

Geo-diversity and geo-materials in the region of Rabat-Salé-Zemmour-Zaer: Characterization and Rationalization of Utilization

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The Rabat-Salé-Zemmour-Zaer (RSZZ) is distinguished by a rich geology is varied. Outcrops are found in both the Paleozoic basement, especially along the major wadis in the area and a fairly extensive coverage postpaléozoïque and locally very thick. It offers a wide variety of petrographic facies some of which the construction of geomaterials value (GMC), very solicited by the construction sector and public works (BTP). Among the most important GMC furniture and beds of RSZZ:

- The sands. They are a fundamental component for the preparation of mortar and hydraulic concrete. They also enter into the composition of adobe and are used for the foundation of shoes.

-The Clays. They are mainly used by ceramists (industrial units manufacturing tiles). The red clay of Triassic age are most represented in the Region in deposits whose thickness can reach several tens of meters.

-The Calcarenite. : It is the most used local stone in building the cities of Rabat and Salé, where she is well known as the Stone of Salé. The same stone is used in the manufacture of lime through calcination. Geologically, it is a calcareous sandstone, of Pliocene-Quaternary age that is in the form of a dune system that runs parallel to the Atlantic coast.

-The Limestones: These massive limestones and more or less metamorphosed dolomitized Devonian. These limestone outcrop along major wadis of the region (Akrech, Ykem, ...) as layers sometimes quite thick and more or less tectonized. According to localities, these limestones show a wide range of colors (white, gray, black pink) and a wide variety of structures (colorful, beaded, veined, textured)

- The quartzites. They correspond to Ordovician bars that appear quite often emerged in relation to other surrounding formations because of their high resistance to erosion.

The rock is generally brownish gray and shows a very high hardness related to its siliceous. Local and temporary holdings allow blocks extraction for various public works (foundation, basement, filling).

- Granites. The granitic pluton hercynien of Zaer, of Upper Carboniferous age, outcrops over an area of over 700 km². It offers two main granitic facies: an internal facies biotite-muscovite, light gray color and grainy equigranular structure; and an external facies of biotite only bluish gray color and grained porphyritic texture.

With this geological diversity, the region of RSZZ could always ensure its supply and self-sufficiency in GMC. However, large construction sites launched in recent years (from 200,000 housing schemes, construction of satellite towns, the development plan of the valley of Bouregreg ...) made the demand on those regional GMC has become very strong. Thus the pace of operations has been accelerated to meet this demand increasingly growing; the consequence is a serious harm to the environment. The purpose of this communication is to raise awareness among operators (local authorities, elected representatives, operators, investors, public authorities ...) on the need to double vigilance on the management of the geological heritage. Indeed, these non-renewable resources on a human scale to be exploited in a rational way and in the context of Sustainable Development. Furthermore, we recall that in the Region of RSZZ exist geomaterials outcrops of great scientific and educational value that must be protected and prohibited from exploitation as well to preserve geological heritage.