Chapter 15

Responsible Resource Management of the Oil and Gas Sector in Malaysia: Issues, Challenges and Opportunities

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The percentage of Malaysia's revenue from natural resources rose from 7.8 per cent in 1975, when the country began exploration, all the way to 40 per cent in 2009 at its peak. Between 2005 and 2014 the country's national development was therefore considered resource-dependent; the revenues came from the oil and gas sector, run by national oil company PETRONAS, wholly owned by the Malaysian government. In the last two years this revenue fell drastically to 20 per cent in 2015, caused mainly by the fall in oil prices. Malaysia has not suffered from the 'resource curse' in its worst form even in the past. However, given fluctuating oil prices and the unstable implications this has for the country's finances, it is more imperative than ever to examine whether natural resource revenue has in the past been responsibly used for social good. Given the current situation, it is also equally important to look into how the national government should view natural resource revenues, moving away from dependence on these as lucrative sources in the long run. This chapter provides a brief background to the oil and gas sector in Malaysia, examines resource management through the expenditure, savings and subsidy mix employed by the government, industry sustainability for future generations, and transparency and public reporting of the industry. The government, private sector and civil society must ultimately work towards good governance in managing the oil and gas industry.

Introduction

Malaysia is blessed with abundant resources, revenue from which has contributed significantly to national development. Oil and gas revenue is especially prominent, contributing about 40 per cent of national wealth at its peak in 2009, although this fell to almost half of that (20 per cent) in 2015. It has been argued that Malaysia is one of the few countries to have escaped the 'resource curse' or 'paradox of plenty', where countries take their natural resources for granted, leading to wastage instead of translating wealth into better development. US$1 billion, for example, reportedly disappeared from Angola's oil and gas accounts annually due to corruption (McMillan, 2005). Per capita incomes in resource-poor countries grew two to three times faster than resource-export driven countries between 1960 and 1990 (Auty, 2001). Have Malaysia's resources been optimised for maximum returns?

The oil and gas sector has contributed significantly to national development. The proportion of national revenue contribution from oil and gas increased through the years, making up 19.8 per cent of total government revenue in 1980, rising to 39.5 per cent in 2009. However, it fell to a low of 19.94 per cent in 2015 (Economic Reports, 1980–2015), equivalent to its proportional contributions to national revenue 15 years earlier in 2000. National revenue is highly dependent upon the stability of the oil and gas sector and, as the recent national financial situation shows, the government's budget has suffered because of the rapid fall in oil prices.

Malaysia's petroleum industry began in the early 1970s, following the oil crisis of 1973 when crude oil world prices tripled. Arab members of the Organisation of Petroleum Exporting Countries (OPEC) imposed a six-month embargo on oil supplies, causing price increases. Countries began to be aware of the need to control their own national resources. The Petroleum Development Act (PDA) was passed in 1974 and Perbadanan Petroleum Nasional (Petroliam Nasional Berhad, National Oil Corporation, PETRONAS) was formed. PETRONAS is wholly owned by the Malaysian government, but is incorporated as a private company.

PETRONAS is now ranked as one of Fortune Global 500's largest companies in the world. Fortune also ranks PETRONAS as the 13th most profitable company in the world and most profitable in Asia with some publicly listed companies (see Fig, 1).[1]

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1 It operates in more than 30 countries, including Iraq, Republic of Sudan, China, Myanmar and Gabon, in a mix of upstream and downstream activities (see Fig. 2). International operations contribute almost half of total revenue – 41 per cent

Given this, the role and contribution of the oil and gas sector to national growth must be examined, specifically whether revenue is used for public interest and social good. Second, whether such natural resources can be continually relied upon for the future economic growth of the country, to ensure the welfare of future generations. Third, whether there have been satisfactory levels of revenue transparency and accountable reporting in the oil and gas sector. This chapter seeks to examine overall good governance in the management of the oil and gas sector in Malaysia.

in 2015, contributing RM102.1 billion (PETRONAS, 2015). It posted a revenue of RM247.7 billion for the 2015 financial year, which was a relatively large decline of 25 per cent due to 'significantly lower product prices in line with the downward trend of benchmark prices'. PETRONAS has more than 100 subsidiaries and owns a fleet of more than 100 tankers and ships through MISC (Fong, 2010). PETRONAS's publicly listed companies are PETRONAS Dagangan Berhad, PETRONAS Gas Berhad, PETRONAS Chemicals Berhad, Malaysian International Shipping Corporation (MISC) Berhad, Malaysian Marine and Heavy Engineering (a subsidiary of MISC) and KLCC Property Holdings Berhad.

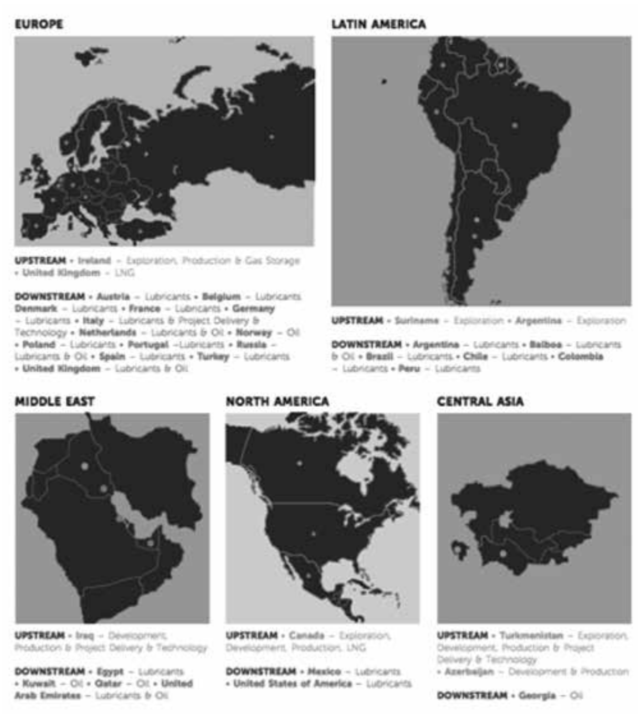

Fig. 1, 2 Map of PETRONAS's international presence.
(source: PETRONAS 2015 Annual Report)

Responsible Resource Management: How Natural Resources Should be Managed Responsibly

Responsible resource management involves oversight and governance over the entire value chain, from the organisation of extractive production, revenue generation and management, and finally expenditure processes and development outcomes. Natural resources ought to be responsibly managed for the public good. When managed well with sufficient transparency standards, government accountability, citizen engagement and responsible corporate practices, natural resource revenue can drive national growth and development.

Standards to ensure responsible management of natural resources are set out in a 'Natural Resource Charter' (2010), with 12 very useful precepts; although situations differ from country to country, they are useful for Malaysia. The 12 precepts prescribe how natural resources should be transparently managed to have positive economic, social and environmental impacts:

1. The development of a country's natural resources should be designed to secure the *greatest social and economic benefit* for its people. This requires *a comprehensive approach* in which every stage of the decision chain is understood and addressed.

2. Successful natural resource management requires *government accountability to an informed public.*

3. Fiscal policies and contractual terms should ensure that the country gets full benefit from the resource subject to attracting the investment necessary to realise that benefit. The long-term nature of resource extraction requires policies and contracts that are robust to changing and uncertain circumstances.

4. Competition in the award of contracts and development rights can be an effective mechanism to secure value and integrity.

5. Resource projects can have significant positive or negative local *economic, environmental and social effects* which should be identified, explored, accounted for, mitigated or compensated for at all stages of the project cycle. The decision to extract should be considered carefully.

6. Nationally owned resource companies should operate transparently with the objective of being commercially viable in a competitive environment.

7. Resource revenue should be used primarily to promote *sustained, inclusive economic development* through enabling and maintaining *high levels of investment* in the country.

8. Effective utilisation of resource revenue requires that *domestic expenditure and investment be built up gradually* and be *smoothed* to take account of revenue volatility.

9. Government should use resource wealth as an opportunity to increase *the efficiency and equity of public spending* and enable the private sector to respond to structural changes in the economy.

10. Government should *facilitate private sector investments* at the national and local levels for the purposes of diversification, as well as for exploring the opportunities for domestic value added.

11. The *home governments* of extractive companies and *international capital centers* should require and enforce best practice.

12. *All extraction companies* should follow *best practice* in contracting, operations and payments.

Governing Frameworks: How the Oil and Gas Sector is Run in Malaysia

PETRONAS has contributed to national development in the country, with exclusive rights as the national oil company to ownership, exploration and production of oil and gas in Malaysia. One pressing issue is the management of resources between the Federal and state governments. Oil and gas resources are concentrated in Sabah, Sarawak, Terengganu and Kelantan (see Fig. 3). Prior to the enactment of the PDA, several mining enactments empowered individual states to govern oil exploration and production (Yusof, 2009). However, with the PDA enactment, oil rights were centralised to the Federal government. Hence, although a federation by name, states' rights over oil were thereby circumscribed (Ibid.). The Federal Constitution of Malaysia provides similarly centralised articles of law that govern resource ownership, exploitation and powers to enter into contracts.[2]

The PDA states that the Prime Minister has ultimate oversight over PETRONAS.[3] The Prime Minister's sole discretionary power over the management of PETRONAS is far-reaching as he also appoints all members of the National Petroleum Advisory Council, whose role is to 'advise the Prime Minister on national policy and matters pertaining to petroleum industries, energy sources and their utilisation'. The Prime Minister can delegate powers 'to any person', whilst other parts of the Act require his explicit approval. As an off-budget agency, PETRONAS's accounts need not be disclosed to Parliament, and for this reason PETRONAS has been subject to criticism.

It has been a long-standing dispute of the Kelantan state government, under the Pan-Malaysian Islamic Party (PAS), that the Federal government owes oil royalty to them; this is currently not paid as it is argued that oil

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2 The Ninth Schedule of the Federal Constitution of Malaysia sets this out within List I – Federal List, giving the Federal government power over the 'development of mineral resources, mines, mining, minerals and mineral ores, oils and oilfields; purchase, sale, import and export of minerals and mineral ores; petroleum products; regulation of labour and safety in mines and oilfields'.

3 Specifically, Section 3(2) of the PDA reads: 'The Corporation shall be subject to the control and direction of the Prime Minister who may from time to time issue such direction as he may deem fit' (Petroleum Development Act, 1974).

Fig. 3. PETRONAS Group of Companies.
(source: PETRONAS 2015 Annual Report)

is drilled outside state boundaries.[4] The other three oil-producing states currently receive an annual 5 per cent royalty from the Federal government, although the state governments have demanded higher royalty percentages.[5] In 2014 the poverty rate was reported as 0.6 per cent in Peninsular Malaysia, and three out of the four resource-rich states had a higher than average poverty rate: 4 per cent in Sabah, 0.9 per cent in both Kelantan and Sarawak (Department of Statistics Malaysia, 2014).

Section 4 of the PDA does not mention quantitative percentages owing to the states,[6] but 12 states signed an agreement with PETRONAS relinquishing their rights and accepting the 5 per cent profits from petroleum production; the exception was Sabah, which wanted the agreement amended. In Sarawak, the British granted concessions to Shell for 'as long as the sun, the moon and the stars are in the sky'. Other energy policy documents include the National Petroleum Policy 1975, the National Depletion Policy 1980, the Gas Supply Act 1993, and other electricity enactments.

Most recently, former Sarawak Chief Minister Adenan Satem negotiated with Prime Minister Najib Razak after a series of controversies with regards to PETRONAS in Sarawak. Adenan emerged victor in August 2016, when the Federal government agreed to a seven-point list of demands, all of which benefit Sarawakians in the natural resource sector.[7]

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4 The Kelantan state government filed a suit against PETRONAS for breaching the Petroleum Development Act (PDA) 1974 by failing to pay the state oil royalties amounting to RM800 million per annum from the Kelantan-Thailand offshore area since 2005. As of October 2012, the Federal Court allowed the Kelantan government leave to appeal the court ruling that the suit should be disposed of.

5 The opposition coalition, Pakatan Rakyat, has called for the review and increase of oil royalty to all four oil-producing states of up to 15 per cent of oil royalties from the current 5 per cent.

6 'The Corporation shall make to the government of the Federation and the Government of any relevant State such cash payment as may be agreed between the parties concerned.' (PDA, 1974).

7 Two years earlier, a resolution was passed in the Sarawak State Legislative Assembly to increase Sarawak's oil royalty received from production sharing contracts from 5 to 20 per cent. Finally, the Sarawak state government is reportedly developing a new regulatory framework with regard to territorial sea boundaries, rejecting the Territorial Sea Act (2012) that it says is unconstitutional as it is argued that any law altering state boundaries first requires the consent of that state via the state legislature. The Act reduces the breadth limit of Sarawak and Sabah's territorial waters – including their rights to fisheries, mineral resources and tourism sites – to three nautical miles from their coastlines. The contention is that, based on the Act,

1. A Sarawakian should be appointed on Petronas's board of directors.
2. The 192 vacant posts would be advertised in local papers and filled by Sarawakians.
3. PETRONAS would provide up to 50 places for Sarawakians to do undergraduate studies at Universiti Teknologi Petronas.
4. PETRONAS would intensify technical training and enrol more Sarawakians in their training centres.
5. Petronas would support two petrochemical industries in the state.
6. The federal government would consider the Sarawak government's intention to participate in Production Sharing Contracts (PSCs).
7. Petronas would agree to recruit more Sarawakians from the non-executive to management levels.

These policies will determine how much of the revenues from minerals found offshore would eventually accrue to the state governments.

Petroleum Revenue and Expenditure

How Oil and Gas Revenue Fuels Malaysia's National Coffers

Oil prices were relatively stable from 1974 to 2000 (US$20–30 per barrel), and revenue management from this extractive industry was not closely scrutinised until 1997 when questions were raised about PETRONAS's money used in the construction of several mega-projects.[8] World crude oil prices then shot up to US$140 per barrel in 2007, contributing to windfall profits to both PETRONAS and the Federal government. Revenue from oil and gas contributed RM400 million to the Federal government in 1975, rising to RM6.3 billion in 1985 and increased rapidly to RM54 billion in 2010. As a proportion of total government revenue, it rose from 7.8 per cent in 1975 to 39.5 per cent in 2009, and then fell again very rapidly to 19.9 per cent in 2015, as a result of falling oil prices, which is an important issue

territorial sea is defined as 12 nautical miles for all other parts of Malaysia, whereas it is only three nautical miles for Sabah and Sarawak, and three nautical miles also for the purposes of oil and gas, which would also include Kelantan and Terengganu.

8 These mega-projects, pursued by then Prime Minister Mahathir Mohamad, are explored in detail in the next section.

addressed later. Since its inception, PETRONAS has contributed RM881 billion to the government (PWC, 2016), which Table 1 traces from 1975 to 2015, and has borne a cumulative subsidy of RM97 billion under the national gas utilisation plan.

Table 1. Federal Government Revenue from Oil and Gas, 1975–2015 (RM million)

Type of Oil & Gas Revenue by Year	1975	1980	1985	1990	1995	2000	2001
Petroleum Income Tax	322	1,736	3,130	2,644	2,185	6,010	9,859
Petroleum Export Duties	0	677	1,639	1,910	751	996	831
PETRONAS Dividend	0	0	930	2,300	3,100	4,100	5,910
Petroleum Royalty & Gas	78	345	619	627	710	1,763	2,000
Total Revenue from Oil & Gas	**400**	**2,758**	**6,318**	**7,481**	**6,746**	**12,869**	**18,600**
% share of Total Government Revenue	***7.8***	***19.8***	***29.9***	***25.3***	***13.3***	***20.8***	***23.4***
WTI US$ per barrel (Dec)	**11.16**	**37.00**	**27.23**	**27.34**	**19.04**	**28.46**	**19.33**
Total Government Revenue	**5,117**	**13,926**	**21,115**	**29,521**	**50,594**	**61,864**	**79,567**
Type of Oil & Gas Revenue by Year	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**
Petroleum Income Tax	7,636	8,466	11,479	14,566	20,674	22,600	24,191
Petroleum Export Duties	768	1,106	1,539	2,029	2,325	2,450	2,703
PETRONAS Dividend	5,390	5,100	9,100	11,000	18,000	24,000	30,000
Petroleum Royalty & Gas	1,600	2,142	2,497	3,293	4,240	4,230	5,908
Total Revenue from Oil & Gas	**15,394**	**16,814**	**24,615**	**30,888**	**45,239**	**53,280**	**62802**
% share of Total Government Revenue	***18.4***	***18.2***	***24.8***	***29.1***	***36.6***	***37.8***	***39.3***
WTI US$ per barrel (Dec)	**29.42**	**32.15**	**43.33**	**59.43**	**62.03**	**91.73**	**33.87**
Total Government Revenue	**83,516**	**92,608**	**99,397**	**106,304**	**123,546**	**141,073**	**159,793**

Type of Oil & Gas Revenue by Year	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**
Petroleum Income Tax	27,231	18,713	27,748	33,934	29,753	26,956	11,559
Petroleum Export Duties	1,104	1,745	1,997	1,968	1,632	1,577	989
PETRONAS Dividend	30,000	30,000	30,000	26,260	27,000	29,000	26,000
Petroleum Royalty & Gas	4,800	4,900	5,100	6,423	6,186	6,532	5,142
Total Revenue from Oil & Gas	**63,135**	**55,358**	**64,845**	**68,585**	**64,571**	**64,065**	**43,690**
% share of Total Government Revenue	***39.80***	***34.67***	***34.97***	***32.99***	***30.26***	***29.04***	***19.94***
WTI US$ per barrel (Dec)	**74.30**	**89.04**	**98.57**	**88.19**	**97.9**	**59.1**	**37.24**
Total Government Revenue	**158,639**	**159,653**	**185,419**	**207,913**	**213,370**	**220,626**	**219,089**

Source: Ministry of Finance, Economic Report (various years).

PETRONAS recorded revenue of RM248 billion in 2015, a 25 per cent drop from 2014, hit hard by low oil prices (PETRONAS, 2015). The Federal government receives revenue from oil and gas via three sources: direct tax (petroleum income tax), indirect tax (export duties on petroleum and petroleum-related products) and non-tax revenue (dividends from PETRONAS to the Federal government and petroleum royalties). In 2012 petroleum income tax accounted for more than a quarter of total direct tax collected, an estimated RM31.96 billion out of a total of RM116.83 billion (Economic Report, 2012/2013), but this fell drastically in 2015 to just a dismal 8.2 per cent, or RM9.53 billion out of a total of RM116.76 billion (Estimates of Federal Government Revenue, 2016). The Federal government collected an estimated RM53.3 billion in 2015 from its total indirect taxes, comprising excise duties, import duties, sales tax, service tax and others from all sources. In 2012 the oil and gas sector contributed RM2.4 billion of the total export duties collected, but the amount collected fell in 2015 to just RM904 million due to the decrease in export duty on crude oil.

For non-tax revenue, dividends from PETRONAS to the Federal government between 2008 and 2011 were consistently fixed at RM30 billion, but a decision was later made that this was no longer sustainable. The dividend in 2016 was RM16 billion, almost half of its former contributions. One of the reasons given was that PETRONAS needs to hold onto cash to help reverse a production slump and retain the company's profits to invest in exploration after Malaysia's oil and gas production fell in three consecutive years between 2010 and 2013. In 2012 dividends made up 41 per cent of total oil and gas revenue collected, but dividends made up 60 per cent of total oil and gas revenue collected in 2015. Petroleum royalties amounted to RM5.14 billion in 2015. Non-tax revenue from the oil and gas sector amounted to RM5.14 billion, just 10 per cent (in 2012, this component contributed 65.6 per cent) of the Federal government's total non-tax revenue of RM51.4 billion in 2015.[9]

Charts 1 and 2 compare the percentage of oil and gas revenue collected by the Federal government in 1985 (the first year PETRONAS gave dividends to the government) and 2015. Dividends to the government as a percentage of total oil and gas revenue first increased significantly from 15 per cent to 41 per cent over 27 years, and then fell drastically back to 19.9 per cent in the most recent two-year period. In 2015, dividends to government made up almost 60 per cent of total revenue, compared to just 46 per cent in 2011.

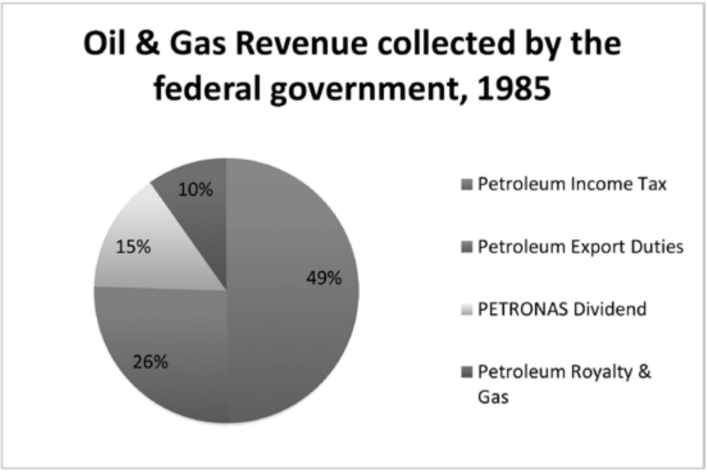

Chart 1. Oil & gas revenue collected by Malaysian federal government, 1985.

9 In the past, government revenue was substantially supplied by the oil and gas sector; in 2012, RM67.96 billion – 32.8 per cent of the total revenue of RM207.25 billion. Total oil and gas revenue collected in 2012 therefore financed almost one-third of the Federal government's expenditure, which amounted to RM252.4 billion. However, this is no longer the case; in 2015 oil and gas revenues financed less than one-fifth of the total expenditure of RM259.8 billion.

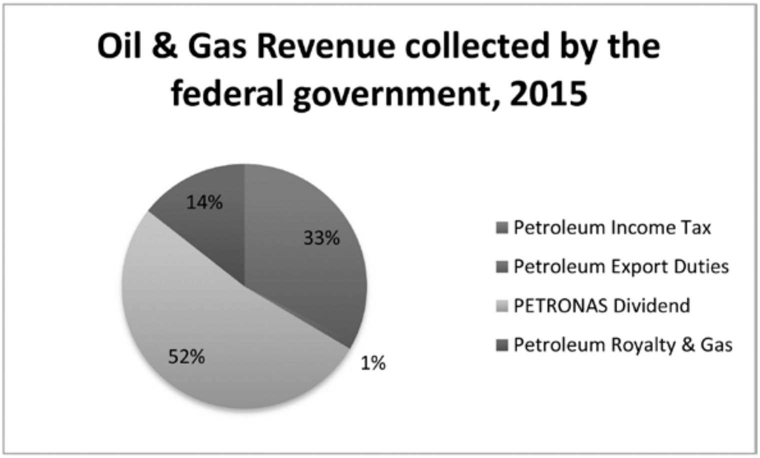

Chart 2. Oil & gas revenue collected by Malaysian federal government, 2015.

Chart 3 shows the increase in oil and gas revenue from 1975 to 2015; it dipped in 2010 due to lower sales prices although higher volumes were generated. It reached a peak in 2009, when oil and gas revenue contributed about 40 per cent to total government revenue, ultimately incorporated into the Federal government's consolidated fund. Even the total volume of oil and gas revenues declined steadily from 2012 to 2015. That said, a significantly large proportion of the budget is still sourced from natural resources. The government therefore has discretion on how it decides to utilise these resources in their appropriate proportions, in the form of expenditure, investments, savings or subsidies.

How Oil and Gas Money is Spent in Malaysia

It is significant to note that PETRONAS's formation took place soon after the New Economic Policy (NEP) was announced. The NEP,[10] which was formulated following violent clashes[11] two years earlier between ethnic Malays and Chinese, had a two-pronged objective: to eradicate poverty irrespective of race and to eliminate the association between job function

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10 New Economic Policy was Malaysia's first five-year development policy aimed at promoting growth in 1971. (Economic Planning Unit, Accessed March 2017)

11 Clashes between the Malay and Chinese ethnic communities broke out on 13 May 1969, in the aftermath of the 1969 general election when opposition parties made gains at the expense of the ruling coalition, the Alliance (Kua, 2007).

and race. There were negative sentiments amongst Malays about their socio-economic disposition despite forming the country's majority. In 1970 only 2.4 per cent of the economy was held by the Bumiputera (Malays and other indigenous peoples); the remainder was held by Chinese and foreigners. The NEP's over-arching theme was therefore to uplift the socio-economic standing of the Malays by increasing their ownership and control of national wealth.

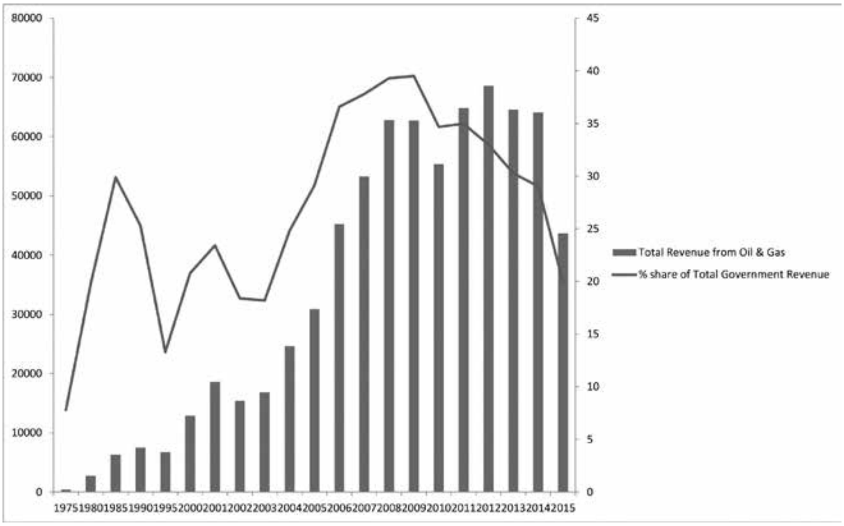

Chart 3. Oil and gas revenue as a percentage share of total government revenue (1975–2015).

PETRONAS was instructed to prepare a blueprint for Bumiputera participation in the petroleum industry in 1985. Its licensing and registration application guidelines stipulate that only companies with 51 per cent Bumiputera equity ownership, board of directors, management and employees qualify (PETRONAS, 2010). Bumiputera dealers operate most of PETRONAS petrol stations in Malaysia and, according to Yusof (2009), more than half of the upstream and downstream contracts from 2000 until May 2006 were awarded to Bumiputeras.

Because oil and gas funds are not earmarked for specific spending, scrutiny is needed of how the government spends its consolidated funds. For instance, in 2015 only 15.7 per cent of the total expenditure was for developmental purposes, with the remaining 84.3 per cent for operating expenditure. Development expenditure used to make up at least 23–24 per cent of total expenditure before 2010, but this has fallen steadily every year

– 20.26 per cent in 2012, 16.51 per cent in 2013, and 15 per cent in both 2014 and 2015. For funds to reach the most appropriate targets in serving public interests, development expenditure ought to make up the higher proportion. Table 2 shows the progressive increases in operating expenditure as a proportion of total expenditure in recent years.

Table 2. Federal Government Operating and Development Expenditure, 2003–2015 (RM billion)

	2003	2004	2005	2006	2007	2008	2009
Operating Expenditure	71.7	80.0	89.1	101.2	113.0	128.8	157.1
	68.5%	73.4%	76.4%	75.6%	72.9%	76.7%	75.3%
Development Expenditure	33.0	29.0	27.6	32.8	42.0	39.2	49.5
	31.5%	26.6%	23.6%	24.4%	27.1%	23.3%	24.7%
Total Expenditure	104.7	109.0	116.7	134.0	155.0	168.0	204.7
	2010	**2011**	**2012**	**2013**	**2014**	**2015**	
Operating Expenditure	152.2	162.8	205.5	211.27	219.59	216.99	
	73.8%	76.8%	83.6%	82.66%	84.43%	84.3%	
Development Expenditure	54.0	49.2	49.8	42.21	39.5	40.8	
	26.2%	23.2%	20.26%	16.51%	15.19%	15.7%	
Total Expenditure	206.2	212.0	245.8	255.6	260.1	259.8	

PETRONAS has prided itself on corporate social responsibility initiatives in education and human capital development. However, some funds may not have been put to their best use, in some cases bailing out companies or funding mega-projects at the demand of the government. In 1984 Bank Bumiputera (Bumiputra Malaysia Finance, BMF) accumulated a large amount of bad loans, almost going under. PETRONAS bailed out Bank Bumiputera by pumping in more than RM2 billion; it paid Permodalan Nasional Berhad (PNB), the major shareholder of BMF), RM1 billion and took over BMF-related loans at a write-down value of RM1.25 billion

(Gomez & Jomo, 1999).[12] In 1991 PETRONAS was again asked to bail out the same bank with RM1 billion (Fong, 2010).

Tabled and passed by Parliament at the time this took place was the Petroleum Development Act (Amendment) Act 1985, which gave new powers to PETRONAS in section 3A, that is the 'power to take over or acquire … the whole or any part of any commercial undertaking, business or enterprise'. Section 4(1) then added declarations to the effect that every act or transaction by PETRONAS before the Act would be lawful, rendering any retrospective action legal. The Act empowered PETRONAS to legally take over or buy up companies.[13]

Since then, PETRONAS's profits have been used to finance economically unsustainable ventures or bail out politically connected corporations. In 1998 it acquired the debt-laden shipping company Konsortium Perkapalan Berhad (KPB Limited) through its shipping carrier Malaysian International Shipping Corporation Berhad. PETRONAS acquired equity in Proton, the national car company that eventually was debt-ridden due to slow car sales; and assisted other companies such as Malaysia Airlines (MAS).

Former Prime Minister Mahathir Mohamad executed numerous mega-projects as part of his vision to put Malaysia on the world map. The iconic PETRONAS Twin Towers is essentially owned by PETRONAS.[14] It is estimated that the government pumped RM2 billion into the project (Tyndall, 2002).[15] The Kuala Lumpur International Airport (KLIA) was another massive project, built at an estimated cost of RM9 billion (Ibid.). As part of Mahathir's Multimedia Super Corridor (MSC) plan to transform the Klang Valley into a Malaysian Silicon Valley, RM2 billion was spent on Cyberjaya (Ibid.). The Formula 1 Sepang Circuit was another project,

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12 Bank Bumiputera was eventually acquired from PETRONAS for RM1.15 billion by the Ministry of Finance Incorporated in 1991 (Gomez and Jomo, 1999).

13 Cheah Kaw Chiew, a Bank Bumiputera account owner who challenged the legality of PETRONAS buying these debts, claiming this was *ultra vires* the PDA 1974, failed as the case against PETRONAS was eventually dismissed on the grounds that its actions were no longer *ultra vires* or illegal following the Act (*Petroleum Nasional Bhd. (PETRONAS) & Anor. vs Cheah Kam Chiew*).

14 PETRONAS is the majority shareholder, holding 52 per cent of KLCC Property Holdings Berhad shares, 31.7 per cent through KLCC (Holdings) Sdn Bhd in which PETRONAS has 100 per cent direct interest, and 20.9 per cent through Cartaban Nominees (Tempatan Sdn Bhd) which holds the shares on behalf of PETRONAS (KLCC Property Holdings Berhad, 2010).

15 Estimates for the PETRONAS Twin Towers have been cited as up to RM6 billion (Fong, 2010: 63).

estimated at US$120 million (F1-Malaysia, 2011).

Putrajaya, the new government administration area, which took almost ten years to complete, had a final estimated construction cost of RM11.83 billion, as stated in a Parliamentary reply (Fauwaz et al., 2008).[16] Altogether, PETRONAS controls 84.41 per cent of Putrajaya Holdings Sdn Bhd.[17] These landmark projects would not have been possible without revenue from natural resources.

Investments, Savings and Subsidies: Identifying Ideal Proportions

Oil revenues can therefore be spent to invest, save or subsidise elements in the economy. This requires the government to analyse the impact of its investments. For instance, PETRONAS financed and built a private healthcare facility, Prince Court Medical Centre, in Kuala Lumpur, with costs estimated at RM544 million. This is not within the mandate of PETRONAS's core business and, more importantly, it adds a costly burden to its enterprise.[18] In this instance, the question emerges as to whether PETRONAS should be running a hospital instead of investing in supplying energy to the country.

Some resource-rich countries have sovereign wealth funds (SWF) that seek to protect their economies from the volatility of their revenue base. Due to poor governance structures, revenue from the oil and gas sector is often spent freely, especially when windfall profits are obtained with high oil prices or when there is great political incentive. These SWFs, savings or investment funds exist to compensate for revenue shortfalls, save for future generations, or invest in physical or human capital for future economic growth. SWFs are most often funded with proceeds from the extractive industries and, although there are varying formulae for their success, they

16 Estimates for the contributions of PETRONAS to Putrajaya have been cited as up to RM22 billion (Fong, 2010: 63).

17 Currently, PETRONAS (via KLCC (Holdings) Sdn Bhd) is the majority shareholder of Putrajaya Holdings Sdn Bhd, with 64.41 per cent. It is also interesting to note that CIMB Group Nominees (Tempatan) Sdn Bhd holds 20 per cent shares in Putrajaya Holdings Sdn Bhd on behalf of Kumpulan Wang Amanah Negara (KWAN), the oil and gas sector fund set up for long-term revenue sustainability.

18 Having said this, several international oil companies have begun to diversify into other areas. Shell, for example, has spun off a company to run a power and electricity business. This, however, makes intuitive sense as they have expertise in the energy sector and it is therefore a natural extension of the core business.

are best used when spent broadly for future and long-term, as opposed to short-term, benefits.[19] Benefits from a depleting resource should be spread across current and future generations (Sachs, 2007).

Malaysia has such a fund: the Kumpulan Wang Amanah Negara (National Trust Fund) formed under the National Trust Fund Act 1988. According to the Act, money is to be appropriated from the consolidated fund and contributions 'may be made by Petroleum Nasional Berhad to the Fund' (National Trust Fund Act, 1988). Provisions for application of the fund are extremely loose; money can be applied for 'any of the purposes of the Development Fund' and 'the granting of loans or advances on concessionary terms to the Federal Government or … any State in Malaysia', subject to the Minister of Finance's approval (Ibid.). Investments are also allowed for.

The National Trust Fund Panel trustees are appointed by the Minister of Finance, and members include an officer from the Prime Minister's Department. The National Trust Fund Report 2014 states that RM9 billion remains in the fund. The Fund's objective was to ensure sustainability of resources for future generations.[20] In the Resource Governance Index 2013 (Revenue Watch Institute, 2013), Malaysia scored 46 out of 100 in the governance of its natural resource fund, ranked 12th of 23 countries.[21]

Apart from savings, the government has spent substantial amounts of national revenue on subsidies. Dato' Seri Idris Jala, chief executive officer of PEMANDU (Performance Management and Delivery Unit) announced that Malaysia has a rising debt, which currently stands at RM362 billion,

19 The Santiago principles set out 24 generally accepted principles and practices (GAPP) of sovereign wealth funds (SWFs) that can be considered international best practices (International Working Group of Sovereign Wealth Funds).

20 Bank Negara Malaysia (Malaysian Central Bank) is responsible for the day-to-day administration and management of the affairs of the fund.

21 The Norwegian Petroleum Fund is a good example of a successful SWF. It was set up in 1990 to smoothen oil price fluctuations and stabilise Norway's currency, with the purpose of catering to long-term needs of future generations. The fund contained US$914 billion as at March 2017. The fund's operations are strictly controlled and monitored by the Parliament, to which it reports three times a year. On the other hand, Nigeria is an example of a country whose Excess Crude Account (ECA) 'will soon be empty of the sizeable windfall profits collected during the recent period of high oil prices' (Gillies, 2010), mainly because the fund was not protected from the short-term political pressures to spend. Key for the success of a national SWF is that there must be extremely well-defined and tightly binding rules regarding inflows and outflows, together with strict transparency measures.

with a deficit that rose from RM5 billion in 1998 to RM47 billion in 2009. He also stated that if government debt continues at the rate of 12 per cent per annum, Malaysia could possibly go bankrupt by 2019 with a debt of RM1158 billion. This, he argues, is a result of the large subsidies given by the government (Jala, 2010). In 2009 RM74 billion (15 per cent of the national budget) was spent on subsidies;[22] 47.8 per cent of this was for fuel subsidy. The government has subsequently used this argument to gradually remove subsidies from petrol prices.

In reality, larger subsidies were given to industrial users, with the independent power producers (IPPs) accounting for more than half (58.7 per cent or RM8.1 billion) of the total gas subsidy (RM13.8 billion) for the power sector (Yusof, 2009).[23] IPPs consume about 60 per cent of the natural gas in Malaysia. It is reported that only RM11 billion worth of petrol subsidies is allocated to relieve consumers' burden, compared to a hefty RM19 billion worth of gas subsidies given to IPPs each year, which constitutes 9 per cent of total revenue (Pakatan Rakyat, 2010). As much as RM39 billion is paid in subsidies and compensations annually to all corporations (IPPs, Tenaga Nasional Berhad (the national power corporation), highway concessionaires and others) by the Federal government. Cumulative subsidies borne by PETRONAS since the gas price for the power sector was fixed in 1997 and the non-power sector in 2002 (up to 2010) amount to RM126.6 billion (Yow, 2010).

Apart from developmental expenditure is the question of how the government deals with off-budget spending and that related to non-financial public enterprises (NFPEs), which seems to be where the real projects are taking place, leaving the official budget documents to handle smaller administrative expenses. In recent years there have been large financial scandals that have wrecked Malaysia's international reputation, and one cannot speak of GLCs without referring to 1Malaysia Development Berhad (1MDB), which is linked directly to Prime Minister Najib Razak. In short, global investigators believe that more than USD1 billion entered into Najib's personal bank accounts, with a total of USD3.5 billion being misappropriated from 1MDB altogether.[24]

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[22] Subsidies were spent for social reasons (RM42.4 billion), fuel and energy (RM23.5 billion), infrastructure (RM4.8 billion), and food (RM3.4 billion).

[23] Independent power producers that benefit from government subsidies include Genting Sanyen Power, YTL Power, Malakoff Berhad and Tanjong Plc/ Powertek Berhad (*The Edge*, 2005).

[24] The case is being investigated in at least four countries at the time of writing,

Steps Needed to Ensure the Petroleum Industry is Better Managed

Monitoring Transparency Levels

Revenue transparency is essential in responsible resource management to ensure public accountability by government and the corporations involved in the extractive industry. In a Resource Governance Index (2013), Malaysia was categorised as having a 'weak' score of 46, ranking 34th of 58 countries. A satisfactory 'Enabling Environment' was contrasted with poor scores on the 'Institutional & Legal Setting' and 'Safeguards & Quality Controls' components, the latter two of which were categorised as 'failing'. Malaysia does not have an adequate legislative framework since there is no independent regulator in this sector, and there is no freedom of information law – in fact the report states clearly that 'the Official Secrets Act restricts disclosure of information deemed crucial to national security' (Natural Resource Governance Institute, 2013).[25] Second, a lack of disclosure policies and checks on licensing authorities led to a low score in safeguards and quality controls. The Auditor-General's Report does not cover the resource sector, hence there are no publicly available audits that are readily viewed.

Malaysia's relatively weak performance was due to an absence of legislation providing for disclosure of information in the oil and gas sector. Hence relatively little information on contracts,[26] agreements and negotiated terms for exploration and production is publicly disclosed. In the same report, PETRONAS scored 61 out of 100 in the national oil company category, ranked 32nd of the 58 countries surveyed, putting it in the category of 'weak' governance of natural resource management. Malaysia performed relatively poorly on the governance of its natural resource fund (scoring 46 out of 100) and of subnational transfers (scoring 22 out of 100, and ranking 26th of 30 countries in this count).

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including a high-profile investigation being carried out by the US Department of Justice, reportedly the biggest case of its kind in history.

25 The Resource Governance Index evaluates the availability of information covering these key areas of natural resource management: access to resources, generation of revenue, institutional setting, state-owned companies, natural resource funds, sub-national transfers, and the extractive industry transparency initiative (EITI) if so applicable.

26 At the beginning of 2010 PETRONAS had 74 production sharing contracts (PSCs) with international oil companies including ExxonMobil, Shell, ConocoPhillips.

Other weaknesses are evident in the areas where the legislative branch of Parliament does not have the authority to ratify contracts, as well as little to no operational information on quasi-fiscal activities, transfers to state governments, or the public disclosure of joint-ventures.[27]

Ensuring Long-Term Sustainability of Energy Supplies and Implications on National Development

One important area of responsible resource management lies in resource sustainability for the future. PETRONAS's reserves replacement ratio[28] was 1.1 times as at 2014. The group's total reserves were recorded at 1 billion barrels of oil equivalent (boe). However, PETRONAS announced in August 2015 that operational revenues would be insufficient to cover capital expenses and the dividends, forcing them to draw on reserves and implement further cost savings. In Malaysia, total average production was 2.24 million boe per day in 2016, comprising both local and international production. Given that the number of mature oil fields off Malaysian shores has declined, the Ministry of Finance confirmed that Malaysia has swung from being a net oil exporter of oil to a net importer since 2014 (*Star*, 2015).

The National Depletion Policy 1980 was aimed at capping total production per day to safeguard reserves, with an upper limit of crude oil at 650,000 barrels per day and of gas production at 2,000 million standard cubic feet per day in Peninsular Malaysia. It has been reported that PETRONAS retains 30 per cent of its revenue for its own investments, although this is not highlighted in its annual reports. PETRONAS reported that it would consider deepwater areas as good prospects for new oil and gas discoveries since existing oilfields are depleting (PETRONAS Sustainability Report, 2009), but these efforts may now prove to be futile given the low oil

[27] Related to revenue transparency is budget transparency; in an Open Budget Survey 2015, Malaysia ranked in the category of providing the public with limited budget information, with a score of 46 out of a full 100, indicating that the government provides the public with minimal information on the budget and main financial activities, making it extremely difficult for citizens to hold the government accountable for its management of public funds (Open Budget Survey, 2015). It scored particularly low in the areas of public participation (12 out of 100) as it does not allow sufficient opportunities for the public to engage in the budget process, and budget oversight by legislature (15 out of 100).

[28] The reserves replacement ratio is the ratio of new reserves discovered to volume of production, an indication of a company's track record in maintaining a stable reserve of oil and gas.

prices.[29] It is also involved in renewable energy research.[30]

Analysts, opposition members and employees have said they believe former chief Hassan Merican usually 'resisted pressure to divert PETRONAS money to other projects, and that many more diversions would have occurred had he not opposed them' and that 'over the years, (he) successfully objected to government personnel and investment proposals for the company' (Chew and Barta, 2010).[31]

Domestic capital expenditure (capex) has increased from 51.5 per cent to 54 per cent of total capex from 2007 to 2015. PETRONAS seems to be focusing more on domestic capital expenditure (capex), with 57 per cent targeted at upstream investments.

Under the ETP, 'enhanced oil recovery' and 'marginal field development' were key thrusts with 25 marginal fields in Malaysia previously identified as a strategy to grow reserves, and an expected 1.7 billion barrels of oil equivalent to be produced for a total investment of RM70–75 billion. PETRONAS had initially awarded several multi-billion ringgit contracts for the development of these marginal oil fields with significant tax incentives for the industry, including to local players. However, this government strategy was adopted when oil prices were above USD100 per barrel, and this is no longer viable given that the break-even point for marginal oil fields is oil prices at USD65 per barrel.[32]

The severe fall in oil prices was largely unexpected by the Malaysian government. While oil prices averaged out at around USD100 per barrel from 2011 to 2014, they suddenly started falling in October 2014 and

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[29] Deepwater prospects are part of PETRONAS's enhanced oil recovery (EOR) solution; two such pilot projects have been implemented in Malaysia: Dulang Water-Alternating-Gas and Angsi Chemical projects offshore Terengganu. EOR potential is also being explored in Sudan.

[30] PETRONAS established an energy loss management (ELM) framework in 2006 with the objective of improving energy efficiency and reducing greenhouse gas emissions. PETRONAS reported in their 2009 Sustainability Report that they had successfully reduced energy costs at domestic downstream plants by 6.8 per cent, saved 4.2 million mmBTU of energy at domestic downstream plants between 2008 and 2009, reduced external lighting at the PETRONAS Twin Towers by 50 per cent and saved 56,142 MT of fuel at MISC.

[31] It was also reported that no real reason was given to end former chief executive Hassan Merican's tenure in PETRONAS.

[32] PETRONAS reached an agreement with SapuraKencana Petroleum Bhd and another partner, Petrofac Energy Developments Sdn Bhd, for the cessation of the Berantai RSC offshore Terengganu, citing that 'the low oil price environment had made the venture uneconomical' (*Star*, 2016).

reached a low of USD29 in January 2016. This had huge implications for Malaysia, since 40 per cent of government revenues came from oil and gas. For instance, the 2015 budget was formulated in mid-2014 with the assumption that oil would be an estimated USD100 per barrel. As a result, the government had to revise its 2015 budget in January that year, assuming a global oil price of USD55 per barrel, and revising its growth forecast to 4.5–5.5 per cent, and widening the expected fiscal deficit to 3.2 per cent of GDP. The following year, the Treasury, in formulating the 2016 budget, assumed oil prices at USD48 per barrel, but by end of 2015 the rate fell to a near seven-year low of USD40.

In the last few years, particularly the 2016 and 2017 budget cycles, there have been massive budget cuts in the federal government allocations to most ministries, including education, energy, finance, urban wellbeing, housing and local government, transport and higher education. In both years, the allocations to the Prime Minister's Department increased from RM19 billion in 2015 to RM20.3 billion in 2016.

Although the Malaysian government aims to improve its fiscal position, it is also necessary to determine where resources would be best allocated. There are two issues here: first, priority should be given to long-term investments that will bear fruit in the future, such as educating our young. In already financially tight conditions, the government must strive even harder to cut the fat and introduce more efficiency in the administration.

Second, while oil has certainly contributed to the rapid reduction of hardcore poverty in Malaysia since its discovery in the 1970s, and we must attribute our country's success to it, the government must now detach itself from depending on these revenues (Murniati, 2015).

Conclusion

PETRONAS has contributed significantly to the country's national development. However, there are many weaknesses along the value chain of responsible resource management. First, much more could have been done to truly develop a thriving domestic economy. The great wealth of Malaysia's oil and gas sector has not significantly supported the small and medium enterprises (SME) sector and, because of licensing and registration requirements, this excludes many local companies from participating.

PETRONAS's production sharing contracts (PSC) and investment agreements details can be made available for public scrutiny. Finally, efforts could be made to ensure PETRONAS's operational and financial status is reported regularly to Parliament, which should exercise its oversight powers to provide more effective checks on executive powers, for example approving contracts and forming parliamentary committees to examine oil and gas revenue. That said, the PETRONAS Code of Conduct and Business Ethics launched in 2012 expressly prohibits the giving and accepting of bribes by PETRONAS employees, and other developments include the signing of the corporate integrity pledge, establishing the corporate governance & international compliance unit and appointing a chief integrity officer.

Malaysia has not experienced the 'resource curse' in the way many countries have, but much more could have been done given the abundance of its natural resources. Malaysia slipped from 18th to 25th position in the World Economic Forum (WEF) Global Competitiveness Index 2016–2017, where the top four most problematic factors for doing business included access to financing, corruption, inefficient government bureaucracy and government instability. Malaysia also fell by one rank from 22nd to 23rd position in the World Bank's Doing Business Index 2017, where 'starting a business' fell 53 ranks. These are all problematic and do not indicate a healthy trend moving forward. Malaysia is still suffering from 15 consecutive years of budget deficits, failure to meet economic growth targets, and an increase in national debt to GDP proportions (35.1 per cent in 1998, 54 per cent in 2016).

Most recently, it was reported that Malaysia lost up to about US$431 billion in illicit flow of money between 2005 and 2014, outflows of which amounted to US$287 billion representing about 10 per cent of total trade (Global Financial Integrity, 2017). In 2013, Malaysia was the world's number five in terms of illegal capital outflow, with speculation that funds are illegally channelled out due to uncertainty in the country based on 'political instability, rising income inequality, pervasive corruption, discrimination in labour markets and unrecorded capital'. The previous report in 2011 had specifically noted that there have been media reports that large state-owned enterprises such as national oil company PETRONAS 'could be driving illicit flows'. In this case, illegal capital flight from Malaysia far surpassed legitimate capital inflows. Malaysia is suffering from restrictive institutions, sluggish SME, ICT and innovation industries, with capital and human resource issues as the most grievous problems. Oil and gas revenue has not been sufficiently targeted to meaningfully mould a strong, resilient and innovative new generation for the long-term future of the country's economy.

With Malaysia now an oil-importing country, the government – together with civil society and oil corporations – must work to ensure the natural resources that remain will continue supporting future generations.

Responsible resource management is the only way to ensure a sustainable and promising long-term future for Malaysians.

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