OROCOBRE

MANAGEMENT APPROACH DISCLOSURE

CLIMATE

13 CLIMATE ACTION

Climate*

Related GRI Contents	103-1; 103-2; 103-3
Related Sustainable Development Goals	SDG 13
Related Performance Data	Environment
Related Management Approach Disclosures	Energy and Emissions
Other related documents	Environmental Policy; Sustainable Development Policy
Future Commitments	+ Continue implementation of our TCFD roadmap
Related Material topics	+ Climate Change Risk (TCFD) + Environmental Management + Responsible Supply Chain

Strategic significance

We acknowledge that our climate is changing, and risks and opportunities are emerging across medium and long-term horizons. These risks need to be identified and assessed in the short term to be effectively managed in the future.

Orocobre's products, operations and communities are directly impacted by the physical and transitional risks and opportunities presented by a changing climate.

Olaroz Lithium Facility production processes use natural solar energy to evaporate brine and concentrate the lithium content before it enters the processing plant. Because natural evaporation represents a critical variable, the Company's production process performance is naturally dependent on climatic conditions. Climate pattern changes reflected in different levels of annual evaporation, temperature, rainfall frequency, solar intensity or humidity impact the evaporation process directly.

The lithium carbonate we produce at the Olaroz Lithium Facility is used in electric vehicles and renewable energy storage systems, both of which are fundamental for the global transition to a low-carbon economy. The Company both supports and benefits from policies and regulations that promote carbon reduction and limit further contributions to climate change.

At our Borax Argentina operations, extreme weather events have the potential to disrupt operation at our sites in the puna, as well as transportation within our value chain. Weather phenomena like El Niño or La Niña can impact rainfall, effecting the efficiency of evaporation ponds on site at Campo Quijano.

The resilience of local communities to extreme weather and changing climatic conditions is also a core focus, given our strategic commitment to communities in the region.

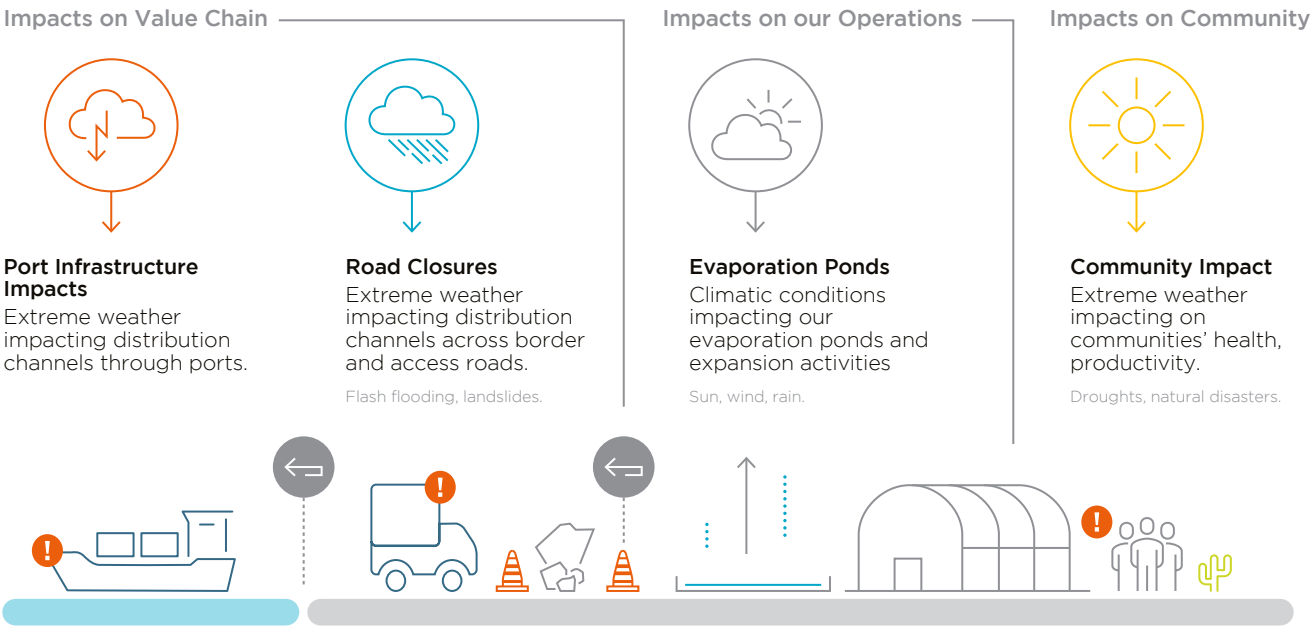
We are constantly exploring ways to reduce energy and water consumption to improve efficiency and thus reduce emissions and impacts on climate. Some examples of our actions to minimise environmental impact include heat and CO2 recovery; innovative energy supply contracts that enable thermal energy capture for process heat; water-reduction initiatives to enhance recovery rates; and optimised workforce rosters and streamlined logistics to reduce transport emissions.

Impact boundary

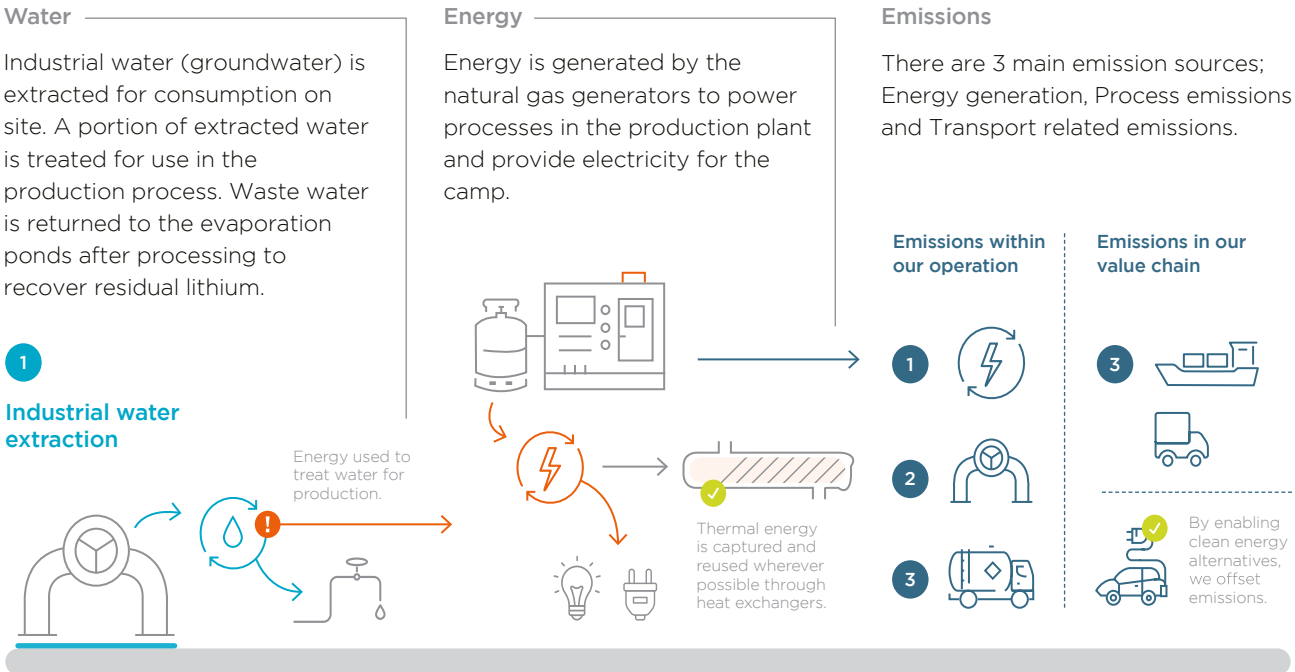
This management approach disclosure refers to the activities of Sales de Jujuy (Olaroz Lithium Facility) and Borax Argentina.

Orocobre considers physical and transition risks and opportunities associated with climate change. Physical risks and opportunities can be either event-driven (i.e. acute) such as heatwaves, storm events and resulting floods; or progressively increasing or evolving (i.e. chronic) such as long-term changes in rainfall trends, increase in global and regional average temperature and resulting sea level rise. We consider physical impacts across every aspect of our value chain, including operational sites and transport routes for both inbound supply of raw materials and outbound distribution of our products. We have outlined some of the current physical climate impacts on our operations, supply chain and wider community below. With climate change, these impacts will be increasingly uncertain and could present as threats, as well as opportunities.

(*) This Document is part of Orocobre's Sustainability Report and should be understood as part of itslef.
Understanding Sales de Jujuy as Sales de Jujuy S.A., SDJ or Olaroz Lithium Facility and Borax Argentina as Borax Argentina S.A or BRX.



Transitional risks and opportunities are those associated with a transition to a lower-carbon global economy. The most common of these relate to policy and legal actions, technology changes, market responses, and reputational considerations. The diagram below identifies elements of our operations and value chain that have impacts on the environment and could be exposed to transitional risks and opportunities. Transitional opportunities include increasing market demand for electronic vehicles that rely on our lithium products. Financial and reputational risks may also be relevant when environmental externalities are monetised (for example, in carbon trading or off-sets). Energy prices could be impacted if the supply is emissions intensive and water could be impacted if this resource becomes increasingly scarce.



We also consider climate related impacts on our local stakeholders, assessing how we can build greater resilience in the communities around our operating areas.

Management approach

In accordance with Orocobre's commitment to the UN Sustainable Development Goals, and in line with SDG 13: Climate Action, the Company is working to enhance its awareness and institutional capacity on climate change mitigation, adaptation, and impact reduction. It is also working to strengthen the resilience and adaptive capacity of its operations and local communities to climate related hazards and natural disasters.

Policies that demonstrate the Company's commitment to understanding the risks and opportunities associated with a changing climate include:

- Environmental Policy
- Sustainable Development Policy

Management Systems

We are implementing the recommendations of the Task Force for Climate Related Financial Disclosures (TCFD) in our climate management approach. Our progress against these recommendations is outlined below:

- **Governance**

We have established a robust governance structure for the management of climate-related issues at the Board level, with the Sustainability Committee and Audit and Risk Committee having oversight of climate-related issues. Our focus is now on education across the broader group to clarify management roles and responsibilities, and their interaction with the Board level committees regarding climate change related risks and opportunities.

- **Risk Management**

We completed a top-down risk assessment during FY20, identifying both physical and transitional climate-related risks and opportunities along our value chain. A climate risk matrix has also been developed to assess the potential financial materiality of the identified risks and opportunities in the short (0-3 years), medium (3-10 years) and long-term (10-20 years). Our executive team have applied this matrix to the identified risks and opportunities to prioritise them.

Climate related risks, opportunities and management approaches identified:

Type	Value Chain	Driver	Description
SHORT TERM (0-3 Years)			
Physical Risk/ Opportunity	Operations	Changes in precipitation patterns and increase in temperatures	The production process at Olaroz Lithium Facility draws on natural solar energy to evaporate brine extracted from the salar and to concentrate the lithium content before it enters the processing plant. Operational productivity is thus dependent on environmental and climatic variables. Climate change in the region may lead to a greater proportion of dry years to wet years, and an increase in mean and maximum temperatures. This would result in higher evaporation rates and (in turn) higher productivity and increased revenues.
Management: Position the Company effectively to capitalise on opportunities for increased productivity as they arise. Actively testing selected emerging technologies to improve recovery and minimise water consumption. Maintain optimal pond inventory levels, always maximising overall pond evaporation area.			
Physical Risk/ Opportunity	Supply Chain/ Operations	Increased uncertainty relating to severity of extreme weather events	Extreme weather conditions can impact the route across the border between Chile and Argentina - a transport route used for the import of raw material and export of product. Transport between the Tincalayu Mine and Borax Argentina Plant in Campo Quijano can also be impacted by weather events. An increase in temperatures could also reduce incidences of snow covering transport routes and associated disruptions in some areas.
Management: Contingencies in place to ensure operational continuity during significant route closure periods, including alternate transport routes and local auxiliary sources for critical production materials. Maintain safety stocks to ensure operating continuity.			

Transitional Risk/ Opportunity - Products and services	Customer	Development and/or expansion of low emission goods and services	The growing shift from fossil fuels to renewable energy is driving greater demand for energy storage solutions and lithium-ion batteries. This will continue to create strong demand for Orocobre's lithium products as countries enforce shifts to low-carbon alternatives.
Management: Sustain core business and the production of critical input materials for batteries that support transition to low carbon future.			
Transitional Risk/ Opportunity - Resource Efficiency	Supply Chain	Financial and reputational drivers to reduce Scope 3 emissions	The location of Orocobre's operations, and the distance between some input suppliers, operations and end-users impacts the financial and environmental costs associated with transport and distribution. The opportunity exists to minimise these costs through increasing local supply contracts and through the co-location of core value-adding processes in the value chain.
Management: Orocobre is deploying a strategy of vertical integration to establish localised solutions for added value at both ends of the value chain. The construction of a lithium hydroxide plant in Japan (close to customers) will minimise the financial and environmental costs associated with product optimisation and distribution. A commitment to local supply is also reinforced through the Company's shared value strategy which promotes local employment and local supplier development for our operations in Argentina.			
Physical Risk	Operations	Increased uncertainty relating to flooding events	Flooding on sites due to extreme weather (both rainfall and high winds) can impact effectiveness of evaporation ponds, damage access roads, facilities and bore holes, delaying work and requiring capital for repairs and/or preventive adaptation measures. Overflow of evaporation ponds at Campo Quijano could also lead to environmental and social impacts and associated reputational risk.
Management: Earthworks are designed to create protective barriers to reduce the impact of severe flooding events. Hydrogeological and geotechnical assessments are carried out for evaporation ponds, investigating climate impacts on the stored water balance (rainfall/evaporation). We use mechanical evaporators for some ponds to further reduce water levels during low rainfall seasons. These measures contribute to mitigating residual flood risk, caused by strong rainfall in short periods of time.			
MEDIUM TERM (3-10 years)			
Transition Risk	Operations	Increased pricing of GHG emissions	Increased pricing of GHG emissions in the global market and potential impacts on operational costs. Orocobre's operations maintain a low emissions profile, but still account for approximately 65kt of Scope 1 emissions annually. If regulations were introduced requiring the Company to cover the cost of direct emissions, Orocobre would have an additional operational expense of approximately $1.8 million per year (based on carbon price of USD28/t). We would also be exposed to potential flow through costs associated with our supply chain emissions.
Management: Monitor and measure emissions and emission reduction initiatives, optimise efficiency of operations to reduce exposure to carbon price risk, and ongoing evaluation and implementation of alternative technologies contributing to emission reduction.			

- **Strategy**

We have defined what short, medium and long-term mean to our business from a climate change perspective. Two detailed climate scenarios out to 2040 were used to guide the identification of risks and opportunities in the climate risk assessment. These scenarios incorporated physical and transitional drivers and potential impacts on our business across products and services, supply chain, communities, adaptation and mitigation activities, investment in R&D, and operations. A summary of each of the scenarios used in our assessment is included below. Note that Scenario 1 incorporates a below 2 ˚C pathway:

Scenario 1 - Ambitious, coordinated global action:

In this scenario, the goals of the Paris Agreement are achieved with signatories of the Paris Agreement significantly ramping up their ambition from 2020 onwards. This would result in global emissions peaking shortly after 2020 and trending down thereafter, achieving a 30% (for a below 2 ˚C pathway) to 50% (for a 1.5 ˚C pathway) reduction by 2030 (on current levels).

- The shift in the global economy is supported by international, national and sub-national policy and market frameworks, global emissions trading, and action by businesses and consumers.
- The growth in residential and commercial renewable energy deployment and the rapid move to EVs is accompanied by a significantly increased demand for battery storage systems.
- Consequences of physical risks are contained, even though already locked-in impacts are still felt.

Scenario 2. Patchy, insufficient progress

This scenario is set in a world where governments deliver on policies presently in place at the time the assessment was carried out, but nothing else. This results in about 3.2°C warming above pre-industrial levels, missing the goals of the Paris Agreement.

- Continued reduction in cost of new energy technologies assists the clean energy transition; however, the momentum is not enough to offset the effects of an expanding global economy and growing population.
- Limited policy intervention results in an uncoordinated transition, both at the national and international levels.
- Physical aspects of climate change are increasingly felt across the world. Uncertainty on when climate thresholds will be crossed remains.

Our focus for FY21 is for our outcomes of our climate related risks and opportunity analysis to be further integrated into the Orocobre risk management processes. This will allow us to document the established ongoing links with our businesses, strategy and financial planning.

Metrics and Targets

Orocobre monitors and reports on climate-related indicators annually in its Sustainability Report and in investor surveys such as the CDP Climate Survey and the S&P Global Corporate Sustainability Assessment (CSA).

We monitor climate-related metrics, such as water usage and intensity, energy consumption and intensity, absolute emissions and emissions intensity, waste and biodiversity at our operations. We began reporting these metrics in 2017 for Olaroz Lithium Facility and during FY20, we have also implemented reporting of these metrics for the Borax Argentina segment of our business. Preliminary emissions reduction targets have been established for the Olaroz Lithium Facility and are stated below.

		Preliminary Targets	
INDICATOR	**FY20**	**FY25**	**FY30**
Process Heat intensity (GJ/t LCE)	< 23.5	< 22	< 20
Operational Scope 1 emissions (tCO2-e)	< 39,500	< 38,000	< 35,000
Operational emissions intensity (tCO2-e/t LCE)	< 3.14	< 3	< 2
% Energy from Renewables	0	5%	20%

Our most recent performance against these targets, and our other environmental metrics are included in the Orocobre Environment Performance Data, available on our website.

Orocobre acknowledges that the global landscape is changing and that threats and opportunities are emerging across medium and long-term horizons that need to be identified and assessed in the short term to be effectively managed in the future. Initiatives to build resilience with the local communities where we operate are included in our Communities Management Approach Disclosures and case studies available on the Orocobre website.

Responsibility and Accountability

At group level, during FY20, the Chief Sustainability Officer had overall responsibility for climate risk management.

Responsibility for managing the climate-related risks (both threats and opportunities), associated with specific business drivers resides with the executive responsible for the relevant business area.

Orocobre is planning to incorporate KPIs relating to climate-related risk and opportunity management into operational and executive performance reviews.

FY20 update

During the reporting period, and consistent with the commitment in our FY19 report, we have been continuing our first formal Climate Risk Assessment in line with recommendations of the Task Force on Climate-related Financial Disclosures (TCFD). The objective of this assessment is to provide greater understanding of climate-related risks (both threats and opportunities), so that they can be integrated effectively into strategic, and operational decision-making.

At Olaroz Lithium Facility, we achieved our FY20 targets for Process heat intensity, Operational scope 1 emissions, and Operational emissions intensity. We also made progress expanding the scope of our reporting of metrics for the Borax Argentina operations.

Our most recent performance against our emissions reduction targets is included in the Orocobre Environment Performance Data, available on our website.

Additional information regarding Orocobre's management of energy and emissions can also be found in the Energy and Emissions management approach disclosure.