

## Environmental Conflicts in Mining, Quarrying, and Metallurgical Industries in the Iberian Peninsula (19th and 20th Century): Pollution and Popular Protest.

Paulo E. Guimarães, NICPRI / University of Évora (Portugal)

J. D. Pérez Cebada, Universidad of Huelva (Spain)

Comparative and transnational analyses of social conflicts related with the environmental changes produced by modern and contemporary mining industries have been a topic of growing academic interest since the last two decades. Those conflicts were often presented in different contexts as anti-modern peasant protests, indigenous resistances, or interest conflicts and one cause for social disruption.

In the Iberian Peninsula, the more important mining basins were affected by the three classical types of pollution (atmospheric, water and soil pollution). Pollution triggered also persistent conflicts between mining companies and diverse social groups: rural communities, mining workers, scientists, sanitary professionals, and specially farmers and landowners. Those groups sometimes combine their forces, others, as it is the case with the later, they fight on their own.

This panel convenes recent contributions on the environmental changes produced by the development of the mining industry in the Iberia Peninsula during the last two centuries and how it related with conflict and social change at community level and at the national and transnational level.

### Papers

Silva, Pedro Gabriel - *The (re)production of anti-mining repertoires of contention – the case of popular protest against tin dredging in rural Portugal (1914-1974)*

Sánchez Picón, Andrés - *Deforestation in the Spanish Mining Boom (19th c.). The Case of Lead Mining*

Nunes, João Paulo Avelãs – *Pollution and conflict in wolfram mining industry in Portugal (20th century)*

Perceval Verde, Miguel Á. Pérez de; López-Morell, Miguel Á.; Escudero Gutiérrez, Antonio - *Ecological Disaster in Portmán (Spain): Mining versus Environment*

# **The (re)production of anti-mining repertoires of contention – the case of popular protest against tin dredging in rural Portugal (1914-1974)**

Pedro Gabriel Silva

Assistant Professor

University of Tras-os-Montes e Alto Douro

Throughout the 20<sup>th</sup> century, the Portuguese countryside was prodigal in conflicts between industrial mining and agriculture. Whether sporadic short-term protests or enduring social mobilizations, these conflicts were participated by a wide range of actors, in spite of its social stand. In collective mobilization against mining, the local communities (comprising rural wage laborers, smallholder landowners and large proprietors) became active agents of contention, defying an industrial infiltration that menaced their use of environmental resources. Accordingly, these quarreling took the form of socio-environmental contention, where disputes for the control of resources were the driving factor of anti-mining protests.

The present paper compares two sets of socio-environmental conflicts against tin dredging that occurred in the Portuguese municipality of Guarda. The first had reached its peak from 1923 to 1926 and the latter saw the light of day in 1974, lasting until 1980. Though 50 years apart, they held in common the motives as well as the vocabularies of contention. The argumentation used by the contenders was implicitly bound to the preservation of the ecological basis upon which depended agricultural activity and explicitly charged industrial mining of being an agent of environmental depredation and poverty. In this sense, the paper will focus on the circumstances and contexts that prompted such discourses, relating environmental arguments with regional and political struggle. This factor is a key-element in conflict analysis, since it ties grassroots mobilization to the upper structures of political action and allows grasping wider consequences of local collective action. The 1920s conflict invites the scrutinizing of the relations between popular malcontent, the fear of loosing control over resources and the importance of local political initiative in a time of institutional and political turmoil, right before the instauration of dictatorship (1926). On the other hand, the 1970s conflict allows studying the very same relations between local anti-mining protests and the menaces over resource control set in motion right after the overthrow of the dictatorial regime (1974). Common to both, the “fear of the brazing dredges” and the “love for our gardens” – tracing such communalities and the devices behind the (re)production of contentious rhetoric through time will be this paper’s central object.

## **Deforestation in the Spanish Mining Boom (19<sup>th</sup> c.). The Case of Lead Mining**

Andrés Sánchez Picón

The expansion of mining in Spain during the nineteenth century produced a major impact on the environment. Up to 1880 the sector leader was the mining and metallurgy of lead. The metallurgy of lead would be the protagonist of an intense deforestation in the mining territories. In this paper we analyze some cases and conflicts that led to the deforestation. The intensification in the use of charcoal in the mining regions of southern Spain is shown as an example of a impact environmental in a organic mining. This paper shows a quantification of the affected area in one of the most important mining districts of that time: the Sierra de Gador. It will also be dealt the analysis of the negative externalities associated with deforestation (increased erosion, desertification, impaired functioning of natural hydraulic systems, increased natural hazards such as floods ...). We analyze the role of the protagonists of the conflict: mining companies, farmers, municipalities and the national government. Regulatory action by the public authorities, as well as the exercise of influence by organized interest groups, will also be treated. The paper show the first rules published (from 1836) to stop the advance of deforestation in the mining districts and their lack of respect and compliance. In summary, the deforestation caused by mining and metallurgy of lead of nineteenth century in Spain is an example of the loss of a public good in the context of a liberal administration.

## **Pollution, interests and conflicts in the wolfram mining subsector (Portugal, 20<sup>th</sup> century)**

João Paulo Avelãs Nunes

Professor Auxiliar do Departamento de História, Arqueologia e Artes da Faculdade de Letras da Universidade de Coimbra (DHAA/FLUC); Investigador Integrado do Centro de Estudos Interdisciplinares do Século XX da Universidade de Coimbra (CEIS20/UC); Investigador Colaborador do Instituto de História Contemporânea da Faculdade de Ciências Sociais e Humanas da Universidade Nova de Lisboa (IHC/FCSH/UNL)

Wolfram mining started in Portugal in 1871. Mining on a significant scale was only effectively achieved from around 1910 in the period leading up to the First World War. It was only then that it became possible to see interests diverge and conflicts emerge, relating to internal pollution – occupational diseases – and external pollution, caused by the extraction and separation of tungsten ores.

At the political-institutional and legal level, the standards in force up to today assign responsibility to the State (through the Direcção-Geral de Minas e Serviços Geológicos – DGMSG – or previous and succeeding bodies), as well as establish the prevalence of mining over other economic activities. Moreover, for decades – at least up to the 1960s – the sub-sector of tungsten was notable for wild fluctuations between periods of ‘normality’, ‘speculative euphoria’ and ‘crisis’, which had a crucial impact on pollution levels and reactions to it, in terms of regulating interests and overcoming any conflicts encountered.

It is also relevant to recall that, in the period in question, Portugal was governed by different political regimes (liberal democratic, authoritarian, totalitarian, democratic) and allowed varying degrees of freedom for the public expression of interests. Furthermore, most of the wolfram concessions were in sparsely populated areas, where farms were small and the soil poor. It should be noted, too, that until the 1960s the wolfram subsector did not generate the creation of trade unions or employers’ associations, and the largest mines were run by foreign-owned companies.

Finally, practically all the conflicts occurring in the tungsten production subsector were concerned with pollution in the cycles of ‘normality’, since in times of crisis the activity mostly shut down, and in the ‘speculative euphoria’ periods – 1914-1918, 1939-1945, 1950-1953 – almost all those affected by internal and external pollution were assiduously involved in extraction and separation initiatives of a legal, unofficial or clandestine nature. Once a mining district was approved, the main mode of regulating conflicts used by the concessionaires was to organize unofficial extraction solutions and tolerate to clandestine mining (both of which were more polluting than the legal extraction).

## **Ecological Disaster in Portmán (Spain): Mining versus Environment**

Miguel Á. Pérez de Perceval Verde y Miguel Á. López-Morell, Universidad de Murcia, Departamento de Economía Aplicada, Facultad de Economía y Empresa, Campus de Espinardo s/n, 30100 Murcia, [perceval@um.es](mailto:perceval@um.es); [mlmorell@um.es](mailto:mlmorell@um.es).

Antonio Escudero Gutiérrez, Universidad de Alicante, Departamento de Análisis Económico Aplicado, Facultad de Ciencias Económicas y Empresariales, Carretera San Vicente s/n, San Vicente del Raspeig, 03690 Alicante, [escudero@ua.es](mailto:escudero@ua.es).

This communication analyzes one of the most important ecological disasters occurred in the Mediterranean as a consequence of mining. Until 1990, and for more than 40 years, the Sociedad Minero Metalúrgica de Peñarroya had been discharging directly into the Mediterranean sea tailings resulting from the concentration process (flotation system) of the ores in the Sierra Cartagena- La Unión in the Southwest of Spain. More than 60 millions of tons of very hazardous waste were dumped. They were very toxic, not only because of the high concentration of heavy metals such as lead or cadmium, but because of the presence of acids used to wash mineral (copper sulphate, sodium cyanide, zinc sulphate and sulphuric acid). It was believed that these materials would end up dispersed in the bottom of the sea, however, sea currents ended up depositing an important part of that waste in the Portmán Bay and as a result it was completely blocked. The Sociedad Minero Metalúrgica Peñarroya, the company responsible for the spills, exerted all of its influence on the Franco dictatorship in order to be able to use the sea as its dump field. As a consequence of the palpable pollution of the coast, several lawsuits were instructed that ended up in a sentence of the Supreme Court granting the continuity of the activity, prevailing impact on the labour market in detriment of environmental impact. With the arrival of Democracy in Spain, the situation did not change, in spite of the raise of social pressure and the intervention of Greenpeace in 1986. Finally, in March 1990, spills ceased. The communication analyzes the development of mineral concentration systems by flotation and their consequences on the environment. The process of implementation of these systems in the Sierra de Cartagena-La Unión is described. Finally, factors that allowed the continuity of this ecological crime for more than 40 years, in spite of direct consequences on people, the environment and the landscape.