

MALAYSIA

*By Muhamad Nor Muhamad
Executive Director, Malaysian Chamber of Mines*

Malaysia's real Gross Domestic Product (GDP) in 2002 strengthened to 4.2% from only 0.4% in 2001. According to Bank Negara, Malaysia's central bank, the economic performance in 2002 was broad-based, driven by strong domestic demand and reinforced by improved exports. The growth in domestic demand was driven by strong consumer spending, continued recovery in investment activity and the expansion in public sector expenditure.

Inflation during the year rose moderately to 1.8% from 1.4% in 2001 due mainly to one-off price adjustments for fuel and telecommunication charges. The local currency remained relatively stable, while continuing to be pegged at one US dollar to 3.80 Malaysian ringgit, which helped to strengthen further the domestic economy. The unemployment rate fell to 3.5% in 2002 from 3.6% in 2001 due to a significant decline in retrenchments as well as higher demand for labour.

Bank Negara has forecast a modest economic growth of 4.5% for 2003 based on a sluggish global economy weighed down by current geopolitical uncertainties. The forecast growth will be driven by strong fundamentals and a greater balance between domestic and external sources of growth. It will be supported by domestic demand, firm commodity prices, modest world economic growth, some pick-up in the global electronics industry, and further expansion in intra-regional trade.

Minerals

In 2002, the mining sector in Malaysia expanded by 4.5%, compared with a marginal growth of 1.6% in 2001. The growth emanated mainly from higher production of crude oil and natural gas. Rising production capacity and stronger external demand contributed to the higher oil output. Expansion in natural gas production was driven primarily by higher domestic consumption. Tin output declined further during the year due to low tin prices, non-renewal of mining leases and exhaustion of ore reserves.

Tin-in-concentrates production declined in 2002 by 15.2% to 4,214 t from 4,972 t in the previous year. Tin prices on Malaysia's physical tin market, ie the Kuala Lumpur Tin Market (KLTM) weakened further in 2002. The number of tin mines operating at end 2002 totalled 54 units, a decline of 9 units year-on-year. Malaysia's tin production in 2002 came largely from the open-pit mining sector, which had 14 operating mines and contributed some 35% of total output.

The KLTM's average tin price for 2002 was RM15.33/kg or US\$4,035/t compared with RM16.49/kg or US\$4,338/t in 2001. Prices on the KLTM were generally soft throughout the year, but gradually turned a little better towards

year end. Trading on the KLTM was in line with trading of tin metal on the London Metal Exchange (LME). This, in turn, reflected global base metals market performance. The highest tin price reached during the year on the KLTM was RM17.10/kg or US\$4,500/t on July 22, 2002, while the lowest price recorded was RM13.86/kg (US\$3,647/t) on February 20, 2002. The tin market during the year continued to be impacted by the weak global economy resulting from the September 11 2001, terror attacks on major US cities.

Stocks of tin in LME warehouses declined during the year under review. At end 2002, LME high-grade tin stocks totalled 25,610 t compared with 30,550 t at end 2001, a decrease of 16.2%.

Tin stocks held by the US Defense Logistics Agency (DLA) also declined during the year. At end 2002, DLA stocks stood at 57,027 t compared with 65,839 t at end 2001, a reduction of 13.4%. The DLA made five sales totalling 8,812 t during the year. Annual sales during its fiscal year, which starts on October 1, is authorised by the US Congress under its Defense Authorisation Act. For the present, the DLA is authorised to sell from its stockpile 12,000 t of tin per fiscal year.

Malaysia's domestic consumption of tin during 2002 again declined due to weak demand from the local tin-based products manufacturing sector. Tin consumed during the year totalled 3,896 t compared with 4,045 t recorded in 2001, a decline of 3.7%. The solder sector remained the mainstay in the domestic consumption of the metal in 2002, followed by the pewter and tinplate sectors.

Imports of tin-in-concentrates in 2002 for smelting by Malaysia's sole tin smelter, Malaysia Smelting Corp. (MSC), totalled 22,908 t, a decrease of 18.2% from the 27,990 t imported during the previous year. These concentrates came mainly from Indonesia, Bolivia, Australia, and China. Malaysia exported a total of 27,076 t of refined tin metal during the year, a decrease of 0.7% from 27,269 t exported in 2001. The total value of Malaysia's tin exports in 2002 was RM425 million, compared with RM461 million in the previous year. Tin is still the country's single largest mineral export earner, in value terms.

The production of other major minerals, namely iron-ore, gold, bauxite, silica-sand and coal, again showed a mixed performance during 2002. Iron-ore output increased in 2002 by 7.4% to 404,350 t from 376,476 t in 2001. The ores came from six small mines located in several states in Peninsular Malaysia. All of the output was consumed by domestic cement, and iron and steel plants.

Production of gold in 2002 also increased, to 4,289 kg, 8.2% higher than the 3,965 kg produced in 2001. The bulk of the production came from the country's single largest gold mine, Penjom, located in Kuala Lipis, Pahang. It is a joint venture between local and foreign interests. There are several smaller gold mines in Pahang, Kelantan, Terengganu and Sarawak.

Ilmenite is derived from two sources in Malaysia, namely as a by-product from alluvial tin mining and from a primary mine in Terengganu. The bulk comes from the former. Production of ilmenite in 2002 decreased by 18.3% to 106,046 t from 129,750 t produced in 2001, and reflected the decline in the tin mining sector during the year due to low tin prices.

Bauxite production in 2002 also decreased, to 39,975 t, or 38% lower than the 64,161 t produced in 2001. There are two operations, located on the southeastern coast of Johore, and the bauxite is mostly exported to Japan, Taiwan and Thailand in the form of upgraded ore. Production has been showing a declining trend since 1999. There is no aluminium smelter in Malaysia today although there is a proposal to establish one in Sarawak.

Malaysia has abundant silica-sand resources including ex-tin mine tailings. According to Malaysia's Minerals and Geoscience Department (MGD), the country has an estimated 148.4 Mt of silica-sand deposits located in the states of Johor, Perak, Terengganu, Sabah, Kelantan and Sarawak. The bulk of the silica produced is used in the manufacture of glass products. It is also used in ceramics, foundries, water treatment, and glasswool. Production in 2002 decreased by 59% to 237,673 t, from the 2001 output of 575,105 t. The government and industry are currently promoting the manufacture of value-added glass products utilising domestic silica-sand resources.

Sand and gravel, the basic raw materials for the construction and infrastructure sectors, are sourced from rivers, alluvium, offshore areas and mine tailings, and are extracted mainly in the states of Perak, Kedah, Sarawak, Johore and Selangor. As demand for sand and gravel is tied to their demand by the construction industry, production of sand and gravel has declined in recent years in line with a slowdown in construction. Future production is expected to improve, however, as it is anticipated that there will be a recovery in Malaysia's economy and hence in the construction industry.

Good demand from the construction and road-building sectors has led to increasing production of those aggregates mainly derived from granitic and limestone rock types. Such resources are abundant and widespread, being produced in the states of Perak, Selangor, Johore, Sabah and Sarawak.

Limestone production has also been on the increase in recent years. It is mainly used to produce marble dimension stone, lime, calcium carbonate powder, terrazzo, chemicals and metallurgical flux. It is also used for cement manufacturing. Production of limestone comes from the states of Perlis, Kedah, Perak, Selangor, Negeri Sembilan, Pahang, Kelantan, Sabah and Sarawak. According to the MGD, Malaysia's identifiable reserves of limestone amount to some 11,391 Mt.

Malaysia has abundant clay resources, including: common clay, ball clay, fire-clay, shale and lateritic earths. The clays are mostly used for brick-making, ceramics, cement and landfill. Deposits are distributed through the states of Pahang, Selangor, Terengganu, Kelantan, Perak, Kedah, Pulau Pinang, Negeri Sembilan, Johore and Sarawak.

Perak is currently Malaysia's major kaolin-producing state. Other states that produce kaolin are Johor, Kelantan, Sarawak, Selangor and Pahang. The kaolin is of various grades, and for local use as well as for the export market. Kaolin is used in Malaysia as a paper filler and also in the manufacture of ceramics, cement, paint, rubber and chemical products. Some 112 Mt of kaolin reserves have been identified throughout the country by the MGD.

Feldspar is being produced in Malaysia in the form of pottery stone and feldspathic sand (from granite quarry dust). Pottery stone is used by the ceramic industry, and feldspathic sand by the glass industry. Feldspar is produced mainly in the states of Negeri Sembilan and Perak.

Malaysia's coal deposits are primarily located in the states of Sarawak and Sabah, with small deposits also found in the states of Selangor, Perak and Perlis. The deposits range from lignite to anthracite, with sub-bituminous and bituminous coal being more common. As estimated by the MGD, total coal reserves currently stand at 1,711 Mt of which 275 Mt are measured, 346 Mt indicated and 1,090 Mt inferred.

There are 11 significant coal deposits in the country and the principal production areas are in Sarawak and Sabah. Output in 2002 decreased by 29.2% to 352,513 t, from 497,733 t produced in 2001. Malaysia is currently a net importer of coal, the major sources being Indonesia, Australia, China and South Africa. Most of the coal is consumed for power generation and in cement plants, and to a lesser extent in the iron and steel plants.

Currently, Malaysia has two coal-fired power plants located in Selangor and Perak. A third plant is being constructed in Johore. The construction of a fourth plant in Negeri Sembilan is in the pipeline. By the year 2006, when all these coal-fired plants are fully commissioned, the domestic consumption of coal will increase sharply. The use of coal in electricity power generation is considered more cost-competitive than other fossil fuels. It is also considered to have less negative impact on the environment. Greater investment in the coal sector could eventually make Malaysia self-sufficient in its domestic requirements, and coal forms a strategic energy resource in Malaysia's Five-Fuel Policy comprising oil, gas, hydro power, coal and renewable energy.

During the year under review, mineral exploration activities carried out in the major mining states of Pahang, Kelantan, Perak, Sabah and Sarawak were at a minimal level as reported by the MGD.

The total number of people directly employed in the mines under mining lease at end 2002 was 3,000, compared with 3,277 at end 2001. The figures do not include the substantial number of workers employed by contractors engaged in mining activities.

Crude oil and gas

In 2002, crude oil production, including condensates, increased by 5.1% to 700,000 bbl/d from 666,150 bbl/d in 2001, and was close to the production

target set under Malaysia's National Depletion Policy. The policy, introduced in 1980, is designed to safeguard national oil reserves by controlling the level of production from the major oil fields. The increase in oil production last year was a result of the commencement of production from five new oilfields during the year, and higher external demand from major buyers, particularly India, Japan and China.

Malaysia's crude oil reserve at end 2002 were estimated at 3.61 bbl compared with 3.20 bbl at end 2001. At the current rate of production, this level of reserve should last about 16 years. Some 61% of the reserves are located in the offshore areas of Peninsular Malaysia, 24% in Sarawak and 15% in Sabah.

Output of natural gas expanded by 3.0% in 2002 to 1,708 Mft³/d in 2002 from 1,658 Mft³/d in 2001. The increase was in response to greater demand from the power-generation sector, which accounts for 70% of the total gas consumption in the country. About 42% of production is from Peninsular Malaysia, 54% from Sarawak and 4% from Sabah.

Malaysia has an estimated gas reserve of some 87,760 billion cubic feet at end 2002 compared with 87,490 Bft³ at end 2001. This level of gas reserve could be utilised for another 40 years based on the present production rate. In energy terms, it is about five times Malaysia's oil reserve. Half of the gas reserve is located in Sarawak, 9% in Sabah and the balance of 41% is located in Peninsular Malaysia.

During the year, continued efforts were undertaken to increase national oil and gas production capacity and reserve. In 2002, five new oilfields, of which four were in Peninsular Malaysia and one in Sabah, and three new gas fields located in Peninsular Malaysia, commenced operations. In addition, 94 development wells were drilled and 60 wells were worked-over during the year, and some 246,475 line kilometres of seismic data were acquired for exploration and development purposes.

Currently, 42% of Malaysia's crude oil reserve and 18% of its gas reserves have been developed. In addition to the aforesaid gas reserve, there is some 4,000 Bft³ of gas reserve (Malaysian share) in the offshore Malaysia-Thailand Joint Development Area (JDA).

Construction of the controversial and much delayed pipeline project to carry natural gas to Malaysia from the JDA in the Gulf of Thailand is scheduled to finally start in early 2003. Work on the 366 km-long trans Thai-Malaysian gas pipeline was originally due to begin in late-2000, and geared for full operation by mid-2002. But fierce opposition from environmental lobbyists in Thailand have delayed the project. This project is a joint venture between PTT plc (formerly Thai Petroleum Authority) and Petroliam Nasional Bhd (Petronas), Malaysia's national oil corporation.

During the year, three new production-sharing contracts (PSCs) were signed between Petronas and several international oil companies. Petronas, which is

South-East Asia's second largest oil producer after Indonesia, went global in its business undertakings in early 1990. Its reported profits for the half year ending March 31, 2002 declined by 12% to RM14.57 billion due to lower crude oil prices and slacker demand since the September 11, 2001 terrorist attacks in the US, and the general economic slowdown worldwide. Petronas has thus far ventured into over 26 countries for oil exploration, production, refining and marketing activities, as well as for pipeline construction and petrochemical manufacturing in Asia, Africa, Middle-East, Europe, Australia and South America. This unlisted national oil and gas company, established in 1974, today earns appropriately 75% of its revenue from exports and international operations.

According to the *Fortune Global 500* list for 2002, Petronas remains the world's most profitable oil refiner in terms of returns on revenue. However, its overall global ranking slipped to 284th spot from 254th in the previous year. Nevertheless, Petronas is ranked 7th in the list of top 50 international companies based on 2001 financial figures.

Outlook

According to Bank Negara, growth in Malaysia's mining sector is expected to be sustained at 4.5% in 2003. The production of crude oil and natural gas is expected to increase during the year in response to higher domestic demand, and a further expansion in natural gas output.

Tin production in 2003 is expected to improve in anticipation of higher tin prices resulting from further drawdowns in global tin stocks, particularly from LME warehouses and the DLA stockpile. Further ahead, the discovery of new applications for tin and its use as a replacement for toxic materials in some industrial applications, could be positive factors.

The performance of Malaysia's other minerals in 2003 will again be determined by the economic health of both the domestic and the global economies.

Table next page.

Mineral Production (t unless stated otherwise)

	2001	2002
Bauxite	64,161	39,975
Silica	575,105	237,673 ^p
Iron Ore	376,476	404,350
Tin-in-Concentrates	4,972	4,214
Ilmenite	129,750	106,046
Kaolin	364,458	258,233
Feldspar	40,509	41,000 ^p
Coal	497,733	352,513
Gold (kg)	3,965	4,289
Crude Oil (bbl/d)	666,150	700,000 ^p
Natural Gas (million standard ft ³ /d)	1,658	1,708 ^p

p - preliminary.

Sources: Minerals and Geoscience Department, Malaysia; and Bank Negara Malaysia Annual Report 2002.