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The Pursuit of Responsible Sourcing in the Mining Sector in Chile & Latin America

Abstract:

This briefing document outlines the current status and development of sustainable mineral supply chains and approaches to responsible sourcing in the mining sector in Latin America, with a particular focus on Chile. The paper outlines the implementation of various international initiatives, regional government strategies, and best practice examples of companies in the copper and lithium mining sector. Collaboration between national and international partners is noted as a priority for the Chilean Government and deemed essential to jointly overcome structural, political and technological challenges in the region. These goals are reflected in Chile's Roadmap 2050, which aims for achieving transparent mineral supply chains and sustainability by 2050.

The [RE-SOURCING Project](#) aims to build a global stakeholder platform for responsible sourcing. The project addresses the challenges facing businesses, NGOs, and policymakers in a rapidly evolving ecological, social, business and regulatory world; through a collective, consultative, and industry & civil society driven approach. RE-SOURCING is funded by the European Commission's Horizon 2020 programme and runs from 1 November 2019 to 31 October 2023.

1. Introduction

The global demand for materials for future technologies is steadily increasing¹, with greater importance being given to responsibly sourcing these minerals. Currently, Chile is the world's largest producer of copper², producing 5.77 million metric tons (MT) of copper, a share of 28.5 % of the total world primary production in 2020³. Between 2020 and 2031, primary copper production in Chile is expected to rise by 22.6%, reaching a production volume of 7.10 million MT in 2031⁴. Chile also accounts for 22% of global lithium production⁵. The minerals extracted in Chile are the starting point of many value chains for the manufacture of batteries for electric vehicles, energy storage systems and numerous products for the electronics industry in Europe and the world.

In the global transition to a low-carbon economy, the mining sector plays a key role. The value chains dependent on these raw materials will be influenced by the price of these minerals, as well as environmental, social and governance (ESG) conditions under which they are extracted. To establish the ESG credentials of these mineral, traceability throughout the supply chain is crucial to advance solutions for a sustainable, low-carbon economy. The global mining industry recognises the importance of ESG traceability as a major challenge, given the large number of players in the mineral production chain.

The responsibility to mitigate the socio-environmental impacts associated with mining activity and to ensure responsible sourcing (RS) of mineral resources has led to the establishment of numerous international and national sustainability standards, codes and approaches by companies, as well as institutional approaches and government regulations⁶. These increasingly address environmental and social issues in a more holistic way, incorporating aspects such as greenhouse gas emissions, biodiversity impacts, corporate social responsibility in supply chains, water consumption, community engagement and traceability of raw materials.

The briefing document outlines current developments, challenges and risks regarding sustainable mineral supply chains and responsible procurement practices in the mining sector in Chile and Latin America. It identifies common ground for collaboration between national governments, civil society organizations and companies as well international collaboration between Europe and Chile. The document outlines the current status of RS in the mining sector in Chile and Latin America, with a focus on lithium and copper; the RS approaches of companies and governments; implementation challenges and monitoring of standards and norms. It also highlights selected national and international standards and initiatives where key Chilean stakeholders are involved.

1 IEA: [The Role of Critical World Energy Outlook Special Report Minerals in Clean Energy Transitions](#) (2021)

2 Sociedad Nacional de Minería (SONAMI): [Minería de Chile en Cifras](#) (2020)

3 SERNAGEOMIN: [Anuario de la Minería de Chile 2020](#) (2021)

4 Comisión Chilena de Cobre (Cochilco): [Proyección de consumo de agua en la minería del cobre 2020-2031](#) (2020)

5 Statista: [Lithium Production](#) (2021)

6 [State-of-Play: The International Responsible Sourcing Agenda](#) (2020)

2. Priorities for Chile's Government for the Mining Sector



In recent decades, the Chilean economy has experienced steady growth, driven strongly by the expansion of mining production output. However, this has lost momentum in recent years and the country's productivity growth is declining⁷. In order to maintain and increase production to meet global demand for minerals, it is essential to encourage investment that complies with international social and environmental standards.

The Chilean government plans to strengthen productive, organizational, technological and innovative capacities so that the national economy can actively participate in finding solutions to the challenges of sustainable production. The goals are to improve productivity and competitiveness of national actors and to reduce dependence on international companies and investors. Some of the main priorities include:

Priorities for Chile:

- Improve productivity & competitiveness
- Update existing capacities and build new ones
- Drive forward digitalization and technological change
- Strengthen relationship to indigenous communities
- Reduce water consumption

■ **Maintaining competitiveness:** Chile faces two major challenges in maintaining its position as a global copper and lithium producer. The first is to update ESG performance capacities, while maintaining existing production competitiveness, to meet the urgent economic, social and environmental challenges associated with the mining sector⁸. The second is to build new ESG performance capacities to address the long-term complex issues, such as the water crisis in the country. Developing comprehensive policies, new innovative business and relationship models, and supporting communities in their transformation and evolution are fundamental requirements of Chile's strategy to create and maintain sustainable value.

■ **Promoting digital solutions:** The government aims to maintain an attractive investment environment for the development of exploration and mining projects. However, these investments need to comply with and incorporate international sustainability standards. The implementation of these standards has so far mostly relied on self-reporting in Chile. The use of digital solutions, that can be considered more robust and independent, such as the use of mobile sensors or cameras that collect data and measure environmental impact, remain limited. This has increased the priority to drive forward digitalization and technological change in Chile⁹.

■ **Strengthening Social Capital:** The interrelationship between mining and indigenous peoples' communities is another complex area, so strengthening social capital and civil society trust in the mining sector is of great importance.

⁷ Ministerio de Minería: [Cadenas de Valor de la Minería Chilena](#) (2021)

⁸ To see a full discussion of these challenges, see the State-of-Play Report on [Renewable Energy Sector](#) (2021) and the [Mobility Sector](#) (2021)

⁹ SONAMI: [Gobierno presenta política nacional minera](#) (2021)

■ **Addressing Water Scarcity:** Water scarcity is a particular challenge for Chile. Currently, 25% of the water consumed in mining activities comes from desalinated seawater¹⁰. Further reductions and more efficient use of freshwater in extraction processes; further expansion of water recycling systems; and the development of other sustainable water sources, are expected to reduce water consumption by 15% by 2030. National environmental organizations have noted however, that these targets are not ambitious enough and will not end the water crisis on the scale faced in the country¹¹.

3. Challenges in achieving Sustainable Mining



This section outlines the issues and challenges for operating sustainable mineral supply chains. First, general issues in dealing with international standards are considered, followed by specific structural, political and technological challenges of the Andean countries.

The [Economic Commission for Latin America and the Caribbean \(ECLAC\)](#) has raised concerns that the multitude of initiatives to achieve greater sustainability in the mining sector could be a hindrance in achieving these goals. Companies and consumers may find the growing number of different regulations and standards confusing. There are overlaps and duplications in requirements from different standards as well as the demand to provide multiple certifications, often addressing similar sustainability issues¹².

Challenges:

- Addressing multitude of different initiatives
- Structural, political and technological difficulties in lithium sector
- Increasing value addition within the country by moving up the value chain

The Andean region, where the majority of copper mines are located, lack infrastructure and national institutions that can provide accreditation and certification services. The impact of initiatives on sustainability is affected by this. In addition, company reporting on sustainability is still voluntary, leading to different reporting metrics that lead to an inability compare data and ESG performance. For example, data on water consumption, across companies or for the industry as a whole is difficult to compile, as various reporting measures are used.

With respect to lithium, ECLAC has identified near-term challenges for production that include regulatory delays for mine projects, inadequate infrastructure, and a lack of coordination in the lithium triangle (Argentina, Chile, and Bolivia). Establishing downstream value chains is arduous and fraught with obstacles, such as local technological production capacities that are in need of development and the lack of a large regional market for batteries for electric mobility and renewable energy.

10 Ministerio de Minería: [Cadenas de Valor de la Minería Chilena](#) (2021)

11 Ciper: [El problema no solo es la escasez de agua, sino su contaminación](#) (2021)

12 For a full review of challenges, please see RE-SOURCING State-of-Play reports on [The Renewable Energy Sector](#) (2021) and the [Mobility Sector](#) (2021).

The Andean countries' lack of leadership in developing the necessary standards could lead to a loss of market opportunities, but could also have an impact on the demand for minerals in the Latin American region¹³.

The Chilean government is incorporating this challenge into its strategy and, in addition to stronger leadership and an institutional framework, is seeking to develop strategic local and international partnerships and a high level of transparency¹⁴. In this regard, the government is particularly concerned with creating value inside the country by moving up the value chain. In this context, the Chilean government called an [international bidding process](#) in November 2021 to find strategic partners in the mining and processing of lithium. In mid-November 57 companies expressed interest in new exploration and production contracts¹⁵.

4. Government & Company Approaches

This section outlines the approaches of the Chilean government, such as strategies, frameworks and regulations. It also provides a few best practices and voluntary approaches undertaken by companies in the copper and lithium extraction sector in the country. These examples illustrate the current situation as well as emphasising the importance of collaborative working to achieve a more sustainable and transparent mineral supply chain.



4.1 Government

Under the Chilean government plans, the creation and strengthening of capacities noted in section 2, will require contributions and actions by mining companies as well as suppliers and civil society organisations. In this way, productivity deficits and performance improvements in the social and environmental areas can be jointly addressed, to increase sustainable value creation and value retention in the country.

Chile Roadmap 2050:

- Strengthening supply chain of copper production & associated product and service supply chains
- Transformation Plan in three phases, to achieve goals by 2050

Roadmap 2050: In 2021, Chile unveiled the „[Roadmap 2050](#)“. The overarching goal of the roadmap is to implement a process that dynamizes the creation and maintenance of sustainable value addition by 2050. The long-term goal of the roadmap is to avoid fragmentation of planned initiatives, unclear definition of responsibilities and smoothen strategic efforts that can be disrupted by election cycles. In particular, the government plans to strengthen two types of activities that are interconnected. The first focuses on the activities related to primary copper production. Lithium is also in focus, as a significant increase in demand is expected in the future.

The second focuses on the products and services that are fundamental to the sustainable production of minerals and materials. This includes numerous subcategories

¹³ CEPAL: [Participación de la División de Recursos Naturales de la CEPAL en el Foro de Minería y Sostenibilidad de las Américas del 2021: cadenas de suministro regionales de minerales críticos](#) (2021)

¹⁴ Ministerio de Minería: [Cadenas de Valor de la Minería Chilena](#) (2021)

¹⁵ La Tercera: [Nuevos contratos de litio atraen interés de 57 empresas en Chile](#) (2021)

such as logistics, telecommunications, water use, desalination and reuse, renewable energy and green hydrogen, environmental services, waste management services and local development¹⁶.

Transformation Plan: For a successful transformation to a sustainable and productive mining sector in Chile, a long-term agenda to promote sustainable mineral supply chains is required. According to government plans, the transformation will happen in three phases:

- **Phase 1:** The first phase, preparation, focuses on addressing urgent challenges, such as the COVID-19 pandemic, sustaining production levels, and the planning of the transformation process.
- **Phase 2:** The second phase deals specifically with transformation and capacity building, developing strategies and incentives for sustainable mining, and the gradual transformation of production processes.
- **Phase 3:** The third phase focuses on sustainable growth driven by mining and its value chains in partnership with other sectors, communities at national and international levels.

The first two phases are expected to be completed within the next decade, while the third phase targets are set to be achieved by 2050¹⁷. The first set of milestones have been set for achieve by 2025. In 2025, the greenhouse gas emissions from the mining sectors are expected to peak. These emissions will be reduced through the transformation of the energy matrix, with increased use of renewable energy, closed-loop systems and green hydrogen. By 2025, all Chilean mining companies are expected to have climate change mitigation plans in place and the technical and administrative capacity to fully implement them.

Regulations: The [REP \(Extended Producer Responsibility\) law](#) introduced in 2020 will also tighten recycling regulations. In the mining sector, 100 percent of tires are to be recycled by 2026. In this context, [Michelin](#) announced the construction of the world's first recycling plant for mining tires in Chile in 2021. Strategic goals, such as traceable and certified copper production and an increase in automation and digitalization, are to be achieved by 2030. In addition, a collective strategic agenda will be established with the regions and communities that actively participate in the process of sustainable value creation around mining.

National Initiative on Responsible Sourcing: The [SONAMI Commission for Responsible Procurement](#) was established in October 2018. Its goal is to promote excellence in supply chain management practices in large and medium-sized mining companies, develop human capital in various supply areas, promote strategic relationships with and development of suppliers, and collaborate on various issues and regulations related to supply chain management. Among other things, the committee played a major role in drafting the REP bill on mandatory recycling of mining tires.

^{16,17} Ministerio de Minería: [Cadenas de Valor de la Minería Chilena](#) (2021)

4.2 Companies

Chilean, as well as international mining companies operating in Chile, are taking concrete actions to reduce their greenhouse gas emissions and supply chain emissions as well as undertake social impact mitigation strategies¹⁸.

Copper Producers

BHP: BHP is one of the 50 largest international mining companies and has two operations in Chile that produce nearly 1.453 kilotons of copper annually¹⁹. The company has committed to meeting the [CEO Water Mandates](#), the [UN Sustainable Development Goals](#), the [UN Global Compact](#) and the [UN Guiding Principles on Business and Human Rights](#). The company is also involved in the [Upcycling Water in the Atacama Desert \(UWAD\) initiative](#) led by Global Bridges, an interdisciplinary team from Denmark, Sweden, Israel and Chile, which is working on a wastewater system to reuse greywater from mining in Antofagasta's public green spaces. BHP's [Kuskalla project](#) aims to implement participatory community management solutions in remote communities in the Tarapacá and Antofagasta regions through a water monitoring system and an integrated recycling model. The company also plans to reduce particulate matter emissions in the centres of Sierra Gorda and Spence by 60% by 2025.



Anglo American: [Anglo American](#) plans to use only renewable energy in its operations in Chile, Brazil and Peru by 2023 and become carbon neutral. Other initiatives include developing a biodiversity conservation strategy in collaboration with the Wildlife Conservation Society; improving infrastructure, services and management at the Yerba Loca Protected Area; and establishing the Santiago Maipo Water Fund in collaboration with The Nature Conservancy and other public and private entities, to protect and guarantee water supplies in the region.

Codelco: A state-owned copper mining company, [Codelco](#), has set a target to reduce its greenhouse gas emissions by 70% by 2030. Measures taken to achieve this goal include the replacement of production and logistics equipment in its underground mines with electric powered equipment and machinery. In addition, Codelco has developed the „[Responsible Copper Project](#)“ in 2018. The first phase was a pilot project to trace the copper cathodes produced by the company, through its journey across the entire value chain. To achieve this, the company developed a lifecycle inventory model that quantified the consumption of raw materials, inputs and energy, and calculated emissions and impacts in the production of copper cathodes by creating environmental and social indicators.

Suppliers pursuing Responsible Sourcing Strategies

Chilean company [Antara MP](#) provides mining companies with software that enables complete traceability of the final product, whether it is copper cathode or copper concentrate. It is a technological platform capable of tracking the final product from raw material extraction to the end customer, including production, logistics, sales and shipping. In this context, a section is dedicated to green mining, contributing to efficient and sustainable mining through registration and the use of traceability variables, complementing the software with a focus on the impact on communities, workers and the environment.

¹⁸ Only a selection of initiatives is presented here.

¹⁹ Consejo Minero: [BHP](#) (2020)

In 2018, Codelco became the first copper mining company in the world to produce traceable cathodes. The project measured the impact of cathode production through 76 indicators, distributed across 8 dimensions aligned with the UN SDGs. The company also signed agreements with car manufacturer [BMW](#) and with [Nexans](#) (a French copper cable manufacturer with copper cable production facility in Chile) to market copper with a sustainability label in accordance with the [ISEAL guidelines](#). Other collaboration efforts with BMW include the development of core indicators that measure progress on sustainability activities and productive collaboration with stakeholders, including NGOs and regulators.

Lithium Producers

SQM: Lithium production is associated with high water use, particularly in water scarce areas. Chilean lithium producer [SQM](#) has developed a system to provide information on water and brine withdrawals, as well as historical records of environmental monitoring conducted by the company. This data helps to assess potential impacts of operations on other stakeholders, and any negative impacts on the protected areas. In addition, the system allows information to be collected to better understand the behaviour of the Salar²⁰ over time. The company will (self) report on its compliance with its commitments to establishing operations that ensure sustainability. In 2020, SQM announced that it will reduce brine consumption by 50% by 2030 and water consumption by 65% by 2040 and become carbon neutral. SQM has also joined Initiative for Responsible Mining Assurance ([IRMA](#)) and is preparing for its first audit under the certification scheme in 2021²¹.



Albemarle: The second major player in lithium mining in Chile, [Albemarle](#), has 150 monitoring wells in the Salar Basin. Indigenous community representatives accompany Albemarle in monitoring the wells. Solar energy makes up 78% of Albemarle's total energy consumption²². The company is also working with strategic customers to enable lithium recycling in the future. In 2021, the company announced that it has commissioned an independent third-party assessment under the Initiative for Responsible Mining Assurance (IRMA) standard for responsible mining at its Salar facility in the Salar de Atacama. ERM Certification and Verification Services, an IRMA-approved certification body, will be conducting the audit at Albemarle. Albemarle is one the first global lithium producers to conduct such an assessment.

²⁰ A salar is an salt-encrusted depression, which one can find for example in the nitrate fields of Chile.

²¹ [SQM joins the IRMA initiative to deepen its sustainability commitments](#)

²² Albemarle: [Making the World Safe & Sustainable by Powering the Potential of People](#) (2020)

5. Alignment with international standards



In addition to the government and companies, international initiatives in Chile play an equally important role on the way to more sustainability and transparency. The mining sector applies various standards and initiatives along its entire value chain and many Chilean companies and organizations have joined these and voluntarily committed themselves to various principles in the area of sustainability. This section outlines a selective overview of these initiatives.

Table 1: Incorporation of International Standards in Chile

Initiative	Participating companies and institutions in Chile	Description
Initiative of the International Council on Mining and Metals (ICMM)	Codelco, Antofagasta Minerals, SONAMI, Consejo Minero	The 10 ICMM Principles for Sustainable Development focus on the key environmental and social challenges facing the global mining industry, including aspects of mining ethics and transparency.
London Metal Exchange's (LME) responsible supply chain initiative	Codelco, Minera Spence, Compañía Minera Zaldívar	The participating companies commit to the principles of the Responsible Supply Chain project, which is currently under development.
Copper Mark	Codelco, Antofagasta Minerals	The Copper Mark seal recognizes mining companies that produce copper in a responsible and sustainable manner. Launched in 2019, it is the first and only system to demonstrate that companies are producing fairly in their treatment of workers, communities and the environment. The organization developed a list of 32 criteria aligned with the United Nations Sustainable Development Goals.

Chilean companies and organisations are also partnering with international counterparts and initiatives to develop solutions for sustainable supply chain management. For example, in 2019 the [Blockchain Initiative for Mining and Metallurgy](#) has partnered with seven mining and metals companies worldwide, including Chilean players such as Antofagasta Minerals, to construct a platform that aims to develop and implement solutions for efficient supply chain management, production traceability and sustainability. Key areas of collaboration and development could include the tracking of CO2 emissions in the copper supply chain. The initiative pools resources and costs, accelerates time to market, and improves industry-wide trust. Blockchain technology could be used to strengthen trust between upstream and downstream partners and to track origins, supply chain, and production methods.

6. Sustainability Approaches in Brazil & Peru



Apart from Chile, other Latin American countries are also engaging in the promotion of sustainable mining strategies.

Brazil

As a resource rich country, Brazil exports essential materials to the European Union for the renewable energy and mobility sectors, needed to produce green technologies. These minerals include nickel, tin, tantalum, niobium, vanadium, copper and graphite. There is the future potential for extraction of cobalt, lithium and rare earth elements.

Challenges in Brazil :

- Development of business opportunities by implementing new technologies
- Implementation of more efficient production processes

Sustainable supply chains are playing an increasingly important role in the performance of Brazilian mining companies. Major mining operations and listed companies are striving to comply with ESG best practices, which are increasingly recognized and demanded by the international market, investors and local communities. However, rudimentary practices are still used in extraction and processing, especially by small extraction companies. Brazil places particular emphasis on promoting small businesses.

Brazil is pursuing the development of an export strategy that is not largely dependent on opportunities arising from a favourable exchange rate, sporadic demand from international customers or other transitory factors. The aim is to increase business opportunities for national companies by developing and implementing new technologies to reduce the environmental and social impacts caused by mining, as means of promoting sustainable growth of these businesses. In the current scenario, the main factors driving future growth are the proliferation of Big Data technologies, the IoT (Internet of Things), additive manufacturing and development of new materials.

To capitalize on these drivers, efforts have begun in the Brazilian mining sector to innovate and develop more efficient systems and production processes. An increased pace of innovation is leading to an expansion of opportunities for smaller firms through establishing lines of credit, especially for digital technologies, through Brazil's National Bank for Economic and Social Development (BNDES).

The developments in Brazil are not limited to the government alone. The 2019 dam collapse at the catch basin of an iron ore mine in Brumadinho in the Brazilian state of Minas Gerais, which killed more than 200 people and caused major environmental damage, also shows how urgent human rights and due diligence is and has increased civil society pressure on companies to implement transparency, safety measures and due diligence.

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The mining company Anglo Gold plans to stop discharging conventional waste into its dams from 2022²³. Dry storage will replace the conventional dumping of tailings in dams, which has the advantage of increasing the safety of geotechnical structures and reducing water consumption. Another example is Companhia Brasileira de Alumínio (CBA), which is involved in restoring mined bauxite areas to make the soil more productive. The company has also launched programs such as Green Legacy and Water Legacy²⁴. Anglo American Minério de Ferro Brasil, one of the largest operators in the country has been recently cited for its commitment to environmental management²⁵.

Peru

In Peru, primarily copper and secondarily iron, zinc, tin, gold and silver are relevant for supplying European industry in the renewable energy, electric mobility and electronic equipment sectors. Sustainable business practices and sustainable supply chains in the mining sector are being given considerable importance in Peru.

Challenges in Peru:

- Social conflicts
- Obtaining and keeping the social license
- Responsible water management
- Renewable energies
- Transparency of supply chains for gold

Obtaining and maintaining a social license to build and operate the projects is noted as a major issue for Peruvian mining companies. This has led to a better understanding by operators that to avoid social conflicts near mining projects, environmentally responsible water management, contaminated site management and compatible transport of products will need to be addressed. One of the biggest challenges faced in Peru relates to the transparency of supply chains for gold, as about 20% of gold production in Peru comes from informal mining²⁶. The use of renewable energies has also recently come into focus for the mining sector.

Some of the larger mining companies in Peru are members of sustainability initiatives such as [IRMA](#), [ICMM](#), [EITI](#) standards and [GRI](#). For example, the Cerro Verde Company is certified by [Copper Mark](#). In terms of advances, new projects in Peru are following the highest ESG standards in their operations. For example, [Quellaveco](#) is one of the five largest copper deposits in the world and the largest mining investment in Peru. Located in southern Peru, the project is being developed by Anglo American in partnership with Mitsubishi Corporation. It is currently under construction and first copper production is expected in 2022. The project is expected to use 100% renewable energy and no potable water will be used in production. The system is based on the use of excess rainwater that drains annually into the sea, as well as the use of water from the Titire River, which is not suitable for consumption due to its volcanic origin, as it contains high levels of salts, boron and arsenic.

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23 Conexaomineral: [AngloGold Ashanti investe na disposição a seco e até 2022 deixará de enviar rejeitos para barragem](#) (2021)

24 Companhia Brasileira de Alumínio: [2020 Annual Report](#) (2020)

25 Brasil Mineral: [Quais são as mineradoras mais sustentáveis?](#) (2021)

26 DAR: [Minería Artesanal y a Pequeña Escala en el Perú: la formalización que nunca llega](#) (2020)



7. Collaboration with Europe

The Chilean government has a great interest in strategic cooperation with Europe, as this allows for access to international capital and markets; participation in the processes of technological change; stable integration into global value chains through the formation of international alliances. To achieve such a strategic cooperation, the establishment and development of complementary relationships in the sustainable development of the Chilean mining sector are essential.

A key challenge for furthering this cooperation for Chile is establishing a national mining policy with a solid technical base, that takes into account a high level of transparency for the entire sector and not a selected few mining companies. International and national mining companies, and other global players that dominate the mineral value chains, appear to focus on RS solutions on a global scale, without adequate participation in the Chilean national innovation systems. Greater cooperation is required between mining companies and national and international suppliers, universities and technology centres, and between production sectors in conjunction with the government, to promote a modern mining policy. Chile is not seeking to play a passive role in the development of its mining sector with regards to sustainability standards and practices.

It is important for international cooperation to create uniform standards that are accepted worldwide to minimize uncertainty on the part of producers and consumers. There are a multitude of different initiatives, seals and standards, that duplicate requirements and can interfere with the promotion of transparency. Additionally, when requiring or introducing international standards to a country, it is essential to take into consideration that national certification and control bodies, that will carry out compliance and monitoring, require capacity development and expansion. Therefore, control mechanisms and options need to be planned and resources provided, before new standards are required to be implemented, so that their compliance and effectiveness can be guaranteed.

Special sensitivity is also required from European producers and consumers when dealing with lithium extraction, as these operations are located in areas with high ecological and cultural sensitivity. In addition to the environmental dimensions, the social dimensions and interests of the stakeholders cannot be neglected when requiring compliance with international standards.

8. Conclusions

By exploring the current status, challenges and examples of international initiatives, regulations and approaches of organizations, companies and governments in Chile and Latin America it has become clear that national and international collaboration is the key to achieve the goal of a transparent and sustainable mineral supply chain. Collaboration can be very fruitful for both parties, Europe and Chile. Europe is an important partner for Chile and Latin America in providing support through expertise and technologies to overcome sustainability challenges. For Europe, cooperation with Chile and Latin America can go a long way to address its long-term raw material security for technologies on which the [European Green Deal](#) and energy transition are reliant.

For such collaboration to be meaningful, it is important to set priorities, to define the goals of the cooperation and to identify and focus on a selection of standards that are internationally relevant.

The RE-SOURCING Project will be hosting a Global Advocacy Forum in Chile, in June 2022, to discuss the common objectives and time scales for increasing responsible sourcing practices across mineral supply chains. Details for Latin American stakeholders who wish to participate can be found [here](#).

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