

A short review of bauxite and its production: environmental health impact on children in mining areas

ABSTRACT

To achieve rapid economic development, many countries including Malaysia resort various activities to exploit natural sources such as mining. As a consequence, mining are an important economic activity which has the potential to contribute to the development of areas endowed with the ore. Studies have been carried out in countries where the impact were on the environment and health. However, fewer studies have been carried out on the effects of mining on health especially the children. This paper provides a review of the process description, properties of bauxite, bauxite production and the potential health effects of heavy metals from mining ores on children's health. The aims of this article are to evaluate the most frequently reported effect towards health and heavy metals levels in biomarkers such as blood, urine, hair and toenail among children mining areas. Respiratory problems were most commonly reported effects associated with mining activities. Heavy metals such as lead, aluminum, chromium, nickel are also elevated from normal levels due to mining activities. Specific mitigated measures need to be taken in order to solve the problems and protect the public health especially children as they are vulnerable and represent the non-occupationally exposed population.

Keyword: Bauxite; Environmental health impact; Children