

# Implementation of social license to operate into the prefeasibility evaluation stage of a potential mining project

*G. Barakos and H. Mischo<sup>2</sup>*

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Research Associate, Institute for Mining & Special Civil Engineering, TU Bergakademie Freiberg, Freiberg Germany 09599. Georgios.Barakos@mabb.tu-freiberg.de

2.

University Professor, Institute for Mining & Special Civil Engineering, TU Bergakademie Freiberg, Freiberg Germany 09599. Helmut.Mischo@mabb.tu-freiberg.de

## **ABSTRACT**

The social license to operate (SLO) is rooted in the beliefs, opinions and perceptions held by local societies and other stakeholders about a potential mining project until its final approval or not. On occasions, the opposition of the local population to the realisation of a mining project has resulted in its cancellation. Despite the fact that societal frustration for many mining projects has been witnessed long before the initiation of their operations, the implementation of SLO as an evaluation parameter is not considered in the preliminary project assessment stages. Resultantly, time and money are spent for mining projects that are either doomed to fail or that have to be re-evaluated from the very beginning, thus costing more time and money in order to adjust to the societal expectations.

In this paper, the social license to operate is considered as a determining factor even from the preliminary stage of a mining project evaluation. The inclusion of SLO is done in several parts of a prefeasibility study; for the selection of the most suitable mining method, design of processing plant, cost estimation, and risk rate building for determining the cash flows of the project. In these evaluations, the social license is quantified and prioritised among other geologic, technical and economic criteria using different mathematical tools and techniques towards a more realistic assessment of the perspectives of a mining project.

In the context of this research, case studies from potential rare earth element mining projects are discussed to show the implementation of SLO into their early evaluation process and its effect on the realisation potentials of these mining projects.