



## MINING LEGISLATION AND SPACE PRODUCTION

*Dr Lena Karka*

*Ministry for the Environment, Energy and Climate Change*

*l.karka@dxor.minenv.gr, karkale@otenet.gr*

### Introduction

Greek mining legislation dates back to the 70s, except the law on aggregates, which is more recent and has been amended several times, but with minor revisions. Environmental and spatial planning considerations are not embodied in mining legislation, which remains purely sectoral. Nevertheless, it should be noted that the approval of environmental impact statements is a precondition of the exploration and operation licences. Land use planning considerations are also integrated to this procedure. However, this aspect of the control of mining activities is beyond the scope of the present paper, which deals only with sectoral legislation.

Mining law, like other sectoral legislations, aims at providing the most suitable conditions for the development of the activity concerned, by regulating internal issues of the activity, such as mining rights, exploitation conditions, safety of works, granting of permissions etc. It doesn't address any questions related to the spatial organization, but the ones concerning the areas in close proximity to the mine or quarry and, solely, in the context presented above. Hence, mining legislation has spatial effects in areas much wider than the close perimeter of mines.

Greek mining law is based on a classification of the various mineral resources in distinct categories, according to their economic importance, applications and the technical characteristics of each group. The classification in metallic ores, industrial minerals, marbles and aggregates is not permanent or exclusively defined; a ministerial decision may change the above classification and place a mineral commodity in another category, if its current uses justify such a change.

The formal classification leads to important differences as regards the concession of mining rights (that refer to the underground space but also affect the surface), the provisions for the quarry exploitation area (e.g. the minimum and maximum requirements for the quarry surface) and the interrelations with neighbouring land uses, i.e. the priority in land use, the safety distances from other land uses, the occupation rights in adjacent to the quarry areas, the manner of land acquisition (through market negotiations or expropriation processes). This classification also leads to differences as regards the procedure and administrative level on which mining rights are assigned and the mining permission granted.

All the differences mentioned above imply spatial effects, since they influence the location, size and dispersion of mines and quarries, and consequently, the land use evolution in an area. Additionally, they have repercussions on the economic development and the spatial organisation of broader areas. The importance of mining law's influence in spatial organisation becomes more obvious in cases where the classification of a mineral changes and this directly reflects to the characteristics of the exploitation areas.

Thus, mining law has direct or indirect spatial effects. The technical terms, restrictions and conditions, regulating the development of the mining activity in space and time, produce direct effects. On the other hand, mining rights have indirect effects on spatial production, since they affect the relation



between mining activity and other land uses and, in this sense, they condition the development of the activity.

The aim of the paper is to focus on these effects and reveal their importance for spatial planning. Recently there is a rising concern on the role of spatial planning in mining activity's development and competitiveness on European level (EEC- Leoben Univ.,2004). The European Commission (COM 2000/265) considers «the need for land access to be an essential prerequisite for the further development of the industry and its relationship with regional and spatial planning that impact on this need». Land use planning is first considered as an instrument to protect minerals from other developments. But the crucial issue for extraction activities is that planning deals with them on an equal basis with other land uses and takes into account their special characteristics, reflected in the proper legislations.

### **Mining legislation**

The Mining Code (legislative Decree 210/1973, amended by Law 274/1976), main piece of law on mining activity, classifies mineral commodities in two general categories (metalliferous ores and quarry products) mainly with respect to their importance for national economy. Only the first category, i.e. ores, is covered by the Code's dispositions; the other minerals are regulated by special legislations.

The fundamental principle on which the Mining Code's dispositions lie is that ore mining is of public interest and it may have priority over land property and other land uses. On the contrary, quarrying is merely considered as a common economic activity, that has to take place under market conditions. The distinction in the perception of the two activities leads to major differences in their future spatial development. The main difference between the two groups consists on the dissociation between mining rights and land property in the case of ores, while in the case of quarry products, the aforementioned ownership rights are connected.

Here it should be noted that, in both cases, the prevailing principle is that the development of mining resources is confined to private initiative (individuals and corporate bodies), even if ores are state owned. The State preserves the right to mine some mineral resources, such as liquid and gaseous hydrocarbons, minerals containing radioactive elements, geothermic resources, solid fuels etc, judged of special importance. The State involvement in the mining activity also has significant incidences in spatial organisation, since there is a special body of law on the exploitation of public mines. Public mines are 28-30 in all in the country. The State rights for mining in these cases derive from the expiration or the confiscation of the former mine concession, or because the mined substances are State owned (see above) or the latter has realised positive exploration works.

The principle of dissociation between mining rights and land property in the case of ores is dictated by the specific needs of the activity and it has important spatial effects. The main need is associated with the fact that ore exploitation (in terms of both extraction and ore processing) presupposes large scale production and spatial intervention and a long time span. It necessitates extended lands for prospection, opening of mines and development of ancillary facilities. To respond to those needs the Code grant rights to the developers over very vast areas and for long periods through the mine concession . The concession validity is for 50 years, with a possible prolongation for more 50 years. The conceded area may extend up to 10 km<sup>2</sup>. The holder of a concession has the exclusive right to conduct exploration and exploitation of all the mineral substances occurring during the different



phases of the exploitation (extraction or processing), even of the quarry ones, that normally belong to the land owner.

The granting of a mining concession doesn't imply the mining of the whole area concerned. In terms of spatial planning, a concession is a zone indicating that in some places mines may operate. Extraction areas are a minor percentage of the concession areas. For example in the Phokis district Prefecture (Central Greece), where the main bauxite mines are located, mining concessions cover 40% of the department surface, while the areas directly affected by mining are inferior to 0,2% of this surface.

The Code also aims at ensuring that mining will take place efficiently and unobstructedly. Efficiency depends on the concession holder's abilities and investment capacities. So, the total surface that a concession holder may develop simultaneously is a function of the investment realised. The provision means that the Code favours centralized schemes of exploitation. This principle is also adopted in the legislation governing the quarries and it proves to be of capital importance not only for the efficient exploitation of mineral resources, but also for the effort to restore the affected areas, as it will be demonstrated below. In order to avoid speculation, minimal work programmes are required on an annual basis and inactivity is a cause of confiscation.

Unobstructed exploitation refers primarily to rights on land occupation. Since land parcelling must not impede mining development, the Code accords important rights to the developers that regard the underground space, but also affect the land surface, since the extraction may be conducted by underground works or by open pit mining. In fact, a major part of the Code provisions aim at regulating the relations between land owners and holders of mining rights. These rights have been restrained, not by the Code amendments, but through other legislations, especially those regarding environmental protection.

Direct outcomes of the already presented perception of ore mining, are the following provisions:

- o The consent of the landowner isn't asked at any stage of the mining rights granting procedure. (except during the environmental impact assessment procedure)
- o The holder of an exploration licence is entitled to occupy provisionally the necessary surfaces, with liability for compensation of the land owner.
- o Expropriation rights are granted not only for the development of mines, but also for security reasons of adjacent buildings, or life and health of their inhabitants.

The interest attributed to land issues in the Mining Code lies on the fact that questions, linked with land property, seem to be a determinant factors for the activity's future and, also, a key issue in the relation of mining industry with local societies. Ore mining activity needs and affects extended land areas, thus the action mechanism is interesting from the view point of both prices and intervention mode (Karka H, 1997). The fragmentation of the land ownership causes problems to the mining operations, since the necessary areas cannot be obtained unless a unification of lots belonging to different and numerous landlords is carried out.

The expropriation is planned to offer some solution, but mining companies have rarely recourse to it, in order to avoid local reactions. Indeed, expropriation constitutes a procedure aiming at overcoming the objections to the amicable land ownership transfers, as well as a tool for influencing the land market. As a general rule, the owner being near a hindering activity, surrounded by amicable



concessions and menaced by the prospect of expropriation, will avoid facing the verdict of the judge: and all the more so, when the prices set by the expropriation procedure are usually lower, than the prices set by the market.

Only in remote and secluded areas offering little or no alternative choices of job occupation, the expropriation procedure has been used systematically. Unlike that, in more prosperous areas, the companies' policies vary: their attitude seems to adapt to local conditions and depends on the intensity of the conflict for land appropriation. As an example one can cite that the mining companies do not move forward to expropriation of small agricultural properties, that remain in the mining area surrounded by waste piles. On the contrary, they take measures for the protection of these properties from annoyance caused by the extraction and ensure accessibility through the main road axes. This attitude has a double purpose: on one hand, it is a means to avoid frictions with local people and on the other it makes use of these lands, whose value has diminished as a warning for other landowners to come into reason.

The issue of land prices is also extremely important for mine developers, since their activity dictates the exploitation of large land surfaces. It is then in their interest to avoid mining in areas where the land prices are high and prefer remote areas. This way of action contributes in restricting the possibilities for conflicts with other activities, as tourism.

### Quarries

Industrial minerals, marbles and aggregates are considered by the relative legislations (L.669/1977, L.1428/1984 amended by L.2115/1993) as of minor importance for the national economy; they merely contribute to local economies. Quarrying is a local scale activity, even if the concentration of quarries in some areas or the market range of the material extracted implies an activity of national or international scale. It takes place in market conditions and is vulnerable to the competition of other land uses. The landowner is placed on the top of the development procedure and the critical decision for the future use of his land depends on the comparative advantages of the industrial minerals and marbles extraction over other investment alternatives. The landowner is also entitled to transfer his extraction rights to any person or company after agreement sanctioned by notary act.

The principle of subordination of the mining rights to the land ownership is consistent with the technical characteristics of the materials quarried. Deposits are usually fragmented and dispersed, so the areas required for extraction are small-sized and the developer has no need to unify lands of numerous different landlords. The extracted materials are not important in quantity and there is no need for in situ processing; they may be transported to other places for industrial treatment. These features of the quarrying activity facilitate individual operators to undertake extraction works implying limited investments; they usually exploit their own or their families' lands. A direct outcome of this situation is the proliferation of the extraction sites.

In this sense, the principal of subordination of the mining rights to the land ownership has direct effects on the number, dispersion and size of quarries. The small sized parcels in Greece and the fragmentation of properties result in an increase of the number of the extraction areas. The situation is aggravated by the fact that legislation doesn't provide for minima and maxima for the quarry surface in the case of industrial minerals. The L.669/1977 on industrial minerals and marbles quarries imposes only for the latter surface limits, varying between 20.000 m<sup>2</sup> and 100.000 m<sup>2</sup>.



As regards quarrying of industrial minerals and marbles, exploration activities may be carried out without the consent of the land owner, except exploration drilling in forest areas or state properties. The licence for the exploitation of quarries is valid for a period of 15 years minimum and 25 years maximum, but it can be unilaterally extended for 15 years more, after decision of the competent minister. The termination of the works in a quarry must be immediately declared to the Ministry, but firms possessing industrial processing installations may preserve up to three quarries in suspension, in order to keep them as a supply.

The right of expropriation for land acquisition doesn't exist. A sole exception is made for the realisation of infrastructure of common interest. Industrial facilities are also included to this infrastructure. Thus, the land claimed by the activity can only be acquired through the market processes and is subject to the speculative pressures of other activities, especially that of tourism. The extraction of industrial minerals and marbles is then, vulnerable in land market conditions, with respect to land prices.

These factors impede the surface expansion of the quarries as well as the soil rehabilitation, since the overburden material is not deposited in the adjacent areas and have to be transported from more distant areas during the rehabilitation stage. The law provides for the possibility that the developer may apply and, under specific conditions, acquire the concession of adjacent parcels, if they belong to the same owner, or their use is indispensable for the continuation of extraction.

The above mentioned provisions prove that, in certain circumstances, quarries exploitation is given similar status as ore extraction. Namely, in major workings the law permits: a) to keep three quarries in suspension, b) to use expropriation rights for the establishment of industrial and ancillary equipment, c) to acquire the concession of adjacent parcels. It's an indication that centralised schemes of exploitation are promoted not only in the context of the Mining Code, but also through the extraction legislation.

### **Aggregates**

The laws on aggregates' quarries (1428/1984, 2115/1993) present substantial differences from the legislation already presented. The main difference lies on the fact that aggregates extraction shall take place primarily in special zones. The possibility to designate mining zones is also granted by the Mining Code, but this provision has not been yet activated. A similar provision has been proposed during the effort to amend the legislation on industrial minerals and quarries. The mining companies desire the formal designation of mining zones for main or exclusive land use, in their effort to avoid speculation phenomena or administrative impediments to their installation or expansion. The reactions, which such a regulation could have triggered among local societies and the political cost entailed in such a decision, have not permitted its integration in land use planning.

A reason for the exception of aggregates extraction to the general exploitation pattern, is the abundance of the materials in Greece. In order to ensure a rational exploitation of these commodities, the law provides that extraction of aggregates shall take place in specific zones, whose location must be selected by special committees and ratified by decision of the Prefect. Prefects should have accomplished the obligation of defining the zones in the year that followed the promulgation of the relative law. 24 years after the application of the L.1428/1985, very little progress has been made in the field and individual locations are selected for most of the new quarries. The law provides for



individual locations only in cases where the materials extracted are destined to special purposes, as for road construction or cement industries and in islands, where the demand doesn't justify the creation of such zones. There are many reasons for not defining the zones, but a main one is that their definition implies the restriction of the adjacent land uses and especially housing in a distance of 1000 m around. In Greece, where, as a general rule, building is possible on every land parcel of 4000 m<sup>2</sup>, the restriction of this possibility is a source of local contest.

### **Procedure**

The procedure for granting extraction licences differs significantly between mines and quarries. Since the first are of national importance, the procedure for granting consents is more complicated and implies the upper levels of Administration. The exploration licence is granted by Prefects, while mining concessions by Presidential Decrees, after consultative response of the competent Minister. Refusal to an application for exploration is not permitted but for reasons related with national security or with the development of other activities, judged more important for the national economy.

In the case of quarries exploitation, the procedure for granting licences and the competent authorities vary, in accordance with the importance of the extracted material. As a general rule, licences are granted by Prefects. A sole exception is made for industrial minerals, whose quarrying necessitates a Ministerial permit. After a ministerial decision, the right to grant the necessary licences for some industrial minerals may be delegated to District Prefects.

### **Classification changes**

As already mentioned, the formal division of minerals in ores, industrial minerals, marbles and aggregates is not permanent or exclusively defined; a ministerial decision may change the above classification and place a mineral commodity in another category, if its current uses justify such a change.

The importance of mining legislation for spatial organisation becomes more obvious in the cases where a mineral changes category, after a relative ministerial decision. For example, perlite was initially (1959) classified as an ore, but in 1968, according to the compulsory law 534/1968, it was placed in the category of industrial minerals. The first two perlite quarries in the island of Milos, opened in conformity with the 1959 ministerial decision, are much more extended than any other of the numerous industrial minerals quarries, due to the fact that the creation of the former has been regulated by the provisions of the Mining Code, while the latter are regulated under the L.669/1977..

### **Considerations on adjacent land uses**

The Mining Code doesn't prove a special interest for the neighbouring of mining activities with other land uses. The sole provision referring to other activities is the article 32, which provides for Prefects no right to limit the prospection area but for reasons related to the national security. For similar reasons the Prefect has the right to define special conditions for exploration works, if other activities of public interest, judged more important than mining industry, are to be developed. These alternative activities are not explicitly indicated, but, according to official law interpretations, major tourist installations are among them.

As regards quarries, according to law 669/1977, the exploitation rights are not granted in archeological sites or in areas protected for environmental or cultural reasons, if quarrying risks to cause



irretrievable damages to them. But, even in these cases, the importance of the extracted material for National Economy should be taken into consideration. Permits are not provided if extraction could possibly harm monuments, tourist installations or public infrastructures. The kind and range of damages justifying the refusal of a permit are not defined, which means that granting or refusing a permit depends on individual judgement and criteria. In order to avoid this phenomenon, the law provides for the opinion of numerous administration services, before the Prefect's final decision. But they preserve only an advisory role.

The interest on possible impacts to adjacent activities follows from the fact that the developer is asked to report on a plan the existing land uses in a radius of 500m around the quarry. And article 16 provides that the Prefect's consent may be revoked or modified, if "tourist installations or other developments of public interest are going to be realised". In any case, the realisation of those developments should have be preceded by the consent of the Minister of Industry.

### **Spatial effects**

The above presentation aimed at highlighting the substantial differences in legislation dealing with the exploitation of different mineral substance. The first ascertainemet relates to the marked protectionism in the case of ores, in contrast with quarry products. The Mining Code dates back to a time when minerals were considered as important for the economic development and the central objective of the relative law was to regulate land uses in the public interest. The latter was estimated only in economic terms, without any consideration of sustainability principles. The major spatial effects of mining legislation are due to the perception of ores as a resource of national importance, while quarrying is considered as a local- scale activity, of sub-regional or local importance.

The rights granted to developers under the Mining Law aim at a large scale production activity, undertakn by a single operator, with a long time-horizon, which gives the possibility to mining companies to form development poles in the country. On the contrary, legislation on quarries favours the spatial distribution of the extraction areas and limits the possibilities for spatial organisation of the activity, while making it vulnerable to the competition of other land uses and to land speculation tendencies. The problem becomes more serious in a period where there is a great demand for industrial minerals and aggregates and the exploitation areas are getting larger.

The differences have repercussions on the environmental impact of extraction activities and on the possibility to restore them but also on the attitudes of local societies face to the activities. Restoration of abandoned mine sites and especially rehabilitation of soils, even if it is easier (for technical reasons) in the case of quarries than that of mines, becomes difficult because of their dispersion and small size: the small operators are not able to meet the expenses of the restoration and usually abandon open the quarries sites. Besides, the competition between the different small enterprises that try to secure rights for the maximum of possible active quarries multiplies the nuisance spots and the neighbouring with incompatible activities becomes more possible. On the contrary, mining activity, especially surface mining, has more serious impacts on the environment due to the intervention scale and treatment needs of the material extracted. But the large firms operating them are more capable and more willing to proceed to restoration initiatives.

As regards the societal effects of the different types of mining activity, it should be noted that the local societies adopt a much more positive attitude face to quarries exploitation, compared to the very



severe reactions against mining activity. A possible explication is that quarry operators are members of local societies. A second reason may be the fact that local inhabitants tolerate more easily the nuisance from extractive activities in the prospect of land speculation. This expectation of profiteering is effective in placating to a certain degree the conflicts between mining and other activities.

It becomes, then, clear that a mitigation of the differences between the legislations covering the various categories of minerals is necessary in the case of Greece, as it has already been produced in other European countries. The aim of such an amendment should be the securing of access to mineral deposits under conditions that combine the positive dispositions of the Mining Code with these of the other mineral legislations. In brief, this means a balance between the high protectionism of ores mining and the market function of the quarries exploitation.

## References

1. European Commission – University of Leoben “Minerals Planning Policies and Supply Practices in Europe” Austria November 2004.
2. Communication “The raw material initiative – meeting our critical needs for growth and jobs in Europe” COM(2008) 699, (4 November 2008).
3. Karka H. “Exploitation minière et développement touristique sur le littoral de la Grèce (Chalcidique - Milos)”. Thèse pour le doctorat, UER de Géographie, Université Paris 1-Panthéon-Sorbonne” Mars 1995
4. Karka H. “Spatial Planning and Mining Industry in the Littoral Zone - The importance of the land factor”. *Proceedings of the International Conference “Urban, Regional, Environmental Planning and informatics to planning in an era of transition”* NTUA, Athens 1997, p. 620-625.
5. Dalal-Clayton B. & Dent D. “Knowledge of the Land: Land resources information and its use in rural development” Oxford University Press, Oxford 2001
6. ICMM “Mineral Resources in Land Use Planning” September 2009