



Overview of an effective governance policy for mineral resource sustainability in Malaysia



Eric Goh^{a,*}, Shahar Effendi^b

^a Universiti Sains Malaysia, School of Materials and Mineral Resources Engineering, Malaysia

^b Ministry of Natural Resources and Environment, Department of Minerals and Geoscience, Malaysia

ARTICLE INFO

Keywords:

Governance
Mineral resources
Sustainability
Mining
Quarrying

ABSTRACT

A world class mineral resource industry can concisely be defined as an industry with standard-setting excellence in terms of quality, performance, production of market specified rock products and client satisfaction when compared with all other similar industrial sectors from anywhere in the world. The mineral resource industry has always been acknowledged worldwide as the foundation in the design and the construction of various innovative structures, infrastructures and amenities aimed towards global society enhancement. This economic sector is thus the vital catalyst and component of any country worldwide striving for developed, high-income and industrialised nation status. A sustainable mineral industry, which includes the mining and quarrying sectors, aims to meet the needs of the present generation without compromising the ability of the future generation to meet their own needs. World leaders are in agreement that accountability, quality assurance complemented by environmental-friendly and occupational safe work practices are an asset towards a successful sustainability initiative. The updated National Mineral Policy (NMP2), an improvement of the original 1993 National Mineral Policy (NMP1), was strategically drawn-up by the Malaysian Government with the aim towards the systematic sustainable development of Malaysia's mineral resource potential in a globalised market. The revised National Mineral Policy (NMP2) and regulatory framework aims to create a more conducive, transparent and environmental-friendly economic climate to encourage more potential investors to confidently support and further develop the Malaysian mineral resource industry towards world class status and also help contribute towards further economic growth of the nation and society. This article focuses on the major aspects and regulatory framework of the updated National Mineral Policy 2 (NMP2) complemented by discussions on the effectiveness and challenges faced in its implementation towards successful mineral resource sustainability for Malaysia.

1. Introduction

Radical changes are taking place all over the world resulting from the phenomena of trade liberalization and globalisation (Goh, 2006). The recent shift of formerly controlled and planned economies to free market economies in many mineral rich countries has resulted in the evolution of intense competition for the limited pool of risk capital available to invest in minerals exploration, minerals development and mineral product fabrication. This updated National Mineral Policy 2 (NMP2) launched by the Government in 2009, is an improvement over the originally developed National Mineral Policy (NMP1) in 1993 (Abdul Rahman et al., 2006). Historically, the catalyst for the latest National Mineral Policy 2 (NMP2) for Malaysia is due to the positive outcome of the ambitious Malaysian Chamber of Mines blue-print mineral development project to the Government. The principal author

was appointed as Project Coordinator for this 3-year (2005–2008) proposed 'Minerals Industry Development Master Plan (MIDMP)' blue-print project and was carried out under the National Minerals Agenda. The aim of this noble MIDMP project is to further transform the strategic mineral resource industry of Malaysia to another level of world class excellence with respect to policy governance and economic sustainability. Contributors for MIDMP consists of very senior mining and mineral-related government experts of various expertise and captains from the mineral industry. The revised NMP2 initiative launched in 2009 is based on revisions to the original National Mineral Policy 1993 (NMP1) and findings of the proposed 'Minerals Industry Development Master Plan' (MIDMP) project initiated in 2005. The latest version of Malaysia's National Mineral Policy (NMP2) is thus an improvement of the originally developed 1993 National Mineral Policy (NMP1) as the nation's economy and the present setup of the

* Corresponding author.

E-mail address: ericusm8@gmail.com (E. Goh).

mineral sector has changed significantly since then (Malaysian Minerals, 2016).

2. Economic benefits and challenges of Malaysia's mineral resource industry

Since the mineral resource industry is the primary source of critical raw materials for infrastructure development worldwide, one of the major challenges of the Government, industry and society towards effective sustainable development is to secure continuous access to these important economic mineral resources for the needs of the present and future generations (Goh, 2009). The benefits of sustainable development include the evolution of the initial form of capital namely raw mineral products (natural capital) to other means such as 'human capital', 'social capital', 'manufactured capital' and finally 'financial capital'. The mineral resource industry is thus a major source of employment since each mineral development project can lead to the creation of more than two or even six indirect projects; as well as an important source of tax revenue for the Government. The mineral resource industry is also the backbone of other businesses such as suppliers, equipment manufacturers, ready-mix industries, consultants, transport sector, analytical laboratories, precast workshops and end-product customers. Other measurable benefits of the mining and quarrying sectors to the local community include vocational training, public service infrastructure development and the continuous enrichment of the quality of life.

Based on statistical records from the Ministry of Natural Resources and Environment Malaysia and the Department of Minerals and Geoscience, there are 33 types of world class mineral potentials in Malaysia which includes gold, tin, iron, bauxite, limestone, granite, industrial minerals, clay minerals, coal and even heavy minerals (Malaysian Minerals, 2016; EI Watch, 2016). In February 2016, Malaysia's Minister of Natural Resources and Environment indicated that the nation's mineral resources have an economic worth of US\$ 60 billion (RM 235 billion) and should thus be strategically developed for the benefit of all (Astro, 2016; The Star, 2016). Assessment of the latest 2015 economy statistics indicates that production of the Malaysia's mineral resources and mineral-related industries contribute US\$ 1.8 billion (RM 7.39 billion) to the nation's Gross Domestic Product (GDP) (Ministry of International Trade and Industry Malaysia, 2016; The Star, 2016). Bank Negara Malaysia likewise indicated that for 2015, the mining and quarrying industry contributed 8.9% to the nation's GDP and the contribution is expected to grow further by 3.5% in 2016 (Bank Negara Malaysia, 2016; Trading Economics, 2016). In terms of contributions to the country's development, the mining and quarrying industry accounted for 104,000 personnel employed in this economic sector (Department of Statistics Malaysia, 2016). The Ministry of International Trade and Industry (MITI) reported that exports of mining and mineral-related goods amounted to US\$ 18 billion (RM 75.8 billion) for 2015 (Ministry of International Trade and Industry Malaysia, 2016a). Malaysia's demand for aggregates for infrastructure development has also steadily increased from 75 million tonnes in 2008 to 156.5 million tonnes in 2015, a two fold increase in aggregate production. Similarly the production of bauxite has increased from 0.2 million tonnes in 2008 to 6.3 million tonnes in 2015, a substantial increase of 31 times. Overall in 2015, the increase in the demand for minerals by the manufacturing, industrial and construction sectors is very positive and will further improve into the near future (Table 1). Owing to the incremental demand for mineral products, the strong support of the National Mineral Policy NMP2 would be a useful tool to further elevate Malaysia's mineral potential towards effective sustainability.

Mineral development operations on State Land are usually granted a lease over a long time period by the relevant government authorities so that the operator can economically recover back the initial investments put into the project. The major concern of mineral development

Table 1

Statistical increase of mineral production in 2015 compared to 2008. Source: Malaysian Chamber of Mines

| 2008 | | |
|---------------|---------------------|------------------------|
| Mineral | Production (tonnes) | Value (US\$) |
| Aggregates | 75,883,364 | 257 * 10 ⁶ |
| Clays | 25,065,218 | 38 * 10 ⁶ |
| Sand & Gravel | 24,471,877 | 70 * 10 ⁶ |
| Limestone | 23,852,825 | 39 * 10 ⁶ |
| Silica sand | 345,477 | 4.6 * 10 ⁶ |
| Bauxite | 275,069 | 5.6 * 10 ⁶ |
| Iron ore | 981,932 | 26 * 10 ⁶ |
| Gold (kg) | 2,489 | 38 * 10 ⁶ |
| Coal | 1,166,524 | 35 * 10 ⁶ |
| 2015 | | |
| Mineral | Production (tonnes) | Value (US\$) |
| Aggregates | 156,585,912 | 623 * 10 ⁶ |
| Clays | 35,497,604 | 66 * 10 ⁶ |
| Sand & Gravel | 34,341,300 | 126 * 10 ⁶ |
| Limestone | 27,540,339 | 89 * 10 ⁶ |
| Silica sand | 2,211,305 | 25.5 * 10 ⁶ |
| Bauxite | 6,322,300 | 112 * 10 ⁶ |
| Iron ore | 1,611,820 | 83 * 10 ⁶ |
| Gold (kg) | 4,854 | 138 * 10 ⁶ |
| Coal | 2,464,779 | 81 * 10 ⁶ |

operations is the security of site tenure. Some existing mines and quarries have been operating long before the recent introduction of the respective legislations by the Government. Owing to the present setup among government departments, sometimes cases do occur that mines and quarries that have been in operation for years at remote sites have to prematurely close down due to concerns on safety from infrastructure development/housing activities encroaching towards the originally secluded approved mineral development mine/quarry sites.

3. Fundamentals of Malaysia's National Mineral Policy (NMP2)

The latest National Mineral Policy 2 (NMP2) aims 'To provide the foundation for the development of an effective, efficient and competitive regulatory environment and an attractive investment climate for the mineral sector' (Ministry of Natural Resources and Environment - Malaysia, 2009). The strategic directions of this Policy are to expand and diversify the mineral sector through optimum exploration, and utilisation of resources through modern technology and sustainable development. The noble objectives of the National Mineral Policy 2 aimed towards economic sustainability of the mineral resource sector are as follows:

1. to ensure the systematic sustainable development and optimal utilisation of the nation's available precious mineral resources;
2. to promote efficient stewardship by ensuring that the nation's mineral resources are developed in an environmentally-friendly and responsible manner;
3. to enhance the economic competitiveness and progress of the nation's mineral sector at the international level;
4. to encourage the optimum use of locally produced minerals and also to promote the further growth of any potential mineral-based product industry; and
5. to further promote the recovery, recycling and reuse of metals and minerals already used in the construction and industrial sectors for further development.

This efficient Policy includes significant features that cover critical aspects such as the security of tenure, favourable fiscal systems, high priority land use for mineral resource projects, a uniform institutional

Download English Version:

<https://daneshyari.com/en/article/5104185>

Download Persian Version:

<https://daneshyari.com/article/5104185>

[Daneshyari.com](https://daneshyari.com)