



SUSTAINABILITY REPORT

MINERA VALLE CENTRAL
2018-2019





RESPONSIBLE
OF THE REPORT

GENERAL
MANAGEMENT
MVC

CONTENT
REVIEW

GENERAL
MANAGEMENT MVC

SUSTAINABILITY
COMMITTEE



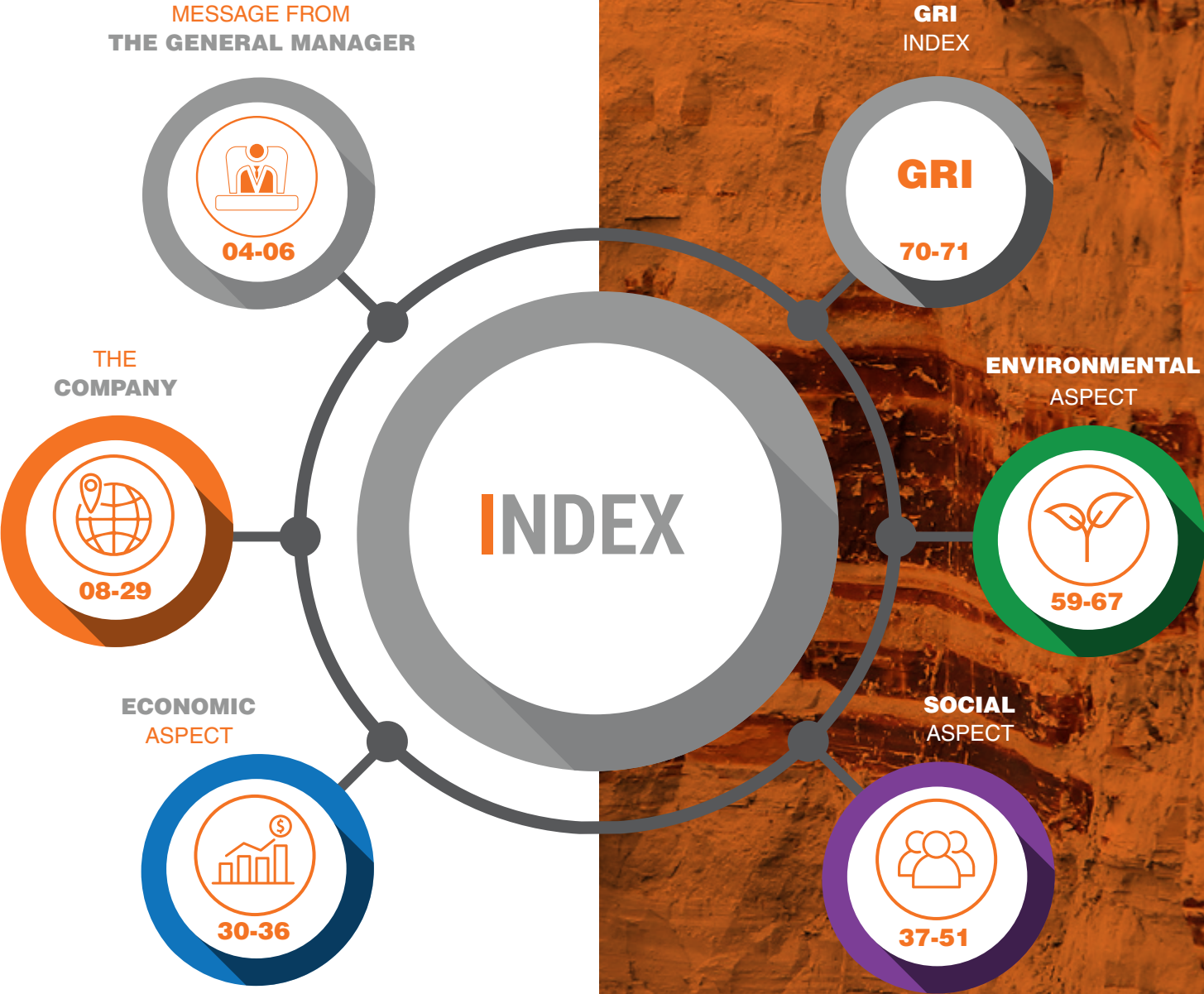
DESIGN AND CONTENT
WRITING AND
EDITING

ASSISTANT
MANAGER OF
CORPORATE
AFFAIRS



PHOTOGRAPHY

ASSISTANT
MANAGER OF
CORPORATE
AFFAIRS



MINERA VALLE CENTRAL

WEALTH BEHIND A MINING LIABILITY



PRINCIPLES THAT GUIDE THE ACTIONS OF MVC



PURPOSE

Contribute to social, economic and environmental sustainability of the mining industry in Chile and worldwide.



MISSION

Offer integral, innovative and safe solutions to the mining industry through the tailings treatment.



VISION

Be a world point of reference in the treatment of mining wastes, recognized for boosting the economy where the chores are located and promote respect for people, communities and interest groups.

VALUES



RESPECT

We trust and respect people, institutions, communities and environment. We interact in an open and collaborative manner, considering all the actors. In the same way, we place emphasis on transparency, teamwork and integrity, promoting an effective leadership that let us face current and future challenges.



OPERATING EXCELLENCE

MVC pursues excellence in all its activities to achieve always the best results, through the processes optimization, efficiency, austerity and care of its resources. It promotes spaces for creativity to generate innovation in order to develop better practices and results. The operating excellence results from the teamwork, creating value for the company, the people and the mining industry.



SAFETY AND ENVIRONMENT CARE

There is no goal above people's safety, health and environmental care. These are priority conducts to be carried out by all the team, for its sustainability and fulfillment of the existing standards.



COLLABORATIVE WORK

MVC promotes multidisciplinary teamwork, favouring the involvement of cross-sectoral groups of interest, with the objective of achieving an intelligent management, sustainable over time.

CHRISTIAN CÁCERES MENESES

The financial year 2019 corresponded to a term of multiple challenges and achievements. MVC potentialities strengthened in the long run and, despite the problems that the Company had to deal with in relation to mining industry, the economic and social current context in Chile, the world and our own operation; the focus of the Company is to face the future.

Because of this, the Sustainability Report corresponding to the year ended December 31, 2019 will have inserted an auspicious sign and confidence in the future.

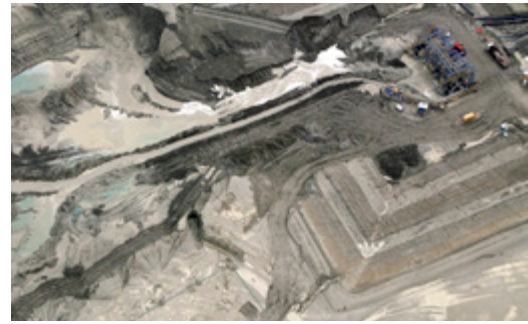
We have completed 27 years working to offer integral solutions to the tailings problematic. We started when nobody was yet talking about this system in Chile. The wealth of the deposits plus a less demanding environmental legislation, made the companies not to be so rigorous with the destination of its tailings. However, this changed. The low grades, the greater difficulty of exploitation and the lack of new deposits, make mining companies and authorities to take a new look to the potential of the huge volumes deposited in tailings. On the other hand, the existence of tailing dams in the middle of urban areas, some of them without plans for closure and some others directly abandoned has meant that the deposits to now an importance never seen before.

The Ministry of the Economy is boosting a Tailings National Policy that aims in brief outlines, to take over a historical debt, as in the case of mining environmental wastes reprocessing which implies, among other things, the reuse of these and the closure, ensuring its physical and chemical stability, strengthen its monitoring, reporting and control.

In this new scenario, our experience and knowledge is key. Few companies in the world have designed and operated transport facilities, storage, processing and re-deposit of tailings, on a larger scale, as we do. Thus and for all the projects ahead, we aim to become a world-class company, able to contribute with innovation, technology and great professionalism to the integral treatment of tailings, in a framework that considers as main pillars social, economic and environmental sustainability of the mining industry at global level.

In 2019, we produced 26,382 tonnes of copper and 1,417,343 pounds of molybdenum, lower than the originally expected, mainly due to a less recovery of the minerals coming from the old tailings, which we continue studying to achieve project recoveries.

The international price of copper had also a negative impact, reaching some times US\$2.50 per pound; all projections trends downward. This was closely linked to the trade war between the United States and China of 2018 that hit hard almost all mining, including the secondary one, which is how tailings treatment is currently known and that was formerly considered as wastes of the extractive mine sites.



Nonetheless, we managed to finish year 2019, meeting our financial commitments.

At a national level, by mid-October we faced a social explosion rarely seen before in Chile, full of all kind of demands that did not leave anyone indifferent.

Assuming this hard scenario, MVC has decided to adopt a proactive policy, taking different initiatives that directly benefit its permanent workers, applying these to its external collaborators and suppliers. This not only involves improvements to salaries but also the way to meet deeper requirements, linked to the quality of life that people and their family or social environment expect.

Beyond difficulties, we also had important achievements, such as the successful collective bargaining with our workers, whose agreements will last three years, allowing us to foresee a stable labor climate in the mid-term and, especially a reaffirmation of the commitment and the rapport with all the members of our Company with the goals, which we have set for ourselves. Among these goals, we include the good relationship with our nearby communities and an unrestricted respect for the environmental protection.

Communities are not only just neighbors for MVC, but strategic partners in their work. Thus, we are continuously developing projects oriented to identify their needs and to find the way to meet them, always acting in concert. In this way, we have established social scholarship programs, specific mentorships of gender that promote women incorporation to the mining field, agreements with universities as well as programs for older adults, just to mention some initiatives.

Another MVC management's essential aspect is the commitment with the environmental sustainability, that has come true in various initiatives, such as the protection of vegetal species at risk of extinction, the conservation of wetlands - considering its huge value in all the area of biodiversity and regulated use - and water recovery, a priority issue at a time when Chile is facing, for a decade now, the greatest megadrought of the history.

For these and other reasons, in MVC we are convinced that we are in the best position to keep consolidating our mission, which is to provide integral, innovative, efficient and safe solutions to the tailings problematic in Chile.

To conclude this letter, it is my duty on behalf of this Company, to thank all the collaborators of MVC, contractors and suppliers for their big effort shown in the period. Without their commitment and dedication, not all our challenges and achievements would have been possible. People constitute our main and most prized asset. Personally, I would like to extend this recognition to our shareholders, for the confidence and support granted throughout the year.

Christian Cáceres Meneses
General Manager
Minera Valle Central



THE COMPANY

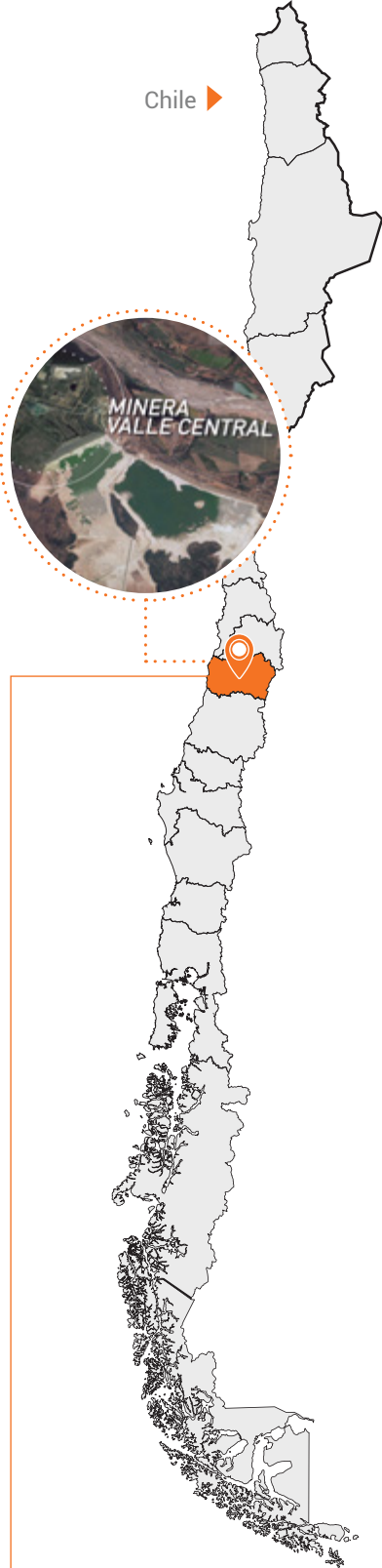


MVC is a Company that offers comprehensive solutions to the tailings problem, including the design of storage facilities, processing, transportation and re-depositing, in addition to engineering projects and water recovery.

It also helps in closure plans, generation of capacity of emergencies in dams and environmental cleanliness solutions, as per new legislation. It operates in the secondary mining industry and from the outset; it has based its work on innovation, knowledge management and continuous improvement.

The Company started in 1992, with a small operation to recover copper from fresh tailings of Codelco-Chile División El Teniente (DET). The work expanded over the years to become one of the largest companies around the world, which recovers copper and molybdenum on a large scale from mining wastes. MVC has the rights to remove and process the old tailings that División El Teniente has deposited at both Colihues and Cauquenes dams, in the region of Libertador General Bernardo O'Higgins, many of which are more than 50 years of age. This milestone has enabled MVC to recover copper and molybdenum with better grades, consolidate its business model and strengthen its leadership in the industry at global level.

MVC has an excellent specialized team of engineers who offer all their expertise and knowledge to design optimum systems of tailings treatment.



Geographic Location / Colihues
KM 13, Requinoa, Region of
Libertador General Bernardo
O'Higgins.

► MINERA VALLE CENTRAL IN FIGURES ◀

27

years in operation

Accumulated production of **400 thousand** tonnes of cooper and **11 million** pounds of molybdenum

In the next 15 years, it will produce **600 thousand** tonnes of copper and **36 million** pounds of molybdenum from fresh and old tailings

MMUSD\$ **350**

of investment in infrastructure in the 2017-2019 period



90%

of its suppliers are from the Region of Libertador General Bernardo O'Higgins

0.3%

head grade processing tailings

It employs directly and indirectly **1000 families** of the Region of El Libertador Bernardo O'Higgins

USD\$ **1.4**

per pound of copper, a highly competitive cost in the industry

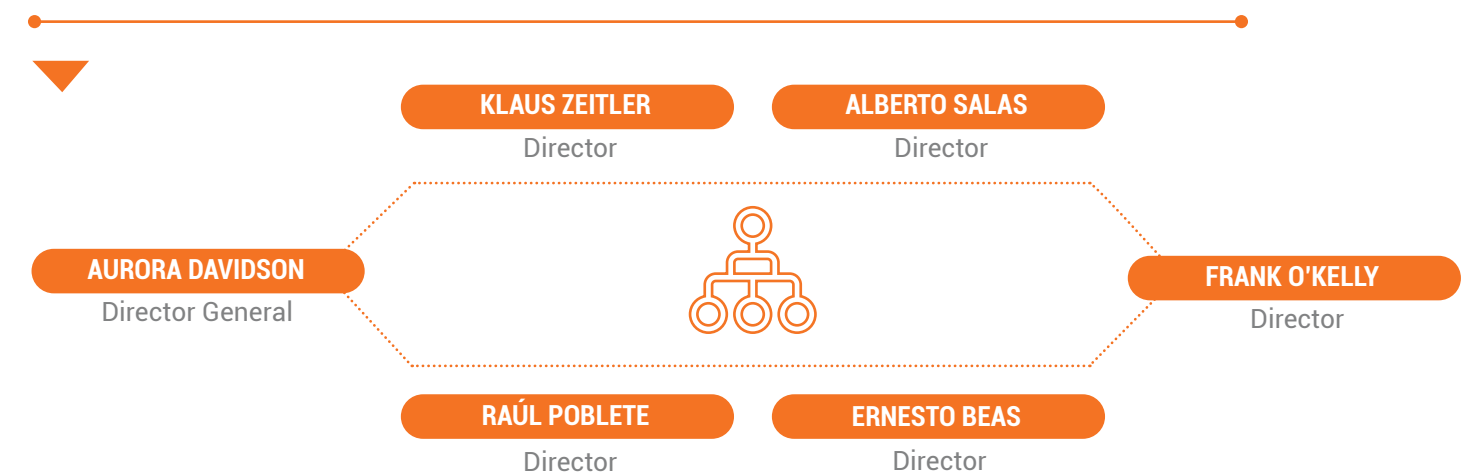
■ SHAREHOLDERS



MVC is 100% part of the Canadian mining company Amerigo Resources Ltd., a society founded in 1984, whose principal asset is the operation of MVC. Their headquarters are in British Columbia, Vancouver, Canada. Amerigo Resources Ltd. shareholders are financial institutions and natural persons who have the power to direct the development of the Company and for the election of directors, among other issues. At the same time, they have access to information regarding the development,

strategies, processes and costs of MVC. The Company promotes a two-way relationship of permanent evaluation, paying particular attention to keep a cross and transparent communication on the corporate processes. Once a year, a General Meeting is held and all the information of the Company is made available to the directory and shareholders for their inquiries. The financial statements are also available and there is a time to answer to any question that may arise from the different analysts in economical, social and environmental matters.

■ DIRECTORS



■ EXECUTIVES



INSTITUTIONAL ARCHITECTURE

The Company has the power to designate the executive positions straightly related to economical, environmental and social matters. In this line, the Administration is composed of:

Economic Area



Finance Manager



Administration and Development Manager

Environmental Area



Assistant Manager of Quality, Environment and Safety

Social Area



Assistant Manager of Corporate Affairs

On the other hand, 100% of the executives of the Company live in the Region of Libertador Bernardo O'Higgins.

MANAGEMENT COMMITTEES



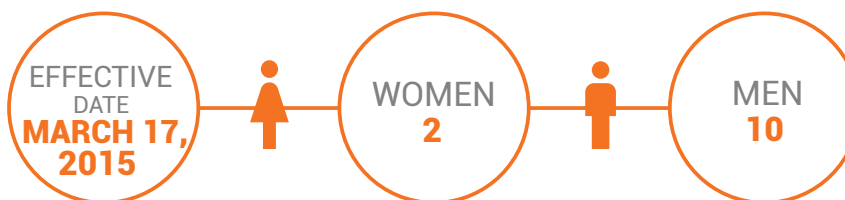
Joint Committee on Hygiene and Safety

With the aim of minimizing the risks, there is at MVC a Joint Committee on Hygiene and Safety, whose purpose is to contribute to the training of a culture based on awareness of work accidents and occupational diseases. This committee represents 100% of the employees.



Health Management Committee at Work and Psychosocial Risk Factors

This committee represents all workers, and its purpose is to evaluate, manage, develop and control the different activities of health established by the Company, as well as psychosocial factors. Among their responsibilities are the implementation of protocols, guidelines and technical standards established by the Ministerial Regional Health Department.



Bipartite Committee on Training

The Company has a Bipartite Committee on Training, which aims to promote the development of job skills of the employees and contractors, improving productivity and processes quality. With this, it seeks to motivate the participation of the delegates and workers of the Company in the training and development processes.



Sustainability Committee

The Sustainability Committee mission is to ensure that the information of Sustainability Reports meet the requirements of transparency and appropriate methodologies. The first and the second Sustainability Report made by MVC were done with the consultancy of an independent company expert on writing and methodology of this kind of documents. From then on, it has been made with internal resources, following the methodology learnt.





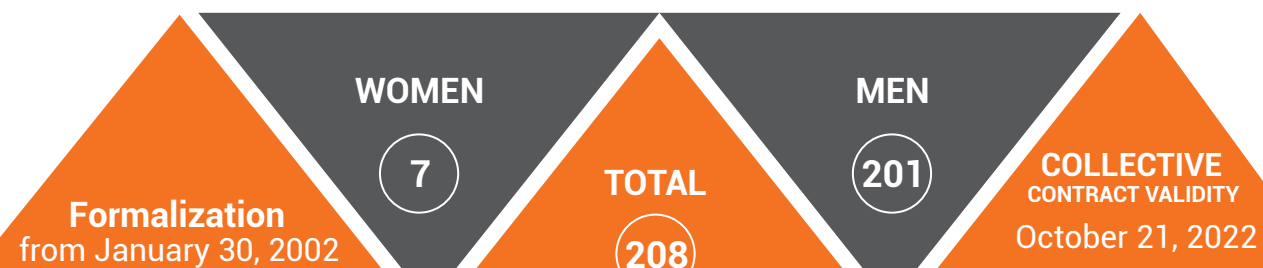
UNIONS



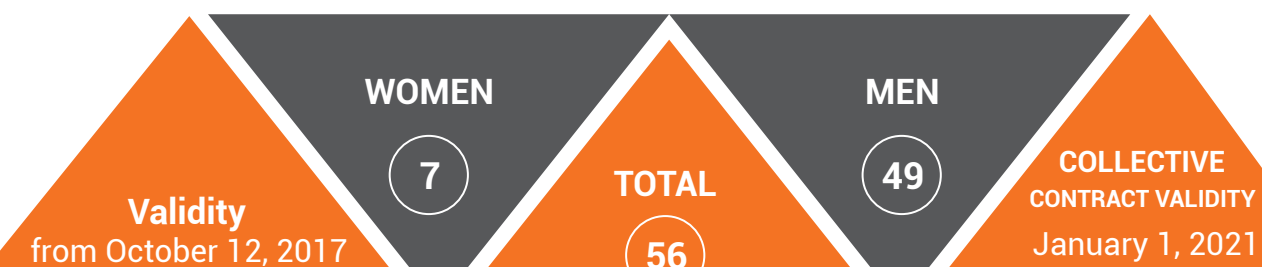
Maintaining reliable working relationships is part of the basic standards of MVC. Consequently, the Company promotes the creation of unions of workers and supervisors, seeking to minimize eventual discontents among the employees. Unions of MVC aim to ensure the welfare of their adherents, ensuring that they can

work in optimum safety and hygiene conditions and that they get benefits in accordance with their contribution to the organization. In addition, is responsible for maintaining a permanent dialogue between the employee and his delegates, promoting mutual respect, where everyone feel represented.

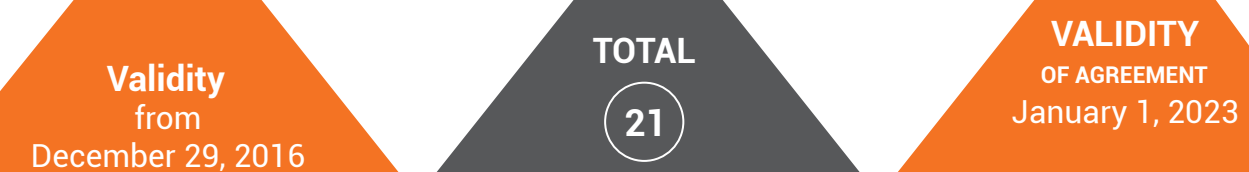
WORKERS



SUPERVISORS



ADMINISTRATIVE WORKERS GROUP



HISTORY - THE ROAD BEHIND US



SECONDARY MINING

TAILINGS

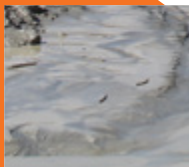
Mining of sulphides of copper extracts vast quantities of material from the deposits, mainly rock, which is blasted to obtain the desired minerals. Only a small fraction corresponds to the element of economic interest to be recovered, equivalent to less than 1%.

Once the rock is crushed and concentrated through flotation processes, a concentrated material is obtained, with a higher quantity of copper, ranging between 20% to 30% that can be commercialized or processed until it becomes pure metallic copper.

The remaining material, poor in copper concentrate, is denominated "tailing", and must be deposited in a safety way, environmentally responsible.



MINING TAILING
is mainly crushed rock and water.



• NON-TOXIC

Toxicity can appear in later stages, when certain tailings react with water and solubilise toxic that may be transported dissolved in water.

• IT IS NOT A SOLID AND HAZARDOUS WASTE

Mining tailings are excess natural rocks processed, which do not correspond to human activities.

Source: Sernageomin



TAILINGS DUMPS

• A tailing dump is an engineering work designed to meet domestic legal demands, in order to keep them away from the surrounding ecosystem. These dumps are regulated under the D.S 248/2007.

• The entity responsible to regulate the design, construction, operation and closure of tailing dumps is Chile's National Geology and Mining Service (Sernageomin), through the Department of Tailing Deposits, the Department of Environmental Management and Site Closure and the Department of Mining, Safety and Inspection.

Currently, there are several kinds of tailing dumps, which vary according to the amount of water it comes with, in other words, its density; as well as the way of containing the deposit.

1 TAILING DAM

Deposit where the wall is built by the coarse fraction of the tailing, compacted, resulted from a hydrocyclone, which is an operation that separates solid coarse and fine, through a water flow discharge. The finest part named limes, is deposited in the dump.

2 TAILING IMPOUNDMENT

It is a dam where the retaining walls are made of soil, clade and surrounding rocks, which is waterproofed in the top and in the inner slope. There are also named tailing dams those deposits located in a natural depression of the land that does not require a wall to be constructed.

3 THICKENED TAILINGS

Deposits where the surface is subjected to a sedimentation process, in a thickening equipment, that favours sedimentation of solids (similar to the cleaning of the rivers used for extracting drinking water), with the purpose of removing an important quantity of contained water, that may be reused to reduce water consumption of clean water sources.

The thickened tailings dump is built as to prevent tailings to leak to different non-authorized areas. It also has recovery ponds of water to minimise the remaining tailings that may flow beyond the dump.

4 FILTERED TAILINGS

Is similar to thickened. It is a dump where material contains even less water, thanks to a filtering process, to assure a humidity below 20%. This treatment is similar than drinking water process.

5 PASTE TAILINGS

Corresponds to a mixture of water and solid, with abundant fine particles and a low water content, so that the mix has a thick consistency, similar than a high-density slurry.

6 OTHER KIND

There are other kinds of tailing dumps, such as those in underground mines or abandoned pits, among others.

740 MINE TAILINGS DUMPS IN CHILE



Chile is the third country in the world generating tailings from mine sites, with about 1.5 million tonnes per day, preceded by China and the United States.



101

► Operative



469

► Inoperative



170

► Abandoned

HIGHER QUANTITY OF DUMPS IN CHILE

386

Coquimbo
Región

161

Atacama
Región

47

Antofagasta
Región

Source: Sernageomin 2018

Of the 740 tailings dumps, 22 corresponded to large scale mining, which means that they had a 98.6% of the tonnage of tailings currently produced in Chile.

Many of the abandoned dumps constitute a risk for the population and environment. Over the last few years, disaster events in tailing dumps have claimed the lives of many people. The most recent case was a dam burst at the Vale Mine in the southeast Brazil, losing approximately 125 hectares of forests, equivalent to 125 football courts. In addition, social problems have increased, because of the uncertainty and concern shown by the communities located along the dams, for both their health and their territories.

A concrete solution is thus urgently required on mining environmental liabilities and that is where secondary mining comes in.

One of the most relevant discoveries in recent years, has been to determine the presence and concentration of 55 chemical elements in Chilean tailings, including those of economic potential, such as cobalt, rare-earth compounds and other substances of significant value in the international metal market.

This new view has made today tailings to be considered as a relevant part of the mining of the future, since they add value and open huge challenges to achieve development.



The new economy proposes:

- NOT TO DISCARD ANYTHING
- TO USE INPUTS IN A BETTER WAY
- TREAT WASTE AS A VALUABLE RESOURCE

Being aware of these needs and of the productive and sustainable value that tailings processing may generate, MVC is developing comprehensive solutions for the treatment of these.

To operate, MVC goes through each case in particular, the kind of mineral present in tailings, its recovery potential and safety. It also evaluates the required investments, conducts environmental impact studies for the tailing dump and its location in certain geographic areas.

EQUATOR PRINCIPLES

MVC has signed up to the Equator Principles since 2015, a frame of reference, which was launched in 2003 so that the finance institutions might determine, evaluate and administrate social and environmental risk of their projects. These principles were driven by separate entities of the financial sector in coordination with the International Finance Corporation, an agency attached to the World Bank. This is a minimum standard, voluntary, to support the decision making in financial matters.

Members of these principles are committed to not only implement these social and environmental policies, but also reject customers or projects not aligned with their postulates. Additionally, propose a series of commitments, ensuring projects to be binding and socially responsible, apart from being environmentally friendly.

These definitions mark the action of MVC in different activity areas. At the operational level, its commitment is to generate safer and more stable tailings chemically and physically; environmental remediation in case they become necessary; major recirculation of water, considering the increased shortage of this resource; greater safety in tailings redeposit through new technologies; and research and development of technologies that enable to exploit these resources, transforming mining environmental liabilities in mining assets.



TAILINGS POLICY

Chile is the largest producer and exporter of copper in the world, making the industry an important economic motor. The wealth of mining sites in Chile made that companies were not be aware of the value of the contents of tailings. However, the drop in copper grades, the greatest difficulty for exports and the lack of new mining sites have led to see through different eyes the potential of the large volumes deposited. In addition, the presence of dams within urban areas, some of them without closure plans and some others straightly abandoned, have raised the concern of the authorities.

The Ministry of Mining is promoting a National Policy of Tailings that aims to provide higher security to the dams, strengthening its monitoring, reporting and inspection. Besides, it is promoting the remediation of the inactive tailings, with programs, tools, compensation systems and promoting reprocessing and reuse of deposits, creating economic opportunities. Its preparation took into account international disasters related to dumps and tailings; the demand of investors regarding dumps management and a possible increase in social conflicts and concern of the community.

Among the issues raised for a new policy of tailings treatment are creating new paradigms regarding its generation; giving a concrete solution to mining environmental liabilities; creating a new industry from its wastes and the incorporation of new technologies in productive processes.

AXES OF THE NATIONAL POLICY OF TAILINGS



POPULATION SAFETY

Strengthen monitoring, reporting and inspection of tailing dumps and implement and coordinate measures in case of emergency.



ENVIRONMENT

Design and implement programs and tools of remediation of abandoned tailing dumps, considered mining environmental passives.



CIRCULAR ECONOMY AND INNOVATION

Foster the reprocessing and reuse of tailings dumps, creating economic opportunities and promoting new technologies.

The new tailings treatment strategy, agreed in 2019, considers to ensure the abandoned mining dumps, which would imply among other things, the reuse of these or their closure. For the assets, the main management instrument would be the implementation of the monitoring mechanism in real time,

of tailing dumps that the "Tranque" ("dam") Project of Fundación Chile is promoting. This would be done at a national level in a gradually and standardized way. With regard to abandoned and inactive tailings, technologies would be used for reprocessing through a satellite monitoring; on the other hand, the Environmental Impact

Evaluation System would help to compensate the impacts. Along with this, the Ministry of Mining is developing a "bank of ideas", with the purpose of bringing together the most appropriate ways to ensure tailings and the best technologies for reprocessing.



STRATEGIC
GUIDELINES OF MVC

Philosophy of Minera Valle Central is based on three strategic guidelines:

ECONOMIC

SOCIAL

ENVIRONMENTAL



ECONOMIC AXIS

- Increase profitability for its shareholders and reach optimum compliance levels and operational efficiency.



SOCIAL AXIS

- Establish transparent and reliable business relationships with human team, neighboring communities and groups of interest, through a timely and clear communication.

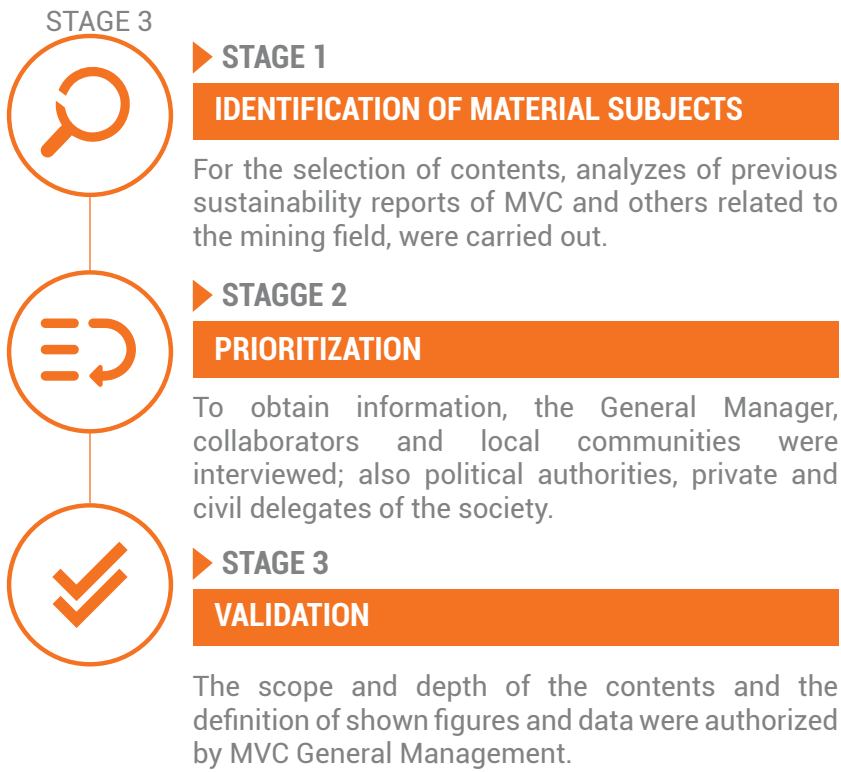


ENVIRONMENTAL AXIS

- It establishes guidelines to prevent and mitigate possible effects that the activity may cause on the community and the environment, as well as promoting the efficiency use of resources used in processes.

MATERIALITY

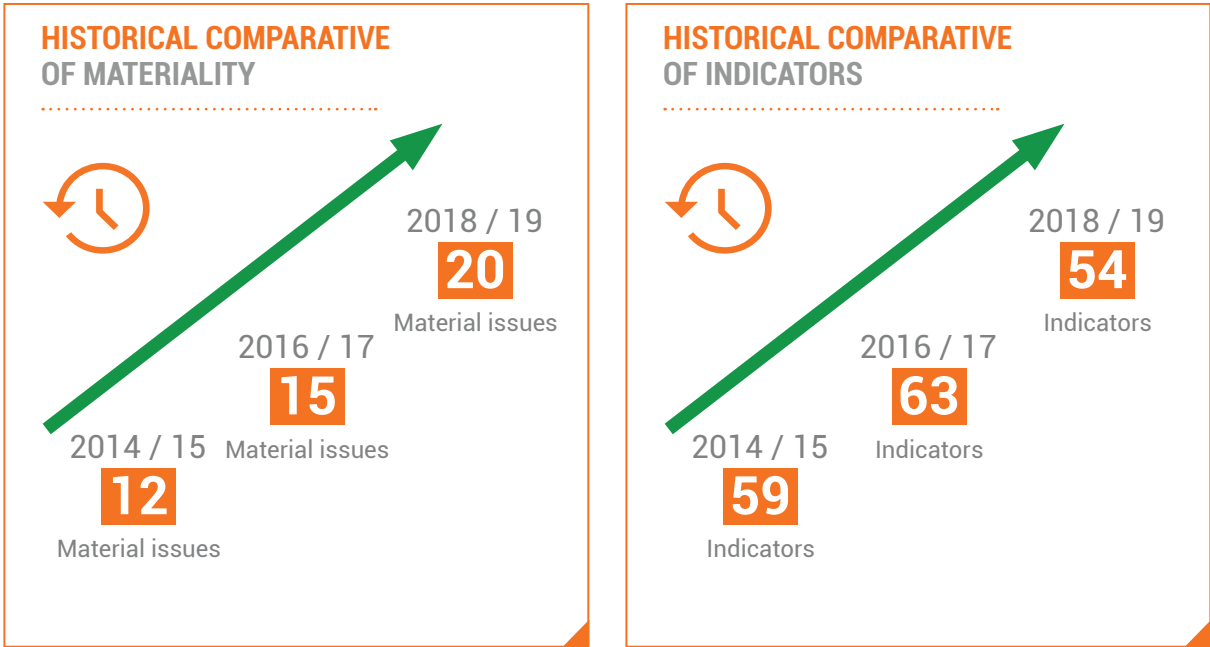
This is the third Sustainability Report of MVC, which has been elaborated in accordance with the criteria and requirements established by the Global Reporting Initiative GRI. The selection of indicators to be addressed in each of the chapters were consulted to groups of interest, both from public and private spheres of the civil society. To define the contents of the report and fulfill the purpose of essential conformity, we based our work on the GRI methodology, which includes materiality, Groups of Interest participation and Sustainability context.



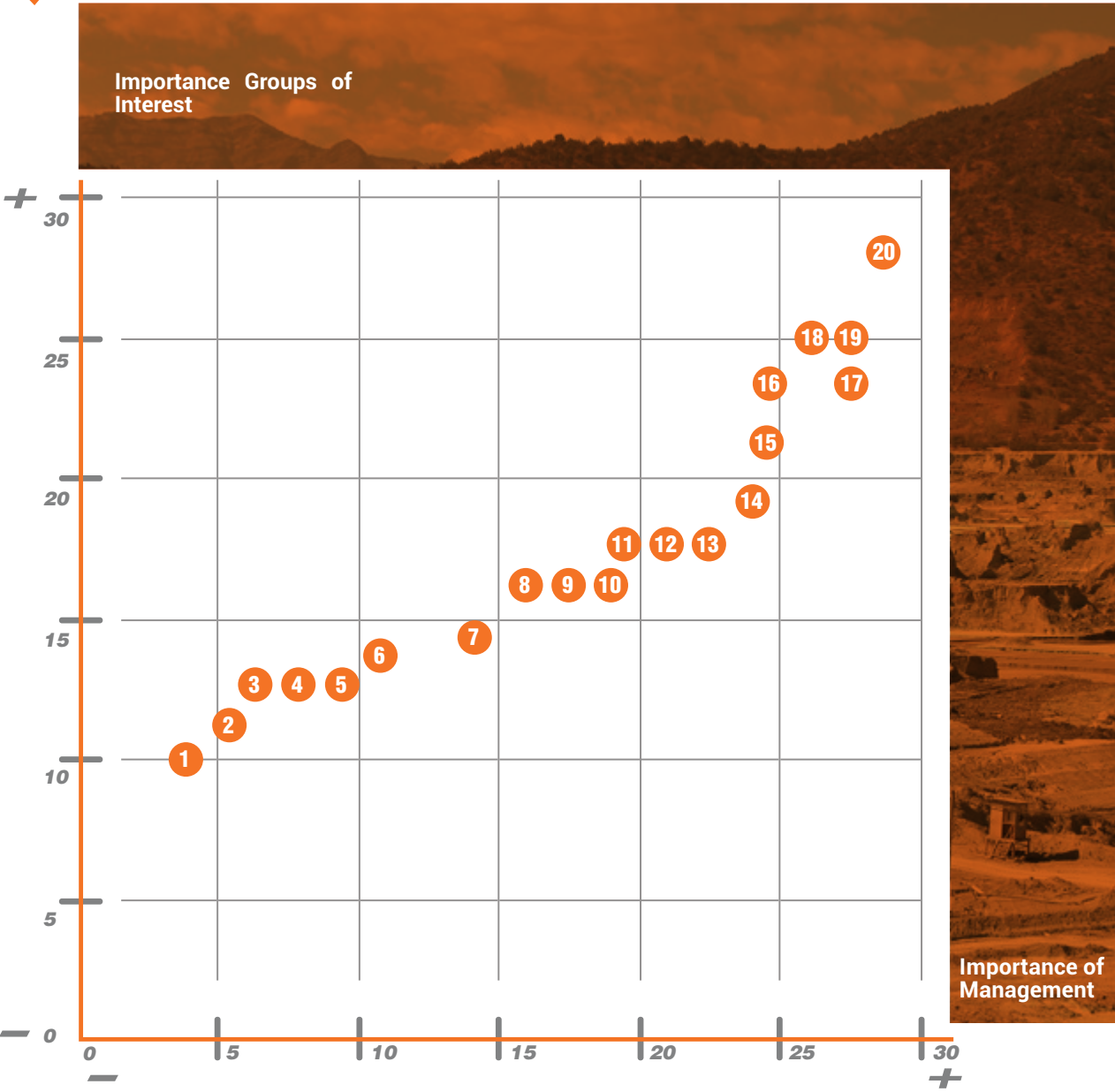
REPORT PERIOD 2018-2019

LAST REPORT 2016-2017

REPORTING CYCLE EVERY 2 YEARS



MATERIALITY COMPARATIVE



- 1

Employment
- 2

Practice and acquisition
- 3

Biodiversity
- 4

Diversity and gender equity
- 5

Education and training
- 6

Presence in the market
- 7

Emissions
- 8

Safe practices
- 9

Corporate governance and ethics
- 10

Regulatory compliance
- 11

Social performance
- 12

Freedom of association
- 13

Direct economic impacts
- 14

Worker-company relationship
- 15

Energy
- 16

Water
- 17

Local communities
- 18

Environmental performance
- 19

Economic performance
- 20

Health and safe at work

PRIORITIZING TREND

- Health and safe at work
- Environmental compliance
- Environmental development
- Economic development
- Local communities
- Water
- Energy

GROUPS OF INTEREST

The groups of interest are those people, groups of people or organizations that can be impacted or can affect the operation of the company and that may affect its development. A permanent commitment with the groups of interest leads in a better management of risks and opportunities, development of products and services, identification of trends and generation of confidence in the long run.

EMPLOYEES AND CONTRACTORS

99% of MVC employees come from the Region of Libertador Bernardo O'Higgins. On the other hand, contractors represent 64% of MVC staffing.

SHAREHOLDERS

A shareholder is a natural or legal person who holds shares of the company. Said shares lead to economic and management rights on society.

¿WHY DO WE RELATE TO EACH OTHER?

MVC seeks to promote constructive relations, based on mutual respect and transparency with employees (internal and external), minimizing labour disputes, contributing to a higher productivity and efficiency together with a high labour loyalty. On the other hand, the company needs all contractors to be part of the same standards of our workers, as well as the company goals.

Being owner of a percentage of the company involves at least two kinds of rights: economic and management. Economic rights involve the receipt of dividends in proportion and in accordance with the General Meeting of Shareholders, and the possibility of selling said shares to others, as per the statutes of the company. Management rights, in turn, grant the right to vote on decisions of the company as well as the right to obtain information about its management.

¿HOW DO WE RELATE TO EACH OTHER?

Through the Welfare and Collaborative Companies Management departments; MVC promotes transparency, confidence and good relationships with those who are part of it; therefore, there is a fluid communication through monthly meetings, informational emails, field visits and delivery of relevant information.

Once a year, the Board of Directors attends the Annual General Meeting, where consolidated information regarding the company is provided. Likewise, financial management and sustainability reports are delivered to them and they are given time and space to ask questions and clarify doubts.



¿WHY DO WE RELATE TO EACH OTHER?

MVC understands that communities, with all their human wealth and diversity, are strategic partners for its productive, economic and social development.

COMMUNITIES

Communities are essential for the correct development of MVC operation. Therefore, we try to keep relationships of mutual trust and materialize actions on site that adds value beyond economics.

CUSTOMERS

Customers are those companies or organizations to which MVC provides integral services related to transport, treatment, re-depositing and processing of tailings.

UNIONS

The main goals of unions are to represent workers in the rights of individual employment contracts; represent members in collective bargaining; ensuring compliance of social and security laws.

¿HOW DO WE RELATE?

We interact with communities through dialogue structure, to find out what the neighbors concerns and needs are. We organize visits to MVC site and have digital communication platforms to deliver messages and relevant information. We also have a program in Radio Comunitaria de Olivar 107.5 FM., where we talk about topics of interest to the neighbors and we interview persons of interest. On the other hand, we conduct workshops and programs that aim to strengthen personal and relational skills of people; we grant scholarships for training in different disciplines. We report periodically to the Board of Directors the results of our management with communities.

Relations and commitments with customers are long term. This allows us to guarantee the sustainability of our business model and reduce the risks related to commercial activity.

Since we keep medium and long-term contracts with our clients, contact with them is daily. Coordination meetings are fortnightly and monthly and evaluations are biannual.

MVC relates to unions in order to keep the fulfillment of collective bargaining and the established working program, through an efficient communication and an ongoing work, building a peaceful co-existence within the organization, on a base of confidence and mutual respect.

With unions, we relate through monthly meetings, informational e-mails and through the participation of their delegates in different recreational, training and safety matters.

GOVERNMENT AND REGULATORY INSTITUTIONS

These institutions establish and implement policies, which constitute the legal framework of the company.

SUPPLIERS

To MVC, suppliers are essential for the productive development, since they provide a wide variety of products and services. Currently we work with 825 suppliers, coming mainly from the regions of Libertador General Bernardo O'Higgins and Metropolitana de Santiago.

TRADE ASSOCIATIONS

As part of its policy of relationship, MVC is member of groups of people or institutions in order to promote the rationalization, development and protection to mining activity.

¿WHY DO WE RELATE TO EACH OTHER?

The impact that social, environmental and economic laws and regulations have on the business development, forces us to keep a constant updating of these, to avoid affecting the corporate development.

Suppliers are fundamental to the development and growth of MVC, since they collaborate, contribute and adhere to the policies of sustainability, safety and efficiency that the company works with. We privilege local suppliers (from the Region of Libertador Bernardo O'Higgins), because we want to contribute to the local economic development.

In MVC, we are aware of the issues that concern to society. Through different actions, we seek to contribute to the discussion, debate, new ideas and projects, both within and outside the mining field.

¿HOW DO WE RELATE TO EACH OTHER?

To understand the laws, regulations and public policies related to mining and similar activities, MVC encourages the public-private partnership. The aforementioned is performed through definitions established in the Law of Lobby N°20.730.

The supply department of MVC is the one in charge of promoting, maintaining and supervising relationships with providers. It also checks that products and services offered are aligned with the social, economic and environmental guidelines of the company.

We are part of working committees of different members of the guild. We attend meetings monthly and participate in activities organized by the guilds in which we participate.

CORPORATIONS AND FOUNDATIONS

Maintaining relationships with non-profit social organizations, not for profit, is part of our sustainability policy. Working together in collaboration we seek to contribute to our communities' development.

ACADEMY

We currently work with two national universities: Universidad de O'Higgins and Universidad Mayor, to enhance scientific research on mining and to promote an early approach of the students to the industry.

¿HOW DO WE RELATE TO EACH OTHER?

Our relation with the corporations and foundations is through sponsorship programs, visits on site, milestone activities, participation in dialogue tables and working meetings.

¿WHY DO WE RELATE TO EACH OTHER?

In MVC we have defined as a focus, cooperating and promoting welfare actions in foundations. On the other hand, we intend to contribute for the regional development, through our participation in corporations.

Our job with the academy seeks to foster the research, innovation and development on mining activity, specially providing comprehensive solutions to the tailing treatment in areas related to processes, water resource, redepositing and others.

With the academy, we keep collaboration agreements, regular meetings and visits to the site and to the laboratory.



ECONOMIC ASPECT

“CHANGING ENVIRONMENTAL LIABILITIES INTO AN ECONOMIC ASSET”



MVC: A LARGE-SCALE MODEL

During its 27 years of history, MVC has consolidated itself as one of the main companies in the world processing tailings on a large-scale, with a processing standard of 200.000 tonnes per day.

Its business model is based on the foundations of innovation, productivity, public-private partnership, optimization of processes and a human team that allows it to face a more sustainable and environmentally friendly mining.

In addition, MVC produces very competitive prices with traditional mining. Since it is not extractive, has a low risk and, more importantly, it generates an additional production for the owner of the resource, that can be used in favour of the same company and/or its surrounding.

Thanks to this model, the company has achieved the transition from a linear economy to a circular one, confirming that mining wastes can generate economic wealth, contribute to the environmental sustainability of mining areas, improve safety standards on sites and have a positive impact on communities.

The permanent interest shown in innovating and adopting latest-generation processes, makes MVC to expect to increase in the next 15 years a total production of 600,000 tonnes of copper concentrate and 36 million pounds of molybdenum, from fresh and old tailings.

ACCUMULATED PRODUCTION



400,000
Tons of copper



11,000,000
Pounds of molybdenum

EXPERIENCE IN TAILINGS

In all these years, MVC has improved its processes to recover copper and molybdenum from mining wastes.



Fresh tailings

Cu	Mo
0.10%	0.012%

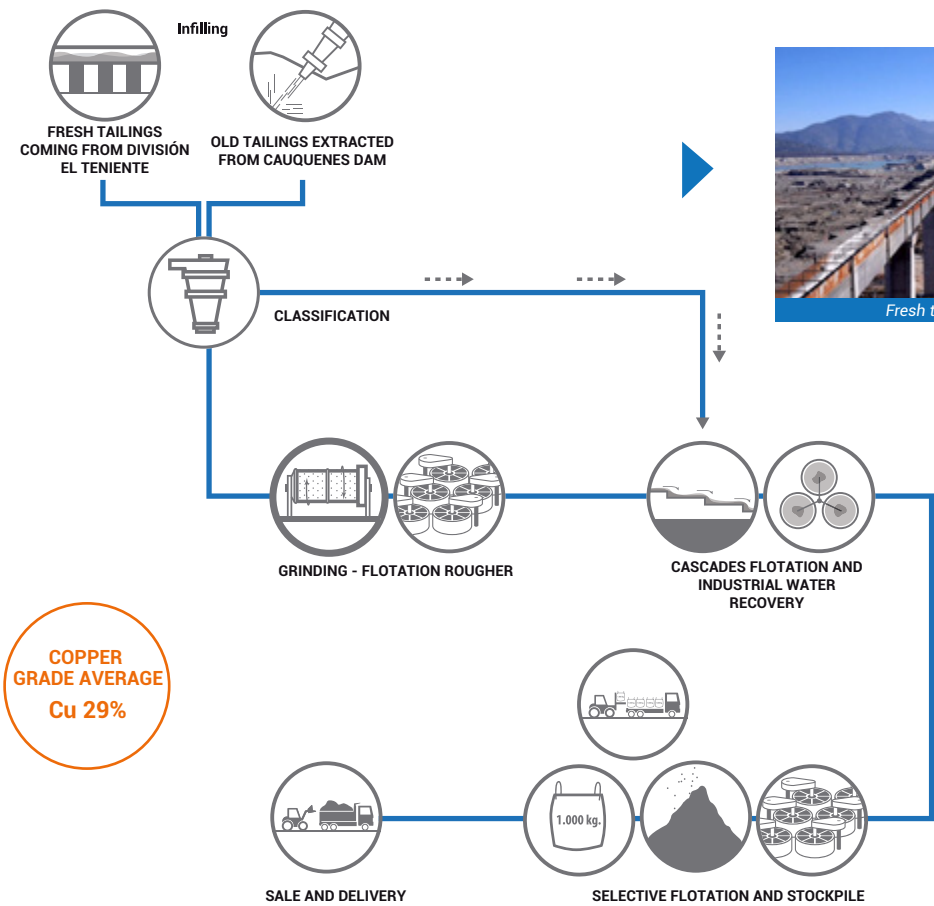


Old tailings

Cu	Mo
0.27%	0.022%



PRODUCTION PROCESS

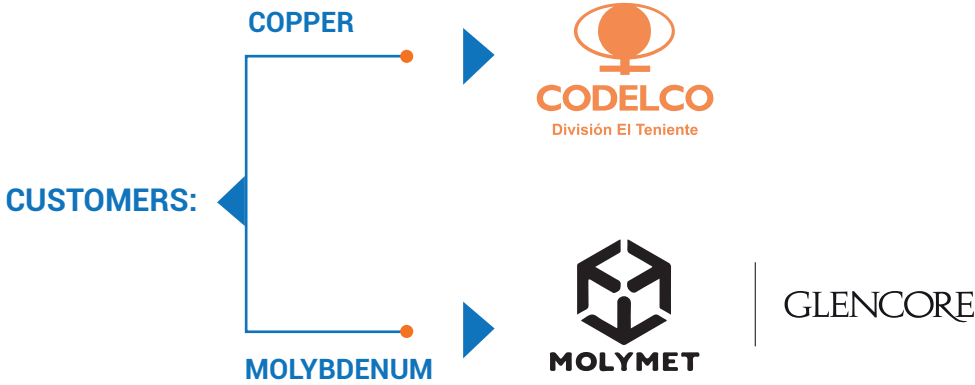


MVC PRODUCTS

MVC produces:

COPPER CONCENTRATE

MOLYBDENUM CONCENTRATE



During 2019, Glencore Chile SPA, a commodity trading of raw material company, becomes active client.



MVC SERVICES



Tailings and mineral recovery processing.



Transport of tailings and tailings ducts.



Redepositing.

- Paste and thickened tailings
- Tailings disposal in dams
- Stockpiling of filtered tailings
- Preparation and distribution of paste landfills



Engineering projects.



Water recovery.



Closure plans.

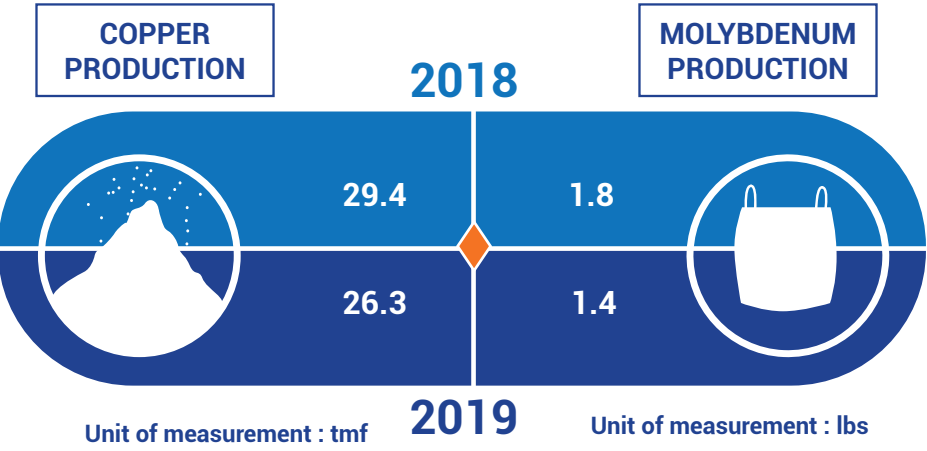


Capacity building of emergencies in dams.

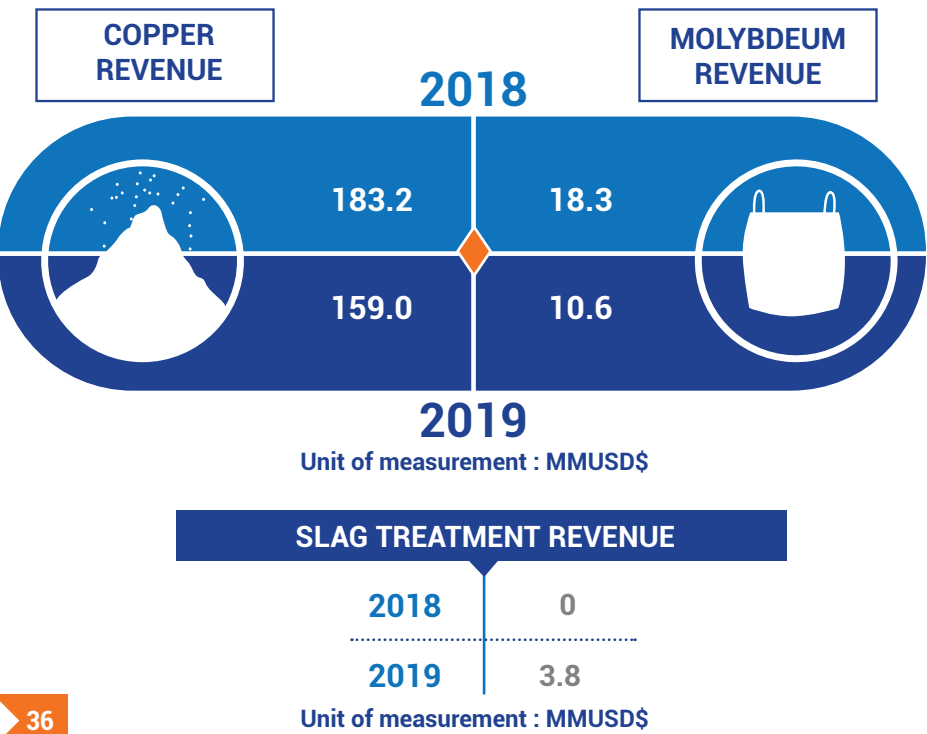


Environmental sanitation solutions, under the new legislation.

COPPER AND MOLYBDENUM PRODUCTION



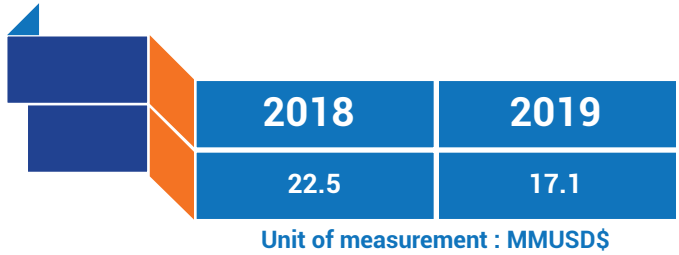
ECONOMIC VALUE GENERATED BY MVC



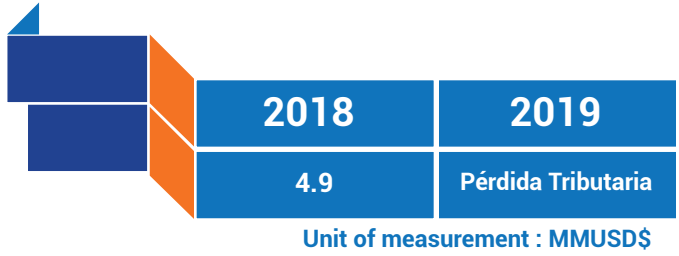
This amount includes the following costs: administrative, transfer fee, Amerigo Resources, refinancing expenses and loan charges.



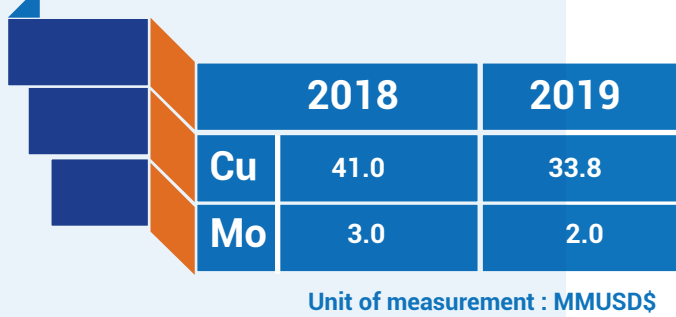
ECONOMIC VALUE DISTRIBUTED BY MVC



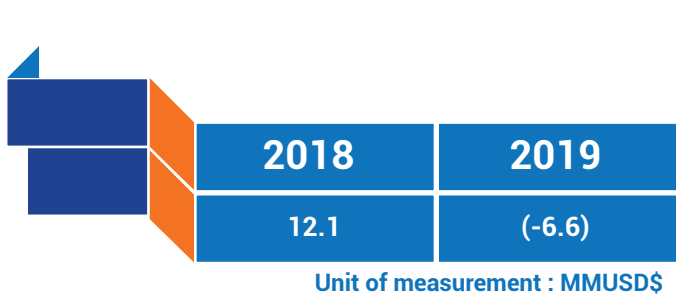
STATE PAYMENTS



ROYALTY PAYMENT



RETAINED ECONOMIC VALUE



2018-2019 PROJECTS

ABC PHASE II PROJECT - CONCENTRATOR PLANT ENLARGEMENT

In 2018, the Company worked on the enlargement of the plant to process the fine fraction of tailings from Cauquenes dam, through the ABC Phase II Project. This initiative started rolling in 2017, with the purpose of expanding the tailings operating business. The aim of the ABC Phase II Project was to improve the processing capacity of MVC plant, increasing the recovery of copper from 34% to 49% in these old tailings. This venture generated employment offers with a total controlled staffing of 734 workers, corresponding to 39 contracting companies.

The magnitude of 734 workers indicates the number of people accredited for the ABC Phase II Project, without considering if they stayed for one day or the whole project. Thirty-nine companies shows the contribution of the contracting companies.



START	END	COST
AUGUST / 2017	DECEMBER / 2018	MMUSD\$ 39,9

SUMP 1D AND 2D PROJECT

During 2019, the Company worked on the construction of sumps 1D and 2D. This project seeks to reach new levels of extraction, obtaining material of high grade and granulometry. The construction of these sumps were entrusted to local contracting companies. More than 120 people were accredited to work in the project, which started in February 2019 and ended in July of the same year.



START	END	COST
FEBRUARY / 2019	JULY / 2019	MMUSD\$ 5

SOCIAL ASPECT

“COMMITTED TO THE TERRITORIAL DEVELOPMENT OF COMMUNITIES”



SOCIAL LICENCE

The last yearly report issued by EY Chile and Centro de Estudios del Cobre (Cesco), which considers the ten risks of Chilean mining, shows that for the period 2019-2020, members of said productive area shall pay attention to an aspect that moved from the seventh to the first place with a time lag of 1 year: the social license to operate.

This concept has been defined as the continuous approval of the groups of interest, which is the establishment of a partnership that goes far beyond the acceptance of a specific project by the involved community.

The groups of interest are defined as strategic partner communities for the development of the mining operation that represents a fundamental focus to MVC, establishing a link with its environment and promoting the activities from the public-private partnership.

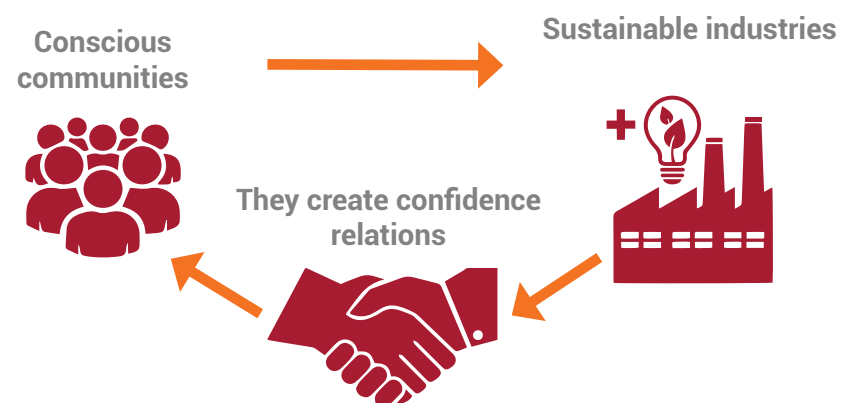
Taking on this reality, in MVC we think that communities are strategic partners for the development of the operations, and therefore generating and gaining their confidence makes possible to add value for the company. That is why contributing to improve development indicators, such as education, welfare, public health, sports, culture,

environmental awareness and infrastructure, allows us to help with community's welfare, which results in a social licence to operate.

MVC relates to the communities through dialogue and programs of education and training, such as social scholarships and the strengthening of relational skills.



At MVC we understand that the current context demands:



Additionally, we keep strategies and tactics that lead to workshops, citizen discussions, neighbors' visits to MVC plant, grievance mechanisms, participatory appraisals and communication platforms such as social networks, web site and a program at a local radio called Radio Comunitaria de Olivar.

The results of the community



COMMUNITIES

MVC has a policy with communities based on three elemental pillars:

1. Sustainable knowledge:

Build good relationships with communities from knowledge.

2. Effective participation:

Establish actions that favours trusting relationships with communities.

3. Territorial development of communities:

Contribute to improve indicators such as education, social welfare, environmental awareness, community capacity building and infrastructure.

Regarding the aforementioned, during the reported period MVC developed a participatory appraisal with its nearby communities, so that they can know the environment they are part of. This evaluation was addressed through the "problem tree" methodology, which revealed seven local difficulties, from which three of them were part of the working plan for the considered period.

management is regularly reported to the Board.

This approach is the one that MVC has worked on, understanding that relationships are built over time, through transparency, confidence and specially, people's loyalty, making them part to the point that they feel that the future of the company is straightly proportional to their own development and benefit. MVC has taken over this reality with communities more internalized and aware of the social and environmental impact that industries cause, understanding the value of the trust for the development of mining operations.



Among them are:



Low number of groups of older adults.



Little employability during months of less agricultural activity.




Little knowledge and valuation towards culture.

Based of this diagnosis, MVC has defined its collaboration focus towards its neighbouring communities in children and older adults, addressing as working areas the education, culture and employability.


This has involved since many years the development of a close and enriching job with the neighborhood councils as well as other groups of interest. One of the implemented projects was the "Access to Población Yungay", oriented to improve the road safety of the junction that allows transit to this community, located at Gultro, Region of Libertador Bernardo O'Higgins, that was concluded in November 2018.




MVC SOCIAL PROGRAMS




▶ Social scholarships oriented to development and employability of younger segments and older adults.




▶ Talks and strengthening of skills programs to the community for young people and children, through theater and artistic expressions.




▶ Sponsorship, auspices, discussions and support for people's development.



▶ Volunteer program that supports girls in social risk of the Fundación María Ayuda and children with Down's syndrome from Fundación Somos Down.



▶ Collaboration agreements with higher education institutions such as Universidad de O'Higgins, Universidad Mayor and Liceo Bicentenario Óscar Castro.



▶ In alliance with the ministry of mining, we have been carrying out the "Programa de Mentorías" for four years, which seeks to encourage women from mining related schools to be inserted into the field.



2018 RELATIONSHIP PLAN WITH COMMUNITIES

	Sessions	Participants
• Theater workshop Colegio Gultro	28	11
• Theater workshop Colegio Santa Amalia Requínoa	28	9
• Talks to communities of Olivar and Requínoa	5	60
• Requínoa social scholarships program	25	16
• Olivar social scholarships program	25	16
• Discussions	3	210
• Yungay joint access project	1	ORIENT GULTRO COMMUNITY
• Orocoipo square remodeling	1	ORIENT GULTRO COMMUNITY
TOTALS	117	262



2019 RELATIONSHIP WITH COMMUNITIES

	Sessions	Participants
• Theater workshop Colegio Gultro	57	12
• Theater workshop women older adults Requínoa	33	11
• Olivar social scholarships program	60	12
• Requínoa social scholarships program	60	12
• Rancagua social scholarships program	25	10
• Discussions	1	70
• Talks to communities of Olivar and Requínoa (Digital literacy)	4	29
• Olivar community radio program Conversando con Minera Valle Central	36	44
TOTALS	276	200



WHAT WE
BET ON

“WE WANT OUR NEIGHBOURS
TO BE PROTAGONISTS OF THEIR
OWN CHANGES”



- ① Older adults home care worker course
- ② Discussion Óscar Castro (Environmental area)
- ③ Gultro Council Pensando En Mi Barrio
- ④ Personal finances talks
- ⑤ Run for inclusion - Requínoa
- ⑥ Volunteerism Fundación María Ayuda
- ⑦ Children's day August 10 parade
- ⑧ Theater workshop at Gultro School
- ⑨ Theater workshop Older Adult Requínoa
- ⑩ Volunteerism at Gultro School
- ⑪ Olivar Digital Literacy Workshop - Requínoa
- ⑫ Visit to Gultro School and to Avellanita Site

EMPLOYMENT AND LINKAGES

MVC has a permanent commitment with communities linked to its operations, generating direct and indirect employment for more than 1.000 families of the Región del Libertador General Bernardo O'Higgins, and the transversal decision to work with suppliers of the same, reaching over 90% within the area.



From the total workers reported in the considered period, 99% (295 workers) belongs to the Región del Libertador Bernardo O'Higgins and 1% (2 workers) to the Región Metropolitana de Santiago, which shows the company's concern to support the regional economy. Along with the 297 workers on site, MVC counts on 523 contractors working in operations, projects, exploration and at the corporate facilities. Contractors make up 64% of the company's staffing.

This labour model has been key to development, growth and continuity of Minera Valle Central. Fostering constructive relations, based on mutual respect and transparency has definitely decreased labour disruption, on a higher productivity and efficiency and, the most important, loyalty from workers to the company. On the other hand, MVC has established organizational guidelines that allow the growth and development of its team, among them, full-time and indefinite-term contracts, granting stability to the nuclear family and chances of professional development.

In relation to management positions, MVC operates with executives directly involved with economic, environmental and social areas, all of them living and working in the Región del Libertador General Bernardo O'Higgins.



1,000

families from the Región del Libertador General Bernardo O'Higgins positively impacted.



90%

Suppliers belonging to the Región del Libertador General Bernardo O'Higgins



RECRUITMENT						
			Ages		Regions	
			20-40	41-60	Metropolitana	O'Higgins
2018	14	4	15	3	1	17
2019	3	1	3	1	0	4



LAYOFFS						
			Ages		Regions	
			20-40	41-60	Metropolitana	O'Higgins
2018	8	1	5	4	0	9
2019	3	1	0	4	0	4



TURNOVER RATE	
Period	Turnover rate (by incorporation)
December 2018	3,9%
December 2019	1,3%



WORKFORCE DISTRIBUTION

TOTAL WORKERS			
			TOTAL
2018	274	23	297
2019	273	24	297

The company has established organizational guidelines that make possible the growth and the development of our team of employees, among them, fulltime and indefinite contracts, granting stability to the nuclear family and possibilities of professional growth.

On the other hand, MVC defines operational changes through the Management Committee, which informs each department about any organizational agreement or changes decided, at least one week in advance.

WORKERS BY AGE GROUP			
2018		2019	
ÍTEM	N° OF WORKERS	ÍTEM	N° OF WORKERS
• Between 18-30	45	• Between 18-30	36
• Between 31-45	155	• Between 31-45	158
• Between 46-60	92	• Between 46-60	99
• 60 and more	5	• 60 and more	4
TOTAL	297	TOTAL	297

WOMEN AND MINING

The presence of women at different levels in large-scale mining is 8.1%, according to Estudio de Fuerza Laboral 2015-2024, done by the Consejo de Competencias Mineras del Consejo Minero.

In Chile, women's incorporation rate to work is one of the lowest of Latin America, being the sixth one with less female participation among the OCDE countries, lower than 54.1% that is the block average.

Minera Valle Central has carefully followed the way crossed by countries such as Australia and Canada, which have fostered different initiatives to give room for female participation such as gender quotas, recruitment skills,

advancements and retention of women in the industry or the development of related studies.

Following these examples, from 2016, and in partnership with the Ministry of Mining, MVC has carried out the Programa Mentorías, in which students from the 5 high schools related to mining of the Región del Libertador General Bernardo O'Higgins are accompanied by female workers from División El Teniente of Codelco and MVC.

Once a week, in a whole day event, they receive training and tools to strengthen their skills, so that in the future, they can successfully operate in the mining industry.

One of the great purposes of this program is to boost women's participation in mining industry, just as men do. This last aspect was the focus of MVC since, in its internal policies, it is defined from the beginning that women cannot become part through pre-established quota but for their conditions, skills and talents.



FEMALE WORKERS AT GRAND MINING

8.1%

One of the lowest rates of incorporation in Latin America

8.13%

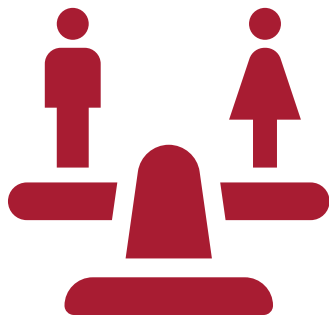
Female staffing at MVC

MENTORIAS PROGRAM

- 4 consecutive years
- 18 students
- 9 MVC professionals
- 2 mining related high schools

DIVERSITY AND INCLUSION

MVC understands a diverse world, both in the market as in workplaces, being aware that, operating in it is critical for its long-term sustainability. Through the creation of an inclusive work environment, the company seeks to exploit the talent, opinions and ideas of all collaborators. The company expects to reflect, in each level of leadership, the diversity of communities in which it is active.



ECONOMIC FORUM RANKING

COMPARATIVE OF CHILE WITH LATINAMERICAN COUNTRIES AND THE CARIBBEAN IN GENDER GAP

- We are not among the top ten.
- Chile is in the 14th position in the region.
- It is in the 57th position in the world.
- Chile is not by the moment in a good position.

Chilean law NCh3262 is based on:

No discrimination, empowerment and recognition of women's rights as per the Convention on the Elimination of all forms of Discrimination against Women (CEDAW).

- Balance
- Joint responsibility

SUPPLIERS

Minera Valle Central maintains relations with 826 supplier companies, mainly from VI and Metropolitana regions that provides its operations in terms of inputs, services, materials and energy. The company has a close link with its suppliers. They hold meetings regularly, promoting a joint work with communities and contributing to the creation of local employability, through job opportunities and training to work or to provide services in the mining industry.



PAYMENTS TO SUPPLIERS
MMUSD\$ 45.93

REGULATORY COMPLIANCE





MVC has fully complied with the legislation that regulates the companies that operate in Chile. So far, the company has not received any type of fine, penalty and/or claim due to economic, social or environmental matters. This has allowed to reduce the risk that fines imply as well as to control impacts or a possible crisis regarding the institutional image.



SAFETY

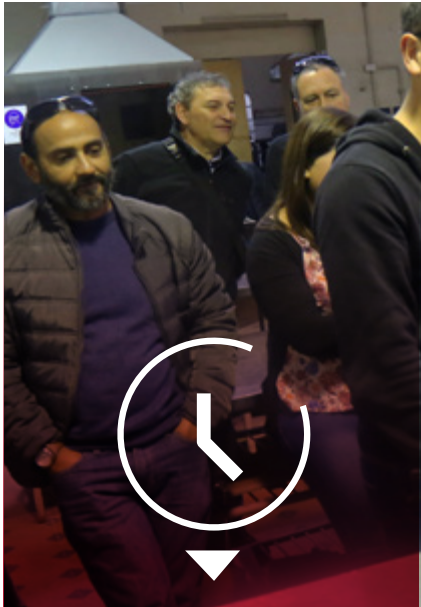
Due to the characteristics of its processes, Minera Valle Central is a company, which has fewer risks compared to traditional mining of extraction. However, safety is relevant to all the operation and it is fundamental from the corporate guidelines to ordinariness inside and outside the company.



2018		Gender
Types of accidents		 
Accidents rate (TFA)	6.65	6.65 / 0
Occupational diseases incidence rate (TIEP)	0	0 / 0
Days lost (DP)	91	91 / 0



TRAINING



2018	2019
10,636	4,689
Hours invested	



2018	2019
81	84
Trainings	



2018	2019
258	156
Trained workers	

The main emphasis of training at MVC is focused on operational workers. They are offered programs that seek the improvement of their skills and talents, and those who are part of these programs, are supported in their transition process.

In the same way, the company conducts annual trainings for all the employees, to support them in their adaption process to the organization, commitment, values, legal compliance and technical and functional training.

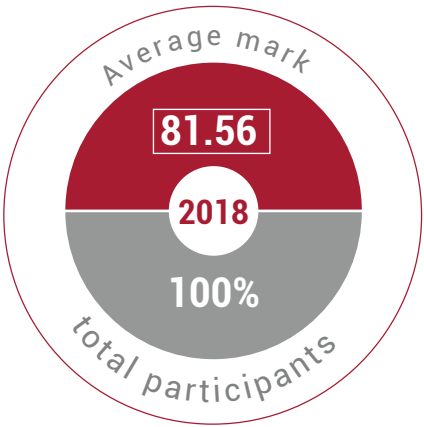
MVC has a general induction program for the company's new workers. Its purpose is to communicate general issues and specific ones related to each job position. Qualified specialists of

MVC in the workplace of each collaborator carry out the latter.

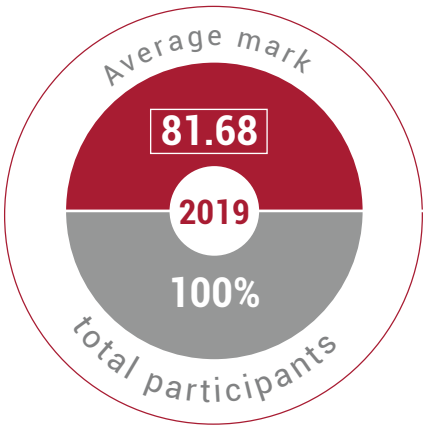
The company has a "performance evaluation program" which aims to promote an instance of communication and conversation between workers and direct supervisors, identifying strengths and weaknesses of the team members, strengthen the integration of values and the organizational culture, aligned with core business.

Another initiative is the induction for the "change of duty", which seeks to guide the collaborator when promoted to a different job position in an activity that is different from the one usually performed. For them, there is an induction related the new tasks they will carry out.

- ▶ Training Program
- ▶ General Induction Program
- ▶ Performance Management Program



Evaluation performed in 2018, corresponding to period 2017



Evaluation performed in 2019, corresponding to period 2018



PRIVATE-PUBLIC PARTNERSHIP

Corresponsability and collaborative work are essential to MVC, for the appropriate territorial and industrial development. This is why the Company fosters from all the lines, the public-private partnership, that is to generate shared-service provision agreements, through arrangements, contracts with municipalities, non-profit entities and other private enterprises.

The purpose of this association model is to work jointly the execution of specific projects; obtain financing, in whole or in part; and to supply goods and services.

This way the risk can be shared, compensations can be granted and a work that contributes to the Company's development and the inclusion of its collaborators can be done.

As an example, MVC promotes a private-public partnership with its First Responders Forest Brigade or Emergency

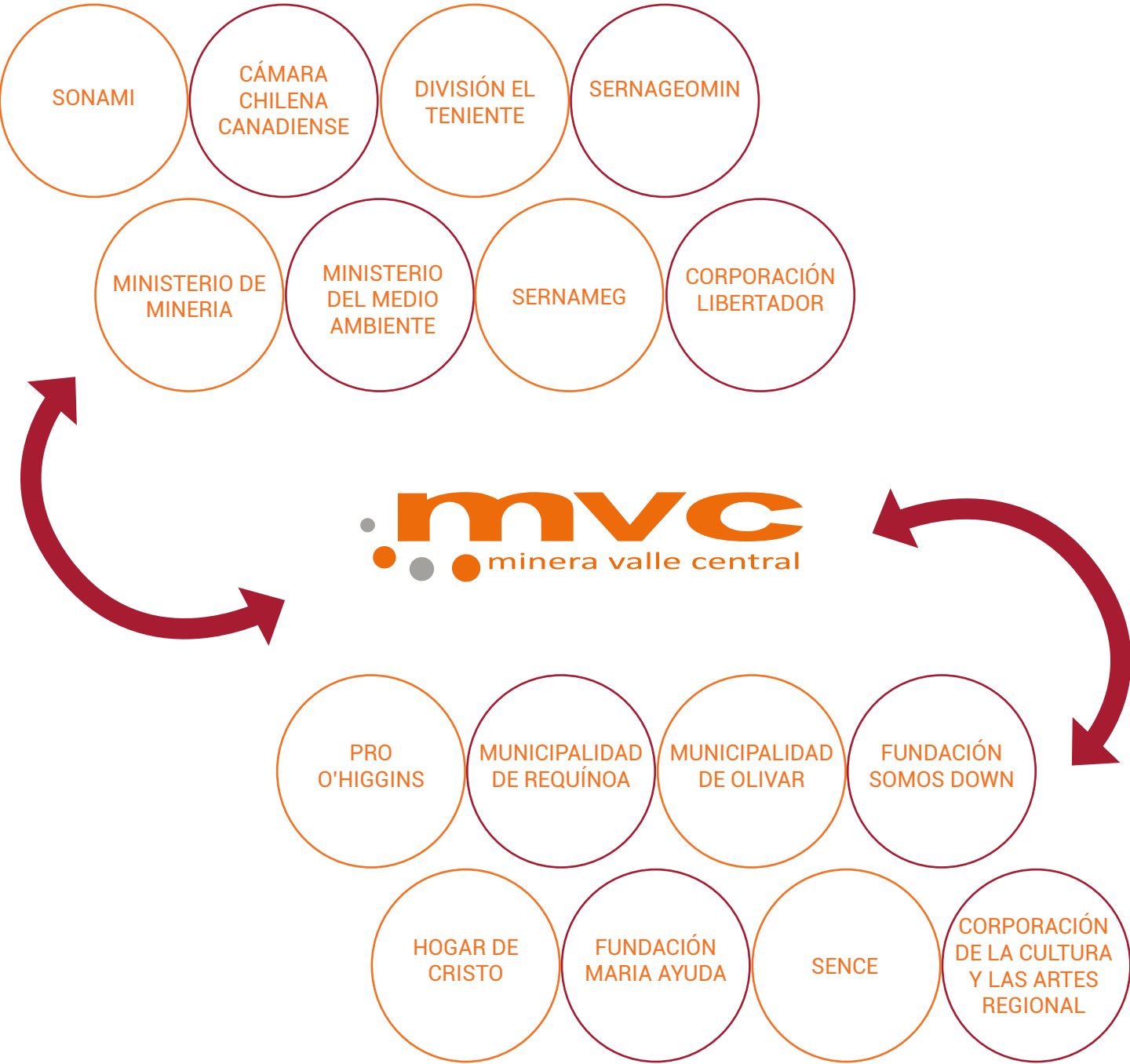


Brigade that seeks to serve communities in case of fire in the area. An important focal point of this initiative is to call on companies to count on their own emergency brigades to, jointly, provide support to neighboring communities.

Another instance is the "Social Scholarships Program". Through an alliance between two governmental and two private entities, we seek to foster work skills development of neighbors, so that they can be protagonists of their own changes.



INSTITUTIONS THAT MVC RELATES WITH



POBLACION YUNGAY ACCESS PROJECT

The aim of this project that started in 2017 was to improve the road safety of the joint that gives access to Población Yungay, at Gultro Village, completed in November 2018.



ENVIRONMENTAL ASPECT

“WE GIVE SUSTAINABILITY TO MINING INDUSTRY”



CONTRIBUTION TO COMMUNITY DEVELOPMENT

MVC believes that being a social agent of change is not only the right thing to do, but also an intelligent business decision, since maintaining reliable relations with its groups proposes a balance among economic growth, social welfare and the good use of natural resources.



COMMUNITY CONTRIBUTION

2018
MMUSD\$ 0.044
2019
MMUSD\$ 0.074



Among the GRI standards, the environmental dimension is related to the impact of the organizations on living and inert natural systems of the environment, including air, water, land and ecosystems. MVC operations are performed next to Codelco División El Teniente's tailing dumps, among them Colihues and Cauquenes dams, on land handed by state-owned corporation in gratuitous bailment to MVC. This is a precious area that MVC has established for the conservation of a subpopulation of "Avellanita Bustillosii Phill", an endemic shrub of

the central zone of Chile, considered "rare and in danger" of extinction.



The Avellanita is located at the Andes Mountains of the region of Libertador General Bernardo O'Higgins, bordering Colihues tailings dam, at Requinoa. The conservation area established by MVC covers 21.45 hectares, divided into two areas at a distance of 500 meters far from each other.



The Avellanita Bustillosii Phill bush is an endemic, unique in the native forest and shrub lands in Chile. Only a few of them still exists in the natural environment, but are constantly threatened by forest fires, drought and the local livestock and agriculture. The Avellanita is considered an endangered shrub, which is why MVC makes an important effort to protect its conservation.



CONSERVATION PLAN OF ■ AVELLANITA BUSTILLOSII PHILL RESULTS



POPULATION
CENSUS

Samples of shrubs resulted from assisted reproduction are not considered in this figures.

SPRING
2018

1035
LIVE
SPECIMENS

SPRING
2019

734
LIVE
SPECIMENS

The conservation areas demand great interest and concern by MVC since living with the industry the flora and its habitat might be affected. Against this background, Minera Valle Central has established that this control plan duration, monitoring and conservation, will be long-term and will be divided into the following axes:



Samples protection through the fencing and permanent monitoring of the area.



Knowledge generation regarding population through periodic censuses and by the establishment of networks with universities to conduct research.



Diffusion and education regarding Avellanita Bustillosii Phill to workers, local and educational community.



Reproduction and propagation actions of the species.



MVC has forged links with several organizations to implement the following actions:



Seed collection.



Enrichment of the conservation soil, through in situ reproduction as well as nurseries.



Conservation on the area with native vegetation that helps to offer better conditions for the natural regeneration.



Tests of vegetative growth of the Avellanita.



Genetic research of the Avellanita seeds.

UNIVERSIDAD
DE O'HIGGINS

JARDÍN
BOTÁNICO
EL CHAGUAL

UNIVERSIDAD
MAYOR

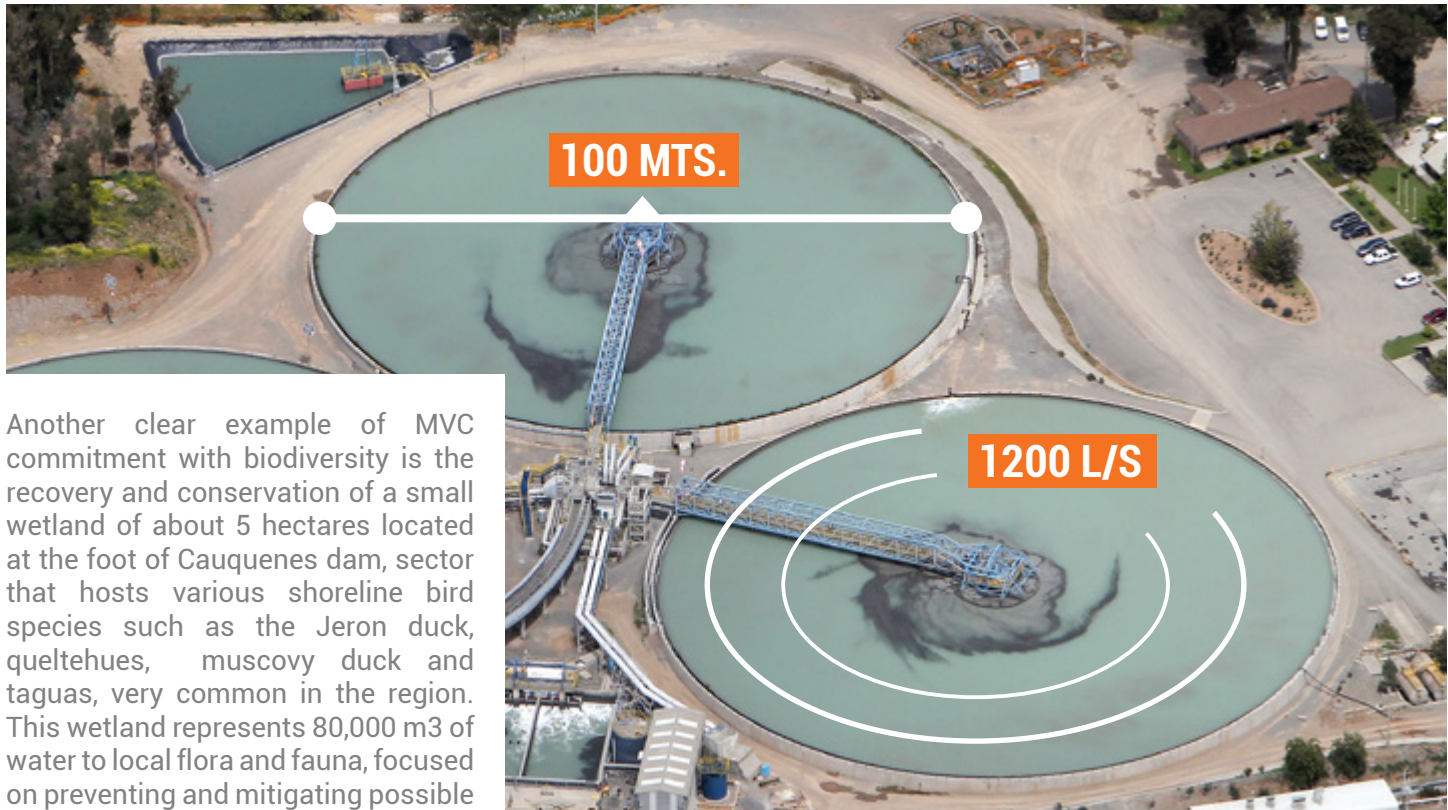


■ WATER FACTOR

One of the central axes in MVC regarding sustainability is to make good use of the natural resource in their production processes, with emphasis on water and electricity. Therefore, and with special concern with current drought that Chile has been facing for more than a decade, counting on industrial water recovery systems is a real

commitment with the use of natural resources and the environment. MVC thickeners are solid and liquid separation equipment where suspended solids form a pulp that feeds a tank with an internal mechanism, which, through gravity, allows concentrating solids at the bottom and flow clarified water to the surface. In 2018, 74% of the

water used on site was recovered, corresponding to 39,311,039 m3 of water. In addition to these actions, there are internal campaigns promoted by the joint committee of MVC, which has led to care for water and its consumption within the company.



Another clear example of MVC commitment with biodiversity is the recovery and conservation of a small wetland of about 5 hectares located at the foot of Cauquenes dam, sector that hosts various shoreline bird species such as the Jeron duck, queltehue, muscovy duck and taguas, very common in the region. This wetland represents 80,000 m3 of water to local flora and fauna, focused on preventing and mitigating possible effects that the activity might cause in the community, natural resources and cultural heritage. In the environmental area, the company has also generated links with public and private institutions as well as with the academy to preserve regional endemic flora in harmony with the natural environment.



■ EDUCATION AS TOOL FOR ENVIRONMENTAL AWARENESS

MVC considers education and research as one of the central elements for the achievement of their sustainable axes. During the reported period, two important agreements were signed with Universidad O'Higgins and Universidad Mayor, which purpose is to incite the establishment of connections with the academy, analyzing together the generation of solutions for the planet sustainability, always in line with a circular economy promotion.



■ MITIGATIONS / COMPENSATION PLAN OF ATMOSPHERIC EMISSIONS



In the aim of neutralizing emissions MP10 generated by the industrial activities development, as a suppressor of dust, moisten the dust and paving, Minera Valle Central has made an important mitigation in a different industry: agriculture. This way, since 2015, has implemented a plan called "Plan de Compensación de Emisiones/Manejo de Rastrojos", providing a subsidy to farmers in the commune of Chimbarongo, which enables them to carry out actions through the incorporation of vegetal slabs to the field, resulting from the harvest, specifically in the management of corn stubble, which represents a strong environmental and social intervention.

- ▶ Prevents land degradation due to the nutrients recovered from the harvest residues.
- ▶ Avoids agricultural burning, preventing emissions of pollutants so they do not cause damage to health and the environment.
- ▶ Avoids forest fires.

With this initiative, MVC has become the first company of the Región del Libertador General Bernardo O'Higgins that assumed the development of a compensation plan of emissions out of its productive sector.

POWER



Power Consumption	2018	2019
Electricity	1,119,475,631	1,183,058,806
Diesel	66,489,253	72,730,884
Fuel	583,317	580,717
Liquefied gas	1,663	1,851

Measurment Unit: MJoules

Power Consumption	2018	2019
Totals	1,186,549,864	1,256,372,258

Measurment Unit: MJoules

The sum of consumption of fuel from non-sustainable sources and electricity consumption. Different consumptions were added in M.Joules.

Energy intensity ratio at MVC	2018	2019
	4.73 (kWh/lbs)	5.65 (kWh/lbs)

Cost of Energy. Production Cu (kWh/lbs, measurement carried out within the organization).

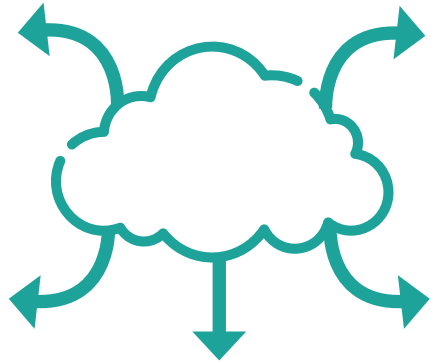
EMISSIONS / COMPENSATIONS

Nitrous Oxide NOX	
2018	2019
• 8.7	• 4.0

Unit of measure Ton/year

Sulphur Oxide	
2018	2019
• 0.5	• 0.2

Unit of measure Ton/year



Volatile Organic Compounds	
2018	2019
• 0.7	• 0.35

Unit of measure Ton/year

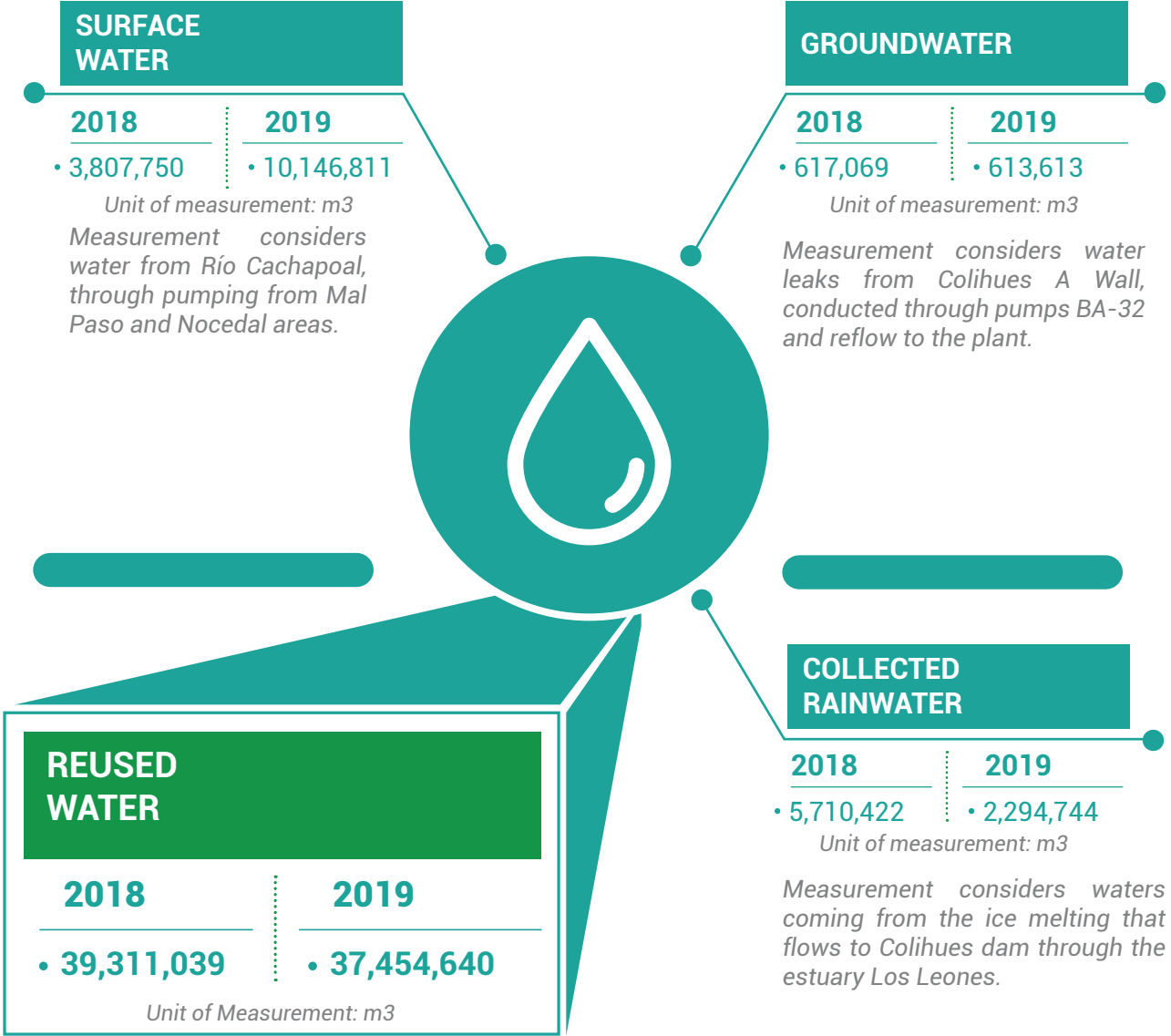
Particulate Matter	
2018	2019
• 0.6	• 0.3 (PTS) • 0.15(PM10) • 0.045(PM2.5)

Unit of measure Ton/year

Other Emissions	
2019	
Measuring starts in 2019	• 0.900 (CO) • 150 (CO2) • 1.15 e-12 (Dioxinas)

Unit of measure Ton/year

SURFACE WATER



This reused water corresponds to 74% of water reused in the production during the reported period.

- Recirculated water from the three industrial thickeners owned by MVC, whose measurement is made using flowmeters located in the 8 water pumps that drive it to the thickener coarse plant.
- It should be noted that MVC has a small wetland "Laguna Cauquenes", that serves various species as a place of permanent hydration or migration, having 80,000 m3 of water for biodiversity of the local flora and fauna.
- To calculate and to study the total water present in this wetland, MVC uses bathymetry as scientific method of measurement.

SUSTAINABILITY TARGETS

2020

As part of its policy of constantly innovation and adaptation to the new economic and social requirements of the country, MVC has adopted several targets for 2020.

Among them, it is considered to adapt the business model of MVC to the current requirements of the mining companies, focused on diversification of services and integral solutions to tailings problematic. The aforementioned means, among other tasks, emission and compensation plans that aim to protect the environment, which would allow it to be recognized as an expert company in secondary mining.

For this, one of the biggest challenges is to attract, retain and develop the best talent to be part of MVC team, standardise and increase the effectiveness of the learning processes and people's development, inclusion and diversity.

A vital complement to strength the cohesion

between MVC and its internal and external collaborators is to improve working conditions and promote psychosocial factors for the completely human team. In practice, this means to systematize and to apply new technologies in remuneration processes, legal and labor control; also to manage efficiently compensation processes to foster workers motivation and productivity.

Another target is to obtain local and international standard certification, such as ISO 9001, related to tailings extraction; ISO 14001, linked to the environmental protection; OHSAS 45001, related to management systems of health and safety matters at work; and NCH 3262, linked to the gender equality and the conciliation of working, family and personal life.

In the environmental level, MVC expectations for 2020 are to meet 100% of the existing rules based on environmental quality (RCA) issued by Servicios Evaluación Ambiental (SEA), and at the same time to fulfil with all the existing rules concerning emissions. All that will allow Minera Valle Central to be recognized and validated as one of the best companies to work in Chile.



MVC COMMITMENTS



1. Provide sustainability to the mining industry.



2. Find a definitive solution to the tailings problematic.



3. Generate a virtuous economy for the region and the country.



4. Increase the participation of female incorporation to the industry.



5. Promote competitiveness at all levels.



6. Respect and promote environmental institutions, the relationship with communities and the role of secondary mining in Chile.



7. Consider innovation as a key element to ensure goals and continuous improvement regarding energy efficiency.



8. Help the workers feel proud and co-responsible for transforming mining liabilities into wealth.



9. No productive goal takes precedence over workers safety and health, and environmental care.



10. Automate processes.



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SUSTAINABILITY REPORT

MINERA VALLE CENTRAL
2018-2019

