building programs tailored to the needs of public entities responsible for transportation infrastructure and services. Such collaborative efforts will help improve operational efficiency, enhance service delivery, and build institutional resilience in managing transport-related challenges, particularly in the context of increased regional activity and population mobility.
- Periodically undertake engagement with affected communities in the direct area of influence and also in the indirect area using a risk based approach (e.g. communities surrounding planned stops for drivers), to ensure ongoing and effective communication on transportation risks (including cumulative impacts associated with increased regional traffic), emergency response procedures, employees code of conduct, and ensure continued access to the grievance redress mechanisms and GBV referral pathways.

- Develop and formalise comprehensive plans that incorporate detailed assessments of community (including along the transportation routes) vulnerabilities to potential emergency events (Rio Tinto Evaluation Social Alternatives of Transport, April 2025). These plans will be practical, implementable, and include clear roles, responsibilities, communication protocols, and periodic training and drills involving both the company and affected communities.

*Assessment of Effectiveness of Mitigation Measures*

Preliminary assessments suggest that the proposed measures — such as optimised logistics, driver training, speed controls, coordinated scheduling, and strengthened collaboration with transport authorities — have the potential to effectively manage increased traffic and reduce road-safety risks associated with Project activities.

Effectiveness will be evaluated through continuous monitoring of indicators including traffic volumes along key routes, frequency and severity of accidents, road-condition reports, driver-behaviour records, and community feedback from settlements located near planned stops or high-risk segments. Information gathered through community engagement activities and the local social roundtables will provide additional validation and help identify any need to adjust transport protocols.

Associated plans (ERP, BRMP) will define triggers for corrective actions if increased road wear, safety incidents, or service disruptions occur. Should any measure prove insufficient, the Project will reinforce actions or adopt alternative approaches in coordination with Provincial authorities, transport agencies, and affected communities to ensure that traffic associated with mining development does not exceed the carrying capacity of the regional road network.

### 2.9.10 VEC-8: Traditional Productive Activities

To effectively manage traditional productive activities-related risks and ensure compliance with environmental and social standards, RINCON will undertake the following actions, in alignment with the mitigation hierarchy.

#### 2.9.10.1. Avoid

- The Project is already implementing actions aimed at preventing impacts on this VEC, including:

- Survey of traditional activities and usage rights: The Project has conducted a specific study on Puesteros' activities and traditional land use within the area of influence, including participatory mapping and community validation.

- Ecosystem Services Management Plan: Measures of monitoring of water sources and strategic pastures is carried out to prevent impacts on resources used by communities and puesteros, considering cumulative pressure from other regional activities and projects.

- Design of the Technical Assistance Program: A participatory program is being developed to strengthen traditional productive practices, incorporating Indigenous knowledge and promoting sustainability.

- Commitment to cultural preservation: In line with the ESIA (Rio Tinto, 2024) for the 50Ktpa plant, the Project is committed to establishing actions for the preservation of the cultural practice of herding, including initiatives for knowledge documentation, intergenerational transmission, and awareness campaigns on cultural and productive heritage.

#### 2.9.10.2. Minimise/Mitigate:

*Measures*

- Awareness campaigns: Promote the cultural and economic value of traditional herding and its link to local identity.

- Strategic partnerships: Consolidate agreements with public entities, private organisations, and social groups to drive rural development projects that integrate health, education, and infrastructure, while strengthening traditional livestock activities.

- Coordination with Social Mining Roundtables: Articulate community actions aimed at preserving and promoting traditional productive activities.

- Monitor long-term trends in traditional productive activities, including participation levels, labour availability, and intergenerational transmission, to identify cumulative decline risks and inform adaptive support measures.

*Assessment of Effectiveness of Mitigation Measures*

Preliminary assessments and ongoing actions — including the Technical Assistance Program to strengthen herding practices, improve pasture management, and support the transmission of traditional knowledge — indicate that the proposed measures have the potential to sustain and revitalise traditional productive activities in the AoI.

Effectiveness will be evaluated through continuous monitoring of indicators such as the number and activity of livestock posts, the condition and availability of high-Andean pastures and high-altitude wetlands, access to water suitable for productive use, livestock health and reproductive performance, community participation in traditional practices, and the continuity of intergenerational knowledge transfer. Information generated through participatory work with puesteros and coordination within the Social Mining Roundtables will provide additional validation and support timely adjustments to the program.

#### 2.9.10.3. Compensate/Offset

- Livelihood Restoration Plan (PRMV): In line with IFC PS5 and Rio Tinto standards, the Project will implement a Livelihood Restoration Plan for any economically displaced individuals, ensuring restoration of income and living standards through culturally appropriate and sustainable measures.

- Implementation of the Technical Assistance Program: Designed through a participatory approach, it will include technical training, capacity building, and improvements in sustainable productive practices.

# 3 Links to ESAP

The ESAP for the Project is designed to incorporate the combined effects of past, present, and future actions into its goals and strategies. The ESAP actions described have been shaped by cumulative impacts based on the environmental and social vulnerabilities identified, and prioritises specific, time-bound mitigation and management measures, responsible parties, and deadlines for completion.

The ESAP addresses a wide range of issues including:

- Environmental and Social Management Systems (ESMS).
- Regulatory Obligations Register.
- Labour and working conditions.
- Monitoring requirements (including 'Trigger, Alert and Response Plans' (TARPs) for groundwater, surface water, key biodiversity components, and priority ecosystem services).
- Assessment of the viability of mitigation measures.
- Numerical groundwater simulations to demonstrate the possibility of localized reinjection to limit post-closure water-table drawdown at the Ojos de Agua.
- Implementation of an Influx Management Plan to monitor and mitigate influx and potential GBV-related impacts.
- Security risk assessments.
- Implementation of a Livelihood Restoration Plan.
- Installation of bird flight detectors.
- Implementation of a Post-Construction Fatality Monitoring (PCFM) program for birds.
- Implementation of a Biodiversity Management and Monitoring Plan.
- Implementation of a Biodiversity Action Plan to achieve no net loss for Natural Habitat and net gains for Critical Habitat species.
- Implementation of an Indigenous Peoples Plan (IPP).
- Grievance mechanism.

RINCON will use the ESAP to address any outstanding issues and ensure ongoing compliance with local laws and international standards throughout the Project lifecycle.

The ESAP is presented in Table 48.

Table 48. Environmental and Social Action Plan

| No. | Description | Anticipated Completion Date |
|---|---|---|
| 1 | The borrower will further refine and implement its Environmental and Social Management Systems (ESMS) commensurate with the risks and impacts of the project per the requirements of IFC PS1 and local requirements. The ESMS will include an update to the project's Regulatory Obligations Register, which will document all E&S obligations made by the borrower in the ESIA, the E&S disclosure package, and through acceptance of all regulatory conditions. The register will specify which entity (borrower, specific contractor, multiple contractors) is responsible for implementing each obligation. These obligations will be integrated into the to-be-developed sub-plans & procedures. The Construction Environmental Management Plan (CEMP) will be updated accordingly. | 04/30/2026 |
| 2 | The borrower will update its E&S clauses to require contractors and subcontractors to comply with IFC PSs, and E&S obligations defined in the Regulatory Obligations Register, as applicable to their scopes of work. Furthermore, the clauses will contain clear provisions related to labour standards and define labour monitoring expectations. | 12/31/2025 |
| 3 | The borrower will develop and implement an Operations Environment & Social Management Plan (OESMP) consistent with IFC PSs, national requirements, and all relevant E&S Obligations. The borrower will require its operations contractors to develop implementation plans aligned with the OESMP and applicable to its scope of work | 12/31/2027 |
| 4 | The borrower will update and further refine its E&S Monitoring Program (E&S MP), which will define monitoring requirements (including those established in the E&S Disclosure Package) throughout the project's lifecycle. The E&S MP will define monitoring locations, parameters, frequencies, etc., which will be regularly reviewed and adjusted as required. The E&S MP will establish 'Trigger, Alert and Response Plans' (TARP's) for sensitive components, including groundwater, surface waters, key biodiversity components, and priority ecosystem services, defining conditions that activate an alert, alert values thresholds, and response plans that outline the actions to be taken when an alert is triggered. | 03/31/2026 |
| 5 | The borrower will develop a 'Worker Handbook' applicable to their employees and will include information related to general employment terms and conditions (e.g., working hours, entitlements, social security, H&S obligations), collective agreements, worker associations, retrenchment, non-discrimination, etc., and provide a link or reference to relevant sponsor policies, plans, and procedures. The borrower will require all contractors employing project workers at the Project site to develop a 'Worker Handbook' applicable to their workers and will include information related to general employment terms and conditions (e.g., working hours, entitlements, social security, H&S obligations), collective agreements, worker associations, retrenchment, non-discrimination, etc., and provide a link or reference to relevant company policies, plans, and procedures. | 01/31/2026 |
| 6 | The borrower will enhance its management of third-party workers by establishing a procedure defining its approach to managing, providing oversight of, and monitoring project contractors' and subcontractors' compliance with local labour laws, IFC PS2, and consistent with the general principles described within IFC Good Practice Note: Managing Contractors' Environmental and Social Performance. | 12/31/2026 |
| 7 | The borrower will establish a more accessible, confidential first contact point for worker-related grievances and develop procedures to connect corporate-level mechanisms, such as My Voice and CareHub, with the site-level system. The borrower will tailor the referral pathway of CareHub to the project's operational context with a gender responsive and survivor-centred approach implemented by trained personnel, ensuring accessibility for both direct employees and third-party workers. Furthermore, the borrower will develop and implement a communication and training program on the grievance mechanism for staff, third-party workers, and management. | 03/31/2026 |
| 8 | The borrower will commission an assessment for each of the identified potential mitigation measures, confirming their viability, permitting requirements (for their implementation), and providing a cost estimate. Should the mitigation measures be deemed unfeasible, the borrower will propose alternate measures. | 12/31/2027 |
| 9 | The borrower will complete numerical groundwater simulations to demonstrate the possibility of localized reinjection to limit post-closure water-table drawdown at the Ojos de Agua. | 02/28/2026 |
| 10 | The borrower will develop and implement an influx management plan, aligned with IFC PSs, to monitor and mitigate influx and potential GBV-related impacts. The plan will consider i) awareness-raising activities for prevention and addressing GBV for community members, local authorities, and project workers; ii) monitoring procedures and KPIs to monitor impacts; and iii) survivor-centred grievance procedures, with mapped referral pathways to local GBV specialized services. Furthermore, the influx management plan will consider measures for monitoring, preventing, mitigating, and compensating for impacts to community members that there is reasonable evidence are caused or linked to the borrower´s activities or the project development. | 07/31/2026 |
| 11 | The borrower will revise its existing security risk assessments to identify potential risks posed by the project's security arrangements on internal and external stakeholders. Based on the assessment, the borrower will develop and implement a Security Forces Management Plan (SFMP) for managing private security forces aligned with national requirements, IFC PS4, and VPSHR. The SFMP will include security selection/evaluation procedures and a security code of conduct to guide the interactions between security personnel, workers, and community members. Furthermore, the SFMP will include provisions for systematic training regarding GBV, human rights, and the use of force, and formal procedures for reporting, responding to, and documenting security incidents, which will be communicated to relevant stakeholders. The borrower will work with the Provincial and federal governments in order to establish a formal Memorandum of Understanding with the Argentinian security forces aligned with IFC PS4. | 02/28/2026 |
| 12 | The borrower will develop and implement a livelihood restoration plan aligned with IFC PS5. | 03/31/2026 |
| 13 | The borrower will install fit-for-purpose bird flight detectors staggered along the entire length of the two overhead transmission lines being constructed by the project. | 12/31/2027 |
| 14 | The borrower will develop and implement a post-construction fatality monitoring (PCFM) program based on Good International Industry Practice to monitor bird flight activity, assess the effectiveness of mitigation, and identify any further measures to be taken in line with an adaptive management approach. | 07/31/2026 |
| 15 | The borrower will develop and implement a Biodiversity Management and Monitoring Plan that defines all mitigation measures for construction and operations, and details monitoring activities to evaluate the effectiveness of such measures. | 03/31/2026 |
| 16 | The borrower will develop a Biodiversity Action Plan (BAP) to achieve no net loss for Natural Habitat and net gains for Critical Habitat species. Given that the project's infrastructure is located within a legally protected area, the BAP will also include additional conservation actions. It will be developed in consultation with relevant stakeholders. | 12/31/2027 |
| 17 | The borrower will develop and implement an Indigenous Peoples Plan (IPP), aligned with IFC P7. The IPP will outline the borrower's commitment to conducting ongoing, culturally appropriate engagement as part of the FPIC process and outline monitoring processes for continuous evaluation of the implementation of the IPP. | 03/31/2026 |
| 18 | The borrower will enhance its grievance mechanisms to include a gender responsive and survivor-centred approach and develop appropriate plans for implementation, training and dissemination of the mechanism across the relevant communities, designed to avoid revictimization, support survivors and refer them to specialized GBV and/or child protection services duly mapped in the project area and, develop of a CGM flowchart and response timeline so that communities are clear on who receives each type of complaint and principles of confidentiality, anonymity and non-retaliation. | 05/31/2026 |

# 4 Conclusions

While the Project offers significant economic benefits, including employment and regional development, cumulative impacts on water resources, terrestrial biodiversity and ecosystems, demographic structure, and traditional productive activities require proactive management. Coordinated action with stakeholders, government agencies, and communities for these High Priority VECs, as well as the Medium and Low priority VECs, is essential to ensure environmental sustainability and social resilience.

## 4.1 Predicted Cumulative Impacts for VECs and Prioritisation

4.1.1 High Priority:

- VEC-1: Water Resources (potential drawdown and quality degradation of groundwater and brine systems, affecting vegas, lagoons, and critical biodiversity features such as Ojos de Agua)..
- VEC-2: Biodiversity (habitat loss within a protected area (RPFLA) and risks to endemic species (*Liolaemus* spp.)).
- VEC-3: Demographic Structure (demographic shifts from population influx, socioeconomic restructuring driven by mining employment, and increased pressure on road infrastructure (RN 51 and RN 52)).
- VEC-8: Traditional Productive Activities (labour displacement, water resource competition, cultural erosion, economic vulnerability for households that rely on these activities).

4.1.2 Medium Priority:

- VEC-4: Socioeconomic Structure (increase in demand for labour, challenges due to the increased price barrier, potential for increased corruption in public institutions).
- VEC-6: Provision of Health Services (limited capacity of local health facilities, increase in population density (both through immigration and local population growth), exposure to environmental health risks (including dust emissions, noise pollution, and traffic accidents), demand for health services (potentially overwhelming existing facilities and personnel)).

4.1.3 Low Priority:

- VEC-5: Educational Services (positive economic impacts, saturation of existing educational infrastructure, reduced quality of education).
- VEC-7: Road Infrastructure (increase in vehicular traffic, significant infrastructure upgrades).

## 4.2 Mitigation Strategies for High Priority VECs

- VEC-1: Water Resources: Implement reinjection trials, adaptive groundwater management, and consider physical barriers.
- VEC-2: Terrestrial Biodiversity and Ecosystems: Avoidance of critical habitats, species relocation, and apply biodiversity offsets for No Net Loss.
- VEC-3: Demographic Structure: Strengthen local hiring, influx management, gender inclusion, and educational partnerships.
- VEC-8: Traditional Productive Activities: Support for traditional livelihoods, fiber-use programs, generational engagement, preserve cultural heritage.

## 4.3 Additional Considerations

It is noted that CSOs have identified potential cumulative impacts to extremophile microbial ecosystems (EMEs) identified in the Ojos de Agua and the migratory patterns of flamingos as being of concern. While these receptors were not directly assessed as VECs in this CIA, RINCON has undertaken the following.

### 4.3.1 Ecological Microbial Ecosystems (EMEs)

Lowering of the water table and the desiccation of surface water bodies resulting from groundwater extraction and brine management may threaten the aquatic and semi-aquatic habitats where EMEs occur. Because EMEs are often restricted to narrow ecological niches, even modest alterations to their habitat conditions could lead to adverse effects.

EMEs are therefore the focus of ongoing research. For the EMEs present in the Ojos de Agua, resilience testing is being conducted in a controlled laboratory environment to evaluate their tolerance to potential changes in aquatic conditions and to define thresholds that will inform adaptive monitoring.

To support this work, an in situ experimental laboratory has been established, where a range of disturbance scenarios are simulated in controlled study units known as microcosms. Microcosms are experimental representations of natural systems that allow researchers to analyse ecological processes under controlled and isolated conditions (Benton et al., 2007). The purpose of these experiments is to assess system responses and to identify key factors that contribute to the stability and vulnerability of EMEs.

A Phase I Pilot Test and Phase II Pre-Assay have been completed, and a Phase III Environmental Resilience Experiment is currently underway. Results from these experiments, along with updates from ongoing conceptual and interseasonal modelling of the Ojos de Agua system, will ensure that the experimental conditions are realistic and representative of potential exposure scenarios. These scenarios include stressors such as dust deposition, declining water levels in the Ojos de Agua, flooding, exposure to depleted and concentrated brine, reverse osmosis reject water, and mixed effluent.

Although the EMEs are unique and locally significant, their small extent and isolated location make them more susceptible to localised risks and impacts, primarily those associated with the Project. As such, the potential for broader cumulative effects is expected to be very limited to negligible. Furthermore, the groundwater modelling already incorporates Argosy's Puna Mining operations and their potential contribution to lowered water tables and the desiccation of surface water bodies associated with groundwater extraction and brine management.

### 4.3.2 Flamingos

Collisions with the transmission lines and persistent noise and artificial lighting can interfere with migratory routes and resting areas, forcing birds to relocate to less suitable habitats. This increases energy expenditure and may reduce survival and reproductive success.

The Biodiversity Monitoring Program will include clear, science-based thresholds and early warning indicators for biodiversity health (e.g., species diversity, population density, habitat fragmentation indices). These will serve as triggers for adaptive management actions. The monitoring Program will be implemented using expert-led monitoring protocols for priority species, including flamingos. Collisions with the two transmission lines will be mitigated, if required, by placing bird-flight diverters on the transmission line cables, and flamingos will be monitored using a protocol designed by a species expert and surveys will be timed with regional surveys to better understand any observed population fluctuations and contribute to the regional program.

The Project is conducting bird flight risk studies to address bird collision risks associated with transmission lines. These studies identify flight corridors, collision hotspots, and species-specific behaviours, providing the basis for targeted mitigation strategies and effective prevention measures.

### 4.3.3 Cumulative Impact Assessment Engagement

Engagement activities related to the CIA was undertaken, as presented in Section 2.4.2. Engagement related to the prioritisation of VECs is planned for the first trimester of 2026.

RINCON recognises that IFC PS1 requires early and ongoing stakeholder engagement in defining/validating VECs, temporal and spatial boundaries, prioritisation of VECs based on impacts, and actions planned under the mitigation hierarchy. This engagement is planned; however, any social validation/participatory processes require community capacity building, which is currently in progress. Information about the Project and its potential impacts, including cumulative effects, will be disclosed to affected communities, and consultation with local communities on matters that directly affect them will be undertaken.

A SEP has been developed for the Project, consistent with IFC PSs. RINCON has implemented a robust stakeholder engagement program throughout the ESIA process, including in-person meetings with key local

stakeholders. Stakeholder identification and mapping were undertaken, ensuring that any vulnerable or otherwise disadvantaged stakeholders were identified, and their needs incorporated in the planning of disclosure and consultation events.

Stakeholder feedback, including the potential for the Project to impact local water supply and livelihoods, has been used to focus this assessment. RINCON started engaging with local communities, authorities, NGOs, and other local representatives in 2022 (after acquiring the Project). Engagement aligned with national requirements was completed in 2023 and 2024, related to the R3000 pilot (with the Estación Salar de Pocitos, Olacapato, and Catua communities). Engagement related to the Project commenced in 2024, with public meetings being held between July 2024 and November 2024. Further consultation was conducted as part of the national ESIA process in July 2025.

Project-related information was made available prior to the meetings in hard copies in the community centers for Olacapato and Estación Salar de Pocitos. Key topics raised by communities during the consultation relate to potential impact on water, increased traffic, impact on puesteros, local employment, and local procurement. RINCON will disclose an updated version of their SEP that will include the complete list of engagement activities conducted and a program of future engagement.

## 4.4 Advancement of the Cumulative Impact Assessment

The CIA is a live document and will continue to be updated to reflect additional data collection efforts as well as consideration of additional projects (if and when they may become active). While the 10-year temporal scope for social VECs is justified at this Project stage, based on census data availability, longer-term cumulative social trends will be considered in future CIA updates.

The next update of the CIA will incorporate the outcomes of the planned engagement activities to validate the prioritisation and mitigation/management measures. Future updates will incorporate the results of the Environmental and Social Action Plan (ESAP), including targeted data collection designed to address information gaps.

### 4.4.1 Possible Scope for CIA Development with Neighbouring Companies

Figure 40 presents a possible scope for the future CIA development with neighbouring companies. Figure 41 the estimated schedule for the CIA update, including a Terms of Reference targeted with neighbouring companies aligned with DIA conditions which is not as a precursor / dependency of the CIA update process.

Figure 40: Possible scope for CIA development with neighbouring companies

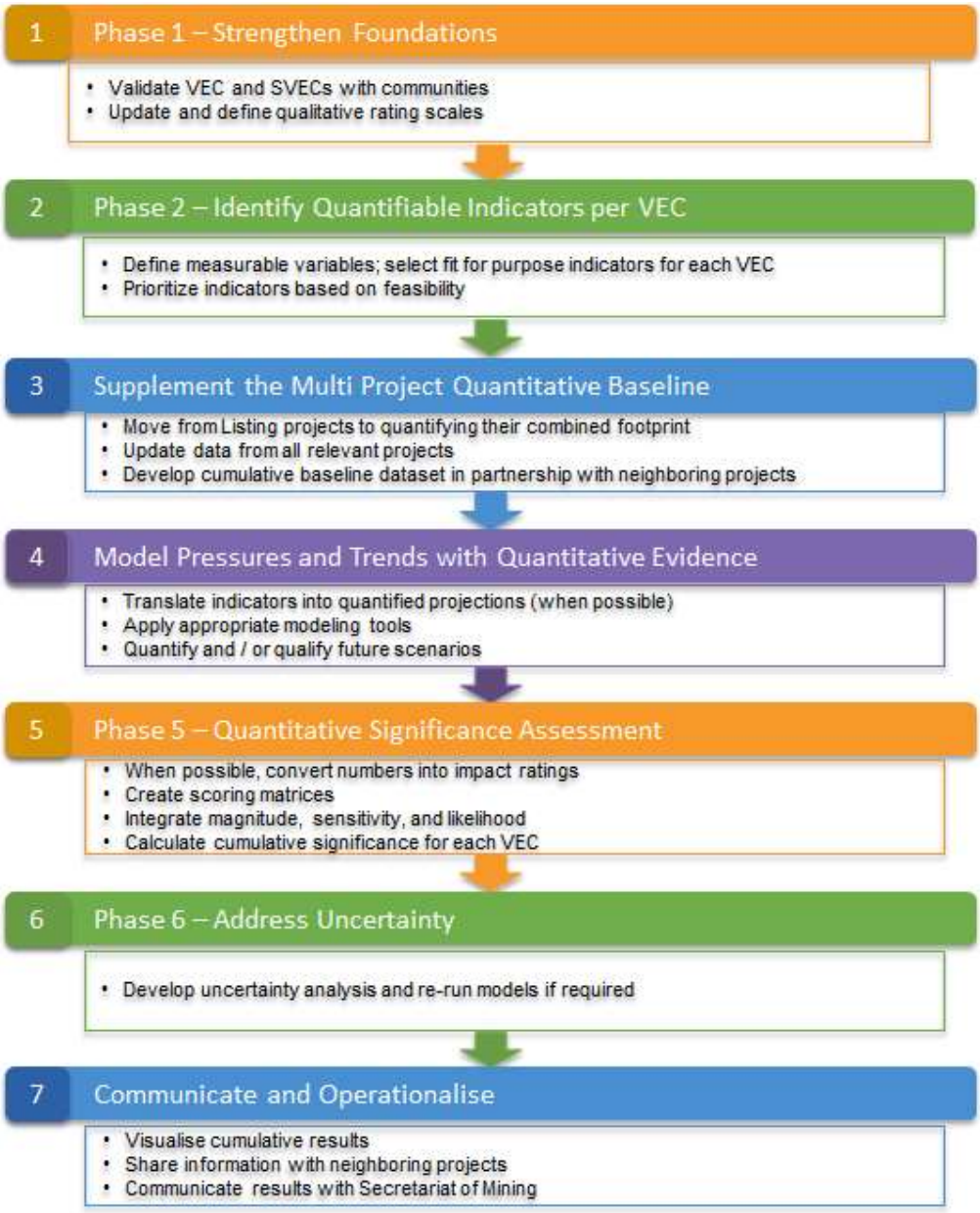
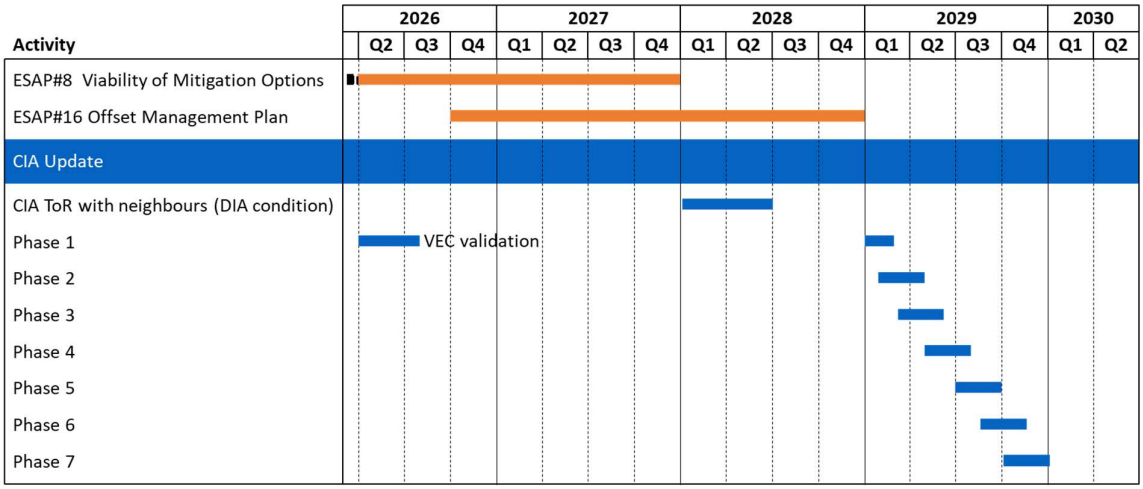


Figure 41: Estimated schedule for CIA update



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