

## ITALY

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**A**cross Europe, a large part of the activities carried out in the traditional extractive industries are witnessing a remarkable decline. This is due to the fact that the economics of these activities is no longer favourable and on the depletion of mineral reserves. In Italy this decline is concerned mainly with two sectors of the traditional extractive industry: metals and energy.

At the beginning of the nineteenth century there were about a thousand mines in the Alps region, Tuscany, Sicily and Sardinia. It could be concluded that the Italian minerals extractive industry is disappearing, but in reality the 'new' extractive industry is focused on industrial minerals and ornamental stones, and within this sector, Italy has a high degree of self-sufficiency. But it is essentially a processing industry, and statistics show that the value added by processing is about 20% of GDP.

Problems relating to environmental restoration and the safety of abandoned areas is not confined to Italy but affects all countries where mining activities are carried out. Mining companies have to sustain these costs that have not been budgeted for previously. In the past, the Mineral Resources Authority used to give indications in relation to the main interventions that were needed including sealing the main entrances to an underground mine. The costs were paid by the mining companies. As far as open-pit mines were concerned, the main interventions requested were installation of fences around the area. Today, the Mineral Resources Authority is more sensitive to environmental issues and is able to give valuable advice in safeguarding surrounding land.

Another issue concerns the safety of tailings ponds, as several serious incidents have occurred in Europe, amongst them one in Italy at Val di Stava some years ago and, more recently, in Romania and Spain. Soon there will be legislation in place to regulate the construction and use of any kind of ponds.

The Italian Law of 1927 focused primarily on production and for this reason the mining company could lose mining rights if it did not deploy sufficient economic and technical means adequate to the importance of the mine. Environmental issues were not high on the agenda at that time. During the 1990s new legislation was put in place. The 'Rules Concerning Mining Policy' had two objectives:

- a) To form the basis for a purchasing policy of raw materials;
- b) To help mining companies to deal with non-profitable mines and eventually supervise their closure.

During the same period, following the creation of the Environmental Ministry (1986), new legislation concerning the safeguard of sites close to rivers, sea, parks, etc, was put in place. More recently, the implementation of EU Directives and new legislation at regional level and the evolution of sustainable development principles have limited mining activity. As far as mine closures are concerned, the restoration and remediation of these sites could not come without financial help from the government and it is important to consider the needs of local communities.

### **Ornamental stone**

Italy is one of the most important world producers of ornamental stone, with output at over 10 Mt/y of blocks which are quarried and processed by over 8,000 companies with 60,000 workers who are amongst the most highly skilled in the world. The market looks to Italy, particularly, for certain materials which have proven their excellent qualities over the centuries. These include the white marble varieties from Carrara first and foremost, the coloured marble varieties from the Aosta Valley, Veneto and Liguria, beige limestones from Puglia (Trani and Apricena) and Sicily (Perlato), granite varieties from Sardinia and Piedmont and stone varieties from Lombardy (Botticino and Serpentino). Travertine is also an important Italian material, the most important deposits being found around Tivoli (Rome), and Ascoli Piceno.

Italy's modern stone industry has managed to maintain its world leadership thanks to its highly skilled workers and avant-garde technology. The close relationship between stone companies and machinery manufacturers has led to positive results such as:

- production of advanced machinery;
- improvement of existing plants;
- on-site experimentation of new prototypes.

This is why Italy is also a world leader in the related technology with over 100 specialised companies and a workforce of around 3,500.

### **Industrial minerals**

Industrial minerals are non-metallic, non-energy minerals for an extremely wide range of industrial and domestic applications. For some minerals, physical properties are the most important aspect to consider. They are associated with low unit value and large volumes (eg clays, kaolin, bentonite, feldspar and micas). For others, chemical properties, generally linked to the end-use of the mineral are the most important element to consider (eg alkaline and magnesia salts, fluorite, sulphur and phosphates). The main markets for these products are in abrasives, ceramics and tiles, chemicals, glass, paint, paper, plastics and rubber. Italy is a major producer of feldspar, bentonite, talc, silica sand, gypsum, and calcium carbonates.

Important sectors of the Italian economy (eg ceramics, with over 250 companies and 350 plants, and the glass and paper industries) owe their success to high-technology applications and an economic use of their own raw materials.

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**Indicators for non-energy extractive industry**

Sustainability in the non-energy extractive industry is at the core of a document drawn up by the Council of the European Union: the contribution of entrepreneurship to sustainable development. The document explains that entrepreneurship has to play a central role to guarantee the integration and equilibrium among sustainable development's three pillars: the economic dimension, an environmental and a social dimension. To achieve this it is necessary for:

- a high and stable level of economic growth to supply extra resources needed to face the environmental pressure and to strengthen the community's social cohesion;
- specific attention to competitiveness, R&D and innovation to increase investments and develop economic growth;
  - legislative proposals that do not undermine the competitiveness of the industry to the point where important investments could be moved to developing countries with lower environmental and social safeguards;
- recognition of the importance of Corporate Social and Environmental Responsibility (CSER) as a way to achieving higher levels of environmental and social protection;
- elaborate policies tending to achieve the goals set by the Kyoto Protocol in terms of reduction of Greenhouse Gas Emissions (GHG) without compromising the competitiveness of the companies;
- utilisation, in full, of all the opportunities offered by voluntary approaches.

The European Council acknowledged the positive relationship between sustainable development and competitiveness as outlined by the European Commission in a communication dated 2002 and looked favourably on the possibility of setting up Sustainable Development Indicators (SDI) linked to the environmental performances achieved by European industry. These indicators have been identified as a communication tool among groups representing different interests:

- Mining Companies, which could show the level of contribution they offer in relation to economic, environmental and social problems;
- Central and Local Governments, which need to examine companies' performance and adopt suitable actions;
- Communities, whose interests are linked to current (or expanding) mining activities.

Their aims are to:

- generate the right information in relation to mining activity, considering the underlying social and economic effects;
- prevent problems caused by specific types of activities;
- evaluate the performances of mining companies;
- collect and evaluate properly all the available information.

Indicators at companies level include employment, health and safety, investment in R&D, mining exploration costs, relationship with local

communities, use of energy and water, use of toxic substances, environmental incidents, transportation and land management. At member states level, these include: sustainable access to resources, concession of land for mining activities, minerals consumption pro-capita, contribution of the sector to national GDP, plus trading balance and cooperation with third parties to promote sustainable development in the non-energy extractive industry.

Italy is a Member State of the International Lead & Zinc Study Group (ILZSG), International Copper Study Group (ICSG) and International Nickel Study Group (INSG). These groups were formed to "provide opportunities for regular intergovernmental consultations on international trade in lead, zinc, copper and nickel, to make such special studies of the world situation in lead, zinc, copper and nickel as may be appropriate and to consider possible solutions to any special problems or difficulties which are unlikely to be resolved in the ordinary development of world trade". Currently there is an intense discussion focused on rationalisation of the three non-ferrous metals study groups.

<b>Industrial Minerals Production in 2003*</b>		
Feldspar	Mt	2.5
Kaolin	t	60,000
Refractory clays	t	400,000
Bentonite	t	530,000
Fluorite	t	60,000
Barite	t	15,000
Talc	t	140,000
Cement clays	Mt	7.0
Salt	Mt	. 2.7
Potash	t	600,000
Asphalt	t	. 40,000

\* preliminary data