CSIS-Pertamina
Southeast Asia Energy Security Roundtable Series
2017 Compendium Report
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This compendium report provides a summary of the discussions from a series of three CSIS roundtables held in 2017, as part of the CSIS-Pertamina Energy Security Roundtable Series. These discussions brought together government, industry, financial, and policy experts to examine the most important energy issues affecting Southeast Asia and their broader strategic significance to regional and global energy security.
Southeast Asia in Global Energy Markets
Trends, Challenges, and Policies
Global oversupply of oil and gas is continuing to exert downward pressure on prices.

U.S. tight oil production has increased rapidly in recent years and has contributed to more than two years of low prices in the oil market, with prices for the benchmark Dubai crude falling from an average of $104 per barrel in March 2014 to an average of $51 per barrel in March 2017. The agreement between the Organization of Petroleum Exporting Countries (OPEC) and major non-OPEC producers to cut output in the first half of 2017 boosted prices temporarily but has yet to reduce the level of globally held oil stockpiles that, among other things, is creating downward pressure on prices. At this point an extension of the cuts at OPEC’s May 25 meeting is widely viewed as necessary to keep oil prices above $50 per barrel.

Natural gas prices are also at low levels, with prices for liquefied natural gas (LNG) in Japan falling from an average of $16.55 per million British thermal units (Btu) in March 2014 to an average of $7.60 per million Btu in March 2017. Gas prices are likely to remain low as global LNG supply surges by around 50 percent over the next few years on the back of increased production from Australia and the United States. Demand growth for LNG is also projected to remain weak as the slowdown in Asian gas demand continues.

The robust production of unconventional oil and gas continues to shake up the global energy landscape, and U.S. producers of shale oil and gas have thus far been the most competitive assets for attracting new in-
Southeast Asia in Global Energy Markets: Trends, Challenges, and Policies

**Oil Prices, 2014–2017 (Monthly)**

- Monthly average price for crude oil, Brent ($/bbl)
- Monthly average price for crude oil, Dubai ($/bbl)

**Gas Prices, 2014–2017 (Monthly)**

- Monthly average price for natural gas, LNG Japan ($/mmbtu)

Source: Adapted from World Bank data (May 2017)
vestment. The U.S. shale industry has proved unexpectedly resilient to lower prices, and shale production costs have fallen by 50 percent since 2014 thanks to technical advancement and productivity gains. This reduction in costs has made some of the U.S. shale production projects more competitive than many conventional oil and gas projects.

Continued low prices have greatly reduced investment in new oil and gas projects.

During the oil price downturn, oil and gas companies sought to reduce capital expenditures and create more value out of the volumes of production they could extract from existing assets. As a result, the industry has seen a significant reduction in investment in exploration and new production as low oil prices constrained their revenues. Global oil discoveries reached a record low in 2016, and the number of conventional oil projects sanctioned for development reached the lowest level since the 1940s, according to the International Energy Agency (IEA). Higher-cost offshore projects have seen a particularly large reduction in new investment.

The gas industry is also seeing a slowdown in new projects sanctioned, as low LNG prices and the looming increase in production capacity from projects currently under construction makes new LNG projects economically unviable. With the gas market already facing a major global oversupply, it could take several years for demand to catch up and raise the price level enough to justify new investments.

Asia, including Southeast Asia, is becoming the world’s only near-term net energy importing region.

Discussion of Asian energy markets has traditionally focused on the role of Northeast Asian countries as consumers of energy, but Southeast Asia is becoming more important to global energy markets as it becomes an area of growing demand. Oil consumption in Southeast Asia increased from 3.6 million barrels per day (mbbl/d) in 2000 to 6 mbbl/d in 2015, and regional gas consumption increased from 2.7 trillion cubic feet (Tcf) in 2000 to 5.7 Tcf in 2014. This demand growth along with declining energy production is driving a shift from Southeast Asia’s posture as an energy-exporting region to an energy-importing region. This will deepen Asia’s net energy deficit at the same time as North America transitions to a net energy surplus, with long-term consequences for energy trade and investment flows in the coming decades.
Southeast Asia’s Role in Global Energy Markets

Southeast Asian oil production is gradually declining, leading the region to steadily increase imports.

Indonesia, Malaysia, Vietnam, and Thailand are the largest Southeast Asian oil producers, and all face gradually declining output from mature oil fields. At the same time, oil consumption is anticipated to increase, greatly outpacing growing domestic supply. All four countries are already net oil importers, as is the Southeast Asian region overall, and this reliance on imports will grow as regional demand for oil steadily rises.

Vietnam, Indonesia, and Malaysia lead the region in oil reserves, but Southeast Asian reserves are not significant on a global scale, representing less than 1 percent of global oil reserves. Exploitation of these reserves could help boost production and meet some of the increasing domestic demand for oil in these countries, but there has been a decline in the number of new discoveries in recent years, in part due to low oil prices but also due to the relative attractiveness of exploration options offered to companies.

The greatest potential for increased oil production in Southeast Asia exists in offshore basins, particularly in Indonesia and Vietnam, that have yet to be fully explored and are likely still rich in hydrocarbons. Deepwater projects are not economically viable at current prices, however, and regulatory barriers further contribute to a lack of new exploration and production in offshore areas.
Southeast Asian gas production is stable, but is not outpacing long-term regional demand.

Indonesia and Malaysia are Southeast Asia’s largest gas producers, and both countries may continue to be net exporters of gas for years to come. Gas production across Southeast Asia is reaching a plateau, however, and growing local demand means that an increasing percentage of Southeast Asian gas will likely be consumed in the region, decreasing net exports over time. Persistent low gas prices could speed this shift by spurring demand for gas as an alternative to coal for power generation and oil in the industrial sector.

Southeast Asian LNG imports are expected to surge over the medium term due to increased demand from the power and industrial sectors and reduced supply from regional pipelines as Indonesia and Malaysia consume more of their own gas. Countries like Singapore and Thailand with a heavy reliance on regional pipeline gas imports for power generation are investing in LNG import infrastructure to prepare for this shift.

Southeast Asia has more extensive reserves of gas than for oil, primarily in Indonesia and Malaysia. Myanmar—which already exports gas to
Southeast Asia in Global Energy Markets: Trends, Challenges, and Policies

Southeast Asia Dry Natural Gas Production, 2000–2014

![Graph showing Southeast Asia Dry Natural Gas Production, 2000–2014]

Source: Adapted from U.S. Energy Information Administration data (May 2017)

Thailand and China—has the potential to hold significant unexplored reserves of oil and gas, as demonstrated by recent discoveries such as the large Thalin gas discovery in 2016. Expanding gas production in Southeast Asia faces similar challenges to that of oil, however, with the most promising basins lying offshore in deep-water areas that are expensive to exploit.

Southeast Asia will remain a major exporter and consumer of coal for years to come.

Indonesia is the world’s largest exporter of the thermal coal and is likely to remain a major exporter for the foreseeable future as coal maintains its status as the most dominant fuel for power production in Asia. Indonesia’s coal industry has expanded greatly over the last decade on the back of exports to fuel power stations in China and India, but Southeast Asia is a growing market as local demand rises.

The domestic abundance, low cost, and easy storage and transportability of coal make it an appealing option for power generation in Southeast Asia. Many Southeast Asian countries are also concerned about being overly reliant on gas for power generation as regional reserves are deplet-
ed, leading them to implement a large increase in coal-fired power generation projects that are already commissioned or still under construction. The coal boom in Southeast Asia is likely to continue, with almost 40 percent of new power generation capacity to 2040 projected to be coal-fired. Coal will likely become an increasingly important part of the energy mix in Southeast Asia, possibly even rivaling oil—the most prominent fuel in the region—within a few decades. Southeast Asia is one of the few regions to experience this trend toward coal use. Indonesia, with by far the largest coal reserves in Southeast Asia, will be key to meeting Southeast Asia’s demand for coal and also a major source of that demand. Many Indonesian coal projects are coming online in the next few years and the Indonesian government’s plan to add 30 gigawatts of power capacity by 2019 relies heavily on coal-fired power plants.

Southeast Asia faces regulatory and policy barriers to increasing oil and gas exploration and production. New production is needed to maintain Southeast Asia’s output of oil and gas and meet at least some of the region’s growing demand for energy. The low-price environment in both the oil and gas markets are working against efforts to increase production, however, especially the significant reserves of exploitable oil and gas in costly offshore areas.

While there are few near-term solutions to the economic dilemma facing Southeast Asian producers looking to expand production, technological advances over the next few years could reduce the cost of deep-water projects enough to make them competitive with shale oil projects, opening the door to increased production.

Southeast Asian countries are struggling to strike a balance between state ownership and control over resources, insulation of the domestic economy from high prices, and promotion of a competitive environment for upstream exploration and development. The removal of regulatory and policy barriers that deter increased foreign investment in energy exploration and production in Southeast Asia may be politically difficult in the face of societal pressure to assert control over natural resource developments, but would go a long way toward increasing the confidence of investors looking to expand exploration and production in Southeast Asia.

For example, Indonesia in January issued a regulation requiring future production sharing contracts (PSCs) in the oil and gas industry to adopt
a new “gross split” mechanism that eliminates the traditional allowance for contractors to recover their startup costs before they begin sharing production revenues with the government. The implications of this regulatory change are not yet clear, but they could be wide-ranging as 35 PSCs are expiring over the next decade. A gross split PSC could conceivably benefit contractors that can improve the efficiency of their production operations, especially if market prices rebound, but shifting the risk of operations fully onto contractors may reduce contractor interest in investing in badly needed exploration.

Legacy regulations, like price controls on gas in Malaysia and Indonesia intended to aid their domestic power sectors, also reduce incentives for exploration and expanded production. Southeast Asian governments are not unwilling to make needed regulatory changes, however, as demonstrated by the gradual price deregulation underway in local gas markets. On the other hand, Indonesia last September also revised a 2010 regulation to provide tax incentives during the exploration phase of oil and gas projects to boost Indonesia’s attractiveness in response to dwindling investment in exploration activities. These kinds of policy changes could play a valuable role in increasing the number of new oil and gas discoveries in Southeast Asia that can move to production when offshore projects become economically competitive.

**Investments in energy infrastructure and institutions are needed as regional energy consumption patterns shift.**

Southeast Asia’s ongoing transition from an energy-exporting to an energy-importing region will require regional countries to invest in changes to their existing energy infrastructure to adapt to changes in regional energy consumption patterns. The most obvious example of this is efforts by Singapore, Thailand, and others to build the LNG terminal infrastructure and regasification capacity needed to support a looming shift from pipeline-delivered gas imports from within the region to tanker-delivered LNG imports.

LNG infrastructure development is booming in Southeast Asia. Thailand this year will complete an expansion of its Map Ta Phut LNG import terminal to double its capacity to 10 million tons per year (Mtpa), and has an additional 1.5 Mtpa expansion planned for 2019. Vietnam is building its first LNG terminal at Thi Vai, scheduled to open in 2019, and is planning for a second. Malaysia is planning for two new LNG terminals in Sabah and Johor to join its existing terminal at Malacca. Indonesia has converted the Arun LNG production plant into a terminal, and is planning to build additional terminals, including several small-scale terminals to serve its smaller islands.
Singapore has perhaps the most ambitious LNG plans in the region, and is looking to seize the opportunity to position itself as a regional LNG trading hub. Singapore is expanding its Jurong Island LNG terminal capacity to 11 Mtpa this year, plans to increase it to 15 Mtpa in the future, and is considering a second terminal. In addition to physical infrastructure, Singapore is making institutional changes to position itself to serve as a regional LNG trading hub, such as creating the Singapore Exchange’s LNG spot price index, developing a domestic secondary gas market, and is considering approval for third-party LNG imports.

Singapore faces stiff competition from Japan and China as it tries to become Asia’s hub for LNG pricing and trading as the market moves away from long-term contracts toward more flexible spot purchases. While its small physical and LNG market size weigh against it, Singapore’s political and market stability, geographic proximity to key LNG producers and consumers, and experience as an oil trading hub could win out if it gets the necessary infrastructure in place.
Opportunities exist for greater cooperation with Middle Eastern partners.

Producers in Gulf countries—Iran, Iraq, Kuwait, Saudi Arabia, and the United Arab Emirates—are looking to expand their market share in Asia over the next few years, offering an opportunity for Southeast Asian countries to court investment in their energy sectors through greater cooperation with Middle Eastern partners. Opportunities for joint ventures with Gulf producers are particularly good in the refining sector and in petrochemicals production. Many companies see petrochemicals as an attractive long-term market thanks to its steady growth, in contrast to the slowly dwindling market for petroleum-based fuels for transport, and are making investments needed to expand petrochemicals production.

Recent joint venture deals between Saudi Arabia and partners in Southeast Asia demonstrate the potential for greater cooperation in the refining and processing sector. Saudi Aramco signed an agreement with Indonesia’s Pertamina in December to proceed on an upgrade of Pertamina’s Cilacap refinery on Java that will allow the refinery to process Saudi crude oil to produce basic petrochemicals and fuels that meet European emission standards. Aramco signed a similar deal with Malaysia’s Petronas in February to buy a stake in Petronas’s Refinery & Petrochemical Integrated Development (RAPID) project in Johor. Involvement in these projects demonstrates Saudi interest in providing oil and refined products to growing markets in Southeast Asia, an interest that is sure to be shared by other Gulf producers who can invest in Southeast Asian refining and processing capacity.

Regional governments have made progress in slowing energy demand, but more can be done.

Growing energy demand in Southeast Asia will result in an increasing dependence on energy imports even if efforts are made to increase local energy production, and efforts to slow the growth in energy demand in Southeast Asia will be key over the long term in lessening the region’s reliance on energy imports. Per capita energy demand in Southeast Asia has been growing steadily over the past two decades, and will likely continue to experience steady growth in line with other developing areas of Asia.

Energy intensity—a measure of the energy efficiency of an economy—has begun declining in Southeast Asia over the last decade, however, and may have peaked in key countries like Indonesia and Malaysia. This increase in energy efficiency is likely to continue as Southeast Asian countries continue to urbanize and shift from the use of traditional fuels like wood and other organic matter to modern energy sources. The reduction of fossil-fuel subsidies in Indonesia, Malaysia, and Thailand
have also slowed growth in the demand for oil and gas, and are a prime example of successful regional policies to lessen energy consumption.

While Southeast Asia is making progress on slowing energy demand, the regional focus remains on meeting rather than slowing growing demand and more can be done to increase energy efficiency. Policies mandating increased energy efficiency standards for buildings, equipment, appliances, and vehicles could be particularly effective in Southeast Asia, where many countries have not yet introduced such standards. More ambitious efforts like Singapore’s proposed carbon tax, which is slated to begin in 2019, could provide an interesting test case for other Southeast Asian states to observe and potentially adapt for their own domestic carbon-pricing schemes.

Governments seek to bolster energy security through diversification strategies that include promotion of modern renewable energy resources.

Renewable energy sources already contribute significantly to the energy mix in much of Southeast Asia, but primarily in the form of traditional biofuels, like wood and other organic matter, and hydropower, which is the dominant source of power generation capacity in Laos, Myanmar, and Vietnam. Many countries in the region are promoting the use of modern renewables (wind, solar, geothermal), however, and have adopted targets for increasing their share of the overall energy mix. For example, the seven Southeast Asian countries that are APEC members have agreed to double their share of renewables in the energy mix by 2030, and countries like Indonesia have set even more ambitious targets.

Hydropower remains an important option for Laos and Myanmar, which both have large amounts of unexploited hydropower potential. Laos has taken advantage of its hydropower potential to become a successful electricity supplier, with two-thirds of its hydropower exported to neighboring Thailand and Vietnam. Myanmar’s hydropower potential dwarfs that of Laos, but much work needs to be done to build out Myanmar’s capacity and power grid before it can rival Laos as an electricity exporter.

Opposition to further hydropower expansion exists due to the potentially harmful impacts on the environment and local communities, especially in Myanmar where protests in 2011 pressured the government to stop China’s construction of the Myitsone dam. Still, hydropower is readily available and existing financial incentives makes hydropower attractive for future investment.

Wind and solar power have the potential to play a significant role in Southeast Asia’s energy mix, but both face challenges to their adoption in the short term. Solar and offshore wind power have wide potential
across Southeast Asia, but are not economically competitive with gas or even cheaper coal for power generation. Onshore wind power suffers from limited geographic availability in the region, with onshore wind potential concentrated in Vietnam and Laos. Vietnam is interested in developing its wind power sector, but high installation costs and power prices well below those in other Asian countries are a significant obstacle to the building of greater wind capacity.

Financing difficulties and bureaucratic hurdles in areas like licensing hold back the potential of solar and wind projects in much of Southeast Asia. Policies aimed at addressing these barriers would help increase the rate of adoption of renewables in the region, and cheaper financing in particular will help make solar and wind competitive alternatives to coal over the long term. Growing opposition to coal plants and their impact on air quality may drive an increase in renewables use even before they can match coal on price. Organized opposition to coal remains limited in the region for now, but countries like Thailand are already locating new coal-fired power plants in neighboring countries to avoid protests like those aimed at the proposed Krabi coal plant.

Geothermal power also has the potential to play a growing role in Southeast Asia’s energy future, albeit one limited primarily to the Philippines and Indonesia. The Philippines and Indonesia are the second- and third-largest producers of geothermal power generation, and Indonesia in particular has significant geothermal potential that has yet to be exploited. Geothermal is a significant source of power generation in the Philippines, where the industry has benefited from financial and other incentives promoted by the 2008 Renewable Energy Act. The potential of geothermal is limited by the inherently few sites that can support geothermal plants, but it can provide a valuable source of non-variable renewable energy in areas that can support it.
The Energy Industry in Southeast Asia

Structures, Players, and Processes
Southeast Asia’s ongoing transition from an energy-exporting to an energy-importing region is challenging governments to adjust their energy policies and regulatory environments. It is also prompting them to undertake institutional reform and infrastructure investments in order to adapt to changes in regional energy consumption patterns. National oil companies (NOCs) will play a key role in this transition process given their importance in several of Southeast Asia’s key energy-producing countries. Seven of the 10 member states of the Association of Southeast Asian Nations (ASEAN) have a NOC of some sort, and some of these NOCs are major global energy companies with tens of billions of dollars in annual revenue.

Southeast Asian NOCs, particularly the major NOCs in oil and gas producing countries, face a broadly similar set of challenges. First, they need to boost domestic production of oil and gas to lessen the need for imports to meet their home countries’ energy needs. This requires investment both in exploration to replace reserves as they are depleted, and in production operations to develop these new reserves, which are often technically difficult and more expensive to produce than the fields they replaced. NOCs can undertake these activities themselves if they have the necessary financing and technical and managerial expertise, or they can seek out partnerships with other oil companies—oftentimes experienced international oil companies (IOCs) but other times NOCs from other regions.

Domestic production in Southeast Asia is almost certainly insufficient to keep up with growing consumption, however, even with stepped-up exploration and production efforts. As a result, Southeast Asian NOCs face increasing pressure to look overseas to acquire oil and gas assets and secure long-term energy supplies, both for the energy security of...
their home countries and for their own bottom line. This shift toward global operations can be a challenge for NOCs that are used to operating in a more familiar domestic political environment, sometimes as market monopolies, and struggle to operate as efficiently as the top NOCs and IOCs that are competing for global opportunities. Making this transition requires a great deal of professionalism, investment capital, and technical expertise, and some players are further along in the process than others.

Finally, almost all NOCs face expectations to contribute to the noncommercial objectives of their national governments, and Southeast Asian NOCs are no exception. The degree to which NOCs are expected to play a political and social function in their home countries varies, but all have the challenge of meeting these obligations without undermining their competitiveness with purely profit-driven competitors.

The second discussion in the CSIS-Pertamina Southeast Asia Energy Security Roundtable Series looked at three key Southeast Asian NOCs—Malaysia’s Petronas, Indonesia’s Pertamina, and Thailand’s PTT. The discussion explored the ways in which the structure, players, and processes in each country’s energy bureaucracy and industry shape the behavior and performance of these NOCs and their ability to successfully make the transition into global oil and gas players.

### List of Southeast Asian NOCs

<table>
<thead>
<tr>
<th>National Oil Company</th>
<th>Country</th>
<th>Total 2016 Revenue (in billions USD)</th>
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<tbody>
<tr>
<td>PTT</td>
<td>Thailand</td>
<td>50.4</td>
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<tr>
<td>Petronas</td>
<td>Malaysia</td>
<td>48.04</td>
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<tr>
<td>Pertamina</td>
<td>Indonesia</td>
<td>37</td>
</tr>
<tr>
<td>PetroVietnam</td>
<td>Vietnam</td>
<td>18.9</td>
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<td>Myanma Oil and Gas Enterprise</td>
<td>Myanmar</td>
<td>1.4*</td>
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<tr>
<td>Philippine National Oil Company</td>
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<td>0.04**</td>
</tr>
<tr>
<td>PetroleumBRUNEI</td>
<td>Brunei</td>
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</tbody>
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* 2013–2014 fiscal year
** 2015
Source: Company annual reports, official government statistics, and press reports
Case Studies

**Petronas**

Malaysia’s Petronas (short for Petroleam Nasional) is viewed as one of the world’s best-managed NOCs and has achieved great success over the past three decades in implementing an overseas expansion strategy that has transformed it into a truly global company. Petronas’s successful transition from a typical NOC focused on domestic production into a major international energy player active in more than 20 countries makes it a valuable example for other NOCs looking to make similar transitions.

Petronas was founded in 1974, and spent its first two decades focused primarily on managing oil and gas production in Malaysia. Petronas oversaw the introduction of a production-sharing contract (PSC) regime with key IOCs like Shell and Exxon, which required tough negotiation to convince these companies to surrender their preexisting concessions in Malaysia. Petronas also undertook efforts to develop Malaysian expertise in the oil and gas business by gradually expanding its domestic operations from production into exploration, LNG exports, refining, petrochemicals, and fuel sales. This successful learning process set the stage for Petronas’s subsequent transformation.

In the early 1990s, Petronas began its expansion into international exploration and production operations to replace its depleting domestic oil and gas reserves, beginning in Southeast Asia but eventually focusing its efforts in large part on Africa. Petronas currently has an upstream presence in 26 countries, and revenue from international operations has been the largest contributor to Petronas's total revenues since 2013.

Petronas also made a move into shipping and logistics, building the Malaysia International Shipping Corporation (now MISC) into one of the world’s largest operators of tankers and LNG vessels and a player in offshore support services. This expansion has proved vital to Petronas’s continued success, with international operations being the largest single contributor to the company’s revenues in recent years, eclipsing oil and gas exports and domestic operations.

The centralized nature of the Malaysian energy industry has aided Petronas in its rapid rise from a new NOC in the 1970s to the notable global energy player it is today. Petronas has benefited from complete control over Malaysia’s hydrocarbon resources since its creation, and has also enjoyed general freedom to pursue its commercial interests with only episodic pressure to contribute to noncommercial objectives.
of the Malaysian government. This insulation from noncommercial demands is due in large part to the fact that Petronas only answers to one boss, the Malaysian prime minister.

Petronas has answered directly to the Prime Minister’s Office since its creation by the Petroleum Development Act of 1974. This highly centralized system gives Petronas the ability to act independently so long as it has the blessing of the prime minister, while Petronas’s ownership and control of Malaysia’s oil and gas resources provides a strong asset base with which to finance the company’s operations and expansion plans.

The corporate nature of Petronas has also been a key to its success. Petronas was purposefully created as a corporation and not a government body, in part to avoid criticism that the new NOC was a means of nationalizing Malaysia’s oil and gas resources. Petronas keeps any profits that it earns and pays taxes to the government on the same terms as other oil and gas companies operating in Malaysia. The government does not demand royalties or other types of payments from Petronas beyond the dividends it receives as a shareholder. This setup has allowed Petronas to act for the most part as a commercial, profit-seeking enterprise, which has helped it cooperate and compete with IOCs on the international stage. It has also helped Petronas cultivate a well-regarded management and a professional, technically skilled workforce.

Petronas’s international expansion reflects many of the factors in the Malaysian energy industry and Petronas’s corporate culture that have contributed to the company’s success. Petronas’s professional leader-
ship recognized early on that Malaysia’s domestic oil reserves were declining and could not be replaced over the long term even with aggressive exploration. Expansion of exploration and production overseas was therefore critical to replacing Petronas’s reserves, and plans were developed to undertake this effort. These plans won not only the blessing of then-Malaysian prime minister Mahathir Mohammad (1981–2003)—the only possible veto point in the system—but his active support as a buttress to his own efforts to raise Malaysia’s profile on the international stage. With the prime minister on board, Petronas was given free rein to develop its international operations as it saw fit, to great success.

The success of Petronas has resulted in the company being cited as a model for other NOCs to emulate. The centralized structure of the Malaysian energy industry certainly has some merits, but there are potential downsides to strong central control that Petronas has avoided largely due to the restraint of key institutional actors. The total control Petronas enjoys over Malaysia’s hydrocarbon wealth makes it a tempting target for political leaders hoping to fund broader social and economic objectives.

Petronas has not been completely immune from pressure to contribute to noncommercial objectives of the government. Beginning under Mahathir, Petronas was conscripted to fund prestigious mega-projects in Malaysia, and to provide capable management and financing to rescue other government-linked companies.

Not all of these efforts have been a burden on Petronas. The 1997 acquisition of MISC and subsequent purchase of a Mahathir-linked shipping company was financially successful and helped Petronas make its move into the shipping business. The twin Petronas Towers in Kuala Lumpur (which opened in 1997) are also seen as a success. The benefits of other projects for Petronas are less clear. Petronas probably did not recoup its investment in the 1984 and 1989 bailouts of state-owned Bank Bumiputra, and the construction of a new administrative capital in Putrajaya is widely viewed as a boondoggle, as was Petronas’s brief investment in troubled national automobile manufacturer Proton in 2000.

While Petronas, like most NOCs, faces pressure to contribute to pet projects as part of its socioeconomic responsibilities, it does have the benefit of only having to participate in the pet projects of the prime minister, who shields Petronas from pressure from other political actors. The prime minister’s office has also remained mostly uninvolved in Petronas’s core business activities, and this relatively hands-off approach has given Petronas a great deal of independence in its day-to-day operations.
Petronas leadership in the past has also shown the ability to push back against prime ministerial directives (such as a proposed 1999 investment in ailing Malaysian Airlines), but this freedom has been lessened under current Prime Minister Najib Razak (2009–present). Najib quickly asserted his control over Petronas by pushing out longtime Petronas CEO Hassan Marican in 2010 after a disagreement on a Petronas board appointment, and is seen as playing a more interventionist role in Petronas operations than past prime ministers.

Increasing politicization could be a long-term threat to Petronas’s professionalism, attractiveness as a partner in international joint ventures, and ability to act as a commercial-minded company, particularly if the long-ruling United Malays National Organization (UMNO) party decides to utilize Petronas as a cash cow for political patronage purposes rather than as an occasional source of funding for prestige projects and the bailout of key state-linked companies. There is little indication that such a shift in the government’s relationship with Petronas is imminent, however, and the success of Petronas under the generally hands-off supervision of previous prime ministers makes a strong argument that continued restraint is in best long-term interest of Malaysia, which relies on Petronas’s tax payments for much of its government revenue.

Petronas will need quality leadership to deal with the impact of continued low oil and gas prices on its bottom line, as well as navigate the difficulties facing some of its highest-profile international joint partnerships. Petronas’s plan—in partnership with Sinopec, JAPEX, Indian Oil Corporation, and PetroleumBRUNEI—to build a $27 billion LNG export terminal in western Canada remains in limbo due to public opposition in British Columbia and the new economic reality caused by the fall in LNG prices. Petronas is also seeking to finalize the terms of Saudi Aramco’s involvement in its largest downstream project, after Aramco signed an agreement in February 2017 to buy a 50 percent stake in the Refinery and Petrochemical Integrated Development (RAPID) project during the Saudi king’s visit to Malaysia.
Pertamina

Indonesia’s Pertamina was created in 1968 by the merger of national oil companies Permina (1957) and Pertamin (1961). Pertamina is a useful contrast to Petronas because the two companies are pursuing similar goals in the context of vastly different bureaucratic structures and with much different levels of industry influence. Comparisons between the two NOCs are instructive for this reason, but also because of the past similarities between the two companies.

Much like Petronas today, Pertamina at its creation controlled Indonesia’s hydrocarbon resources, operating as both a regulator and a producer, and answered to only one person, then-president Suharto (1967–1998). Pertamina was one of the world’s largest corporations by 1974—when Petronas was created based in large part on the example of Indonesia’s NOC—and longtime Permina/Pertamina director Ibnu Sutowo (1957–1976) operated with almost total independence thanks to a close relationship with Suharto.

It is an irony of history that Pertamina collapsed in 1975, shortly after Petronas was formed in its image. Sutowo—who had used his autonomy to expand Pertamina haphazardly beyond oil and gas into steel, construction, real estate, insurance, shipping, agriculture, and more—suddenly found himself unable to pay back his creditors. Pertamina, which had long been a vital cash cow for Suharto and the army, now required government intervention to repay over $10 billion in outstanding debt. Suharto kept a tighter leash on Pertamina after 1975, and the company remained the central player in Indonesia’s energy industry until the end of the Suharto regime in 1998.

The origins of Indonesia’s present energy industry structure lie in the chaotic years that followed Suharto’s fall. Pertamina, which had long been used to funnel money to the Suharto family and military, found itself a prime target for reform efforts. An oil and gas law passed in 2001 stripped away Pertamina’s governmental and regulatory functions, and redirected the government’s share of oil revenues (which had previously passed through Pertamina) to the central bank. Pertamina also lost its special legal status and was converted to a normal state-owned enterprise in 2003.

The decentralized structure of the Indonesian energy industry today reflects the broader decentralization of power in post-Suharto Indonesia. Pertamina’s former role in managing the Indonesian oil and gas industry is now spread across several government ministries and regulatory bodies. Energy policy and industry regulation is now managed by the Ministry of Energy and Mineral Resources, which ultimately answers to
the president through an intervening Coordinating Minister for Maritime Affairs. Pertamina, on the other hand, is managed by the Ministry of State-Owned Enterprises, which answers to the president through the Coordinating Minister for Economic Affairs.

The Special Taskforce for Upstream Oil and Gas Business Activities (SKK Migas) now fulfills the upstream regulatory role once played by Pertamina, which includes the licensing of new field development, setting the terms of contracts with foreign operators, and serving as the government representative for PSCs negotiations. The Downstream Oil and Gas Regulatory Body (BPH Migas) similarly filled Pertamina’s former role in downstream regulation, which includes regulating the supply and distribution of fuels and the transmission of gas via pipeline. Pertamina also lost its former monopoly on the distribution and sale of fuel in Indonesia.

Several other players outside the executive branch also influence the energy industry in Indonesia, either directly or indirectly. The lower house of the Indonesian legislature—the People’s Representative Council—plays a key role through both its law-making authority and the oversight role played by its Commission VII (responsible for energy issues) and Commission VI (responsible for state-owned enterprises).
The judicial branch plays a more limited role, although the Constitutional Court did dissolve the predecessor body to SKK Migas in 2012 after declaring it unconstitutional. Indonesia’s Corruption Eradication Commission also influences behavior by monitoring the energy industry. The corruption commission convicted a former head of SKK Migas in 2014, and the current SKK Migas head is a former corruption commission official.

This complex and decentralized system achieves many of the goals set in the early 2000s by Indonesian democratic reformers, who sought to separate control of policy, implementation, and revenues in the energy industry to eliminate rampant corruption and other abuses. These reforms necessarily resulted in a major change in Pertamina’s role in the Indonesian energy industry and a reduction in its ability to achieve many of the objectives generally expected of NOCs.

Pertamina no longer enjoys most of the advantages that NOCs traditionally receive that enable them to carry out their role as national champions providing socioeconomic benefits for the state. Despite these limitations, Pertamina still faces pressure from the government to meet noncommercial objectives that would be onerous even for a NOC in full control of its domestic market. An example of this is the requirement that it implement a “one-price policy” that will set a uniform fuel price throughout a sprawling archipelago with widely varying levels of infrastructure development.

Pertamina, like Petronas, also faces the challenge of replacing its reserves as Indonesia’s domestic oil and gas reserves decline. While Indonesia has greater domestic reserves remaining than Malaysia, Pertamina must compete with both IOCs—Chevron is Indonesia’s largest oil producer and Total is the largest gas producer—and other Indonesian producers to develop those resources. To succeed in this very competitive market, Pertamina must continue to develop its expertise in exploration and production operations, which were somewhat neglected in Pertamina’s heyday as the company was primarily focused on supervising the production of IOCs operating in Indonesia under PSCs.

Pertamina is working to expand its international operations, which is necessary over the long term to replace its reserves, but these efforts may be hampered by a lack of capital caused by Pertamina’s lost access to government oil revenues and continuing need to spend money in support of noncommercial objectives. This reality is pushing Pertamina toward overseas joint ventures with other oil and gas companies, including production operations in Algeria, Iran, and Iraq. Joint ventures with Saudi Aramco and Russia’s Rosneft are also being pursued to expand Pertamina’s valuable refining business.
The downstream sector as a whole, where Pertamina has retained a much greater market role, is an important growth area and an increasingly important contributor to Pertamina revenues since the Indonesian government reduced fuel subsidies in 2015.

Proposed reforms of the energy sector in Indonesia could also boost Pertamina’s ability to compete on the international stage. The legislature is currently considering revisions to the 2001 oil and gas law that would merge SKK Migas and BPH Migas into Pertamina to create single government agency governing the upstream and downstream sector, giving back Pertamina much of the governmental and regulatory power it lost in 2001.

There are also plans to restructure Indonesia’s state-owned enterprises that, if implemented, would help improve Pertamina’s finances. While the details of the plans are in flux, most versions have Pertamina merge with state-owned gas transmission and distribution company PGN and serve as the holding company for all state-owned oil and gas assets. Some more grandiose versions have state-owned power producer PLN also folded in to create a holding company for all of Indonesia’s state-owned energy assets, but this seems unlikely given PLN’s opposition and strong political position.

Even if these reforms do not come to fruition, Pertamina’s position will improve to 2030 as it inherits significant oil and gas assets as a result of a May 2015 Energy and Mineral Resources Ministry regulation that gives Pertamina priority in the management of hydrocarbon blocks whose production contracts with IOCs had expired. The upcoming transfer of control over the Mahakam block on the eastern coast of Borneo—Indonesia’s richest gas block—from Total to Pertamina in January 2018 will be a key test of this new policy and Pertamina’s ability to successfully manage and operate a very large and complex production block.
PTT

Thailand’s PTT (formerly the Petroleum Authority of Thailand), founded in 1978, occupies an interesting middle ground between the highly centralized bureaucratic structure overseen by Petronas in Malaysia and the highly decentralized bureaucratic structure Pertamina must navigate in Indonesia. Thailand, despite setting up its NOC after both Indonesia and Malaysia, has remained aloof from innovations spearheaded by its neighbors, retaining a more traditional industry structure and contracting system while setting the pace in the region for the privatization of national energy companies. This independent approach has worked for Thailand and PTT, which rivals Petronas in terms of revenue and has a similar reputation for professionalism, while lacking Petronas’ global reach.

Thailand’s Energy Industry

Thailand’s energy industry has a relatively simple bureaucratic structure, with PTT answering to the prime minister only through an intervening energy minister. The state—not PTT—controls Thailand’s hydrocarbon resources, and the Ministry of Energy is responsible for setting policy. The relatively new Energy Regulatory Commission (established
in 2007) regulates the energy industry. These regulatory functions are less involved in Thailand than in Malaysia and Indonesia because Thailand has stuck with a concessions-based regime for awarding production contracts rather than switching to a PSC regime.

Under this system, created by the 1971 Petroleum Act and Petroleum Income Tax Act, producers are awarded concessions to oil and gas blocks and control whatever hydrocarbons they extract. In return, the producers pay a concession royalty (5 to 15 percent, increasing with the amount produced), a petroleum income tax (50 percent of net income), and a windfall profit tax in certain cases. Producers are also required to make certain nontax payments at certain points of their contracts, which include both bonus payments and contributions to scholarship and economic development programs. These terms give the Thai government a significant take of producer income, but are generally more favorable than the terms offered by other Southeast Asian nations operating under a PSC regime.

PTT does not enjoy a privileged position as a domestic producer under this system, and IOCs are active in the exploration and production of Thailand’s oil and gas. Chevron is the largest operator in Thailand, followed by PTT (under its exploration and production subsidiary). Where PTT does enjoy a privileged position is in the distribution and transport sector, particularly the transmission of natural gas through its network of pipelines. PTT is also the dominant player in Thailand’s refining, petrochemical, and retail sales sectors.

PTT acts as the monopoly purchaser, transporter, and distributor of natural gas produced in Thailand, which gives it substantial market power in setting prices for consumers of natural gas. The largest consumer of natural gas in Thailand is the state-owned Electricity Generating Authority of Thailand (EGAT), which also answers to the Ministry of Energy and is the monopoly power producer in Thailand.

Ironically, PTT’s sister state-owned enterprise is the biggest potential challenger to its monopoly on gas transmission. While PTT’s control of domestically produced gas is under no real threat, Thailand’s growing reliance on natural gas imports has provided an opening for EGAT to gain greater control over its supply of gas. EGAT last year submitted a plan to set up a new business to buy LNG directly from Middle East suppliers and spot markets, and to develop its own floating storage regasification unit (FSRU) in the Gulf of Thailand. While the project has yet to advance beyond the planning stage, it is an example of the type of challenge growing LNG imports could pose to PTT’s core gas transmission monopoly.
PTT, like most NOCs, has not been immune to the influence of domestic politics. In PTT’s case, however, the political influences may have inadvertently helped the company develop into the professional and respected company it is today. The Thai government was dominated by technocrats in the 1990s, which helped imbue PTT with a nonpolitical and professional management culture. The shock of the 1997 Asian Financial Crisis led these technocrats to propose serious reforms to the Thai energy industry, including the privatization of state-owned enterprises PTT and EGAT, but these reforms were stymied by domestic opposition until the rise of the strong populist government of former Prime Minister Thaksin Shinawatra (2001–2006).

While the Thaksin government only implemented some of the recommended reforms and the reforms that were initiated were criticized as unfairly benefiting Thaksin's political supporters, it did succeed in partially privatizing PTT in 2001, selling off 49 percent of the company. The privatization survived a 2007 court challenge, although PTT was required to transfer ownership of its pipeline network to the Ministry of Finance, to which PTT must now pay an access fee while retaining de facto control of the pipelines.

PTT’s status as the only publicly listed NOC in Southeast Asia provides it with external pressure from shareholders to maintain its professionalism and competitiveness with other NOCs and IOCs. While not as active globally as Petronas, PTT has a respectable international presence, with exploration and production projects in 10 countries. PTT also has a large number of publicly listed subsidiaries, including PTT Exploration and Production (PTTEP) in the upstream sector, PTT Natural Gas Distribution Co. in pipeline construction, and Thai Oil, IRPC, and PTT Global Chemical in the refining and petrochemical sector. PTTEP’s overseas activities are concentrated in Southeast Asia, but also include projects in Algeria, Brazil, Canada, and Mozambique.

Thailand has clearly bucked regional trends in the management of its energy industry, but it is hard to argue with the performance of this system. Thailand has steadily increased its production of both oil and gas since 2000, despite having less favorable geological conditions than many of its neighbors and dealing with the declining production of its best fields. This success may be explained, in part, by the continued reliance on a concessions-based contracts regime and openness to IOC exploration and production that attracts the expertise and investment needed to tap Thailand's increasingly harder to exploit reserves.

The stable and successful Thai energy industry may be in for a shake-up in the next few years, however, as the current military government passed an amendment to the 1971 Petroleum Act in March that paves
the way for the introduction of PSCs in Thailand as existing concessions come up for renewal, with two of the largest gas concessions set to expire in 2022–23. It is not yet clear if PSCs will replace or merely exist as an option alongside the traditional concession approach, or who will negotiate and manage PSCs for the Thai government.
Bibliography


The Impact of Regional Maritime Disputes on Energy Security in Asia
Asia is one of the growing markets for oil, and routes from Middle East suppliers to Asian consumers are the new fulcrum of the global oil trade.

Asia’s crude oil imports are projected to increase from 19 million barrels per day (mbbl/d) in 2014 to 31 mbbl/d in 2030. The growth will be led by developing countries in Asia. Specifically, the oil consumption growth by non-Organization for Economic Cooperation and Development (OECD) Asia except China and India—effectively Southeast Asia—is forecast to grow at 33 percent, from 8 mbbl/d in 2015 to 11 mbbl/d in 2035. During the same time period, China’s will grow from 12 mbbl/d to 19 mbbl/d and India’s from 4.1 mbbl/d to 9.2 mbbl/d. Oil consumption in the developed economies of Japan, South Korea, and Taiwan is projected to hold steady or even decline, but these economies will remain dependent on oil imports, particularly from the Middle East, for nearly all of their oil supply.

While Asian consumption increases, North American and European oil imports are projected to decrease from 18 mbbl/d in 2014 to 13 mbbl/d in 2030, largely eliminating their need for imports from the Middle East. Middle East oil exports are projected to rise from 17 mbbl/d in 2014 to 25 mbbl/d in 2030, with virtually all of the increase destined for Asia.

Regional production of gas makes Asia less reliant on the Middle East for its supply, but both intra-regional shipping of liquefied natural gas (LNG) and extra-regional imports will need to increase to meet growing demand.

Southeast Asian gas producers like Indonesia, Malaysia, and Brunei already supply much of the LNG demand in Northeast Asia, and nearby Australia is
likely to become Asia’s largest supplier of LNG as gas projects come online and massively boost production. The global gas market has entered a period of supply surplus as Australian and U.S. production increases, introducing greater flexibilities in what was previously a very restricted and rigid LNG market. Several regasification projects are underway in Southeast Asia to benefit from the growing LNG trade and to meet rising gas demand. For example, Thailand, whose LNG demand is forecast to grow from 2.9 million tons per annum (mtpa) in 2016 to 20 mtpa by 2025 and 34 mtpa by 2036, is expanding its Map Ta Phut LNG import terminal. LNG infrastructure development is also underway elsewhere in the region, including Vietnam, Malaysia, and Indonesia.

Energy shipping flows through Southeast Asia are extremely important, and any disruption of critical sea lanes like the Strait of Malacca or South China Sea would have major impacts on the energy security of vital economies of Northeast Asia.

Crude oil shipping through the Strait of Malacca is already crucial for the global oil trade, with around 7,700 tanker passages in 2014 (compared with 10,600 for the Strait of Hormuz), and its importance will only grow along with Asian demand for Middle Eastern oil. Tanker passages of the Strait of Malacca are projected to increase strongly to around 12,200 in 2040, a more than 60 percent

Major crude oil trade flows in the South China Sea (2011) million barrels per day

Source: U.S. Energy Information Administration
The vast majority of the tankers that pass through the Strait of Malacca also pass through the South China Sea on their way to markets in Northeast Asia. The Strait of Malacca is also an important transit route for LNG shipments, with around 2,400 east-bound tanker passages in 2014. This number is only projected to increase slightly to around 2,600 in 2040, however, reflecting the increasing role played by LNG suppliers in Australia, Southeast Asia, and the United States that would not utilize the Strait of Malacca to reach Northeast Asian markets. Most Southeast Asian producers, particularly Malaysia and Brunei, are reliant on the South China Sea for LNG shipping, however, while Indonesian and Australian LNG shipments transit the South China Sea when bound for some destinations. North American suppliers are the only major LNG suppliers for Northeast Asia that do not have any exposure to transit risks in the Strait of Malacca or South China Sea, which makes growing U.S. LNG exports appealing to consumers looking to diversify their LNG supplies to boost energy security.

The oil and gas resources in disputed maritime areas in Asia, particularly in the South China Sea, are generally modest and in most cases too expensive to be economically viable.
Proved oil and gas reserves in the South China Sea are very modest on a global scale, and only about 20 percent of those reserves are located in disputed areas.\(^9\) Proved and probable gas reserves in the South China Sea (190 trillion cubic feet, 2.9 percent of global reserves) are more significant than those for oil (11 billion barrels, 0.6 percent of global reserves).\(^{10}\) South China Sea gas reserves would meet only around 7.5 years of Asia’s 2016 gas consumption while oil reserves would not even meet one year of Asia’s 2016 oil consumption.\(^{11}\) Most gas production in disputed areas of the South China Sea is likely to remain economically unviable for the foreseeable future given the high cost of exploiting deep-water basins and continuing low prices for gas stemming from the current global supply glut.

The sheer scope of Chinese claims ensures that the South China Sea dispute affects the greatest swathe of potential oil and gas fields in Southeast Asia, but there are other regional maritime disputes that impact energy security. The Timor Sea dispute between Australia and Timor-Leste has held up development of the Greater Sunrise fields—estimated to hold 5.1 trillion cubic feet of gas (tcf)—since 2004, delaying production that is crucial to the economic future of Timor-Leste.\(^{12}\) The Ambalat dispute between Indonesia and Malaysia in the Celebes Sea has similarly held up development of fields estimated to potentially hold 764 million barrels of oil and 1.4 tcf of gas.\(^{13}\)

Regional maritime disputes in Asia are primarily driven by nationalism and domestic political or bureaucratic interests, which severely constrains the ability of policymakers to make compromises that would promote energy security through increased energy exploration and production.

Competition over access to oil and gas resources is often mentioned as a driver of regional maritime disputes in Asia, but energy security is usually secondary to concerns about sovereignty and national pride. This dynamic is particularly apparent in the prominent disputes in the South and East China Seas, where the areas under dispute contain almost no commercially viable reserves and the potential reserves that do exist are too small to significantly improve the energy security of key players like China. Fisheries resources are actually more important in these areas, and conflict is more likely to break out between rival fisherman than over oil and gas competition.

While the extent of competition over oil and gas resources is overblown, it is clear that state-owned oil and gas companies in the region are being used to assert maritime claims, with oil and gas rigs and blocks being used as public markers to demonstrate state control over disputed areas. International oil companies trying to operate in disputed areas are also at risk of being used to advance nationalist goals that take priority over economic and business rationale. This nationalist focus makes it difficult for regional countries to agree on joint-development or other compromises that would require setting aside sovereignty but would allow energy exploration and production to move forward.
The South China Sea

The South China Sea is not the only maritime dispute in Asia, but it may be the most complex and intractable given the number of parties involved and the strong stances taken by several of the claimants. The South China Sea is also of particular interest because of its importance as a transit route for energy shipments, and because of the risk of a major power conflict breaking out there between China and the United States. For these reasons, the roundtable participants spent much of their time discussing the South China Sea dispute and its impact on energy security and arrived at the following key takeaways.

*China remains uncompromising on its maritime claims in the South China Sea, and is the most active claimant in asserting its sovereignty and challenging exploration activities by other claimants.*

While China has been somewhat more restrained in asserting its claims in the South China Sea since the ruling last summer in the compulsory arbitration case launched by the Philippines, Beijing also has done little to indicate it will respect the Arbitral Tribunal’s ruling. Beijing continues to uphold its expansive nine-dash line claim in the South China Sea—even though the Arbitral Tribunal ruled that China has no basis to claim historic rights within the line—and challenges the activities of other claimants well-outside the 12-nautical-mile territorial sea of any disputed South China Sea feature.

The most serious Chinese challenge to another claimant this year occurred in July, when Beijing reportedly threatened to attack Vietnamese outposts in the South China Sea if Hanoi did not halt exploration activity by a subsidiary of Spanish oil and gas company Repsol in Vietnamese-leased Block 136-03 within the far southern reaches of the nine-dash line.14 China has leased out its own exploration block in the same area. Vietnam reportedly backed down after the Chinese threats and ordered Repsol to halt its exploration.

While China continues to oppose exploration by other claimants within the nine-dash line, it has shown no qualms about using its own state-owned oil
companies to show the flag in disputed maritime areas. The best example of this remains the months-long 2014 standoff with Vietnam sparked by the China National Offshore Oil Cooperation (CNOOC) using its HY-981 rig to perform exploratory drilling in a disputed area near the Paracel Islands.

CNOOC is probably a willing partner in these sorts of sovereignty assertions, as it has an interest in encouraging leadership in Beijing to take a hard line on protecting its access to offshore oil and gas resources. CNOOC is also known for promoting inflated claims for potential oil and gas reserves in the South China Sea (125 billion barrels and 500 trillion cubic feet, respectively—11 and 2.5 times larger than U.S. estimates). Boosting the perceived importance of the South China Sea to China’s energy security interests may help the company elevate its prestige and political clout.

The Philippines has taken a less combative stance on the South China Sea under its new president, but political and legal realities in Manila make it unlikely that the Philippines will cave to Chinese pressure in the energy realm.

Philippine president Rodrigo Duterte has made outreach to China a key plank of his foreign policy, and has seen at least symbolic gains from Beijing in the form of promises of $24 billion in investment and credit in return for his down-playing of disputes in the South China Sea. Duterte can also claim some progress on the long-delayed Code of Conduct in the South China Sea during the Philippines’ chairmanship of Association of Southeast Asian Nations (ASEAN), with China joining ASEAN in August to adopt a framework for a future Code of Conduct, still to be negotiated.

While Duterte has dialed down Philippine rhetoric and taken some concrete steps to reduce activities of concern to Beijing in the South China Sea (such as maritime-focused exercises with the U.S. military), he faces very real political constraints on his ability to smooth over differences with China on the South China Sea. The Philippine constitution makes failure to defend Philippine national territory—which includes territorial seas, seabed areas, and undersea shelves—an impeachable offense, and the strong public reaction to revelations earlier this year that China had surveyed the undersea Benham Rise east of the Philippines demonstrates the sensitivity associated with these issues.

Duterte has not disavowed the Arbitral Tribunal’s ruling in favor of the Philippines on almost all counts, and Philippine legal positions on the South China Sea now reflect the award and do not recognize Chinese claims over undersea features within the Philippines’ exclusive economic zone (EEZ). These areas include Mischief Reef, the location of China’s largest artificial island in the South China Sea, and the Reed Bank, where the Philippines hopes to exploit gas reserves in Block SC72. Manila sees the development of Reed Bank as crucial to its future energy security, to replace the declining Malampaya gas field off the coast of Palawan, the Philippines’ only significant gas-producing area.
The need to exploit Reed Bank in the face of almost certain Chinese opposition puts Duterte in a bind, and the Arbitral Tribunal’s clear ruling that the area is part of the Philippines’ EEZ only makes the problem harder to solve. Joint development of Reed Bank remains the obvious compromise solution, but is likely to fail for the same reasons as previous attempts. China is extremely unlikely to recognize Philippine control of the area or accept the foreign ownership restrictions imposed by Philippine law, while Duterte cannot compromise on sovereignty without risking political and legal blowback, including potential impeachment. Creative solutions to move forward on joint development exist—potentially drawing lessons from the Japan-China agreement on joint development in the East China Sea—but only if China is willing to show good faith and refrain from driving a hard bargain over development of resources in the Philippine EEZ.

*Vietnam is out alone on a limb now that the Philippines has stepped back, and is bearing the brunt of Chinese pressure while persistently attempting to advance its own energy interests in the South China Sea.*

**Key disputed blocks in the South China Sea**

Vietnam was happy to let the Philippines take the lead in pushing back on China in the South China Sea during the final years of the Aquino administration (2010–2016), and the shift in China policy under the Duterte administration has left Hanoi in a lonely position out in front of the rest of its Southeast Asian neighbors. It has fallen to Vietnam to insist on inserting strong language on the South China Sea into ASEAN statements, risking the ire of Beijing.
Despite its uncomfortable position, Vietnam does not appear to be shying away from asserting its claims in the South China Sea or advancing energy projects in disputed areas. Hanoi’s decision to resume exploration in Block 136-03, an area of past tensions with China that is not clearly controlled by Vietnam under international law, suggests that Vietnam is willing to take risks to advance its offshore energy interests. The risk may not have paid off in this case, as Beijing appears to have forced Hanoi to back down with negative repercussions for Vietnam’s efforts to attract international oil companies to develop its offshore blocks. It remains to be seen whether Vietnam would back down over a single setback.

While Vietnamese activities in Block 136-03 have halted, Hanoi continues to push forward on the Blue Whale gas project—which will be Vietnam’s largest—in Block 118 off its east coast. This multibillion-dollar project by ExxonMobil, in partnership with PetroVietnam, will be an interesting test of the limits of Chinese opposition to energy exploitation in the South China Sea by other claimant states. Block 118 is partially disputed by China as the eastern parts of the block falls within the nine-dash line, but the drilling facility for the Blue Whale field will lie about 10 nautical miles outside of the nine-dash line. Vietnam is eager to pick up the pace on the Blue Whale project and hoped to announce its official start at the Asia Pacific Economic Cooperation (APEC) forum in Vietnam earlier this month, but ExxonMobil said a final agreement is still on track for 2019. How China would respond to the Blue Whale project development warrants close attention, particularly due to the involvement of the U.S.-based supermajor.

Malaysia and Brunei continue to keep their heads down while quietly being the most effective at extracting oil and gas wealth from the South China Sea.

Malaysia and Brunei have both refrained from taking a strong stance on South China Sea disputes—at least publicly—and have consequently managed to mostly avoid the tensions with China their fellow claimants in Manila and Hanoi have experienced. Malaysia, unlike Brunei, has not been completely free of Chinese pressure, having to face Chinese Coast Guard patrols of the Luconia Shoals in Malaysia’s EEZ and occasional Chinese oath-taking ceremonies above James Shoal, which Beijing claims as the southernmost point of its territory despite the shoal being under 70 feet of water.

Both Malaysia and Brunei are often characterized as leaning toward China because they do not come out strongly on South China Sea issues, but their low-key behavior is more reflective of a desire not to become embroiled in intractable sovereignty disputes that do not affect their core interests. Malaysia and Brunei, unlike the other South China Sea claimants, prioritize oil and gas production in the South China Sea—which are key to their economies—over sovereignty disputes. Neither country has claims on the core Spratly Islands that China, Taiwan, Vietnam, and the Philippines occupy and
dispute, so it makes sense to keep quiet on those disputes while going about the business of exploiting some of the richest oil and gas fields in undisputed areas in the region.

Malaysia and Brunei have been fortunate that much of their offshore oil and gas reserves lie just off the coast, outside even China’s expansive nine-dash line claim. As these reserves are depleted, however, both countries will be forced to move further offshore to open up new production in areas within the nine-dash line, raising the specter of future tensions with a China that opposes all foreign oil and gas activities within the nine-dash line. This is the scenario, in which their core economic interest in continued oil and gas production is threatened, that could see Malaysia and Brunei take a more vocal position on China’s behavior in the South China Sea.

*Indonesia remains an adamant nonclaimant, but has taken symbolic steps to make it clear that it will oppose infringements on its sovereignty by China or others.*

Indonesia has long maintained that it is not a claimant in the South China Sea, despite the overlap between the extreme southern end of the nine-dash line and Indonesia’s EEZ northeast of the Natuna Islands, a position based on a wholesale rejection of China’s nine-dash line claim as lacking any basis in international law. This position has a strong legal rationale and in fact presaged the rejection of the nine-dash line by the Arbitral Tribunal, but its practical limitations have been exposed in recent years as China more actively moved to exert its jurisdiction within the nine-dash line.

A series of incidents involving Chinese fishing vessels operating illegally in Indonesia’s EEZ near the Natuna Islands and Chinese Coast Guard vessels aggressively intervening to rescue detained Chinese fishing vessels from Indonesian custody came to a head last year, with Indonesian president Joko Widodo holding a cabinet meeting on a warship in the area to demonstrate his government’s intention to uphold its sovereign rights in the area. Indonesia has since held military exercises in the Natunas, called for faster economic and military development of the islands, and renamed the maritime area north of the islands the “North Natuna Sea” in what are likely steps to demonstrate resolve to counter future Chinese incursions in the area.

While illegal fishing was the driving factor behind recent China-Indonesia tensions in the South China Sea, there is also an energy component that remains on the minds of Indonesian policymakers. The East Natuna gas block—one of the largest gas reserves in Asia at an estimated 46 tcf—lies within the nine-dash line, raising concerns about whether China would move to stop Indonesia from developing the field. This remains a long-term concern, as the technical difficulty and high cost of developing East Natuna will likely make the project economically unviable for the foreseeable future.
Key Policy Recommendations

_Policymakers should strengthen preparedness for potential disruptions to energy shipments through key chokepoints in Southeast Asia like the Strait of Malacca and South China Sea._

A short-term disruption of energy shipments through key chokepoints in Southeast Asia should be manageable, as there are other nearby routes that tanker traffic can be diverted to without adding too much time and expense. If the Strait of Malacca is closed, traffic can divert farther east to the Sunda, Lombok, or Ombai Straits. If the South China Sea is closed, traffic can similarly be diverted to the east of Borneo through the Makassar Strait, Celebes Sea, and then the Western Pacific to the east of the Philippines. Insurance rates would likely skyrocket in response to a contingency serious enough to warrant the diversion of shipping, however, economically straining the tanker industry.

A long-term disruption of energy shipments would be harder to manage, but also seems unlikely to occur unless driven by a much more serious crisis like a major power war. Long-term use of longer diversion shipping routes would require an increased amount of tanker traffic to maintain consistent supply, leading to an increase in shipping costs.

Policymakers can strengthen preparedness for potential disruptions by crafting contingency plans to ensure that diversion to alternate transit routes can quickly be implemented if needed. Key insights from this planning should be shared with partners in the region and inform regional capacity-building efforts. Consumer countries can also seek to diversify their suppliers, par-
particularly in LNG, now to ensure that some of their supply will be unaffected if shipments from one part of the world are disrupted. Policymakers should also pay attention to refining operations and ensure that markets—particularly specialized product markets like that in jet fuel—can cope with a temporary loss of access to key refining hubs like Singapore.

Greater investments should be made in key infrastructure and services to promote resilience to disruptions in energy shipments.

Alternate transit routes to the Strait of Malacca and South China Sea are not well-developed and would benefit from investments to make them more capable of handling a surge in traffic during a crisis scenario. For example, alternative straits in Indonesia like the Sunda and Lombok Straits would benefit from improved navigation aids for transiting vessels. These alternate transit routes would also benefit from building up more robust support services for passing merchant traffic.

Refining infrastructure is also vitally important and steps should be taken to ensure this infrastructure does not become overly centralized in a way that could reduce the resilience of the overall market to shocks caused by transit disruptions or impaired access to key areas. Consumer countries in Northeast Asia should strive to keep their own refining sectors vibrant, and should consider cooperating with Southeast Asian countries by investing in their refining sectors to ensure there is a broad base of refining capacity distributed across the region.

Policymakers should come out strongly in favor of a rules-based order in the Indo-Pacific region based on respect for international law, and should be supportive of freedom of navigation for military vessels throughout the region.

The U.S. Navy has controlled the seas since the end of World War II and has maintained free and open access to global sea lanes to the benefit of all trading nations. Rising powers that seek a greater role in international affairs are welcome to join the United States in upholding an open global order. Instead challenging such an order after having benefited from it for decades should not be condoned. Moreover, no country should accept attempts to close large areas of ocean to lawful freedom of navigation, whether by military or civilian vessels. Military access to the world’s oceans is vital for keeping sea lanes open and free for trade and other civilian purposes, and countries in Asia (and elsewhere around the world) should be willing to take a stand on this issue.

Countries in the region should also strongly support adherence to international law, including the United Nations Convention on the Law of the Sea (UNCLOS), and promote its use as a means to resolve maritime disputes. The Arbitral Tribunal’s ruling in the Philippines v. China should be respected by all South China Sea claimants, as well as other parties, and
serve as the basis for further negotiations, international legal options, or other nonviolent and noncoercive means to resolve disputes in the South China Sea.

_Policymakers in Southeast Asia should continue to lead by example on the peaceful resolution of disputes through negotiation and international legal mechanisms._

Southeast Asian states have a strong track record in utilizing international legal mechanisms to peacefully resolve disputes. This track record includes disputes over sovereignty, with Indonesia and Malaysia in 1998 seeking a ruling by the International Court of Justice (ICJ) on the sovereignty of Ligitan and Sipadan islands in the Celebes Sea, and Malaysia and Singapore in 2003 seeking an ICJ ruling on the sovereignty of Pedra Branca, Middle Rocks, and South Ledge in the Singapore Strait. Southeast Asian states have also resolved maritime boundary disputes through international legal means, with Myanmar and Bangladesh in 2009 asking the International Tribunal for the Law of the Sea to delimit the maritime boundary between them.

Southeast Asian countries have also relied on negotiations to peacefully resolve maritime disputes. Indonesia has successfully delimited parts of its maritime boundaries with neighbors Singapore and the Philippines through negotiations. Indonesia in 2015 also swapped special envoys with Malaysia in a fresh attempt to jumpstart long-stalled negotiations over the Ambalat dispute. Timor-Leste has been in negotiations with Australia to resolve the Timor Sea dispute, with the two countries in the home stretch of finalizing an agreement on their maritime boundary.

While it has often taken a long time for Southeast Asian states to agree to resolve lingering disputes through international legal mechanisms or negotiations, they have shown an admirable amount of good faith for the process once engaged and respect for the rulings or agreements once they are reached. The growing number of international legal cases launched by Southeast Asian countries since the turn of the century, as well as their increasing complexity, suggests that the region increasingly accepts international law and negotiations based upon it as the norm for dispute resolution. This is a valuable development and one that Southeast Asia should be proud to export to the rest of Asia, where such pragmatic approaches to peaceful dispute resolution are badly needed.
Endnotes


5 Ibid.


7 Ibid.

8 Ibid.


11 Ibid.


About the authors

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