

# ANALYSIS OF THE PREVAILING ENVIRONMENTAL LEGISLATION FOR MINING ACTIVITY. SAN JUAN PROVINCE, ARGENTINA

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## ABSTRACT

*This research work analyses Argentina Republic and San Juan Province prevailing environmental legislation for the mining activity.*

*The study focuses the subject from a mining engineering point of view.*

## INTRODUCTION

Mining causes significant effects in the surrounding areas of a given target. This is a truth which cannot be denied. Nevertheless mining works are required for several products which are of every day use to cover human being basic demands.

Mining multiplying outcomes are a significant contributions for provincial and regional economics generating labour sources and new facilities, different from the world-wide known farming growth development.

Consequently, mining activity should be balanced with environmental preservation maintaining a clear idea about governmental, public and industrial support (sustainable development).

Such mining activity due to its profit break-even point through innovating projects and up-to-date methodologies and technologies applications support the country cultural, natural and economical stock and inheritance.

Mining activity involves a series of stages closely related to environmental damages with a noticeable tendency of increasing when the exploration phase is over the exploitation and metallurgical benefit starting point. Being conscious of the devastating consequences, it is peremptory to guarantee the environmental protection through laws.

Argentina Republic Federal governmental system has sanctioned provincial and national functional rules that have the force authority because they have been promulgated by official organisms of state or other mining organisation. These laws should be known and respected by research agencies, companies, mining engineers, geologists and workers concerned with this kind of tasks.

## ENVIRONMENTAL PUBLIC MANAGEMENT

Environmental management or administration is the whole body of such customs, practices or rules prescribed by controlling authorities, established as law which are either advisable or obligatory to observe under given conditions. In this field of study it implies conformity with law to keep any sort of environment as healthy as possible taking care of people welfare and natural heritage. This subject is not an easy one when it is necessary to achieve social and economical effectiveness in the present world complex system (Domínguez and Muñoz, 1994).

State forces are responsible for public environmental management. Four main supporters provide the necessary strength: Environmental Politics, Evaluation of Environmental Impact, Official Inspections and Environmental Education. None of them can be replaced or rejected to conform a conventional standard (Domínguez and Muñoz, 1994).

Argentina has been working in advance. It is ready for the large mining labour development outlining a public environmental management based on control measurements to avoid contamination during a coherent system or organisation of projects stages.

## PUBLIC ENVIRONMENTAL POLITICS

Public environmental politics means the group of activities and governmental proceedings used by different levels of the state competence and organisation: nation, provinces and municipalities. They aim at achieving given environmental conservation and protection goals.

Three specific items should be taken into account within the governmental affairs so as to analyse environmental politics: juridical order, environmental management and citizens participation.

## MINING ENVIRONMENTAL PUBLIC POLITICS IN ARGENTINA REPUBLIC

To understand the Argentina Republic Juridical order, it is necessary to take into account the first article included in its National Constitution which determines that the country has a representative, republican and federal governmental form. Federalism decentralises power and in this way, the coexistence of a sovereign central government and self-governing provinces and municipalities is possible. Central government represents the whole nation, but each province organises by itself. It establishes its own constitution, chooses its own representatives and so on, without any kind of exterior interference (Alexandre, 1971).

When dealing with the legislative aspect, the central government has the right to promulgate laws to be applied in all the country. Such a law is a basic one or it may be adhered through a special provincial law. At the same time each province has the right to promulgate laws to be applied within its own boundaries and each municipality is able to establish its own by-laws.

### National Juridical Order

From 1992 on, the Argentine government promoted national and foreign investments for mining industries establishing new and clear regulations as regards juridical security all over the country. Such regime was called "The New National Juridical Order".

Due to the activities generated, it was required to establish specific environmental norms so as to avoid damaging both the environmental quality and the natural resources.

Following the world tendency of environmental protection, the National Constitution included in 1994 a reform stipulating every inhabitant right to live in a healthy, suitable and balanced environment which should be preserved for future

generations. Article 41<sup>st</sup> declares that productive activities should satisfy everyday requirement without damaging the prospective ones. It also takes into account the fact that authorities are obliged to protect such a right to guarantee the rational natural resources usage, the natural and cultural heritage preservation and be aware of biological diversity, environmental education and information teaching campaign (Medioambiente y Minería, 1995).

As mining labours increased under the National Constitution regulation, **Law # 24,585 "Environmental protection for mining activities"** and its norms legislating field labours together with environment preservation was promulgated. This law modifies Article # 282 of the Mining Code of Argentina and it incorporates a Complementary Section which has a national competence (Law N° 24.585).

The above mentioned law significance is centred in mining activities specifications and probable impact of environmental damage. It is a preventive law rather than a reactive one. It not only regulates its application and scopes but it also conditions Environmental Management Instruments, Protection Norms and Environmental Conservation, Environmental Damage Responsibilities, Infringements and Sanctions and Environmental Defence and Education Planning.

After its approval, Law # 24,585 became the first environmental law for a specific sector of Argentine economy, conveying a juridical uniformity and homogeneity within the whole national territory.

Another law deserving a special mention is # 24,051/92 about **Dangerous Wastes** to be applied when generating, manipulating, transporting, treating or placing wastes and residues in their final stage, generated or situated in national jurisdictional places. Decree # 831/93 establishes standard guiding levels of water, air and soil quality.

The Environmental Federal Agreement for the promotion of adequate environmental development policies was signed in 1993 by the National, Provincial and Buenos Aires Municipality authorities (Carrara and Sevit, 1995).

### Provincial Juridical Order

Most Argentina provinces have general laws about environmental preservation, conservation, defence, and improvement and evaluation of environmental impacts, as well. Laws are applied to any project which may alter the ecosystem either direct or indirectly, including the mining activities which should follow the ordinary procedure.

San Juan Province Legislative Power promulgated the following laws in a successive period of thirty-one years:

**Law # 3,511/66** establishing protection requirements for the anthropological, archaeological and paleontological heritage.

**Law # 4,392/78 and Law # 4,526/79** (modified) determining the Waters Code and its reclamation regulating the supplying, conservation hydric resources of public domain. Mining usages are also considered.

**Law # 5,824/87** conditioning water, soil and air preservation and their control of contamination. Decree # 638/89 is this law regulation and remarks quality norms when discharging industrial effluents.

**Law # 6,571/94** "Evaluation of environmental impact" organising proceedings so as to identify, interpret and prevent private or public actions effects about ecological equilibrium. This law enumerates those activities to be subjected to the Environmental Impact Process, among which mining enterprises are included.

Environmental Impact Evaluation Process includes Environmental Impact Declaration which is compulsory for companies, public audience of people being affected or involved in such activities, and the final legal opinion to emit the Environmental Impact Declaration.

**Law # 6,634/95** "Environmental General Law. Principles regulating the provincial environment preservation, conservation, defence and improvement. It enumerates the norms required to preserve and improve the environment so as to keep and preserve the ecological dynamics and propitiate actions conducting to an appropriate development within the whole provincial territory. Such a law postulates a provincial environmental policy and planning, offers a continuous environmental education system, creates an environmental provincial council and an environmental provincial budget.

**Law # 6,665/95**, San Juan Province adheres to the Dangerous Waste Matters.

**Law # 6,740/96** amplifies Law # 6,634 promoting the creation of environmental organisations not included in state regulations and devises a data base of them.

**Decree # 1,426/96** adheres to National Law # 24,585 – Complementary Norms and quality standards to complete and regulate such a law.

**Law # 6,800/97** modifies Law # 6,571 derived from San Juan Provincial Law to the National one # 24,585 "environmental protection for mining activities". Law # 6,800 implies that mining activities included in the Mining Code are excluded from the provincial law # 6,571 applications, which should be ruled by the Complementary Headline about environmental protection for mining activities (Law # 24,585).

### National Management Order

National Law # 24,585 "Environmental Protection for Mining Activity" determines that a National Authority is responsible for elaborating and controlling both A Consultants and Laboratory Register and An Infractors to Law Register.

The National Environmental Management Bureau (UGAN) (Mining Bureau – Industry, Trade and Mining Bureau – Ministry of Economy, Building and Public Services of Argentina) is responsible for the above mentioned registers. It is also able to allow each province to name an authority officially so as to achieve a legal review of its administrative area or jurisdiction.

The decree regulating Law # 24,051/92 about Dangerous Wastes or Residues establishes that the National Human Environment and Natural Resources Bureau is the authority in command (Jacobo and Rouges, 1994).

### Provincial Management Order

Each province has its own organisms in charge of the whole area environment.

San Juan Province Decree # 589/96 designates the Mining Department – Mining Bureau – Ministry of Production, Facilities and Environment as the main authority. On the other hand Law # 6,800/97 determines that the authority responsible for the approval of mining projects is the Mining Department or any other institution able to replace it and being supervised by the Environmental Policy Bureau. Such an authority should issue the Environmental Impact Declaration Law # 3,511/66 about anthropological, archaeological and paleontological provincial inheritance protection. Its application is supervised by the Institute and Museum of Natural Sciences at the National University of San Juan and San Juan Province Police Department.

The Hydraulic Department and its decentralised organisms is the management authority for the application of Law # 4,392/78, Waters Code.

Law # 5,824/87 appoints the following provincial organisms as application authorities:

- Sanitary Constructions Governmental Society: effluent discharges in sewer collecting nets.
- Hydraulic Department: underground waters, springs, rivers, streams, brooks, slopes and natural courses.
- Municipalities: effluent discharge in public woodlands, plantations, irrigation systems, rain drainages and effluents transport.

### Citizens Participation

National Law # 24,585 "Environmental Protection for Mining Activity" in contrast to many national and international laws fails to include citizens participation (public audiences, information periods, etc.).

San Juan Province Law # 6,800 exempts mining activities to apply law 6,571 which includes public audiences of people being affected or involved in such activities. Consequently, citizens are not given the opportunity to express opinions as regards mining projects environmental evaluations.

## ANALYSIS OF SAN JUAN PROVINCE MINING ENVIRONMENTAL LEGISLATION

Argentine Public Environmental Management analysis shows that basic items have been taken into consideration, such as: policy, evaluation, inspection and environmental education. They have all been included in the prevailing legislation. Authorities concern themselves with the environmental protection of the whole country. Legislations aim at preventing any

kind of negative impact and solving problems derived from infractions.

The prevailing laws are accomplished by mining companies and they are efficiently controlled by the state authorities to avoid environmental impacts.

It is worthy to mention that National Law # 24,585 demands the accomplishment of presenting Environmental Impact Reports to be evaluated by pertinent authorities who should inspect the environmental effects (Leyes Mineras y Proyectos de Ley, 1994). This law also analysis the various stages of the project being evaluated: prospection, exploration or exploitation demanding further description, detailed studies and prevention measures against contamination while the project is in progress. Besides, the environmental impact report includes ore minerals process during the mining stages and insists on environmental management plan with precaution and mitigation measurements as well as reconditioning, restoration and recomposition of the altered environment. In cases of environmental contingencies they should have elaborated a plan of actions.

Once the Environmental Impact Declaration has been obtained, the Environmental Quality Certification may be applied to authorities. The declaration must be brought up to date every two years reporting the environmental activities performed.

Law establishes that those mining activities previous to its applicability should have the Environmental Impact Report within a one year period. However, their activity is not affected by the detection of irreversible or unavoidable impacts caused before the law applicability, but corrections to impacts of future consequences will be demanded if mining labours are to be continued.

Though the national law fails to analyse potential impacts "softening or deadening zones", it establishes that the corresponding Environmental Impact Report should include the following items: units data, flows, concentrations and constituents types indicating their points of emission, the verification distance required and the estimation method or pattern employed. It is important to define the "deadening or softening zone" since San Juan Province fails to allow the modification of the environmental components quality from the same emission point (zero discharge) through the application of Decree # 638/99 (Law # 5,824/87) which deals with industrial effluents emission and discharge.

Moreover, although this law promotes the environmental education and defence, it fails to refer to citizens participation, a subject deeply discussed in Argentina because company owners and mining engineers who ignore environmental effects and they believe that the population participation obstructs industrial project approval. Citizens contribution is an important item but they should be informed by consulting expert organisations with knowledge of mining environmental issues.

The national law differs from some other legislation already analysed replacing the idea of "who contaminates, pays for it" by "who contaminates, repairs it". It demands the restoration of the environmental damage produced and establishes penal or administrative sanctions, as well.

Law # 24,585 regulations, which has the Mining Federal Council approval within its Complementary Rule and Minimum Quality Standards, establishes quality standards for water, air and soil being in accordance with the international rules of quality standards. Nevertheless, the following components should be added due to the degree variety of danger:

- Drinkable water quality rules: iron, manganese, sulphates, colour, turbidity and faecal coliforms;
- Irrigation water quality rules: beryl, cyanide, manganese, barium, iron, sulphates, tin and fecal coliforms.

It may be considered an excess to try to equal Argentine standards with the developed countries ones due to environmental and economical obvious differences. Underdeveloped countries should learn from developed nations mining traditions and apply the international principle "to prevent is more economical than to repair".

The National Government is interested in being a part of international organisations such as MERCOSUR, NAFTA and the EUROPEAN UNION to be able to trade with foreign countries. It also is aware of the fact that these groups share strict environmental rules and inspection processes.

The Dangerous Residues National Law imposes economical and environmental regulations in accordance with residue generation rate.

As regards the prevailing juridical point of view, San Juan Province has established laws and decrees in order to complement the mining national law as regards water, air and soil preservation and contamination control, quality norms for industrial effluents discharge and a series of requirement to protect the provincial anthropological, archaeological and paleontological inheritance.

Law # 5,824/87 determines industrial effluents discharge standards controlling the presence of suspended solids, hydrocarbons, oils and grease in rivers, springs, slopes and irrigation courses.

Although provinces next to Andean Range like San Juan are considered seismic hazardous areas, Argentina has neither provincial nor national laws for hydraulic, effluent, mining or tailings dikes construction or operation. It is peremptory to regulate their design. The Chilean Mining Ministry has sanctioned Decree # 86/70 dealing with safety details and procedures when building dams and reservoirs in that country after having overcome devastating earthquakes.

Argentine company owners and professionals should be conscious applying the prevailing legislation included in the Environmental Impact Declaration, to be easily inserted in foreign trading groups.

## CONCLUSIONS

Argentina Republic has established a Public Environmental Management Plan for mining activities. It may be defined as precautionary and fixed to international laws. National Law # 24,585 "Environmental Protection for Mining Activities" deter-

mines Public Environmental Management , imposing the Environmental Impact Declaration for mining projects, inspecting the environment, regulating environmental quality standards for water, air and soil and promoting environmental education.

San Juan province decrees and laws complement National Law # 24,585 to prevent environmental impacts.

It is worthy to notice that the national and provincial prevailing laws are not excludible among themselves except for a written approval.

To stimulate the environmental care it would be necessary to approve mining laws minimising environmental impact and promoting up-to-date research technologies.

The National Government should foster the accomplishment of environmental rules applying fiscal incentives.

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