

Critical Minerals in Facing the Challenges of a Sustainable Tomorrow



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It is important to distinguish between environmental disasters that are attributed to natural geological processes, which are generally irregular, haphazard, sudden and violent, and environmental issues that are man-made, which are more regular, occurs mostly in areas of human activities, and less violent, but just as hazardous.

Most people are quite aware of man-made environmental issues. However, few members of the public are aware that minerals also provide major solutions to the environmental problems created by humans, in their voracious appetite for industrialization and infrastructure development.

Some critical minerals have been identified and engineered, to be made suitable for reducing the negative effects on the environment (environmental remediation), based on what is required by the industries. Discussions will centre on understanding in which industries these minerals are used and, and the reasons why they are used, in order to develop creative solutions to existing,

and to new environmental problems. Minerals do not replace technological or engineering solutions to environmental problems, but instead, complement them. Existing industries include those from the mining, extraction, power, cement, construction, chemical plants, metallurgical, steelmills, ceramics, glass, paints, rubber, plastics, electrical and electronic, petroleum, agriculture and even the aerospace industry.

We need to further develop continuous, systematic, relevant mineral education and training to current and future generations of the mining industry/fraternity and public at large, to be aware of the possibilities of minerals in solving or reducing some of the environmental issues. This should include implementing environmental management standards, in all the industries, and in all relevant government institutions, to ensure Malaysia moves rapidly towards sustainable developed nation status by 2020.