# Mining- and Water-related Legislation in Peru, Bolivia and Chile - Results from the CAMINAR Project

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#### Abstract

CAMINAR (Catchment Management and Mining Impacts in Arid and Semi-Arid South America) has the general aim of contributing to the establishment of policy options, management strategies and technologies for the sustainable management of ecosystems in those river-basins of arid and semi-arid South America which are subject to impacts from mining. In this context, the project intends to derive a set of principles for future policy development and implementation to protect fragile ecosystems and dependant human communities in arid/semi-arid regions. To this aim, a review of the policy context for the management of arid river-basins impacted with mining has been prepared in the three 'demonstration' countries Peru, Bolivia and Chile, and open policy issues in each country have been identified.

Key words: integrated river basin management, stakeholder participation

#### Peru

Peru is experiencing a mining boom in the last decade. This situation is favoured by the policies of promotion of foreign investment in this sector, and by the high prices of metals at international level. Today, mining is one of the most important economic activities in Peru, representing currently more than 50% of the Peruvian income. The high growth of the sector in the 1990s was promoted by an aggressive policy where environmental and social issues were less important. This has been one of the key sources of conflicts in all the mining areas. As a result of this development policy, there are serious problems regarding the management of natural resources affected by mining, especially those related to water pollution, accessibility and availability. Mining companies considered "modern" (that is to say, with policies of social and environmental responsibility, and that uses technology of end not only for the maximization of profits, but also in view of a suitable environmental management) must face the resistance of the communities due to bad experiences and practices without responsibility applied by some mining companies. (Balvin Díaz, 2002; Balvin Díaz and Follegatti, 2004).

The availability and quality of water resources are issues that that originate most of the socioenvironmental conflicts in the country. Impacts of mining are linked to a legal framework that does not have effective and concrete management tools to enforce the law. On top of that, the environmental responsibilities (water quality and quantity monitoring, permits, control and penalties) are dispersed amongst a number of organizations. It is necessary to develop an optimized legal and administrative framework. (Belling et. al, 2006).

It can be argued that the impacts caused by mining on the water resources in Peru are possible because the normative framework does not count on concrete and effective management instruments, able to guarantee the application of the law. Additionally, the state has a sectored structure that makes it impossible to manage water with an integrated approach of hydrographic river basins. This structure has been long criticized by those who consider that, for example, the mining authority today in charge of the environmental control, is as well the organization that promotes mining investment, and that this reduces transparency of the management. Therefore, an Independent Environmental Authority should be created.

On the other hand, the river basin approach is not taken into account at the time of regulating water management in mining operations. Very briefly, the different norms refer to "local" water bodies in the influence area, without considering that these waters will flow to adjacent areas. Finally, the access

to information (transparency) about the volumes of water required by the mining operations is restricted.

The future implementation of the Ministry of the Environment, which has been announced recently, provides an excellent opportunity to promote the necessary changes in legislation, so that the management of water in the mining sector, and in general in all the productive activities and human consumption, can be sustainable for benefit of all.

## Bolivia

The history of Bolivia is, to a large extent, a history of mining. The foundation and the development of the main cities of the West of the country, Potosí, Oruro, Sucre, La Paz and Cochabamba, are related to the mining character of this region. Even though Bolivia has a high availability of water in its territory, the shortage of this resource in some regions of the country, the deterioration of the quality of the water bodies, and the increase in the competitiveness on the access to the water, requires urgently an integrated approach to the management of the resource.

Before the year 1992, an examination of the legislation on the environment showed that, generally, it was not based on a holistic vision of the environment, but, in the best of cases, on sectored criteria of conservation and protection of certain isolated environmental elements. (Heinrich and Eguivar, 1991).

The Law of the Environment (Law 1333) of 1992 initiated the environmental legislation in Bolivia, introducing the legal base for future regulations. Law 1333 was one of first of its kind on the South American continent, after the Laws of Brazil and Cuba. Over time, it has been changed on many occasions by modifications, extensions and complementary norms, but no complete updated version has been produced.

There is no modern law on water management. The existing water law was written during the last decade of the XIX century and still prioritizes the use of the water for railway steam engines. Based on this law, sectored laws were established, e.g. a law on use of water for industrial purposes, another law for domestic and urban use, another one for irrigations. Nevertheless, the water legislation does not contain an integral disposition that adopts coherent and long term policies for the holistic use and conservation of water.

Mining is regulated by the Law 1777 of 17 of March of 1997, the Code of Mining that prevails until today. This legal text introduces for the first time a complete chapter with respect to the treatment of the environment, in which it mentions that the mining activities must be carried out according to the principle of sustainable development, according to the Law 1333 of the Environment, its Regulations and the Code of Mining. (Salinas Romero, 1993)

Both the Law of the Environment as its Regulations are general, non-sectored norms. As such, they require the environmental authorities, in coordination with the sectored authorities, to establish specific norms to regulate sectored aspects that are not or incompletely treated in the general legislation. Therefore, a specific regulation on mining and the environment exists called the Environmental Regulation for Mining Activities. On the other hand, within the Code of Mining, environmental aspects are also covered.

Regarding the institutional aspect, there is a lack of policies to ensure the correct application of the existing legislation. The Bolivian environmental legislation is quite recent. Therefore, in general the Bolivian government still does not have the necessary capacity in personnel, economic resources and other means to assure the fulfilment of the environmental legislation.

## Chile

Chile has extensive mining operations, but rather new environmental laws. However, in some cases like environmental impact assessment, technical issues and rules on how to apply the laws are in conflict with economic pressures. Another peculiarity of Chilean legal system is the Water Law, which grants unconditional water rights to individuals, organizations or control committees ("juntas de vigilancia"). Water rights owners are free to use their water or not, transfer it to other sites etc, and no obligations of "beneficial use" are attached to these rights. This has led to the development of a water market with monopolies and speculation.

Mining is an activity of great importance in Chile, representing a high proportion of the national exports. This activity has acquired even more importance in recent times given the high international prices of metals (Cu, Mo, Au), which has meant great economic returns to the state treasury.

Nevertheless, the main mining activity of Chile is developed in the arid and semi-arid zone of the Center-North and North of Chile. Therefore, problems associated with the distribution and use of the water resources have arisen.

Chile is a democratic country with a presidential regime with separation of the powers of the State. However, the country suffers from a high centralization around the capital, which complicates the political, administrative and financial management of the regions.

Mining is regulated by the Mining Law (http://www.minmineria.cl/img/codigodemineria-OK.pdf). It stipulates that "the State has the exclusive, inalienable and imprescriptible power over all the mines...". However, it also states that "Any person can make manifestations or petitions and to acquire Mining concessions...". Once the mining permit has been granted, this concession constitutes a property title. This right is independent of the property of the lands on which the mining is being carried out.

The existing system of environmental protection and evaluation suffers from clear deficiencies, which favour that economic criteria dominate over technical criteria in the process of decision making.

The current Law of the Environment (www.conama.cl/rm/568/articles-931\_downloadLeyBase.doc) approved in 1994 and contains many modern provisions, such as Environmental Impact Assessments (EIAs). However, in practice it is not fully applied for several reasons. On the one hand, when projects are evaluates and approved, often economic criteria prevail over technical criteria and environmental concerns. In addition, stakeholder and citizen participation in the process is hindered by insufficient technical assistance and support from the administration, caused by a lack of resources or excessive work load of its employees. The time frame for EIAs is not long enough for people to understand in depth the implications of each project. Therefore, the process leaves the citizens with a permanent feeling that their rights have been harmed and that the law does not fulfil their necessities and expectations. On the other hand, the control of the projects is also a problem. In principle, the administrative services related to the area of the project are in charge of the control of the projects, but in general they do not have sufficient capacities to fulfil their duties. This matter is currently being discussed in the public, since it is seen as one of the greater deficiencies of the existing environmental system of the country.

Moreover, the Law allows projects to start before approval, or that changes to the project after approval do not require a new process of citizen participation. Finally, the position of the Government is somewhat ambiguous. On the one hand, environmental legislation is promoted. Nevertheless, companies owned by the State been have been involved in contamination problems, and they have special norms that allow them for example to emit liquid residues to water bodies with contamination levels greater than those allowed for private companies.

The Water Law from 1981, in present use (http://www.dga.cl/otros/documentos/codigodeaguas.pdf), gives water the character of private property, granting unconditional water rights to the water rights owners. In some river basins, this situation has led to a balanced market for the use of water, but in other catchments water is being speculated with, without any respect for the common interests or the future availability of water. Another generalized problem is that superficial and ground waters are two different and completely independent entities from the legal point of view, which makes integrated water resources management difficult.

The inter-institutional coordination must also be improved. At the moment, more than 30 organisms of the state have competences in water resources. Therefore, competences are often not clearly defined between the institutions.

Finally, it is important to indicate that the policy of opening to external markets and the signature of Free Trade Agreements impelled by the government of Chile in the last years will demand in the short term a greater attention to the environmental aspects of all the productive activities, and therefore the mining activity.

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