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## Dilemmas and problems of raw materials supply strategy in Poland

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Poland has, in European terms, diverse mineral resources and long mining traditions dating back to prehistoric times. At present, the Polish Mineral Resources Register lists about 12000 identified deposits of more than 50 mineral commodities [1]. The most important in the national scale are: hard and brown coal, natural gas, copper ores with several accompanying metals like silver, PGM, rhenium; lead-zinc ores, natural sulfur, rock salt, gypsum, various sorts of rocks used as a building and crushed stones, limestone and marls for cement and lime industry and natural aggregates. The mining activity is regulated by the Geological and Mining Law.

Despite such significant mineral potential well we do not have the well defined raw materials policy and strategy [2]. Such documents should exist to guarantee the state mineral security and optimum use of the resource base in the long term. This applies in particular non-energy mineral resources. To date, these important issues have been dispersed in several official documents. Apart from geo-political reasons and neglect by previous governments, there are several barriers to meeting the State's needs for non energy minerals. Some of these relate directly to governmental activities: permitting, taxes and fees, the ownership of mineral deposits. Others, such as nature protection requirements and land-use and spatial planning issues, relate to the use of the space and generate several conflicts. Diverse land uses, for example nature conservation, tourism and building development, can restrict the area available for exploration and/or mining, and thus the access to mineral deposits. Other issues such as protests against mining activity and NIMBY effects are related to societal issues. These problems are inter-related which complicates their resolution.

Solving these problems requires the introduction of new effective regulations. The most important of these relate to organizing the concession policy, the stability of the financial provisions relating to mining operations and ensuring the availability of reserves to the industry. In addition to the legal provisions there is a need for more active CSR and better public education [3].

These issues relate to internal solutions. However, the raw materials policy and strategy also require reference to external factors. The output of many minerals will largely depend on the trends in world markets. This in turn depends on the pace of economic development the main producers and consumers of mineral commodities, in particular China. Another independent factor is the rate of deployment of new technologies for recovery of minerals from both primary and secondary sources. The development of the mining and processing industry will also be increasingly limited by observance of increasingly strong environmental standards, on local and regional, as well as global, scales. Therefore the main dilemmas of the raw mineral strategy in Poland are:

- decisions on maintaining the proper balance between using our own traditional energy sources (coal) and the exploration of unconventional sources;
- identifying priorities for the geological prospecting;

- prioritizing the exploration and mining of metal ores with the interests of the state as the owner; and
- implementation of mineral resources protection to ensure the accessibility for mining with particular emphasis on the requirements of open pit mining.

*References:*

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