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Testimony

The Relationship between Natural Resources and Tensions in China’s Maritime Periphery

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RAND Office of External Affairs

CT-385
April 2013
Testimony presented before the U.S.-China Economic and Security Review Commission on April 4, 2013

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Mr. Chairman, Commissioner Brookes, Commissioner Tobin, and Members of the Commission: It is an honor and privilege to appear before you today. Thank you for the invitation, and I look forward to discussing with you the relationship between natural resources and China’s maritime disputes.

This afternoon I would like to try to distinguish between the political and economic dimensions of natural resources in China’s maritime disputes. By gaining a better understanding of these dimensions, I hope to clarify the extent to which resources serve as drivers of tension. Additionally, such an understanding may help address your questions about how China uses resource issues in a broader context and the potential for meaningful joint development. I will focus on hydrocarbon development and fisheries as the most significant and most contested maritime resources.

Following the executive summary below, I will address three issues. To counter persistent misconceptions about the region’s offshore resource base, the testimony will begin by reviewing the maritime energy and fishing resources in both the South China and East China Seas in the context of predicted regional demand. The focus here will be on the economic value of these resources and the extent to which the region is witnessing a “resource conflict.” The second issue the testimony will address is how resource issues reflect and amplify more fundamental and intractable concerns of nationalism, political legitimacy, and maritime jurisdiction. I will also discuss how resource issues function as political instruments therein. Finally, I will conclude by highlighting some potential changes in natural resource dynamics that may affect the future direction of regional maritime tensions.

Executive Summary

Media and policy sources frequently cite natural resources as a primary driver of tensions in the South and East China Seas. In reality, the region’s hydrocarbon potential is moderate, with speculative reserves most likely dwarfed by expected regional energy demand growth and by the capacity of traditional hydrocarbon producers. Rather than functioning as fundamental drivers themselves, resource issues function primarily as focal points for more powerful underlying drivers of domestic political legitimacy, popular nationalism, and regional order. Further, fisheries and hydrocarbon blocks serve as political instruments of a wider strategy that involves establishing presence and precedent in disputed sea space. As such, while joint development potential will continue to vary from project to project and may tactically alleviate some tensions, fundamental concerns over who owns and controls above-surface features make joint development unlikely to more comprehensively ameliorate tensions. Several factors suggest that

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the role for resource issues will likely grow over time: sharply rising energy demand and plateauing supply; increasing capabilities of state-owned energy firms to conduct offshore operations; increasing demand for fish and concordant pressure to fish further from shore; and increases in the volume of maritime traffic and proximity. These issues could lead to both increased domestic political pressure and increased opportunities for accidents and miscalculation.

**Putting Regional Hydrocarbon Potential in Perspective**

Implicitly or explicitly, media and policy sources commonly cite tensions in China’s maritime periphery as examples of “resource conflict.” Similarly, nontechnical sources provide a wide range of estimates about the potential value of resources in both the South and East China Seas, as well as different understandings of the significance of these estimates. However, much of the nontechnical data and analysis is misleading, and many of the terms are conflated, with a tendency to overstate both the amount of resources and their significance. This section reviews the most likely estimates of hydrocarbon potential within the context of projected regional energy demand.

The general inflation of South and East China Sea hydrocarbon potential occurs in a wider context of growing energy security anxiety in Asia. Regional resource tensions are being driven by the growing divergence between energy demand and local supply, a divergence created by the sharply increasing demand of Asian economies and the plateauing production of most East Asian and Southeast Asian hydrocarbon fields. China’s demand for oil imports is expected to grow from 5.1 million barrels per day (bpd) in 2012 to around 13 million bpd by 2035, with imports counting for 75 percent of oil consumption. China’s natural gas consumption is expected to nearly triple to 11 trillion cubic feet (Tcf) per year over the same period, with a similarly heavy reliance on imports. ASEAN oil imports are predicted to quadruple by 2030, and Vietnam may become a net oil importer as early as 2015. While Asia’s energy demand growth is considerable, reliable energy projections expect ample global hydrocarbon supply from both conventional sources (principally in the Middle East) and unconventional sources (oil shale, oil sands, shale gas). However, the increased demand and the plateauing of local fields in Asia naturally incentivize states and firms to expand existing domestic opportunities as an alternative to further reliance on import markets and/or foreign investment opportunities.

In the context of rising hydrocarbon demand, oil remains more valuable than gas, in both a monetary and energy security sense. Because oil is essentially the sole fuel for the transport sector, it is irreplaceable within a state’s energy portfolio, and mainstream estimates expect this to remain true for the medium term. In China’s case, oil accounts for 19 percent of China’s

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energy consumption, with absolute demand set to grow strongly. Natural gas currently makes up 4 percent of China’s energy usage, of which China imported 22 percent in 2011. This consumption is somewhat concentrated in the industrial sector (34 percent in 2011), with the remainder distributed across power, utilities, and residential sectors; compared with the transportation sector, substitution for natural gas from coal, hydropower, and other fuels is comparatively more available. China is planning a larger role for gas in its energy portfolio, hoping to reach 10 percent of consumption by 2020.

What Is the South China Sea’s Hydrocarbon Potential?
When we consider the hydrocarbon potential of the South China Sea, it is helpful to envision the maritime geography in three zones: (1) uncontested coastal areas that are currently producing hydrocarbons and that contain the majority of proven reserves; (2) contested coastal areas where disputes over new bidding on blocks typically take place; and (3) more distant, contested deepwater areas where hydrocarbon potential remains more theoretical. Media sources commonly confuse reserve estimates for the entire South China Sea with those in the contested areas, thus implying a higher resource potential for those contested areas. For the deepwater areas, regional oil companies are becoming stronger at operating in progressively deeper water (particularly CNOOC and Malaysia’s PETRONAS), but still depend on partnering with Western international firms for advanced survey and deepwater operations—a reality that drives the large number of offshore joint ventures.

It is impossible to confidently estimate the resource potential of the two contested zones, particularly the deepwater areas, because disputes over maritime Exclusive Economic Zones (EEZs) have deterred the necessary surveys and exploration. Chinese sources have characteristically predicted “another Saudi Arabia” of over 200 billion barrels in the contested South China Sea, and such numbers have unfortunately been cited in western media coverage, thus portraying the area as a competition for globally significant hydrocarbon resources. China, however, has a history of making similar claims in Xinjiang and the East China Sea, claims that the energy industry regards with skepticism. Further, nontechnical sources on both sides of the Pacific tend to conflate the terms “resource base” (the expected volume of oil present in the ground) with “reserves” (the amount of oil that is technically and economically recoverable, which is generally around 10 percent of the estimated resource base in the case of frontier deepwater). The conflation of the two terms and the ensuing discussion of elevated resource potential further spread the conception of Asia’s maritime periphery as a potential “silver bullet” for regional hydrocarbon demand.

However, mainstream industry estimates of the amount of recoverable hydrocarbons from the South China Sea are far more circumspect. The EIA predicts that the uncontested coastal zone holds 11.2 billion barrels of oil and 190 Tcf of gas; this area is currently producing 1.2 million bpd


and 3.4 Tcf, divided among seven states. The existence of these resources around the coastal rim has encouraged exploration in the contested coastal areas, as well as fed speculation that there may be undiscovered reserves in the central deepwater areas. However, there may be little to no economically recoverable deepwater hydrocarbons, and the central areas of the South China Sea remain relatively unattractive from an energy development standpoint. While estimates are speculative given the lack of survey data, the National Bureau of Asian Research compiled the best available estimates and industry forecasting methods to produce a “best guess” of recoverable reserves in the contested zone of 1.6–6 billion barrels, delivering approximately 650,000 bpd for ten years before declining sharply along standard deepwater depletion curves. This volume of supply is dwarfed by both regional demand and the available Middle Eastern resource base; as context, China’s domestic proven reserves have grown by 4 billion barrels of oil and 27 Tcf of gas over the last three years, with little effect on China’s energy security equation.

A host of other geographic and economic factors further call into question the contested areas’ energy potential. In addition to the political challenges associated with the maritime disputes and their role in deterring investment and surveys, natural gas is more likely to be prevalent than oil across the South China Sea, which will yield less monetary and energy security benefit. The deepwater nature of the areas adds further logistical challenges and costs, as does the absence of infrastructure and the long distance to gas processing facilities. These logistical challenges are further amplified by the region’s unusually strong undersea currents and tropical storms. Developing any resources identified, particularly in the South China Sea, would require substantial time and risk. Even if the political obstacles could be overcome, it would require years to develop the necessary surveys, testing, exploratory drilling, building of wells, and logistical networks—all with the potential for little or no significant hydrocarbon production. As such, development of the contested deepwater regions remains speculative and distant. The most promising development potential for the medium term lies in uncontested areas, and on the margins in the coastal and contested zone, with firms hoping to push out from existing fields with shorter distances and relatively shallower water.

What Is the East China Sea’s Hydrocarbon Potential?
Similar to the South China Sea, the ultimate potential of the contested area of the East China Sea is relatively unknown as the political disputes discourage adequate surveying and exploration. However, reliable sources assess a more moderate resource base than in the South China Sea, focused again more heavily on natural gas than oil. While Chinese sources predict as high as 160 billion barrels of oil and 250 Tcf of gas, the EIA estimates between 60 and 100 million barrels of proven/probable oil reserves, and currently 1–2 Tcf of natural gas with some potential for further gas discoveries. Unlike the South China Sea, from a Chinese perspective, the East China Sea does not have the deepwater and logistical distance issues, making the development of any hydrocarbon resources discovered more likely. However, from a Japanese perspective, significant logistical hurdles exist for development; having to build gas pipeline infrastructure to cross the Okinawa Trough would be expensive and difficult, with the gas more likely to be pumped to mainland China for processing.

It should be emphasized that the South and East China Seas cannot be directly equated in terms of either energy potential or the context of China’s foreign relations. From the Chinese perspective, the South China Sea dispute is party to a host of smaller nations with less robust ties to the United States, more concrete sea lane and security concerns, a much larger and more distant sea space, and better potential upside for natural resources. In contrast, the East China Sea features Japan, a country that is a major power and trading partner with robust ties to the United States. The East China Sea dispute, as it involves Japan, has a shorter trigger for nationalist sentiment, making it potentially more difficult for Beijing to ignore or manage domestically.

**What Are the Likely South and East Sea Contributions to Chinese Energy Security?**

Potential South and East China Sea contributions to Chinese energy security are deeply speculative. Given the region’s hydrocarbon demand growth, Asia is almost certain to see continued growth in its dependence on Middle Eastern oil and regional sea lanes. China’s expected hydrocarbon demand growth far exceeds even optimistic mainstream projections of South and East China Sea deposits, meaning that development would likely only marginally decrease import reliance and contribute little to energy security. As such, the center of regional energy security will not be located in disputed, speculative, and technically difficult deepwater offshore claims; rather, regional energy security will increasingly rely on the sea lanes that provide Asia with access to key producing areas. Although the potential for significant resources in the areas cannot be wholly dismissed, this potential, particularly for oil, is generally overstated and not commensurate with the level of security competition observed. As I explore in greater detail below, the interaction of moderate hydrocarbon potential with more powerful political factors better explains the intransigence and volatility of disputes over maritime exploration rights.

**Evaluating Regional Fisheries as Drivers of Resource Conflict**

As is the case for energy resources, reliable data are difficult to ascertain for regional fisheries and fish-related confrontations. Most data come either from national governments or national media, which in addition to biases face their own data collection challenges. China alone reports over 1 million fishing vessels. It is worth pointing out there is a long and geographically wide context for Asian fishing disputes: Such disputes have occurred from the Russia in the north to Sri Lanka in the southwest, and many of these disputes do not of course involve China. China’s role is defined by its large coastline and massive population and by its rising incomes and growing protein consumption, the combination of which have cemented China’s status as the world’s largest fishing nation.

As is true with hydrocarbons, there is increasing anxiety in regional fisheries between sharply increasing demand and anxiety over local stocks. This divergence has amplified competition over fishing rights. Demand continues to grow as a function of regional population growth, economic development, and preference for fish consumption. China’s population is predicted to peak in 2030 at 1.46 billion, and Vietnam’s is expected to grow by up to 25 percent to 2050, reaching around 110 million. Vietnam depends heavily on its maritime economy for energy, fish, and

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trade; the Vietnamese government is seeking to further exploit maritime resources, calling for the maritime economy’s share of GDP to increase from 48 to 55 percent by 2020.21 The South China Sea is among the world’s richest fisheries resources; it supplies potentially 10 percent of global consumption, despite dramatic stock declines between the 1960s and late 1990s. Fisheries represent a multi-billion-dollar industry and a significant source of employment for the areas surrounding the South China Sea. Despite significant Chinese conservation efforts since the late 1990s, overfishing (including illegal and unreported fishing), pollution, and climate change issues continue to threaten fishery stocks.

However, although fisheries are important regional economic and social issues, they too can be overvalued as a resource driver that is directly contributing to conflict. Despite some literature attempting to directly link food security concerns and regional tensions, the economic and social value of stocks is not commensurate with the amount of regional tension and top-tier political issues that fishing issues have generated. Of course, fisheries jurisdiction issues are not unique to Asia. Most of the world’s coastal countries, some of which have far more pronounced food security issues, have to manage fisheries issues with neighbors. This is typically accomplished without significant conflict.

At the risk of simplification, from an economic perspective, fisheries provide two primary benefits to regional states: a source of protein and a source of economic gain (reduced imports, increased exports, and employment). These are serious considerations given the demographic pressures covered above, and diminished fishing activity can create political pressure from sensitive constituencies. However, in both cases, the benefits are relatively fungible: There are substitute sources of protein and employment, and states can import fish from global markets. Further undermining a direct link between food security and Chinese vehemence in fishing disputes, the majority of seafood produced in China is farmed, and China exports around half its yearly global catch.22

I do not wish to undervalue regional fisheries, and I argue below such fisheries have more significant value when amplified through their ties to national self-image and political legitimacy. However, assessing its role as a potential economic driver of the observed level of regional conflict— independent of any political concerns—the value of fisheries should be seen as a secondary consideration, particularly given the impending risks and costs associated with such conflict.

**Resource Issues as Indirect Drivers and Political Instruments**

In sum, at first glance, natural resources appear to be competing with some of China’s top-tier foreign policy interests (potential conflict, regional and Sino-American relations, China’s international reputation). However, a better understanding of the potential value of these resources suggests that their economic weight is significantly overstated as a primary driver of regional disputes. For example, consider China risking conflict with Japan—an economic calamity of the first order, with the potential for exceptional military and economic escalation—for the primary purpose of securing the rights to explore for speculative hydrocarbon deposits that partially facilitate economic development. Further, neither maritime dispute is new, nor is the South China Sea conflict approaching the peak levels seen between 1988 and 1995, despite pronounced growth in resource demand. During most of the period of heightened tensions, China

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was an oil exporter and believed it would continue to be energy self-sufficient.\textsuperscript{23} Finally, disputed resources alone do not historically create the “winner take all” atmosphere that has typified recent Chinese energy behavior in the South and East China Seas. As a body of resource security research has suggested, resource disputes rarely create conflict where tensions do not already exist, suggesting that resource issues tend to exacerbate existing geopolitical tensions rather than create them independently.\textsuperscript{24} Resources are typically divisible, not zero-sum. There are plenty of established options for dividing the resources, dividing the territory, jointly developing, or disagreeing—options that do not involve militarization—and neighbors historically find these options. Such developments usually result in producing resources for regional economies rather than keeping them under water while heightening tensions.

Given this, an overemphasis on “resource drivers” is likely obscuring the fundamental strategic interests guiding China’s behavior in its maritime periphery. I assess that Beijing’s fundamental goals are to establish increasing jurisdiction over maritime territory through a coordinated, long-term campaign involving all elements of statecraft (diplomatic, legal, economic, and military). Beijing is motivated to do so by a consistent sense of maritime insecurity, a desire to assuage and satisfy domestic nationalism and buoy political legitimacy, and (as a distant third) a desire for the area’s potential natural resources. As maritime disputes receive more public attention, particularly within China, the link between resource issues, popular nationalism, and political legitimacy increases. Several other top-tier interests balance Chinese assertiveness: Beijing’s attention to regional relations, Sino-American relations, public diplomacy and its efforts to cultivate an image of a “peaceful rise,” and the need to deter conflict in the “strategic window of opportunity” for China’s economic development.

My colleague Andrew Scobell’s concept of China as being in a learning process of “Slow Intensity Conflict” describes the activity well: China is calibrating a constant, low-level campaign of establishing presence and precedent, opposing rival abilities to do the same, taking advantage of incentives. China’s recent escalatory operations in the East China Sea fit well with the concept of “Slow Intensity Conflict,” as China likely saw an opportunity for expansion during the transition of islands from private to Japanese public ownership. Over the next few months, China will likely attempt to dial back tensions, having established a new baseline that it will continue to reinforce with less dramatic incursions.

Within this broader framework of interests and strategy, resource issues function in China’s maritime disputes in two fundamental ways. First, hydrocarbon rights and particularly fishing disputes serve as increasing focal points for issues of popular nationalism and are, thus, directly connected to core Chinese Communist Party (CCP) concerns over political legitimacy. Second,

http://www.brookings.edu/~media/research/files/reports/2006/12/china/12china.pdf


resource issues can be used as political instruments to demonstrate jurisdiction over disputed sea space. These roles are described in more detail in the sections below.

**How Do Natural Resource Disputes Serve as Focal Points for Nationalism and Political Legitimacy?**

Perceived control over China’s maritime periphery and, thus, perceived success in regional maritime disputes exist in a broader context of popular nationalism and Beijing’s continued concerns about political legitimacy. As such, energy and fisheries issues activate popular nationalism, functioning as focal points and amplifiers for domestic nationalist discourse. A review of the Chinese media and blogosphere reveals the depth and vehemence of these feelings; fishery disputes are often front-page national news, and the level of vitriol is rather shocking. From a political and social stability perspective, local and national CCP leaders are, of course, sensitive to these sentiments and aware that they exist in a wider context of public anger over corruption, land grabs, and other well-publicized reasons for Chinese popular discontent. In this context, Chinese leaders likely see maritime rights issues as a potential threat to legitimacy and stability if mishandled and as a potential “diversionary force” for public anger if calibrated correctly. That calibration is difficult and risky, in particular when government actors have less than perfect control over maritime actors, such as fishermen and maritime law enforcement. There is also a temporal dimension to nationalist rhetoric; the longer and more publicly tensions exist, the greater the relative political cost of retreating or compromising.

Public perceptions and control of key symbols are naturally central to managing popular nationalism, and these perceptions shape the resource dispute discourse. With respect to fisheries, fishermen in East and Southeast Asia are potent national symbols, somewhat like farmers in the American political context. To have fishermen denied their livelihood in areas perceived as historical fishing grounds or, worse yet, detained or facing violence can strike deeply discordant notes. As such, it is not surprising that confrontations involving Chinese fishermen receive scant coverage in Chinese media, because the CCP is understandably worried that such detentions could leave the party open to charges of lax protection.26

While fisheries may serve less as a direct economic driver for conflict than speculative oil and gas potential do, they are arguably more important as focal points of nationalism and potential conflict escalation. Compared to energy actors, fishermen are in routine operations, often in proximity with other states’ maritime actors, with fewer operational restraints, and they are pursuing resources that are being exploited now rather than explored for potential future benefit. Oil firms are comparatively sparser, future-oriented, and operating to uncover unknown resources. Regional fishing areas can also be exceptionally crowded, particularly between the northern Vietnamese coast and Hainan Island. Proximity remains a very real issue, and the United States should resist the urge to summarily conclude that collisions in the densest areas are orchestrated or intentional.

With respect to energy, China’s energy perceptions are shaped by persistent and widespread conventional wisdom about “peak oil,” the inevitability of resource conflict, China’s sea lane vulnerability and “Malacca dilemma,” a distrust of international markets and economic organizations, and a presumption of malevolent American intentions. All this leads to the further politicization and securitization of hydrocarbon issues. China’s mistrust is amplified by the fact that western powers and Middle Eastern producers dominate in the energy domain, with the United States having well-established and technically advanced firms and longstanding

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27 The “Malacca Dilemma” refers to anxieties over the security of China’s seaborne oil imports, particularly at the narrow Strait of Malacca, a strategic chokepoint on the extreme southwest of the South China Sea. Over 80 percent of China’s oil imports transit the Strait by tanker, which China’s senior leadership has identified as a potential strategic vulnerability.
commercial and political relations with key producers. China’s state-owned firms are still comparative neophytes in this area.\(^{28}\) The perceptions of energy insecurity and lack of deep commercial, political, and institutional links to the core energy producing states tends to amplify the dispute’s resource dimension and the sense of zero-sum stakes that pervade the dispute.

**How Do Natural Resource Issues Serve as Policy Instruments?**

In addition to their relationship with nationalist politics, resource issues serve as tools in building a case for legal jurisdiction or for opposing similar claims from rivals. Within contested waters, the presence of Chinese fisherman and the detaining of rival fishermen demonstrate a precedent of jurisdiction. Oil blocks or surveys can function in similar ways: Offering blocks or conducting surveys on the fringes of disputed sea space can reinforce a case for ownership. It is worth noting the hydrocarbon potential of these blocks can be quite low, and the terms of development onerous for international oil companies (IOCs).\(^{29}\) The June 2012 announcement by the Chinese National Offshore Oil Company of nine blocks near the central and southern Vietnamese coast, the most assertive blocks announced to date, are almost certainly an example of political value trumping energy development potential.\(^{30}\) China has also interfered with opposing Vietnamese and Philippine efforts at conducting energy surveys, either by pressuring firms by threatening to curtail their other business in China or, in the most extreme cases, by intimidation or cable cutting of seismic survey vehicles.\(^{31}\) As for rival claimants’ resource activities, Beijing often gets to strategically choose when it is “offended” by an oil block or fishing issue. Malaysia, for example, has proffered blocks in contested areas in the South China Sea, and there was no appreciable reaction from China. Because these jurisdictional flashpoints involve fisheries and hydrocarbon activities, they further contribute to popular conceptions of a “resource conflict,” despite often functioning more accurately as tools for establishing jurisdiction.

**Implications for U.S. Policymakers**

Several issues in the resource domain are worthy of policymaker attention in the near to medium term. Individually or in sum, these issues could both increase the domestic political pressures surrounding resource issues and present increased opportunities for accidents and miscalculation:

- **Potential for Meaningful Joint Development:** Given that the roots and key drivers of the disputes are not in the resource realm, it is doubtful that an enduring remedy can be found there either; focusing on resources likely deals with symptoms rather than addressing root causes. China is likely reticent to negotiate or pursue meaningful joint ventures, partly because its current strategy of consistent, low-level pressure is doing an adequate job of meeting its objective of increased control of its maritime periphery. Fundamental concerns over who controls above-surface features will continue to make

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joint development unlikely to ameliorate the disputes in a more comprehensive manner. It is worth noting that China received a good deal of domestic criticism over exploring joint development with the Japanese in 2008; both sides have ample examples of functioning joint development zones, but the Chinese particularly lack the political will to pursue them.32 While China has offered some joint projects, critical details have often been prohibitively one-sided. Fundamental questions of whose legal code, whose tax code, whose oversight mechanism, and particular aspects of maritime geography delineate between genuine offers of joint development and public relations ploys. Joint development potential will continue to vary from block to block and may alleviate some tensions tactically. The value of this should not be understated—tactical successes in joint development can help alleviate short-term tensions and open doors for dialogue on the more foundational issues. However, joint development, efforts to de-link territorial disputes and maritime jurisdictional claims, and codes of conduct remain starting points in much more difficult, often domestic, dialogues about power and place in the context of popular nationalism.

- **Potential for Hydrocarbon Survey to Alleviate Tensions:** For similar reasons, meaningful future survey work that suggests a lack of significant hydrocarbon potential is unlikely to greatly ease disputes over maritime jurisdiction. It is worth noting that the Paracel Islands have little to no energy potential, yet continue to be a focal point of dispute. Meaningful surveys are unlikely to take place, and in any case, it is unrealistic to survey the entire area. Thus, the perception of energy potential may prove quite enduring. Further still, enduring perceptions of resource potential may be useful to Beijing as a more palatable public reason for asserting maritime control. Potential unconventional energy dynamics, such as Chinese shale gas development, probably hold similarly little potential to lessen maritime tensions.

- **Technological Capability of Regional Oil Firms:** With respect to contested deepwater areas, continued growth in the competence of regional national oil companies (NOCs) could lessen their relative need to partner with IOCs for deepwater survey and development. Currently, to meaningfully conduct exploration and production of potential deepwater blocks in the South China Sea, regional firms must partner with more technologically advanced and less politically driven IOCs. Development of more advanced capabilities within regional state-owned firms, particularly China’s CNOOC, could lessen or remove IOCs’ comparative conservatism as a brake on assertive activity. China’s first deepwater drilling platform, CNOOC’s 981, is a sign of emerging capabilities, and 981’s activities may be a bellwether of CNOOC’s strategy in this regard. At its launch in May 2012, CNOOC’s CEO described 981 as “mobile national territory and a strategic weapon” (战略利器).33 From 2003 to 2011 CNOOC was typically less interested in the contested areas of the South China Sea, but CNOOCs new CEO appears to have a more assertive stance. The effect of NOC development can be overstated: Regional NOCs have found willing foreign investment partners in some of their riskier projects (although no takers in others), deepwater vessels are not required for initial survey ventures, and China’s NOCs are not simply political pawns of Beijing’s foreign policy wishes.34 Moreover, China does not require deepwater exploration capability to announce assertive blocks. However, holding all other variables equal, regional NOCs are more beholden to

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parent governments than IOCs, and growth in their capabilities could add to the relative politicization of oil survey and drilling activities.

- Increasing Importance of Regional Sea Lanes: As regional states' oil import and trade dependence continues to grow, the criticality of maritime sea lanes will likewise increase. This will mean more vessels, in closer contact, and more national value contained within sea lanes. This will further underscore China's insecurities about its maritime sea lanes and its "Malacca dilemma." Increased regional reliance on sea lanes also occurs within a context of regional naval modernization and a continued relative growth in Chinese naval power. Dependence on sea lanes and expanding regional Chinese naval power is likely foreboding to Vietnam and particularly to an island nation like the Philippines, where maritime commerce is largely concentrated at Manila Bay. Increasing sea lane dependence also raises issues about the degree to which the United States can, and should, consider holding China's sea lanes at risk.

- Potential for Depleting Fish Stocks: With regard to fisheries, regional demand growth may complicate efforts both to protect sustainable stocks and delineate respective jurisdiction. Regional stocks cannot be considered stable. If regional stocks become further depleted, two dynamics can take place that increase escalatory pressure: recrimination on other coastal states for the blame of low fish returns, and increased pressure to fish further offshore or in new areas. A "tragedy of the commons" dynamic is also possible: If the parties cannot agree to and enforce a scaling back of fishing activity to allow stocks to replenish, depleting stocks could encourage actors to take what they can, while they can, causing a feedback loop rather than conservation. China has done a great deal to encourage conservation since the late 1990s in reaction to severely depleted stocks. These efforts include summer fishing bans in selected waters, protected areas, and a cap on total fishing capacity. These efforts are important and should be applauded; however, it remains to be seen if they will endure in the face of rising demand and competition for resources. Vietnamese fisherman are taking advantage of China's summer fishing bans, which both undercuts resource replenishment and raises tensions. Strengthening regional fisheries governance, both multilaterally and bilaterally, can help minimize flashpoints.

Thank you again for the opportunity to testify, and I look forward to your questions.

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