STRUGGLES IN SOUTHEAST ASIA

Ng Weng Hoong, Contributing Editor, explains how Southeast Asia's oil markets are struggling amid the continuing impact of the COVID-19 pandemic.

For Southeast Asia's oil industry, 2020 was the year to forget as disease, economic decline, political tensions and instability struck all at once.

The region's population of nearly 670 million people used an estimated 880 000 bpd less oil in 2020 than they did the previous year. This represented a record decline of nearly 13.5%, slashing the region's oil demand to around 5.66 million bpd in 2020.

Collectively, the 10 economies of Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Singapore, the Philippines, Thailand and Vietnam shrank by 3.9% in 2020, according to the Asian Development Bank (ADB).

Despite the bank's expectation for an economic rebound of 4.4% in 2021, Southeast Asia's prospects remain clouded. The emergence of deadlier and more contagious variants of the COVID-19 virus and the continued deterioration in US-China relations have put the region under renewed economic strain. For some countries, long-term political instability looms if their economies do not grow sufficiently or fail to recover altogether.

Myanmar

Myanmar, one of Asia's rising economic stars of the 2010s, is on the verge of political and economic collapse with the country on the brink of a civil war since a military coup in February 2021.

Both the US and China have reasons to intervene, potentially turning the country into a new source of regional conflict. China's multi-billion-dollar investments in oil pipelines, storage terminals, and industrial facilities along Myanmar's southeastern corridor have emerged as tempting targets for anti-government forces.

Table 1. Southeast Asia's oil demand, population and economies

	Estimated oil demand		Population (million)	GDP		
	2020 (thousand bpd)	2020/2019 %		2021/2020 % forecast	2020 (US$ million)	2020/2019 (%) (actual)
Singapore	1332	-4.9	5.7	6.0	317 420	-5.4
Indonesia	1230	-24.4	270.0	4.5	1 179 186	-2.1
Thailand	1271	-9.5	70.0	3.0	425 133	-6.1
Malaysia	728	-13.5	33.0	6.0	376 350	-5.6
Vietnam	491	-11.9	98.0	6.7	206 683	+2.9
Philippines	378	-17.7	110.0	4.5	326 217	-9.6
Myanmar	104	-8.8	55.0	-9.8	89 800	+3.3
Cambodia	80	-11.1	17.0	4.0	20 272	-3.1
Brunei	24	+4.0	0.5	2.5	14 175	+1.2
Laos	22	-12.0	7.5	4.0	13 129	-0.5
Total	5660	-13.5	666.7	4.4	2 968 365	-3.9

Sources: ADB, government agencies, BP, World Bank

Table 2. Indonesia's six refineries (thousand bpd)

Cilacap, Java	348
Balikpapan, Borneo	260
Dumai, Sumatra	170
Balongan, Java	125
Plaju, West Sumatra	118
Kasim, West Papua	10
Total	1031

Source: Pertamina

Despite the pandemic, Myanmar's economy grew by 3.3% last year, making it the region's best performer, said the ADB. Until the coup, oil companies were still optimistic about Myanmar's future as they had set out for long-term expansion in the country's downstream market and upstream sectors.

Indonesia and the Philippines, the region's two most populous countries, are most at risk of plunging into a pandemic crisis along the lines of India. The oil refining sectors of both countries are in decline, with the Philippines bracing for the likely loss of its remaining refinery. Malaysia's economic crisis is plumbing new depths amid shocking reports of starvation among the country's poorest people.

Singapore's downstream sector is reeling from the reduced operations of its three refining companies, and the collapse of Hin Leong Trading, the country's biggest home-grown oil trading firm. The 58-year-old company went from planning to build Singapore's fourth refinery in 2010 and mulling a listing on the local stock exchange in 2014 to filing for bankruptcy in April 2020. Founder Lim Oon Kuin faces fraud charges pertaining to bad trades that led to the company becoming insolvent on total debts of some US$3.5 billion owed to local and international banks. The Lim family has been forced to sell off corporate assets including a fleet of oil tankers and its 41% stake in the lucrative Universal terminal that operates oil storage services.

In Vietnam, the government will continue subsidising the country's two refineries to protect the country's domestic supply security of fuels and products. The 145 000 bpd Dung Quat refinery which started up in 2009 and the 200 000 bpd Nghi Son plant which began operating in 2018 have struggled to turn in a profit even during the best of times.

Brunei was the oil industry's main sparkle in Southeast Asia for 2020. Its downstream oil sector was the breakout star following the full-year operation of a US$3.45 billion integrated refining-petrochemical complex.

Decarbonisation challenges

The region's oil industry must also contend with increased pressure from environmentalists demanding that Southeast Asian countries decarbonise their economies.

"Most Southeast Asian governments have started their energy transition towards energy security and diversification through balancing fossil fuels and renewable energies including biofuels," said Sandy Gwee, Nomura Research Institute's Principal Consultant on energy and smart cities.

She observed that even countries with oil and gas reserves are looking to develop renewable energy sources, citing Vietnam which already has the region's largest solar and wind power portfolio.

She said Southeast Asian countries can help their transition by adopting policies and better technology to improve fuel efficiency and conservation.

Indonesia

Indonesia's proposed US$60 billion plan to expand and upgrade its ageing oil refining sector is at risk of being sunk by the lack of interest from foreign investors and the economy's continuing uncertain outlook.

The Indonesian economy shrank 2.1% last year for its worst performance since the 1998 Asian financial crisis.

The ADB is optimistic Indonesia will recover, with its forecast for the region's largest economy to grow by 4.5% in 2021 and 5% in 2022.

But the bank cautioned that Indonesia's recovery will depend largely on how well it deals with the continuing COVID-19 pandemic crisis. It said the country of over 270 million people face global competition for vaccine, rising COVID-19 infections in vaccine-producing countries, and supply chain problems.

In July 2020, state-owned Pertamina unveiled its proposal to boost both its oil refining and petrochemicals capacities through 2027. The goal is to improve domestic energy security and reduce dependence on imports.

According to Bloomberg, the company's President, Nicke Widyawati, told parliament that it expected to raise its 1.05 million bpd refining capacity to 1.8 million bpd and to add 8.6 million t of petrochemicals capacity.

The proposal looked unrealistic from the start as the pandemic was already ravaging not just Indonesia's but also the global economy by mid-2020. Oil demand plunged as the economy came to a standstill.

Ms Widyawati's announcement of Pertamina's refinery expansion programme came shortly after the state oil and gas companies of Saudi Arabia and Oman ended their long-running discussions to invest in Indonesia's downstream sector.

Without the participation of international investors, Pertamina will struggle to raise financing for such a long-term capital-intensive programme.

In April 2020, Saudi Aramco ended discussions with Pertamina to jointly expand and upgrade the existing 348 000 bpd refinery in Cilacap in central Java. In December 2019, Oman's Overseas Oil and Gas LLC (OAG) exited from a proposal to build a new refinery in Bontang.

Balongan refinery fire

The run of bad news for Pertamina continued into 2021 when a major fire broke out at its 125 000 bpd Balongan refinery in west Java on 29 March.

The incident further dented the company's reputation as this was the latest in a series of refinery incidents over the past decade.

According to Indonesian consulting firm Tenggara Strategics, there were fire incidents at Pertamina's refineries in Cilacap in 2011 and 2016, in Dumai in 2014, and in Balikpapan in 2019.

Tenggara said these incidents have undermined investors' confidence in Pertamina's ability to manage capital-intensive projects.

Despite rising domestic oil demand, Indonesia has failed to substantially expand its refining capacity for more than two decades. The country's dependence on fuel imports now stands at around 300 000 bpd, around 18% of total consumption, according to Tenggara.

Consulting firm McKinsey said Indonesia could help its own cause by reducing fuel subsidies which have cost the government an average US$4 billion a year from 2015 to 2019. "The current annual subsidy is the equivalent of investing in a major refinery upgrade every one to two years or a new refinery complex every four to five years. If 10 years' worth of subsidies – about US$40 billion – were redirected to existing and new refineries, the impact would be enough for Indonesia to become self-sufficient in creating oil products," McKinsey said in a recent report on Indonesia's energy sector.

Table 3. Thailand's oil consumption

	2020	2019	Change (%)
Gasoline	199 489	202 484	-1.48
Diesel	411 726	424 164	-2.93
Others	439 579	539 277	-18.49
Total	1 050 795	1 165 928	-9.9%

Source: Ministry of Energy

Brunei

Spared the full impact of the COVID-19 pandemic, Brunei's economy was among a fortunate few that grew in 2020 when most of the world fell into a deep recession.

The small Southeast Asian economy grew 1.2%, thanks to the full-year operation of a new US$3.45 billion oil refinery-petrochemical complex.

The Hengyi Industries complex started commercial operations in November 2019 and was able to produce refined oil and petrochemical products for export throughout 2020. There were no reports of interruptions or major operational issues that often bedevil the early operations of new plants.

The Brunei-China joint venture integrated complex on Pulau Muara Besar reported revenues of US$3.5 billion in its first year of operations, said CEO Chen Lian Cai. According to Biz Brunei newspaper, the company exported 6.38 million t of petroleum products and 1.7 million t of petrochemicals to China and other neighbouring countries.

Hengyi Industries contributed to nearly 4.5% of Brunei's GDP in 2020, underlining China's overnight importance to the oil-rich sultanate.

According to the sultanate's Ministry of Finance and Economy, Hengyi's operations more than quadrupled Brunei's gross value-added production from 226.4 million Brunei dollars (B$) in 2019 to B$921.2 million last year.

The Hengyi Group owns a 70% stake in the complex with the rest held by the Brunei government through its Strategic Development Capital Fund subsidiary Damai Holdings.

The complex currently comprises a 160 000 bpd refinery that produces fuels and oil products mostly for export as well as feedstock for the integrated petrochemicals plant.

The company's importance to the Bruneian economy is expected to surge in the coming years as it has announced plans to invest more than US$13.6 billion in a second-phase expansion. The company said it plans to add 280 000 bpd of refining capacity and 11.2 million tpy of petrochemicals capacity aimed for exports, mostly to China.

With Singapore's oil refining role on the wane, Brunei could eventually become Southeast Asia's second major fuels supplier. With its second-phase expansion, Brunei will have a total of 440 000 bpd of refining capacity, just slightly less than half of Singapore's.

Brunei's new downstream industry could not have come at a better time, as its upstream oil and gas sector is in decline.

According to the Ministry of Finance and Economy, Brunei's refined oil and petrochemical exports surged nearly 3.8 times from B$1.1 billion in 2019 to around B$4.2 billion last year.

Thailand

Battered by the COVID-19 pandemic, Thailand's economy shrank 6.1% in 2020, sending oil demand down by nearly 10%.

According to the Energy Ministry, Thailand's domestic oil demand fell to 1.05 million bpd in 2020, compared with nearly 1.17 million in 2019. These data are lower than BP's which count a broader mix of products.

Table 4. Thailand's oil refining capacity (thousand bpd)

PTT Global Chemical	280
Thai Oil	275
IPRC	215
Esso Sri Racha	177
Star Petroleum Ref Co.	175
Bangchak Petroleum Co.	120
FANG	2.5

Table 5. Singapore's bunker fuel sales (million t)

2016	2017	2018	2019	2020
48.6	50.6	49.8	47.5	49.8

The bulk of this demand destruction centred around fuel oil for use in power generation and shipping. Jet fuel use for aviation transportation also fell. Collectively, demand for those fuels collapsed by nearly 18.5% to a combined 439 579 bpd in 2020 from 539 277 bpd the previous year.

Gasoline demand slipped by nearly 1.5% to 199 489 bpd, while diesel consumption was off by more than 2.9% to 411 726 bpd.

In response, Thailand's refineries reduced throughput by nearly 2% from 1 025 195 bpd in 2019 to 1 004 844 last year. The country's seven refineries have a total of 1.25 million bpd in capacity.

The sector will continue to struggle in 2021 amid the continuing weak outlook for refining margins and demand, said US ratings agency Fitch. "Travel restrictions are likely to continue for the most part of 2021. We therefore anticipate a recovery of the refinery business to be slower than our previous expectation," it said in a recent report.

Thailand's leading refining company, PTT Global Chemical, has announced plans to reduce its carbon footprint by increasing exposure to cleaner energy and the electric vehicle business.

The nation's 2020 energy consumption contracted by 5.8% and is expected to shrink by between 0.2% and 1.9% this year, said the Energy Policy and Planning Office (Eppo), according to the Bangkok Post.

Singapore

Remarkably, Singapore's bunker fuel sales rose 5% to 49.8 million t in 2020 just as the global economy shrank by more than 3.5%.

Traders said Singapore took market share off its competitors in other countries as shipping firms sought to maximise efficiencies and reduce costs amid the economic recession.

Singapore's Senior Minister of State for Foreign Affairs and Transport, Chee Hong Tat, saw this as "a vote of confidence in Singapore's stability, connectivity and capabilities."

He said Singapore will continue to upgrade its services while aiming to supply a wide range of cleaner fuels "to meet the diverse needs of ships that choose to call here."

"These endeavours will not only help secure Singapore's lead as a top bunkering hub, but also support the vision for a greener and more sustainable maritime ecosystem."

With the global economy expected to rebound in 2021, government and industry officials are confident Singapore's bunker sales volume will again exceed 50 million t for the year.

LNG adds to fuel supply role

Singapore has added LNG fuelling to its menu of services for the world's shipping fleet calling at its port.

Long established as the world's leading marine fuels supplier, Singapore undertook its first LNG fuelling of a container vessel last March. The *CMA CGM SCANDOLA* was fuelled by *FueLNG Bellina*, the country's first LNG bunkering vessel, said the Maritime and Port Authority of Singapore (MPA).

The breakthrough deal for 7100 m^3 of LNG underlines Singapore's intention to reduce carbon emissions in its port operations and shipping industry.

FueLNG is jointly owned by the MPA, Singapore's Keppel Offshore & Marine Ltd (Keppel O&M), and Shell Eastern Petroleum Pte Ltd, a unit of the Anglo-Dutch major.

The MPA formed the joint-venture firm "to provide more sustainable bunkering solutions for the shipping industry."

According to the MPA, LNG is "the best immediately available solution" to reduce the environmental impact of maritime transport, as it enables a reduction of 99% in sulfur dioxide, 91% in particulate matter emissions and 92% in nitrogen oxide emissions compared with traditional bunker fuels.

"An LNG-powered vessel emits up to 20% less CO_2 than conventional marine fuel-powered systems," it said.

Shell has forecast that the annual global demand for LNG as a bunker fuel will grow from nearly 3.5 million tpd to 30 to 50 million t by 2040. There are about 400 LNG-fuelled vessels currently in operation.

Malaysia

Malaysia's state energy firm Petronas will be hoping for higher oil prices and an improving economy this year to bounce back from its first-ever annual financial loss in 2020.

In a year to forget, the golden goose of Malaysia's resource-dependent economy was laid barren by the pandemic and a deadly explosion at its new US$27 billion oil-petrochemical complex. Petronas registered the worst performance of its 47-year history with a loss of RM21 billion on account of a RM31.5 billion impairment on assets, weak oil and gas prices, and reduced demand for its energy products.

Petronas said its annual revenue fell by more than 25% to RM178.7 billion from RM240.3 billion the previous year.

Without giving details of the impaired assets, the company said that it nevertheless remained cashflow-positive. Despite the Malaysian economy shrinking by 5.6%, Petronas said it delivered an after-tax profit of RM10.5 billion. This was 78% lower compared to RM48.8 billion in 2019.

Petronas said it expects to restart operations at its Pengerang oil-petrochemical complex in Johor state in 2H21. The complex, jointly owned with Saudi Aramco, is undergoing repairs after a massive explosion killed five people in March 2020.