Argentina: Mineral Policy

Ana Elizabeth Bastida¹ and Diego I. Murguía²
¹Centre for Energy, Petroleum and Mineral Law and Policy, School of Social Sciences, University of Dundee, Dundee, Scotland, UK
²Instituto Interdisciplinario de Economía Política de Buenos Aires (IIEP-Baires) y CONICET, Buenos Aires, Argentina

General Information on Argentina

With a Gross Domestic Product (GDP, current USD, 2015) of around US$ 584,000 million, Argentina is after Brazil and Mexico, the third largest economy in Latin America (World Bank 2017). Argentina’s economic structure is diversified. Manufacturing and primary industries (agriculture, livestock, hunting, forestry, fishing, and mining) are the leading sectors accounting for 21% and 14%, respectively, of the domestic economy (2011) (Secretariat of International Economic Relations 2012). Even though agriculture only represented 4.3% of the GDP (2011), it has traditionally been a pillar of the economy as the exports of grains and their derivatives (mainly soybean) represent the leading export sector (Jiménez 2011) and explain a large share of Argentina’s balance of trade which recorded surpluses during the last decade (although they ran on a deficit in 2015 and 2017).

Mining and quarrying of energy and non-energy minerals represent around 3% of the GDP (KPMG 2018), whereas the mining of non-energy minerals is around 1% (CAEM 2013); exports of nonenergy minerals (mainly due to exports of gold, copper and silver) represented in 2014 a 5.4% of total Argentinian exports (Deloitte 2016). The country’s population (estimated at 43 million) grows slowly at an average annual rate of 0.9% (UN 2014). Though the country does not have an official religion, the population is mainly Roman Catholic. The life expectancy at birth is 76 years which has grown since 1990 (71 years). Argentina’s public health and educational systems are still well established and financed via public spending (represent around 5.3% and 5.8% of the GDP, 2010 and 2011, respectively) (UNICEF 2015). Argentina is placed among the very high human development countries (index value of 0.827 for 2015) according to the UN Human Development Index 2016. Energy and resource efficiency are fields still in their infancy in Argentina with much potential for development.

Need of Minerals

In relation to energy minerals, the Argentinean energy matrix has traditionally and still remains highly dependent on hydrocarbons. By the 1970s, oil was the central source of energy, catering for a 68.5% of the energy matrix, followed by natural
gas with a 21%; this has changed as natural gas became more important. By 2014 natural gas catered for a 51.1% of the country’s primary energy mix and oil for almost a 33%, followed by nuclear with 4.6% and hydraulic almost 2% (Secretaría de Energía 2015). In terms of domestic production, Argentina is almost self-sufficient producing oil and derivatives with low imports. Yet, regarding natural gas, domestic production has substantially decreased (in 2014 a 20% less than in 2004), while gas imports have increased during the last decade: imports reached almost 11,000 million m$^3$ against a domestic production of almost 43,000 million m$^3$ in 2015 (Instituto Argentino del Petróleo y del Gas 2018). At the same time exports of natural gas have been reduced to insignificant values.

Regarding reserves, and due to years of deficient exploration, proven oil reserves have been declining in the last decade, from 425,000 m$^3$ in 2003 to 343,000 m$^3$ by 2016. Likewise proven natural gas reserves have dropped from 446,000 million m$^3$ in 2003 to 336,000 million m$^3$ by 2015 (Instituto Argentino del Petróleo y del Gas 2018), less than by 1990 (579,000 million m$^3$). In relation to unconventional energy minerals, Argentina entered the list of the top 10 countries with technically recoverable shale oil and shale gas resources with the discovery of the Vaca Muerta formation in 2010. With 27 billion barrels of shale oil it ranks fourth worldwide after Russia, the USA, and China in the ranking of shale oil-hosting countries and second for shale gas (EIA 2013).

With regards to nonenergy minerals, copper, gold, silver, molybdenum, lead, and zinc remain the most valuable mineral commodities extracted and produced in Argentina. Copper production (concentrate) grew steadily, jumping from 30.2 kilotons (share in world’s production of 0.26%) in 1997 to 102.6 kilotons in 2014 (share in world production of 0.55%) driven by only one open pit mine (Bajo de la Alumbrera). Even though several first-rate copper-bearing deposits are known (e.g., Agua Rica, Taca Taca, Los Azules, El Altar, El Pachón, Cerro Atajo), no new copper mines have yet been opened, and Bajo de la Alumbrera (which mine life, now as underground, was recently extended until 2029) is still the sole copper and molybdenum producer in the country. Gold production (mostly as doré) takes place in a few large-scale open pit (Veladero, Guacamayo, Don Nicolás, Farallón Negro, Bajo de la Alumbrera), open pit/underground (Casposo, Cerro Vanguardia, Manantial Espejo), and underground mines (San José-Huevos Verdes and Cerro Negro which started commercial production in 2015) and jumped from 1.1 metric ton in 1990 to 63.8 metric tons in 2015 (See Thomson Reuters-GFMS 2017 Gold Survey), turning Argentina into the third largest producer in South America after Peru and Brazil. Domestic silver production has grown from almost 72 metric tons in 1990 to 850 metric tons in 2014, a growth explained by the opening of the Martha, San José, and Manantial Espejo projects and the expansion in Pirquitas (now in closure phase), to be followed up by the Chinchillas project (Chinchillas project is considered an extension of Pirquitas’ mine life. Chinchillas deposit will be mined by conventional open pit mining methods. The ore will be transported and processed in the Pirquitas processing facilities). Copper, silver, and gold are handled as commodities and are exported to smelter and refineries in the USA, Europe, or South Africa. Domestic production of zinc has remained stable around an average of 32,000 metric tons in the last decades.

**Other Minerals of Importance for the National Industry Encompass Iron, Aluminum, and Uranium.** The production of iron has traditionally been insufficient to cater for domestic demand and iron is produced and imported. Since the re-opening of the Sierra Grande mine in 2006 (the sole iron ore producing mine), Argentina has been extracting iron and shipped 400,000 tons of iron concentrate in 2015. In 2014 the pig and sponge iron and crude steel production reached 3644 and 4580 thousand metric tons, respectively (Cámara Argentina del Acero 2015), using iron ore imported almost to 100% from Brazil (Argentina’s iron industry is completely relying on ore imports from Brazil because Sierra Grande not only produces a small annual amount of iron concentrate but also because the quality of such concentrate is not
good as it contains high levels of phosphorus). Argentina’s primary aluminum domestic production (around 440,000 metric tons in 2013) takes place at ALUAR’s Puerto Madryn plant which imports bauxite (Argentina has no bauxite deposits) and delivers alumina catering for the domestic demand and exporting the remaining 70% of its production. Argentina’s nuclear power plants are fully dependent on imports of uranium as no uranium producing mines are in operation. Argentina’s uranium resources are small and total 15,000 tU (though the National Nuclear Energy Commission estimates that there are some 55,000 tU as exploration targets) (World Nuclear Association 2015).

Argentina is self-sufficient in the production of industrial minerals and aggregates, being the main products sand, crushed stone, limestone, gravel, salt, tuff stone, and bentonite. Traditionally nonmetalliferous mining activities have represented a marginal share in the national GDP (Sarudiansky and Nielson 2014). Argentina is a big world player in the production of boron (a mineral considered of critical importance by the European Commission), diatomite, lithium, and strontium (shares of 11.2%, 12.2%, 8.3%, and 1.5%, respectively, in world’s 2013 production) (Reichl et al. 2015; USGS 2015). Argentina is the 3rd largest producer of lithium in the world and exports virtually all of its lithium production. During the period 2012–2016 Argentina produced an annual average of 18,500 tons of lithium carbonate equivalent (LCE), producing in 2016 over 30,000 LCE (16% of the global production) with the entry into production of the Salar de Olaroz operation (Delbuono et al. 2017). The lithium production is expected to grow in the short term with a large number of new projects being developed. Argentina’s lithium reserves are estimated at 5.1 million metric tons of LCE placing the country fourth in the world and are concentrated in the provinces of Jujuy, Salta, and north of Catamarca (Jerez et al. 2017).

The recycling and usage of secondary raw materials is a new and underdeveloped business in Argentina. Almost no statistics exist and only a few companies are pioneering the recycling business, particularly those dedicated to recycling waste electrical and electronic equipment (WEEE) and hard metals. The recycling and re-use of secondary minerals is not expected to grow in the short term due to a lack of sufficient incentives in the legal framework.

Mineral Policy Conception of Argentina

Each country, via the national governments which administer the State during certain periods, establishes goals and objectives to be achieved, i.e., establish priorities to allocate and manage resources in a certain direction. Public policy entails a course of action followed by government institutions to achieve desired outcomes. It is expressed in laws and regulations, public statements, and funding priorities.

A minerals policy is part and parcel of the economic policy of a country (a public policy) and can be defined as the entirety of government actions to influence supply for mineral resources in its territory and beyond (Tiess 2011). The term “minerals policy” is related to the establishment of a minerals policy framework, which in turn, is (or should be) based on (analyses of) minerals consumption (Mineral consumption = (primary + secondary) production + imports − exports) and considers the internal (national territory) and external (beyond) component of a minerals policy framework. Although mineral policies often cover only primary mineral resources, it has been argued (e.g., Murguía and Tiess 2017) that a paradigm shift is needed including secondary mineral resources within an integrated minerals policy framework. Actually, the European Union (EU) has now for years been strongly supporting (politically and financially) an integrated raw materials strategy (the “Raw Materials Initiative”) whose overall objective is to ensure a stable, sustainable and continuous supply of mineral resources (especially metals on which the EU has a high dependency rate) from imports, from within the EU’s territory and also from recycling.

Mineral policies need to be distinguished from mining policies as the latter are focused on extractive activities, and not on the entire management
of the minerals along the value chain. **Mining policies** (Every country has a mineral policy and/or a mining policy. In some instances, this may take the form of a stand-alone document, but in many cases, this is implicit and it can be construed from legislation and a range of information sources) have traditionally focused on minerals extraction issues, i.e., establishing enabling conditions for prospecting, exploration, and extraction of mineral resources. The emphasis on mining policy is slowly evolving, or expected to evolve, towards setting a framework for the transformation of natural wealth into sustainable, broader based development along the lines of Agenda 2030 (Bastida 2014; Bastida and Bustos 2017).

In Argentina, like in other Latin American countries, there is no official minerals policy. Instead, since the 1990s, the country’s successive governments have maintained a mining policy aimed at promoting foreign investment to develop and expand predominantly the metals mining sector based on the production and export of commodities and, to a certain limited extent, the development of the upstream sector (the mining equipment, technology, and services). Very few incentives have been implemented so far to advance in the value chain and establish side stream (logistics, financial services and availability of risk capital, energy infrastructure, etc.) and downstream operations (e.g., refining of copper or of precious metals by the installation of a modern and certified refinery).

**Argentina’s current mining policy was designed as part and parcel of the general global trends featuring the 1990s.** As an outcome of the profound liberalization of the Argentinean economy promoted over that decade, the country opened up the mining sector to private, foreign direct investment (FDI) through a highly competitive fiscal and legal framework and saw the first large-scale open pit mine open in Catamarca in 1997 (Bajo de la Alumbrera). During the 2000s, other large-scale metal mining projects were commissioned and the metal mining sector grew continuously.

While core tenets of the mining framework per se remained unchanged, the administrations of Néstor Kirchner (2003–2007) and Cristina Fernández de Kirchner (2007–2015) (whenever suitable, jointly referred to in this article as the “Kirchner national administration,” spanning from 2003 until 2015), introduced, especially during the period 2011–2015, a number of protectionist measures (e.g., a ban on utilities and dividends repatriation, see Table 1 below). Even though these discouraged speculative financial capital and promoted the development of some local service providers (e.g., the import substitution program), it also infringed some of the stability principles of the national Mining Investment Law and discouraged FDI flows towards (not only) the mining sector.

The introduction of export duties triggered much controversy in the mining sector over this period. Following the economic and financial crisis of 2001, the Law of Public Emergency 25,561 (2002) delegated on the Executive Power the power to establish export duties. By Resolution 11/2002 and subsequent amendments, the then Ministry of Economy and Infrastructure set out export duties for 5 to 10% of the FOB value of exported minerals. While these duties would not reach those companies that had obtained certificates of fiscal stability prior to the enactment of such law, joint Resolutions 288 and 130 issued in 2007 by the Secretariat of Commerce and by the National Secretariat of Mining mandated the National Customs Office to collect export duties from those companies. Over the years, and most clearly from around 2007, the tax regime was further eroded with restrictions to foreign currency exchange and a trend in resource-producing provinces to establish new taxes and charges, or setting up provincial State-owned companies to increase the provincial take.

The administration of Mauricio Macri, who took office in December 2015, promoted fundamental macroeconomic changes steered to open up the financial market (promoting speculation at the expense of an increasing external public debt), reduced fiscal deficit, restored an investment climate (see Table 1 below), and aimed at strengthening the rule of law. In the mining sector, President Macri’s administration abolished the export duties and has been actively promoting a
new investment climate to attract further FDI to the provinces.

In the 1990s, the **Federal Mining Covenant** (Law No. 24,228 of 1993) crystallized the consensus reached between the national State and the provinces to develop coordinated actions. The administration of Mauricio Macri promoted a **New Federal Mining Covenant** between

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**Argentina: Mineral Policy, Table 1** Tax and financial provisions changes during Kirchner and Macri administrations

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<td>Restrictions to purchase foreign exchange</td>
<td>From 2011 onwards prior authorization from the central Bank of Argentina (BCRA) and from the Argentinean Federal tax Agency (AFIP) was required to purchase foreign currency</td>
<td>Any individual or company can freely access the exchange market to purchase foreign currency to invest in foreign assets, subject to the condition that no more than USD 2 million are bought per month</td>
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<td>Minimum stay period for foreign financial flows and compulsory deposit ('encaje')</td>
<td>In 2005 a decree (616) established that all currency flows (stemming from debt originating outside of Argentina and belonging to private entities) entering the local market in Argentina needs to remain within such market for 365 days. Art. 4 of decree 616 established that a compulsory noninterest bearing deposit equivalent to 30% of any foreign investment was due which would be withheld for a period of 365 days</td>
<td>Resolution no. 3/2015 reduces to 0% the non-transferable, non-interest-bearing deposit ('encaje') and reduces the minimum stay period from 365 to 120 calendar days as from the date when the funds entered into Argentina. Resolution no. 1-E/2017 of the Ministry of Economy reduced to 0 days the minimum stay period</td>
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<td>Obligation to liquidate currency in the local market</td>
<td>Compulsory since 2011 (decrees 1722/2011)</td>
<td>The period for liquidation was made flexible (res. 47-E/2017) and then eliminated (decrees 839/2017)</td>
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<td>Ban on utilities and dividends repatriation</td>
<td>Restricted amounts since 2012</td>
<td>Gradually opened, nowadays free inflow and outflow movements of capital</td>
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<td>Control of services and payments abroad (DJAS-DAPE)</td>
<td>Requirement to provide an Anticipated Sworn Statement of Services (DJAS) (res. 3726) and an anticipated statement of abroad payments (DAPE) (res. 3417)</td>
<td>The requirement to present DJAS or DAPE for international financial transactions was eliminated (res. 4008-E/2017 AFIP)</td>
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<td>Import procedures (DJAI)</td>
<td>Requirement to provide an Anticipated Sworn Statement on Imports (DJAI), which could be approved or not.</td>
<td>DJAI procedure was terminated and replaced by the SIMI (simplified import procedure) (res. 3823/2015 AFIP and 5/2015 min. Producción)</td>
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<td>Export duties on metal exports</td>
<td>In 2007 the national government established export duties applicable to the mining activity at a rate of 5% FOB for doré/crude silver and 10% FOB for metal concentrate</td>
<td>Abolished as one of the first measures taken by the new administration (decrees 160/2015, decree 25/2016 and decree 349/2016)</td>
</tr>
<tr>
<td>Program for the substitution of imports</td>
<td>Requirement to hire Argentinian companies for freight transport (by ship, road, air, or any other means) exports of minerals or derivatives (res. 12/2012) and requirement to have an own Department for the Substitution of imports (res. 13/2012), both regulated by res. 54/2012.</td>
<td>All mentioned resolutions were derogated by res. 110-E/2017 of the National Mining Secretariat. In such resolution (art. 3), it is established that companies will have to present a plan of participation of the National Industry along with the feasibility study describing how the company will promote a higher uptake of nationally produced components and services</td>
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Source: own elaboration
representatives of the national State and the provinces. The agreement was signed on 13 June 2017, and it will enter into force once it is approved by the National Congress and the provincial parliaments (still pending at the time of writing). This document lays down the basis for a new State policy for the mining sector. It seeks to anchor mining policy within a sustainable development matrix, invoking constitutional principles and the transformative role that mining can play in boosting regional development. It revolves around five core areas of agreement, each involving specific objectives. They are summarized as follows:

- **Community and social aspects**, envisaging actions to maximize benefits to local communities, support artisanal and small-scale mining and enhancing education at school level on geological knowledge and mineral use aspects.
- **Environmental management**, aiming at coordinated action between national and provincial mining authorities; provincial mining and environmental authorities; and the relevant federal councils in mining and environmental affairs (the Federal Mining Council -COFEMIN in its Spanish acronym- and the Federal Environmental Council -COFEMA-) to discuss appropriate environmental management tools for the sector. The Covenant calls for the creation of a technical and independent consultative taskforce in environmental management; setting up an environmental fund or guarantees for each mining project; establishing a mine closure regime; and promoting the use of renewable energies and the adoption of energy efficiency measures;
- **Productive development and economic and tax aspects**, including actions to promote local content and support small and medium-sized enterprises; encouraging linkages with other sectors of the economy and through shared use of infrastructure, and science, technology and innovation; improving infrastructure and transport conditions (via a Mining Infrastructure Development Plan); authorizing the provinces to charge an additional contribution to establish public infrastructure funds; establishing the basis for calculating royalties; setting criteria for the participation and management of provincial State-owned companies.
- **Institutional and normative aspects**, which include the establishment of a Mining Information Centre to systematize and organize all information related to the sector and projects and promote transparency, standardizing procedures and a unified cadastral system, and establishing a lithium round table, apart from a range of agreements on amendments to the Mining Code.

Such federal covenant reflects Argentina’s current mining policy and is driving government actions in several aspects. It is early to assess whether the aspirational objectives set in the Covenant, and all the programmatic actions envisaged will be fully implemented. Yet, the text as drafted is still far from an integrated mineral policy as it does neither contain a minerals demand analysis nor considers secondary resources. On another point, the document implicitly favors an emphasis on exporting raw materials as commodities rather than on advancing in the value chain of minerals (especially metals) – a long-term trend in Argentina’s mining policy-

Mining has developed in the provinces that support the sector, notably in Catamarca, Jujuy, San Juan, Santa Cruz, and Salta, while there are ongoing exploration efforts in others. The Northern province of Jujuy has taken some steps towards adding value in the value chain of lithium production. Similar to what occurs in Bolivia, the lithium extractive sector is increasingly attracting foreign investment from downstream user companies such as the Japanese Toyota (Sales de Jujuy S.A.) (See the company’s website at [http://salesdejujuy.com/](http://salesdejujuy.com/) (accessed 26.02.18)) already exporting lithium carbonate to Japan), the Korean steelmaker POSCO (POSCO plans include extracting and processing about 2500 tons of lithium per annum as of 2017 to supply electric car battery makers in Korea and elsewhere. See [http://koreatimes.co.kr/www/news/biz/2016/02/602_198006.html](http://koreatimes.co.kr/www/news/biz/2016/02/602_198006.html) (accessed 19.04.17)), or Lithium Americas in partnership with Sociedad Química
y Minera (SQM) de Chile (In 2016, Lithium Americas entered a strategic 50/50 JV with (SQM) to develop and operate the Caucharí-Olaroz project in Jujuy. They plan to evaluate the economic feasibility for a project with a nameplate production capacity of approximately 40,000 metric tons per year of lithium carbonate equivalent. See http://www.marketwired.com/press-release/lithium-americas-and-sqm-announce-joint-venture-tsx-wlc-2109434.htm (accessed 19.04.17)). At the time of writing, apart from the above mentioned Sales de Jujuy, the other project at the stage of production is Salar del Hombre Muerto, operated by FMC. The recently created provincial mining companies (JEMSE in Jujuy, REMSA in Salta) are entering into joint ventures with some of these foreign investors (e.g., JEMSE and REMSA with the French ERAMET). However, what is unique in the case of lithium is that R&I has been ongoing in the Jujuy province. The single known experience in Jujuy is embodied in the Jujuy Litio SA company, founded in December 2017 by JEMSE and the Italian FIB, and supported by Y-TEC. The company is now advancing towards the installation of, first, an assembly plant, and then it reports that it plans to advance towards the fabrication of ion-lithium cells for public transportation (Ensinck 2017). Another initiative which is still in its infancy is the company LITARSA which aims to advance in the value chain with a plant in Salta (Monzoni 2018). Yet, these initiatives appear isolated within a context where the economic, industrial, and R&I policies seem to head towards larger exports of lithium carbonate (or lithium chloride) and, at least at the time being, not linked to the technological or industrial development of the sector (Roger et al. 2017).

The main pieces of the legal framework applicable to mining nation-wide are the following:

- **Mining Code**, enacted by virtue of the power expressly delegated by the provinces to the national Congress (article 75, paragraph 12). The Code was enacted in 1886 and has been amended many times, most significantly during the 1990s. **Law No. 24,585 - Environmental Protection for Mining Activities enacted in 1995** incorporated an environmental chapter (Title XVIII, section 2).
- **Mining Investment Law No. 24,196**, which establishes tax benefits, including fiscal stability for 30 years from the date of submission of the feasibility study, and **Law No. 24,402** of 1994 establishing a financing regime for paying Value Added Tax.
- **Law No. 24,228** of 1993 (**Federal Mining Covenant**) which expresses consensus reached between the national State and the provinces to develop coordinated actions; as explained above, **a New Federal Mining Covenant was signed** in 2017 (still pending of approval by National Congress and provincial parliaments).

The Mining Code establishes the rules and procedures for granting, maintaining, transferring, and cancelling mineral rights. It thus so through a “concession system” whereby the State grants exploration permits and concessions (for exploitation) through an objective, nondiscretionary system that demands compliance with the payment of an annual fee, investment commitments, and the requirement to keep the mine “active.” Concessions have the status of real property and are granted for an indefinite period as long as the requirements inherent to the title are complied with. Procedural provisions under the Mining Code are implemented by provincial regulations. While the inherent features of the concession system and the status of mineral rights have proved attractive to private investment over time, its technical basis is outmoded (Catalano 1999). This has become most recently apparent faced to the boom

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**Regulatory Framework**

Argentina is constitutionally organized as a federal republic. The federal government only exercises powers that have been expressly delegated by the provinces. The provinces hold ownership over natural resources in their territories, according to the constitutional reform of 1994.
of lithium and emerging debate on its most adequate regulation.

The Mining Code also provides a regime applicable to areas reserved to the State due to its geological importance, which are granted through a tender process and administrative concessions. Over time, mining provinces have established State-owned provincial mining companies or agencies with varying extent of participation in the business (Zaballa and Arbeleche 2014).

**Investment Regime**

Pursuant to the Constitution, as a general principle, foreign investors enjoy the same status and hold the same rights than those afforded to local business. From the early 1990s, Argentina established very high standards for investment protection through the adoption of the Foreign Investment Law 21,382 (1993) and the conclusion of more than fifty Bilateral Investment Treaties for the promotion and protection of investment with many countries, including Australia, Canada, China, USA, and South Africa. Most of the 21 treaties to avoid double taxation of which the country is a party were also ratified in that decade. During the same period, Argentina joined the International Center for Settlement of Investment Disputes (ICSID) and became a member of the Multilateral Investment Guarantee Agency (MIGA). MIGA political risk guarantee covered Cerro Vanguardia project with a guarantee of USD 5 million.

The hallmark of the Mining Investment Law No. 24,196 is the 30 years fiscal stability benefit. The Supreme Court of Justice has upheld such fiscal stability benefit in a case where the National Customs Office intended to collect a tax on shareholders’ dividends (Cerro Vanguardia v DGI). It has also granted a preliminary injunction favoring Minera Tritón Argentina S.A. by obliging Province of Santa Cruz to refrain from claiming the payment of a property tax on mines located in its territory that had been established back in 2013, until a decision on the merits of the case is made (Minera Tritón Argentina S.A. v Provincia de Santa Cruz, 30 June 2015). In a case brought to challenge the collection of export duties, the Court decided that the plaintiff should have demonstrated an increase in the overall fiscal obligation and in such a case, followed a specific procedure under the Mining Investment Law to request a compensation or a reduction of its tax burden (Minera del Altiplano v Estado Nacional, 10 July 2012, see Parravicini 2014). The Argentina-Chile Mining Integration and Complementation Treaty (signed in 1997 and approved by Law No 25,243 enacted on 23 March 2000) provides a framework to facilitate investment and coordinate the regime applicable to mining projects across the large border between both countries, where most metallic mineral deposits are located, as identified by the Treaty (e.g., on taxation and customs, labor and social security, environmental and health protection, and shared water resources). It applies to each specific cross-border project by means of a Special Mining Project Protocol. So far, Argentina and Chile have entered into five Protocols, i.e., for Pachón, Pascua-Lama, Vícuña, Las Flechas, and Amos-Andrés projects.

**Environmental Regulation**

In environmental matters, the Constitution deals with the coordination of federal and provincial jurisdictions by providing for the enactment of environmental minimum standards at a federal level, which can be complemented at a provincial level (article 41, Constitution). Law 24,585 of Environmental Protection for Mining (1995), incorporated to the Mining Code, sets up a uniform environmental framework for the activity, which can be complemented by provincial laws and regulations. The competent authority in environmental affairs is either the mining authority or the environmental authority, as decided by each province. Law 24,585 covers the prospecting, exploration, exploitation, development, extraction, storage, and beneficiation phases, including those activities aimed at mine closure. They all require from the operator the filing of separate Environmental Impact Assessment Reports (EIR), which are reviewed separately for approval. For the closure phase, the operator must file another EIR, or an update or amendment of the existing one to cover it, including measures and actions aimed at avoiding (or mitigating) negative environmental impacts after the closure of
operations. There is no specific national law establishing a mine closure regime and financial assurances to ensure compliance (though the National Mining Secretariat is currently working on a draft project advancing a national law on the subject and some provinces, such as Catamarca, have established guidelines for preparing the mine closure plan). The relevant authority approves EIRs through Environmental Impact Declarations, which must be updated every 2 years.

The legislation relies on the traditional administrative (from warnings and fines to temporary and definite shutdown), civil, and criminal mechanisms to enforce compliance. Law 24,585 requires the relevant enforcement authority to provide information to whoever requests it regarding the application of environmental provisions. In turn, the provinces that have retained the powers to regulate general environmental matters within their own jurisdictions can introduce public participation mechanisms and other measures for environmental protection to complement national standards (see further the decision by the Supreme Court of Justice in Villivar v Provincia de Chubut).

At national level, the National Congress enacted Law 26,639 of Minimum Standards for Glaciers Protection (2010) that bans mining from glacier and “peri-glacier” areas as defined by the law and as identified in an inventory prepared by the national glaciers institute. The execution of the inventory has been slow and limited by budget constraints. The Supreme Court of Justice revoked an injunction issued by a federal judge in San Juan province that had suspended the application of a few articles of Law 26,639 (Barrick Exploraciones Argentinas v Estado Nacional). It should be noted that due to the spatial overlap in the location of glaciers/peri-glaciers and metallic deposits and due to the lack of sufficient technological alternatives to the exploitation of deposits, this national law (and its deficient implementation) is currently a hot spot of conflicts for metal mining prospective projects.

### Provincial Laws and Municipal Ordinances Banning the Use of Chemicals and Open-Pit Mining

The question of the extent of the powers retained by the provinces to regulate and even ban the use of specific technologies and extractive methods is hotly contested and expresses the underlying social conflicts permeating the large-scale metal mining sector in Argentina. 2003 witnessed the first case of major community opposition, which occurred in the Esquel project in the Southern Chubut province. This led to the suspension of the project and the start of the “No a la mina” movement. (http://noalamina.org/) Social opposition to large-scale metal mining has been growing in Argentina, resulting in the existence of a remarkable distinction between “mining provinces” (those that support mining) and those that have set restrictions to large segments of the activity.

Currently seven provinces (out of 23) either ban open pit mining and/or the use of different types of chemical substances often used in mining-related processes from their territories. (Chubut (Law No. XVII-Nº 68 (formerly No. 5001), 2003); Tucumán (Law No. 7879, 20 April 2007); Mendoza (Law No. 7722, 22 June 2007); La Pampa (Law No. 2349, 14 September 2007); Córdoba (Law No. 9526, 31 October 2008); San Luis (Law No. IX-0634, 17 October 2008); Tierra del Fuego (Law No. 853, 21 September 2011). Río Negro and La Rioja enacted, and subsequently repealed, laws of this type.) Some of those provinces, such as Mendoza and Chubut, have high mineral potential (e.g., Navidad silver/lead deposit in Chubut, designed to be extracted using the open pit method and one of the world’s largest silver deposits). In the case of Chubut, Provincial Law No. XVII-Nº 68 establishes a process of zoning that once implemented should spatially define zones in which different extraction technologies (e.g., open pit mining) would be permitted and others where mining would be banned. At the time of writing, the zoning process has not yet been established, but there appears to be a growing political willingness for it to take place soon and
allow the development of projects in advanced status.

Companies and mining business associations have challenged the constitutionality of these restrictive provincial laws by bringing claims in the provinces of Cordoba and Mendoza, arguing that these laws impinge upon the powers expressly delegated to the Nation under article 75, section 12, and article 126 of the Constitution to enact the Mining Code. They have also argued that those provincial laws violate property rights and the right to exercise a legal activity – both protected under the Constitution – and that banning open-pit methods and the use of chemicals entails an outright ban to the activity, as these are inherent to processes used today. Such claims have been rejected by the highest provincial courts on the grounds the aforementioned laws have been enacted within the sphere of competence of provinces and are aimed at fulfilling the constitutional duty of guaranteeing environmental protection pursuant to article 41 of the Constitution – the environment being a highest common good. Such decisions have been further challenged and at the time of writing they are awaiting decision by the Supreme Court of Justice. (Superior Justice Tribunal, Cordoba, CEMINCOR y Otra c/ Superior Gobierno de la Provincia s/ Acción declarativa de inconstitucionalidad, Decision 11 August 2015. Id SAJ: FA115160023 (File No. 1798036 initiated on 4 May 2009); Supreme Court of Justice, Mendoza, Minera del Oeste SRL y Ot. c/ Gbno. de la Provincia p/Accion Inconstitucionalidad *102863400*, Decision 18 April 2017. -CUIJ: 13–02843392-6((012174–9,058,901))-).

A number of municipal governments have also enacted ordinances restricting large-scale metal mining activities. These include Esquel and Puerto Pirámides in Chubut, Tinogasta, Andalgalá and Ancasti in Catamarca, Chilecito in La Rioja, Junín de los Andes, Aluminé, San Martín de los Andes, Villa Pehuenia and Loncopué in Neuquén, and Viedma in Río Negro province. (Esquel (Ordinance No. 33/03–2003), Puerto Pirámides (Ordinance No. 536/13); Tinogasta (Ordinance No. 859/15); Andalgalá (Ordinance No. 029/16), Ancasti (Ordinance No. 10/17); Chilecito (Ordinance No. 2695/06), Junín de los Andes (Ordinance No. 2523/15), Aluminé (Ordinance No. 1008/15), Villa Pehuenia (Ordinance No. 381/15), Loncopué (Ordinance No. 1054/12), San Martín de los Andes (Ordinance No. 10664/15), Viedma (Ordinance No. 7882/17)).

Transparency and Sustainability Reporting

On 6 December 2017, the Minister of Energy and Mines together with the Secretary of Public Ethics, Transparency and Anti-Corruption formally announced Argentina’s commitment to join the Extractive Industries Transparency Initiative (EITI). (“Argentina se suma a la transparencia para las industrias extractivas.” 06 de Diciembre de 2017, available from https://www.argentina.gob.ar/noticias/argentina-se-suma-la-transparencia-para-las-industrias-extractivas) The enactment of Law No. 27,275 on the right of access to public information (Official Gazette, 29 September 2016) and Law No. 27,401 on corporate criminal responsibility (Official Gazette, 1 December 2017) signal significant efforts to strengthening governance.

In 2016 Argentina’s Mining Business Association (Cámara Argentina de Empresarios Mineros, CAEM) adopted the Towards Sustainable Mining (TSM) initiative, the tools, and indicators developed by the Mining Association of Canada (MAC) to improve environmental and social practice in the mining industry.

Mineral Resources and Resource Efficiency

A national law safeguarding the recycling of minerals and metals does not yet exist. A fraction of the metals employed is generally recycled, but no statistics exist onto how much is recycled and how much is lost and dissipated (no longer recovered). As exemplified by the WEEE, without a transparent legal framework the industry of recycling of WEEE will not advance (Fernández Protomastro 2010).
International Memberships

Argentina is a member of the G20; it has a permanent mission at UNCTAD; WTO member from 1995 and GATT member from 1967.

Conclusions

In Argentina there is currently no comprehensive official minerals policy in place. From the 1990s, mining policy aims at promoting mining investment (exploration and exploitation). While the focus remains oriented towards exports of raw materials, the New Federal Mining Covenant (which has been signed but not yet received parliamentary approval) advances on concepts and actions that seek to supersede the more limited objective of attracting foreign investment to open up as many projects as possible. It envisages actions to promote local content and encourage broader linkages with other sectors of the economy. This follows the late period of the previous Kirchner administration which had a strong policy of import substitution intended to foster backward linkages, leading to the development of some low technology suppliers of goods and services.

Yet, with the exception of some incipient initiatives like the national or provincial roundtables (e.g., on lithium), there have not been systematic and long-lived institutional attempts so far to build forward linkages further, in order to promote the use of minerals in the industry and new technologies, and to link up with Research and Development and innovation policies. The case of lithium (in the Jujuy province) appears to be the only one where a certain continuity exists in promoting R&D policies towards adding value to extracted metals.

The debate about the environmental and social impacts of mining as well as about the economic contribution of the sector to development has been very polarized over the last 20 years and has led to a division between provinces (and communities of people, workers, media) that support mining and others that have banned the use of chemicals and open-pit methods. Mining takes place in the provinces that support the sector, while there are ongoing exploration efforts in others. The New Federal Mining Covenant envisages the coordination of actions with local communities, as well as with environmental agencies, and a range of actions aimed at enhancing transparency. This has been materialized in the signing up to EITI. If thoroughly implemented, these could lay the grounds to improving governance and fostering much needed dialogue. The challenges are very significant and call for filling regulatory gaps and strengthening the institutional capacities for enhanced environmental oversight and processes to meet community expectations and local development, furthering on the use of environmental and development planning tools and coordination through territorial ordering, and for advancing in the transparency and accountability agenda.

In broader terms, there is much needed discussion on an integrated national, long-term, and strategic mining and minerals development policy that places innovation and linkages with science and technology at its core and is fully anchored in participative dialogue and inclusive governance. A review of the regime applicable to lithium also calls for sober debate faced to the prospects of global demand spurred by its role in low carbon economies.

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References

Primary Sources

Laws and Regulations

Law No. 24,196 of Mining Investment, Official Gazette 24 May 1993, and Regulatory Decree No. 2686
Law No. 27,275, Right of Access to Public Information, Official Gazette, 29 September 2016
Law No. 27,401, Criminal Responsibility, Official Gazette, 1 December 2017
Mining Code, Law No. 1919, 25 November 1886 that reorganised by Decree 456/97, Compiled Text, Decree No. 456/97, Official Gazette 30 May 1997

Policy Instruments

Judicial Decisions
Superior Justice Tribunal, Cordoba, CEMINCOR y Otra c/ Superior Gobierno de la Provincia s/ Acción declarativa de inconstitucionalidad, Decision 11 August 2015. Id SAJJ: FA15160023 (File No. 1798036 initiated on 4 May 2009)
Supreme Court of Justice, Villar, Silvia Noemi v Provincia de Chubut y otros, (Court decisions: 330:1791; 17 April 2007)
Supreme Court of Justice, Cerro Vanguardia v DGI (C. 3378 XXIII), 30 June 2009
Supreme Court of Justice, Minerai del Altiplano v Gobierno Nacional, 10 July 2012a
Supreme Court of Justice, Barrick Exploraciones Argentina S.A. y otro c/ Estado Nacional s/ acción declarativa de inconstitucionalidad – B. 140 XLVII – 3 July 2012b
Supreme Court of Justice, Minera Triton Argentina S.A. v Santa Cruz, Provincia de (Injunction), (CSJ 1382/2013 (49-M), 30 June 2015
Supreme Court of Justice, Mendoza, Minera del Oeste SRL y Ot. c/ Gbno. de la Provincia p/Accion Inconstitucionalidad *102863400*, Decision 18 April 2017, -CUIJ: 13-02843392-6((012174-9058901))-

Secondary Sources
Argentina: Mineral Policy


