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Energy Nationalism Goes to Sea in Asia

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EXECUTIVE SUMMARY

This essay argues that concerns about securing offshore energy production and the sea lanes used to import oil and liquefied natural gas are motivating naval modernization in the Asia-Pacific and creating associated security risks for the entire region.

MAIN ARGUMENT

Maritime disputes in the Asia-Pacific region have historically stemmed from unsettled territorial and maritime claims. In the past decade, however, concerns over maritime energy security have increasingly inflamed these disputes. Rising energy prices, fears of supply scarcity, and rapid increases in oil-import dependency in China and other regional powers such as Indonesia have helped drive resource nationalism among regional governments. Such nationalism incentivizes states to build naval forces capable of deterring rival claimants in potentially resource-rich areas, as well as in some cases threats to major maritime energy transport corridors. As energy security becomes a more important driver of regional arms procurement, it is critically important for states to understand that the high-probability threats to maritime energy security are nonstate threats that are best addressed cooperatively.

POLICY IMPLICATIONS

- Extreme weather, seismic activity, and nonstate threats such as terrorism are the highest-probability threats to maritime energy security in the Asia-Pacific region. Thus, policies based on cooperation will be the most effective in enhancing regional energy security.
- Greater cooperation can also help change regional perceptions in ways that substantially reduce the chance of armed conflict between states, which is the lowest-probability threat, but the one with the highest potential impact on maritime energy security.
- Regional civil maritime organizations offer a more effective and less-politicized vehicle for engagement than navies do. Major energy producers and consumers can also work to increase “maritime domain awareness” by integrating information on key energy assets and the locations of weather, piracy, and terrorist threats along major sea lanes and production areas. The system could also include a joint pirate threat database to plot locations of attacks and anticipate future trouble spots by analyzing patterns of pirate behavior.
- Asian countries with offshore energy production interests in disputed areas should consider creating joint development zones.

Energy nationalism describes a situation in which governments seek assertively to obtain and protect energy supplies, employing tactics ranging from augmented diplomatic and financial support for acquiring oil and gas reserves to using military posturing and action to secure resource deposits and protect supply lines such as sea lanes.¹ Maritime energy nationalism in East Asia is often inextricably tied to disputes over territorial and maritime claims and is exacerbated by the geographical proximity of states with a history of conflict.

Multiple factors make such nationalism in Asia deserving of analytical and diplomatic attention. To begin with, credible Chinese strategists continue to argue that U.S. influence over key maritime trade routes, backed by security partnerships with many of China's neighbors in East Asia, represents a key threat to the security of China's maritime trade, including energy imports.² Even those strategists who support greater maritime security engagement with the United States still advocate the creation of a powerful Chinese navy capable of deterring potential adversaries. China's rising naval power and increasingly assertive policies in the South China Sea unsettle its maritime neighbors³ and drive regional arms purchases of advanced weaponry, including modern submarines and strike aircraft.

Nonstate threats also interfere with seaborne energy transit and have motivated China's first blue water operational naval deployment, which has been ongoing since December 26, 2008. Somali pirates, in particular, have become progressively more brazen, managing to take over a number of very large crude carriers (VLCC) and other tankers in the past three years. Vessel operators such as Maersk have chosen to route ships around South Africa or hug the Indian coast and then head south rather than face the risks posed by pirates in the Gulf of Aden and western Indian Ocean. In some cases, this adds nearly a week to voyage times and shows that sustained pirate attacks can disrupt major maritime energy transit routes.⁴

In addition, regional oil production cannot keep pace with demand growth. As a result, net imports of crude oil to most East Asian countries and India have risen substantially over the past decade. China, Asia's single-largest oil consumer, has moved from needing to import 1.4 million barrels per day (bpd) in 2000 to importing 4.3 million bpd in 2009 and more than 5 million bpd at present (see **Figure 1**).⁵ India's imports likewise grew from roughly 1.4 million bpd in 2000 to 2.2 million bpd in 2009. By contrast, Japan's imports fell from 5.5 million bpd to 4.3 million bpd between 2000 and 2009, while South Korea's oil imports remained flat at roughly 2.1 million bpd, due to higher efficiency and slower growth of oil-intensive activities in both countries.

In the case of Japan, current difficulties in the aftermath of the March 2011 earthquake and tsunami could suppress the country's overall energy demand for the foreseeable future. At the same time, reduced capacity to generate nuclear power and attendant safety concerns could increase reliance on fossil fuels (primarily oil), the effects of which may be felt elsewhere in the region. According to the McIlvaine Company, an energy consultancy, "two-thirds of all new reactor projects

¹ David R. Mares, "Resource Nationalism and Energy Security in Latin America: Implications for Global Oil Supplies," James A. Baker III Institute for Public Policy, Rice University, Working Paper, January 2010, 3, <http://bakerinstitute.org/publications/EF-pub-MaresResourceNationalismWorkPaper-012010.pdf>.

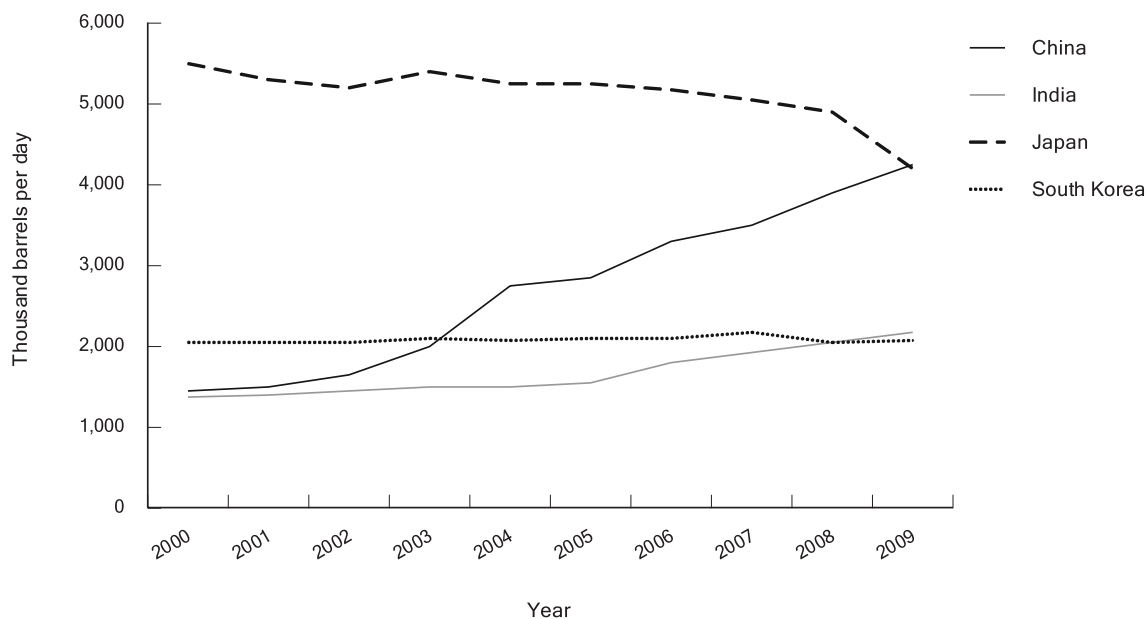
² See, for example, Shi Chunlin, "The Impact of United States on the Safety of China's Pacific Shipping Routes and Countermeasures to be Taken," *China Maritime Safety*, no. 2 (2011).

³ Kamlesh Kumar Agnihotri, "Strategic Direction of the PLA Navy: Capability and Intent Assessment," *Maritime Affairs* 6, no. 1 (Summer 2010): 89.

⁴ "Piracy 'No Go' Zone Grows," *InterManager*, February 4, 2011.

⁵ Chen Aizhu and Judy Hua, "Update 2—China Jan Crude Imports Up 27pct; Diesel Stocks High," Reuters, February 11, 2011, <http://uk.reuters.com/article/2011/02/14/china-crude-trade-idUKTOE64607F20110214>.

FIGURE 1 Net oil imports of East Asian countries and India



SOURCE: Energy Information Administration, 2011, <http://www.eia.gov/>.

will be delayed after the Fukushima Daiichi disaster...[O]ver five years \$200 billion in energy investment globally will be redirected from nuclear to coal, petroleum or other alternatives.⁶ This trend was confirmed by Prime Minister Naoto Kan in a May 2011 interview, when he stated that it would be difficult to construct new nuclear plants in Japan after Fukushima.⁷ The likely increase in Japanese reliance on seaborne oil and liquefied natural gas (LNG), as well as the consequent upward pressure on prices, could in turn heighten regional concerns about seaborne energy security.

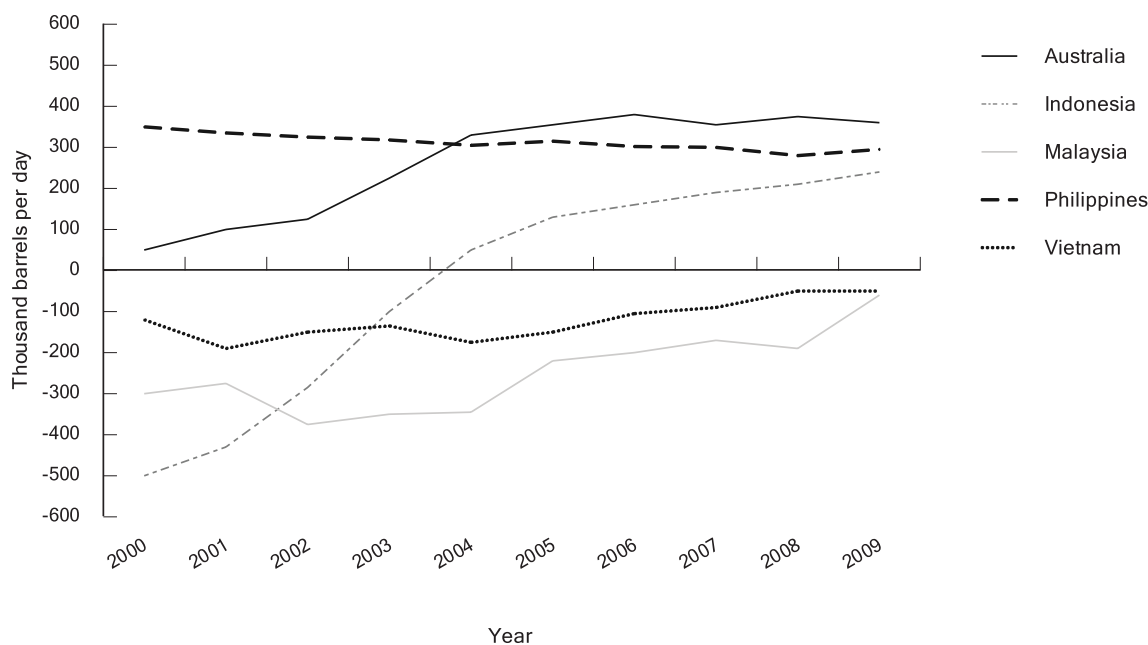
Growth in oil imports has been a reality for most of Southeast Asia and Oceania as well, and likely will have a profound impact on regional perceptions of energy security, given that governments often perceive energy imports as a strategic vulnerability. Indonesia and Australia experienced the largest changes in import demand between 2000 and 2009. Indonesia, which had to leave the Organization of the Petroleum Exporting Countries (OPEC) in 2008 because it ceased to be an oil exporter, went from having a surplus of nearly 500,000 bpd in 2000 to importing an average of 245,000 bpd in 2009 (see **Figure 2**). During the same timeframe, Australia's oil deficit increased from a deficit of 45,000 bpd in 2000 to a deficit of 362,000 bpd.

Rising oil supply deficits typically mean one thing in Asia: increasing seaborne oil imports. Of all the major consumers in the region, only China has the ability to import oil by pipeline from its neighbors (Russia and Kazakhstan). Yet even China must meet much of its oil demand with seaborne crude supplies because oil output growth in Russia and Kazakhstan has not kept

⁶ Andrew E. Kramer, "Nuclear Industry in Russia Sells Safety, Taught by Chernobyl," *New York Times*, March 22, 2011, <http://www.nytimes.com/2011/03/23/business/energy-environment/23chernobyl.html>.

⁷ "Crisis Likely Spells End for Nuclear Plant Pursuit, Kan Tells U.K. Paper," *Kyodo News*, May 26, 2011, <http://search.japantimes.co.jp/cgi-bin/nn20110526a3.html>.

FIGURE 2 Net oil imports of Southeast Asian countries



SOURCE: Energy Information Administration, 2011, <http://www.eia.gov/>.

pace with Chinese demand.⁸ China imports 40% of its oil by sea, and no amount of pipeline construction promises to reduce this. Instead, reliance on seaborne oil is likely to increase, given recent trends.

Although from 2001 to 2005 annual oil-production increases in Russia and Kazakhstan substantially exceeded China's annual growth in consumption (see **Figure 3**), since 2006 Russia's stagnating production and the continued robust growth in Chinese demand have created large deficits that strongly suggest China's seaborne oil imports will continue to rise.⁹ Russian crude production is flattening as drillers struggle to overcome natural rates of decline that some analysts believe may be as high as 19% annually. Likewise, even at a conservative growth rate in annual oil demand of 4%, China's incremental oil demand for 2011 will equal the entire planned oil production increase of roughly 400,000 bpd that Kazakhstan seeks to achieve by 2015.

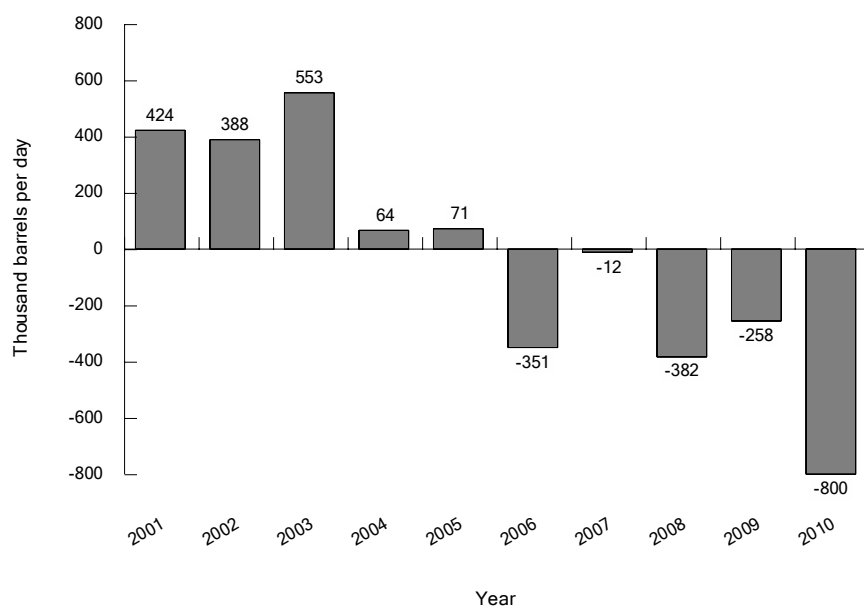
In theory, Russia or Kazakhstan could choose to redirect more crude oil to China. However, strategic decisions to shift crude away from existing markets in Europe (supplied by Western Siberia), Japan (supplied by Sakhalin Island), and other locales are unlikely. Russian news articles from January 2011 say that any increase in oil shipments to China above the currently contracted 300,000 bpd level will not occur until after Russia completes the second stage of the East Siberia-Pacific Ocean pipeline connecting Skovorodino to the Pacific port of Kozmino.¹⁰ This suggests

⁸ The Burma-to-China pipeline is not counted here because it is not a true overland supply source. Oil must still traverse the Indian Ocean in order to reach the starting point of the Burmese oil pipeline and is thus potentially vulnerable to naval interdiction.

⁹ Gabe Collins and Andrew Erickson, "Twilight in the Tundra: Russian and Kazakh Oil Production Cannot Keep Up with China's Rising Demand," *China SignPost*, no. 21, February 4, 2011, <http://www.chinasignpost.com/2011/02/twilight-in-the-tundra-russian-and-kazakh-oil-production-cannot-keep-up-with-china%E2%80%99s-rising-demand/>.

¹⁰ "Uvelichenie postavok v Kitai vozmozhno tolko posle vvoda BCTO-2: Analitik" [An Increase in Deliveries to China Would Only Be Possible after the ESPO-2 Line Is in Service: Analyst], *RBC Daily*, January 21, 2011, <http://www.rbcdaily.ru/tek/partnernews/140268.shtml>.

FIGURE 3 Changes in Russian and Kazakh oil output relative to Chinese oil demand



SOURCE: Energy Information Administration, 2011, <http://www.eia.gov/>; and Winnie Zhu, “Oil Imports Drop in Pipeline,” *China Daily*, January 13, 2011, http://www.chinadaily.com.cn/bizchina/2011-01/13/content_11843765.htm.

that Russia fears becoming dependent on China by allowing it to become the dominant buyer of East Siberian crude oil. Similar concerns likely drive thinking in Kazakhstan.

Energy Nationalism at Sea: Production and Transportation

Energy nationalism at sea centers on resource extraction and the security of sea lanes used for importing oil, LNG, and products. Resource extraction disputes are typically a much more powerful stimulus for conflict because they are usually defined as matters of state sovereignty and thus often become rallying points for domestic political factions, making diplomatic compromise harder to achieve. With the exception of a select set of international chokepoints such as the Straits of Malacca and Hormuz, the Suez Canal, and the Bab al-Mandeb, sea lanes are simply general transit corridors in which ships’ positions can be easily shifted laterally by many tens of kilometers to avoid security threats or weather hazards. Oil and gas deposits, on the other hand, have fixed locations and contain finite reserves. This often causes one country to accuse another of theft if the other side begins exploiting the resource while its delimitation remains disputed.

Maritime energy resource disputes exist in many parts of the world, including friction between Australia’s Woodside Energy and the East Timor government over gas development in the Greater Sunrise Field and tension between Angola and the Democratic Republic of the Congo over offshore oil reserves near the Angolan region of Cabinda. These two disputes are clearly over energy resources. In Asia, the nature of the disputes in the East and South China seas is much more complex, since fishing and national sovereignty are key motivating factors along with energy production.

At present, China is Asia's largest offshore energy producer, followed by Malaysia, Vietnam, and Indonesia.¹¹ The analysis below focuses on China because its growing offshore energy interests and increasing assertiveness in the South and East China seas are key drivers of other regional countries' decisions to safeguard their own maritime energy security interests by upgrading their militaries and diplomatic relationships.

China currently obtains roughly 15% of its domestic oil production, more than 600,000 bpd, from offshore fields. This makes it one of the world's largest offshore energy producers. China's growing emphasis on offshore energy production, including new deepwater fields in the South China Sea, is likely to have profound effects on its energy security strategies and international diplomacy regarding disputed zones in the South and East China seas.

Chinese analysts currently make very large reserve claims for the South China Sea, stating in some instances that the oil reserves in place may be as much as 30 billion tonnes (approximately 219 billion barrels).¹² Similarly, Chinese estimates for oil reserves in the East China Sea run as high as 160 billion barrels of oil and 210 trillion cubic feet of gas.¹³ In essence, Chinese sources, which typically make much more optimistic estimates than sources from Japan and elsewhere, project that the South China Sea's oil reserves are nearly as large as Saudi Arabia's and that the East China Sea's oil reserves are larger than Iran's. Offshore production in the region has been growing strongly, but output numbers and discoveries to date are not nearly as large as the enormous—and likely politically driven—Chinese reserve estimates would suggest.

Figure 4 shows the production of China National Offshore Oil Corporation (CNOOC), China's main offshore oil and gas producer. The Bohai Gulf is presently China's core offshore production zone in terms of oil output. Yet the South China Sea is poised to become an increasingly important oil and gas supplier in the future, as Chinese oil companies gain proficiency in deepwater operations and the local maritime industry becomes an increasingly proficient supplier of deepwater drilling rigs and other important equipment. China is targeting oil and gas production in deepwater areas of the South China Sea of 500,000 bpd of oil equivalent by 2015 and 1 million bpd of oil equivalent by 2020.¹⁴ Barring a major diplomatic breakthrough, however, oil and gas production in the East China Sea is likely to remain negligible in the face of sustained tensions between China and Japan that hinder exploration and development.

Key Indicators of Energy Nationalism at Sea

We have created a detailed, but not exhaustive, set of barometers to help policymakers in the United States and other countries define and track the development of maritime energy nationalism among Asian countries. Key criteria include state flagging of oil tankers, the acquisition of additional military systems to protect resources and transit routes, intensified maritime surveillance programs, and more assertive air and naval posturing near offshore resource zones and key sea lanes (see **Table 1**). Increased state flagging of tankers and acquisition

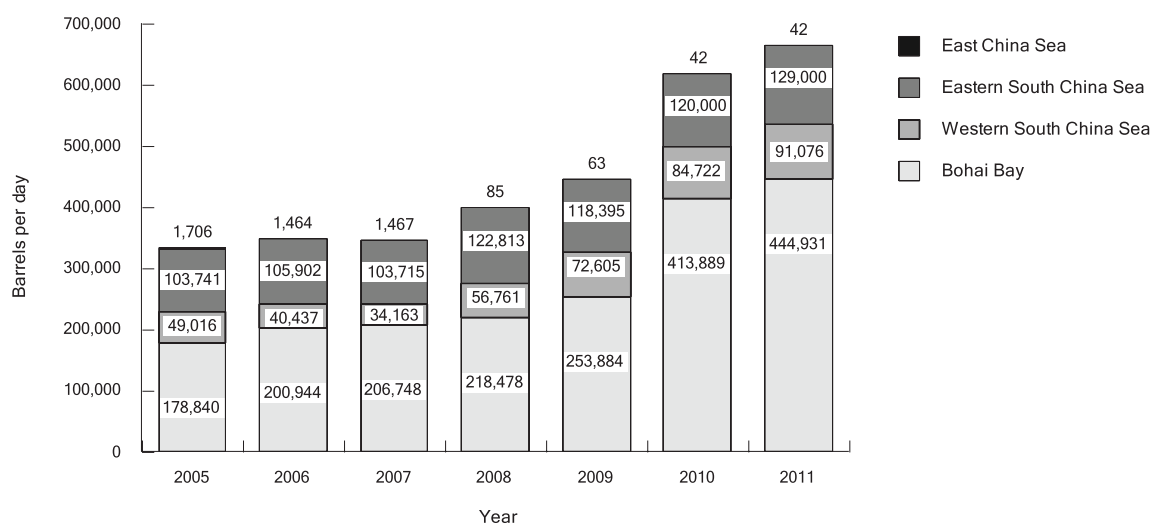
¹¹ Zhao Hai, "Zhongguo shiyou anquan zhi Nanhai diyuan zhanlue sikao" [Thinking Over the Geopolitical Strategy of China's Petroleum Security in the South China Sea], *Natural Resource Economics of China* 23, no. 8 (August 2010): 29.

¹² Ibid.

¹³ "Analysis Brief: East China Sea," U.S. Energy Information Administration, March 2008, <http://www.eia.gov/countries/regions-topics.cfm?fips=ECS>.

¹⁴ Wang Kangpeng, Li Qiyang, and Lin Boqiang, "Zhonghaiyou yingxiong kuangxiang qu: 'si ge Daqing' zhenhan" [CNOOC's Shocking and Heroic Rhapsody: "4 Daqings"], *China5e*, February 24, 2011, <http://www.china5e.com/show.php?contentid=160243>.

FIGURE 4 CNOOC oil production in Chinese waters



SOURCE: CNOOC, 2011, <http://www.cnooc.com.cn>.

NOTE: Data for 2010 and 2011 are estimates.

TABLE 1 Maritime energy nationalism scorecard for selected Asian countries

	Risk of sparking conflict (from lower to greater risk of triggering conflict)			
	Significant state flagging of tankers	Acquisition of military platforms for protecting assets and territory	More intensive surveillance and patrol activities near disputed areas	More assertive air and maritime posturing around offshore economic areas
China	√	√	√	√
Japan		√	√	√
India	√	√	√	√
South Korea		√	√	√
Vietnam	√	√	√	√
Malaysia		√	√	√
Indonesia		√	√	√
Australia		√	√	√
Philippines			√	√

of military systems are important from a deterrence perspective,¹⁵ because they raise the stakes for any party that might wish to interdict seaborne energy shipments or unilaterally extract resources from a disputed zone. On the other hand, maritime surveillance and more assertive posturing, including air intercepts and confrontations between ships, can act as powerful catalysts for the unpredictable escalation of disputes in environments where intense feelings of nationalism have already raised tensions.

Given the commercial advantages of using flags of convenience, such as those of Panama, Liberia, or the Marshall Islands, it is reasonable to treat the state flagging of energy transport vessels as a barometer of energy nationalism at sea. The state flagging of oil tankers involved in long-distance international trade is significant because under international law a tanker enjoys the protection of the flag state.¹⁶ If an outside power were to interdict the vessel, the flag state would have legal grounds to claim that its sovereignty had been breached sufficiently so as to threaten its national well-being, thereby justifying an armed response. The escalatory barrier created by putting state-flagged vessels into government service could thus deter adversaries from interdicting each other's oil shipments unless the countries were already at war with each other.¹⁷

The People's Republic of China (PRC), which is now Asia's largest oil importer, flags the second-largest proportion of long-distance oil tankers in Asia with more than 100,000 deadweight tonnage (DWT). Nearly 70% of vessels with between 101,000 and 150,000 DWT displacement and 38% of ships between 151,000 and 200,000 DWT displacement fly the PRC flag (see **Figure 5**). In addition, nearly 33% of PRC-owned VLCCs, which haul crude over long distances from Africa and the Middle East, are flagged to China, and there is a strong possibility that this percentage will rise in the next several years, given that vessels that are on order for China-based shippers but not yet flagged could choose to fly the Chinese flag. Japan, by contrast, has a much lower proportion of VLCCs (14%) flying the Japanese flag. Most Indian VLCCs (91%) fly the Indian flag, while only 5% of South Korean-owned VLCCs fly the South Korean flag.

Energy Transport Security and Militarization of Maritime Energy Conflicts in Asia

Maritime energy security and energy nationalism are inherently military topics in East and Southeast Asia because overlapping claims are held by major energy consumers and military powers whose current and historical relationships are adversarial. Defense expenditures for major East and Southeast Asian militaries from 2000 through 2009, as well as for the Indian military, show that the largest spending increases in both percentage and absolute terms have come from India and China (see **Figure 6**). Between 2000 and 2009, Chinese and Indian defense spending grew at an average annual rate of 12.6% and 8.2%, respectively, according to the Stockholm International Peace Research Institute (SIPRI). Both countries' defense outlays slowed in 2010 but have picked up steam again in 2011, with China planning to boost its defense budget by 12.7% to

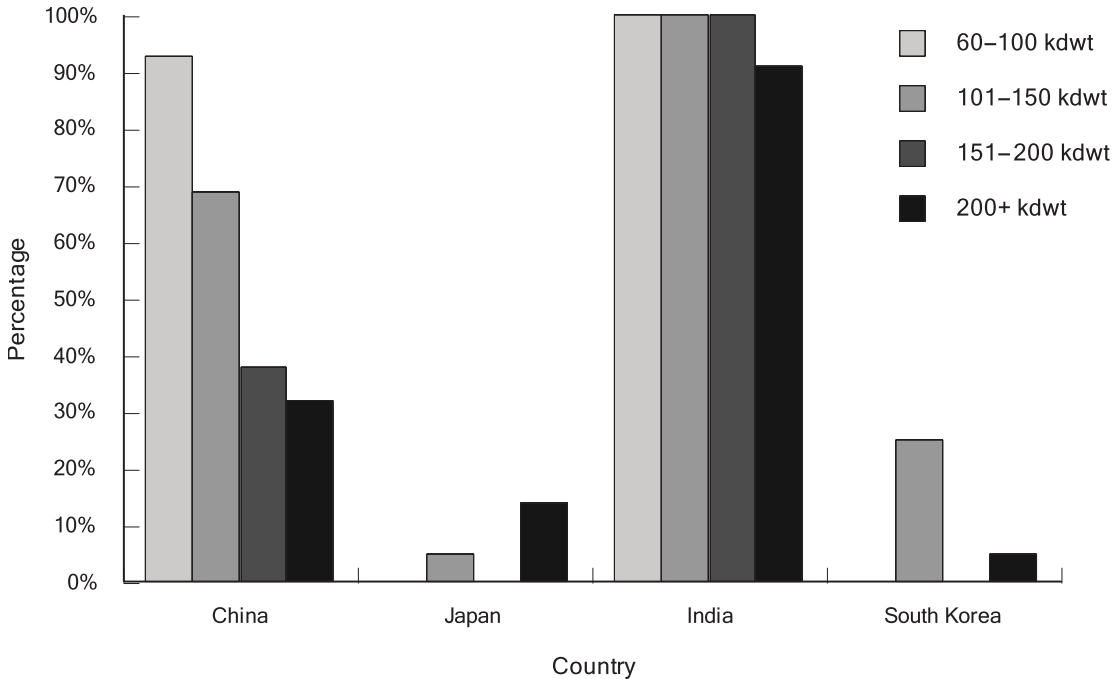
¹⁵ A flag of convenience indicates that a merchant ship is registered in a sovereign state other than that where the shipowner is based and flies that country's civil ensign, the flag flown by merchant ships. This is typically done to avoid taxes and fees or regulatory burdens in the shipowner's home country. State flagging entails a vessel flying the civil ensign of the sovereign state in which its owner is based. Typically, attacking state-flagged merchant ships can be considered an act of war against the flag state.

¹⁶ India, the United States, and certain other countries have "cabotage laws" designed to favor national-flagged shipping in coastal trades.

¹⁷ Gabe Collins and Andrew Erickson, "Beijing's Energy Security Strategy: The Significance of a Chinese State-Owned Tanker Fleet," *Orbis* 51, no. 4 (Fall 2007): 665–84.

FIGURE 5 National flagging of East Asian oil tanker fleets

Percentage of state-flagged tankers operated by companies headquartered in that country



SOURCE: Sea-web, 2011, <http://www.sea-web.com>.

\$91.5 billion and India boosting its defense spending by 11.6% to \$36.5 billion. For comparison, South Korean spending grew by an average of 5.2% per year between 2000 and 2009, while Japanese spending actually contracted until 2009 and has remained steady since then.

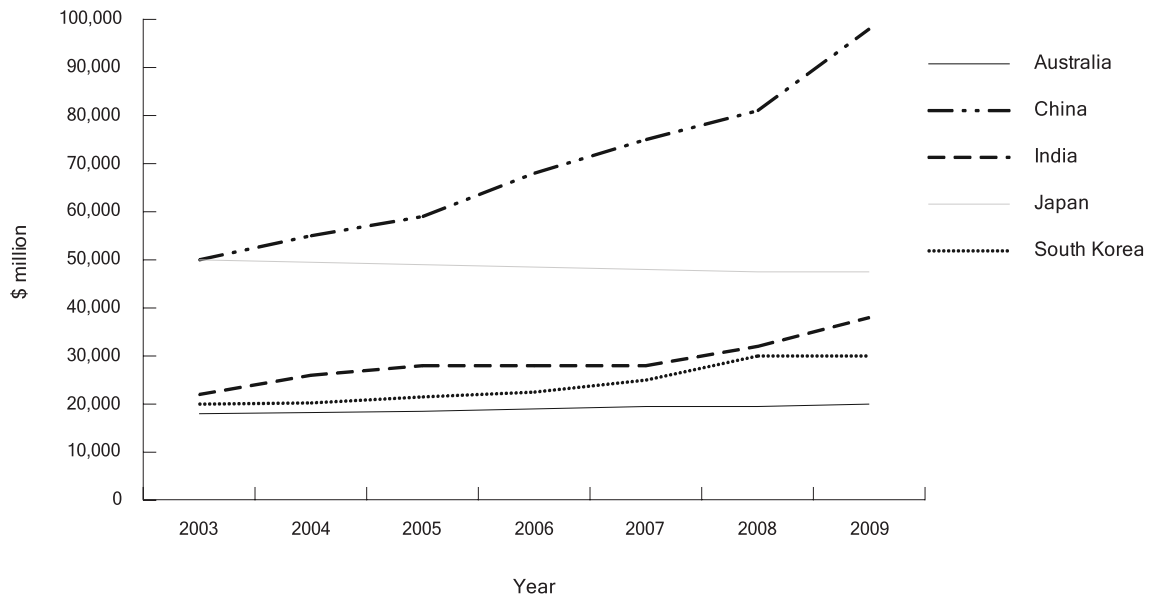
This overall increase in military spending highlights a key strategic risk moving forward: heightened strategic friction between Asia's titans, driven in part by security concerns over energy transport in the Indian Ocean. A critical sub-dynamic is how the smaller countries in the region will respond to a potential "clash of the titans." India sits astride the sea lanes that provide the majority of China's imported oil supply. In recent years, a dynamic has emerged in which Chinese strategic thinkers express concern over the potential for the Indian Navy to interdict China's maritime oil lifeline, and senior Indian officials say they want to see a cooperative sea lane security regime even as the Indian Navy simultaneously enhances its high-end capabilities. In February 2010, Pallam Raju, India's minister of state for defense, said that India was "happy" to help China keep its Indian Ocean sea lanes open.¹⁸ However, Indian naval actions suggest that New Delhi is hedging its bets with respect to China's rising naval power. For example, the country's first Shivalik-class stealth frigate, INS *Shivalik*, has been assigned to the Eastern Fleet.¹⁹

¹⁸ James Lamont and Geoff Dyer, "India Offers to Protect China Oil Shipments," *Financial Times*, February 17, 2010, <http://www.ft.com/cms/s/0/6788f896-1be8-11df-a5e1-00144feab49a.html>.

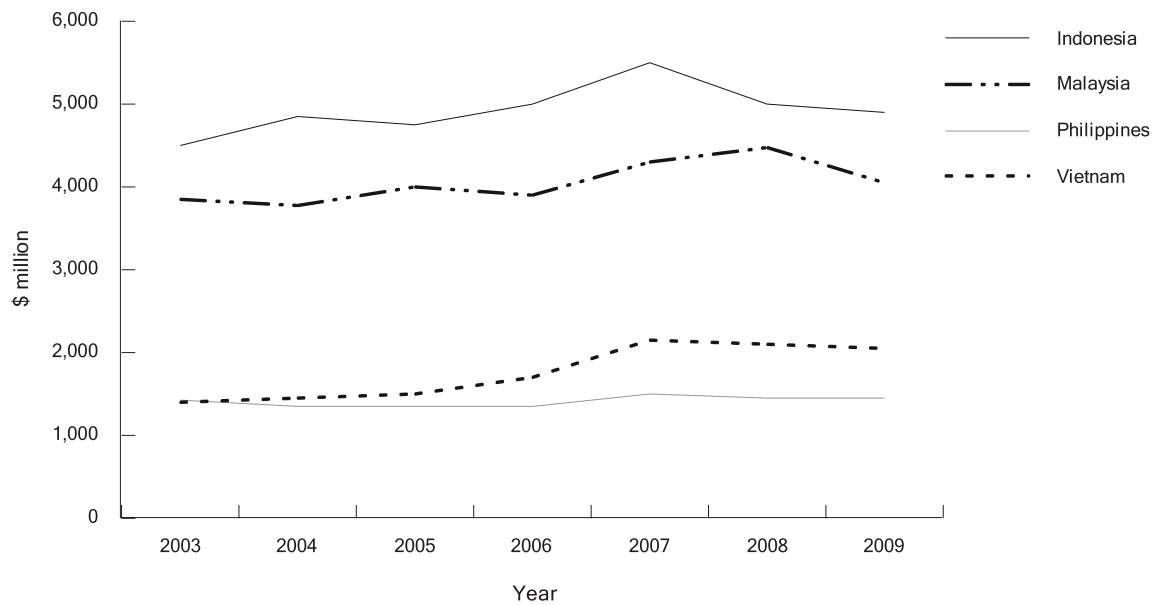
¹⁹ "INS Shivalik Arrives in the City," Press Trust of India, March 22, 2011, <http://www.hindustantimes.com/News-Feed/andhrapradesh/INS-Shivalik-arrives-in-the-city/Article1-676134.aspx>.

FIGURE 6 Selected Asian defense expenditures by country

Larger militaries



Smaller militaries



SOURCE: Stockholm International Peace Research Institute (SIPRI), 2011, <http://www.sipri.org>.

NOTE: SIPRI data for China's defense expenditures is higher than the official numbers provided by the Chinese government. SIPRI data is used here to provide consistent comparisons with other regional military expenditures.

Although the raw dollar amounts that the maritime Southeast Asian states are spending on defense pale in comparison to the defense budgets of China, Japan, India, and South Korea, the systems that Vietnam, Indonesia, and Malaysia seek are clearly geared toward hedging against larger regional militaries such as China's and protecting national maritime resource claims. The Southeast Asian countries' primary military acquisitions to date have focused on long-range strike aircraft such as SU-30s and especially advanced conventional submarines.

Submarines deserve special attention because of their value as deterrents against larger, more powerful militaries. Since 2005, Vietnam, Indonesia, Singapore, and Malaysia have purchased fourteen submarines of the Kilo, Type 209, Scorpene, and Västergötland classes, many of which have already been delivered. Vietnam's decision to purchase six Kilo-class diesel submarines from Russia is perhaps the most China-focused of the recent and planned arms purchases by Southeast Asian countries. The submarines, which will be built by Admiralty Shipyard of St. Petersburg for just under \$2 billion, can carry heavyweight torpedoes as well as the potent Klub anti-ship missile.²⁰ Given that the Kilo is renowned for its ability to operate quietly, even just the potential of Kilo-class submarines operating in the South China Sea could force China to drastically revise its naval operations in the area.

As Asian countries upgrade their air and naval capabilities, the potential for an arms race is very real. Regional navies' submarine acquisitions were likely made with the intention of protecting disputed maritime areas such as the Spratly Islands; moreover, any preparations to strengthen a state's strategic position by military means will worry China and other major regional oil importers, due to the potential ability to threaten seaborne oil shipping. These concerns in turn could provide further impetus for China to hasten its acquisition of long-range power projection systems, such as carriers and more advanced nuclear attack submarines, and to increase the Chinese navy's long-term presence in the Indian Ocean region.

Policy Recommendations

Maritime energy nationalism is a serious concern and has real potential to spark armed conflict in Asia. However, there are a number of ways to cool current friction and set the stage for more permanent diplomatic solutions.

At the strategic level, Asia's shifting security alignments position Washington to remain a central player in East Asia and become a more powerful anchor for new security architectures in Southeast Asia and the Indian Ocean. These new structures need not be defined in anti-China terms; rather, they should be defined positively. Unequivocal support for freedom of navigation and respect for the United Nations Convention on the Law of the Sea (UNCLOS) should be vital tenets of the new system. To bolster its position, the United States should ratify UNCLOS, a move that the U.S. Navy has long supported.

There are also policy steps that pertain specifically to managing competition for maritime energy resources, as well as to assuaging regional fears that seaborne oil supplies could be disrupted by events ranging from extreme weather to piracy and hostile blockades (see **Table 2**). The first steps involve identifying specific threat categories, comparing regional energy security

²⁰ "Russia to Build 6 Kilo-class Diesel Subs for Vietnam," RIA Novosti, April 27, 2009, <http://en.rian.ru/russia/20090427/121320414.html>.

TABLE 2 Ranking of threats to maritime security in Asia

	Incident frequency in East or Southeast Asia	Most affected sectors	Duration	Likely magnitude of disruption
Piracy	High	Transport	Short	Low
Tropical weather	High	Production	Short	Low
Seismic activity	Medium	Production	Medium	Medium
Terrorist attack	Medium	Production and transport	Medium	Low to medium
Interstate armed conflict	Low	Production and transport	Medium to long	High

NOTE: For the purposes of this table, Asia includes the Indian Ocean as well as the South China and East China seas.

responses to date, and then assessing whether similar responses are appropriate for dealing with the threats currently faced.

Many Asian countries focus on acquiring platforms such as submarines that are only suited for high-end warfare between national naval forces. Such an approach risks overlooking the reality that the highest-probability threats to energy security are best handled through multilateral action. An objective examination of such threats suggests a number of avenues for substantially boosting cooperation and offering concrete benefits for all participants.

Maritime domain awareness cooperation could be based on a system that integrates information on key energy assets, such as wells, producing platforms, undersea pipelines, and processing facilities, with the locations of known weather, pirate, and terrorist threats. Coupled with production data, such a system could help stabilize regional markets by more quickly and accurately assessing the potential impacts of disruptions to energy production and transit. The system could also include a joint pirate threat database to plot the locations of attacks and anticipate future trouble spots by analyzing patterns of pirate behavior, a high-value project given the expansion of the pirate threat in the western Indian Ocean. Asian countries with offshore energy production interests in disputed areas should also consider creating joint development zones (JDZ), for which there are extensive precedents. For example, Nigeria and the island nation of São Tomé and Príncipe have created a clearly defined JDZ in the Gulf of Guinea in which resource exploitation is governed by a treaty stipulating that 60% of benefits and obligations go to Nigeria and 40% to São Tomé and Príncipe.²¹

To date, JDZs have been more difficult to create in Asia, particularly between China and Japan. Part of the area near the disputed Shirakaba/Chunxiao field in the East China Sea is now a JDZ, but China says it welcomes Japanese investment in the parts of the field already under development “in accordance with the relevant laws of China.”²² This condition is of course unacceptable to

²¹ For information on this development zone, see Nigeria–São Tomé and Príncipe Joint Development Authority website, <http://www.nigeriasaotomejda.com/>.

²² Xinjun Zhang, “Why the 2008 Sino-Japanese Consensus on the East China Sea Has Stalled: Good Faith and Reciprocity Considerations in Interim Measures Pending a Maritime Boundary Delimitation,” *Ocean Development & International Law* 42, no. 1–2 (January 2011): 57.

Japan, as it would imply Chinese sovereignty over the area.²³ Similar problems would likely arise in the South China Sea between China, Vietnam, and other claimants. To reach a workable solution prior to formal demarcation, such zones could be structured as treaties that neither affirm nor deny national claims and require any commercial disputes to be handled in a neutral, third-party court system.

²³ For detailed analysis of this and related issues, see Richard C. Bush, *The Perils of Proximity: China-Japan Security Relations* (Washington, D.C.: Brookings Institution Press, 2010).