



Drivers of Conflict and Convergence in the Asia-Pacific Region in the Next 5-25 Years

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Scope

USPACOM requested that the Strategic Multi-layer Assessment (SMA) team conduct an “Examination of future political, security, societal, and economic trends to identify where US interests are in cooperation or conflict with Chinese and other interests particularly in the East China Sea.” More specifically, USPACOM requested an examination of future political, security, societal, and economic trends; identification of where US strategic interests are in cooperation or conflict with Chinese and other interests, particularly in the East China Sea; and suggestions as to how USPACOM might best leverage opportunities when dealing with China in a “global context.” The project request also included a series of questions (see Appendix A) that, taken together represent two broad concerns.

- *The Nature of the Future Operating Environment.* Namely, how should USPACOM planners envisage the threats and opportunities represented by the Asian environment over the next 5, 10 to 25 years? (Questions 1, 2, 3, 4, 7, 8)
- *US Engagement Policy.* Specifically, what are the key components of a regional engagement policy centered on China that empowers US partners and allied interests to foster multi-lateral defense of strategic stability in USPACOM’s AOR? (Questions 9, 5, 6, 10 and 11)

The primary objective of this project was to provide decision makers the tools to make better sense of the non-linear dynamics and feedback mechanisms at play in the complex environment in which they, and their competitors, operate in the Pacific region and, by doing so, broaden the horizon of strategic thinking and inform planning.

SMA convened a multidisciplinary group of eleven teams drawn from government, industry, think tanks, and universities. The individual teams employed multiple methodological approaches, including strategic analytic simulation and qualitative, quantitative, and mixed analyses to address USPACOM’s questions. This integration report focuses on the qualitative and quantitative analyses conducted by the think-tank and industry teams (CEIP, CSIS, Monitor 360) and academic teams (START, TAMU, UBC) that informed the simulation and modeling work done by the other teams (GMU, NPS, ICONS).

Executive Summary

Dr. Belinda Bragg (NSI)

Evaluating strategic risk in the Asia-Pacific region over the next two to three decades is a complex challenge that is vital for USPACOM planning and mission success. Based on current trends, it appears that what some have dubbed the 'Asian Century' may be taking shape. By 2020, three of the five largest economies in the world and more than half of the ten largest militaries in the world will be located in Asia, and more than half of the world's population will soon reside in the region. How well the United States (US) responds to emerging opportunities and threats to its interests will be determined by the depth of its understanding of the diverse set of political, economic, and social factors in the region. A better understanding of the priorities and interests that drive the "rise" of China, Asia's largest country, as well as the likely global consequences of its actions will help planners and policy makers both anticipate and respond to future developments. A multi-disciplinary framework that combines these needs could provide valuable insight in dealing with this complex and evolving issue.

The diverse range of approaches and sources utilized by the individual teams involved in this project is one of the strengths of the SMA approach; however, it also makes comparison and synthesis across individual analyses more challenging. The findings from this project are integrated using an interest-based framework. Most broadly, these interests can be categorized as security (preservation of the state and military security), economic (economic prosperity and development), and prestige (international influence and standing). National interests generate economic, social, and international prestige objectives for states, which in turn inform their foreign policy goals and underpin a state's position and response to specific issues that arise in regional relations. Domestic constraints and pressures can intervene between national interests and foreign policy objectives, potentially changing the nature of that objective, its relative salience, or both.

Without an understanding of the national interests and objectives of both sides, anticipating the likely consequences of any action to influence an issue becomes a matter of luck. The potential of a situation or action to create conflict or cooperation between states is a function of how those states' interests align and whether their leadership perceives these interests to align or conflict. When interests lead states to seek or prefer different outcomes, conflict (not necessarily military) is created and all states involved face some risk that their interests will be threatened, although if they prevail, there is also opportunity to further or secure an interest. When the interests of states align and all involved can benefit from the same outcome, opportunity also exists. Consciously or not, state leaders and decision makers attribute objectives, goals, interests, and intentions to other states, and interpret their actions in light of these attributions.

Defining Risk and Opportunity

Determining how the issues, goals, and constraints facing regional states in the Asia Pacific will develop and evolve over the next decade, creating either risk or opportunity for the US, requires a consideration of how risk and opportunity are defined, and the interests or objectives to which they refer. The interest-based integration framework informs the way in which risk and opportunity are defined and assessed. In this framework, risk to national interest is defined as *situations or actions that threaten a state's achievement or protection of an interest*. Opportunities to pursue national interest can be defined as *a situation or action that helps a state to protect or further an interest*.

In many cases, states have multiply interests at stake in a single issue. If we only assess a state's preferences on one interest dimension (e.g., assuming that a territorial dispute involves only security interests), when, in fact, that state perceives the issue to impact other interests as well (e.g., seeking control of territory for economic purposes or in response to domestic nationalist pressures), we are unlikely to accurately predict its actions or responses. The challenge lies in accurately assessing how other states perceive their interests to be affected by a particular situation in order to be able to craft the most effective approach, rather than assuming their interests will mirror ours. The benefit of considering issues from this interest-based approach lies in the potential it creates to identify more areas of potential cooperation. When states have multiple interests at stake, there is an increased possibility of trade-offs, or mutually beneficial outcomes. If a state has only a single interest at stake in an issue, then their perception of the losses and gains from a particular outcome will be based only on that single issue. This increases the probability that, in contentious issues a zero-sum game will emerge, making a negotiated outcome less likely. However, when a state has multiple interests at stake in an issue, or competing states have asymmetric interests, there is more bargaining space in which to locate an outcome that benefits all actors. The implications for the balance between risk and opportunity this creates is presented in Figure 1 below.

		Nature of the issue outcome	
		Zero-sum	Variable-sum
Interests at stake for actor	Single interest	<p>This combination creates the greatest potential for risk.</p> <ul style="list-style-type: none"> If all relevant actors share the same single interest, conflict is most likely, as it is not possible for all states' interests to be secured. If there are different interests at stake for relevant actors and a single outcome can accommodate both, the likelihood of conflict is reduced and some opportunity is present. 	<p>This combination creates some opportunity, as it is possible for all relevant actors' interests to be at least partially realized from the same outcome.</p> <ul style="list-style-type: none"> If there are different interests at stake for relevant actors and a single outcome can accommodate both, the opportunity is substantially increased.
	Multiple interests	<p>This combination creates the potential for some risk, as it is not possible for all actors to achieve all of their interests from the same outcome. Opportunity exists if actors are willing to trade-off across interests—take a loss on one in return for a gain on another.</p>	<p>This combination offers the greatest opportunity, as it is possible for all actors to achieve their interests at least partially.</p>

Figure 1: An interest-based approach to strategic risk and opportunity, and their relationship to the probability of conflict.

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The objectives and interests of both US and China in the Asia-Pacific region provide the necessary context for understanding how US actions and behaviors are likely to be interpreted, and how the actions and behaviors of others, specifically China, may be better understood and predicted, and thus more effectively responded to.¹

¹ A discussion of US and Chinese interests and objectives in the Asia-Pacific region is provided in the full integration report.

Strategic Risk and Opportunity in the Asia-Pacific Region

Strategic risk is defined in this report as situations or actions that threaten a state's achievement or protection of an interest. Two primary areas of risk for the US in the Asia-Pacific region over the next two decades are identified: divergence between US and Chinese preferences regarding regional balance of power and increasing regional economic competition. Both of these areas of risk could increase the probability that existing territorial disputes escalate, and both are likely to be exacerbated by the presence of domestic instability and rising nationalism in regional states.

Regional Balance of Power

There is overall agreement that China is unsatisfied with its current position in the international community and seeks to regain the cultural prestige and international influence it historically enjoyed in the region. While both the US and China have interests in a regional balance of power, the outcomes they seek diverge. The US believes that stability and prosperity in the Asia-Pacific is best ensured through an environment in which it exercises predominant maritime power as a security guarantor, and also enjoys very strong political and economic access and influence. China believes that a more genuinely multipolar environment is best for the region, one in which several major states balance against one another and differences are resolved peacefully through either bilateral negotiations or the authority of multilateral or international institutions. As the issue is zero-sum, and it is not possible for both to achieve (in the case of China) and maintain (in the case of the US) their interests, this creates risk. This may also be one area in which the current perception of US security interest (maintaining regional dominance) may not achieve the desired ends.

Specifically, the team findings suggest we should not assume that a strong China will be more aggressive or a weak China less so. A more influential and aggressive Chinese foreign policy could result in the stronger pursuit of its territorial aims, and more challenges to both the credibility of US alliance commitments and overall US military predominance, increasing the probability of an intensifying and unstable security competition. However, China regards regional stability as a necessary condition for its economic growth and sees regional security cooperation as essential to that stability. These priorities are unlikely to change, even over the longer term. China's rise is an integral part of the China Dream,² and failure to achieve this may create domestic and economic pressures on the leadership that result in more aggressive foreign policies although, historically, regime insecurity has most often caused China to make major concessions abroad.

Increasing Regional Economic Competition

Economic issues, in particular resource security, are expected to continue to shape regional relations with various regional states forecast to experience slower growth rates, due in part to increasing social welfare costs. Understanding the economic interests at stake for regional actors across all issues will be critical in predicting actions and responses to US actions.

Peaceful development is a priority for all regional states and an integral component of China's regional strategy and the China Dream, to which the Chinese Communist Party (CCP) has linked its governing

² The China Dream is a concept proposed by Xi Jinping as the guiding policy for the nation. It typically refers to the goal of achieving a "moderately prosperous" society by 2021, and to regain regional primacy by 2049.

legitimacy. At the same time, economic downturn is generally considered by the teams to be a *possible* trigger of more aggressive Chinese foreign policy and greater regional instability. Insecure regimes often look to strengthen popular support through a heightened emphasis on nationalist objectives and interests, such as territorial claims and resistance to foreign “intimidation.” In addition, energy security is considered a national security issue for China and is also critical to the economic growth that underlies domestic stability in many regional states. Energy needs are, therefore, a possible trigger of competition and potential conflict between regional states. As Chinese and Indian dependence on imported energy increases, concerns for energy security will increase the salience of disputed maritime territories in the South and East China Seas. Such actions would run counter to US interest in maintaining security and stability, and also increases the probability that USPACOM may be placed in the position of having to intervening to support an ally and demonstrate US credibility, potentially further escalating a dispute.

Domestic Instability and the Rise of Nationalism

Rise in popular nationalist sentiment in China or regional states is likely to reduce cooperation and increase the probability of crisis escalation, particularly over territorial and maritime disputes. Domestic economic and social conditions, and challenges to regime legitimacy are the most likely drivers of such a rise in regional states. This could have significant implications for the US’s interest in regional stability, as linking crises and territorial disputes to nationalist sentiments increases the salience of the issue to the public and creates a more zero-sum bargaining environment. Consequently, leaders’ room to maneuver or back down is constrained by concerns over loss of legitimacy and public support making conflict more likely. That said, it is also true that for China, regime insecurity (e.g., as a result of economic downturn or domestic political strife) has most often resulted in major concessions abroad to stabilize the external environment and allow the leadership to focus on internal problems. Thus, overall, while domestic instability and rising nationalism could generate a more rigid and aggressive response to perceived foreign pressure or crises, it is unlikely to cause the Chinese leadership to initiate conflicts with other regional states.

Territorial and Maritime Disputes

Driven in large part by domestically driven economic demands and resource security concerns, as well as the changing balance of military and paramilitary forces along China’s maritime periphery, and the possible emergence of more strident forms of nationalism in various states, territorial and maritime disputes have the potential to become more escalatory.

Non-State Actor Threats

With increasing regional trade and energy demands, it is likely that threats such as piracy and smuggling will continue to present challenges for regional states economic and security interests in coming years. This is an area in which there is already regional cooperation, and the potential for mutually beneficial outcomes exist.

The Asia-Pacific Region Over the Next Two Decades

Key elements of the economic and security environment identified by the teams as critical to US, and more specifically USPACOM, interests and objectives in the region include: military balances, economic growth and development, territorial and maritime disputes, and non-state actor threats. When considering these trends, it is important to note that the further out in time we forecast, the less certainty we can have regarding predictions.

Asia's Next Rising Power

There is agreement that China will be the next rising power in Asia, although India is also expected to grow in both power and influence. Competition is likely to increase between the two states over access to resources and foreign economic performance. The structural similarities between the two economies (rising/developing middle tier powers), in particular insufficient domestic oil resources, large migrant worker pools, and export driven growth, almost inevitably sets them as regional competitors for finite resources. While China is poised to become an increasing security threat to India, especially in the maritime realm, the two countries have a history of cooperation on issues such as smuggling and terrorism. The US's interest in regional stability and security may be better served by building on the areas for cooperation between India and China, both economic and security (non-state actor threats to economic interests in particular), rather than taking actions that may increase tensions and competition between the two.

Maritime balance of power

There is also general consensus that China will, over the next 25 years, likely become a much stronger, more capable, and active military power in the Asia Pacific. Specifically, Chinese naval forces (including submarines, surface warships, and aircraft), land-based advanced aircraft and ballistic missiles, advanced long range anti-aircraft systems, air- and sea-launched anti-ship cruise missiles, more capable forms of C4ISR, space and cyber systems, and a variety of paramilitary forces (centered on the Chinese Coast Guard) will continue to increase in both number and capability. This steady development will likely call into question the clear ability of US and allied forces to prevail in crises or conflicts occurring within at least the first island chain (i.e., approximately 1,500 nautical miles of the Chinese coast), despite continued fairly robust levels of US and allied defense spending. In other words, under the most likely trajectories of Chinese, US, and allied development, past American military predominance along China's maritime periphery will give way to an uncertain, more equal balance of forces over the longer term.

Military and paramilitary force developments have clear implications for perceptions of security as well as regional balance of power. However, the findings from the team reports suggest that interpreting all naval build-up as driven primarily by balance of power considerations may be misleading. Domestic factors such as economic downturn and increased social service demands may constrain defense spending in the US and regional states such as Japan, reducing the likelihood of an arms spiral. Alternatively, states, including China, could increase defense spending in an attempt to stimulate a slowing economy. There is disagreement as to whether increased Chinese naval capability on its own will increase the risk of escalation and conflict. Although the movement toward a more equal balance of power in the Western Pacific might result in greater instability as a result of overall uncertainty and

attempts by China, the US or other powers to “test” capability and resolve, this is by no means inevitable.

Decreasing Risk and Increasing Opportunity

The extent to which these factors will present risks to US regional interests will be a function of the strategic interactions between the US and China, and the actions and reactions of other regional actors. The US’s ability to manage the uncertainty that accompanies changes in the balance of regional power and various types of domestic instability can be offset and managed by improving strategic communication. Effective strategic communication requires a better understanding of China and other regional states’ interests and goals, as well as China’s perception of its role in the region. Understanding how historical experiences condition contemporary regional relations will be critical to this.

Multilateral Solutions to Challenges in Asia

Although there are many regional issues (such as territorial and maritime disputes) that are both highly salient to regional actors and zero-sum, there are others where interests overlap and mutually beneficial outcomes are possible. In particular, non-state actor threats, such as piracy, sea lines of communication, smuggling and terrorism, are issues that negatively affect the security and economic interests of many regional states, without putting them in direct conflict with one another. There is considerable overlap in findings regarding the potential for multilateral solutions and those for strengthening partner nations. This suggests that a coordinated approach to these two goals may provide a more efficient and effective means of furthering US regional interests and goals.

Team recommendations regarding how such cooperation might be achieved fall into two main categories: those which address primarily security-related US interests and those that have potential to secure and further US economic interests. In many cases, the consequences of these recommendations have implications for US interests that go beyond multilateral cooperation to reinforce broader regional goals. For example, hosting multilateral exercises would improve regional response to natural disasters and non-state actor threats while also providing valuable insight into other nations’ capabilities and SOPs, demonstrating US capabilities in a non-confrontational manner, and potentially improving communication between USPACOM and other regional militaries. USPACOM involvement in increased regional and US coast guard activity could similarly increase regional cooperation on such issues while at the same time balancing increased Chinese use of its coast guard to extend influence in disputed territories. These activities would conform with USPACOM’s guiding principle of demonstrating US commitment to the region both in terms of assisting to combat common threats, reassuring allies, and containing and adding cost to Chinese military outreach. Providing greater support for crisis management mechanisms within an existing regional organization, such as ASEAN, may increase the probability of overcoming the barriers to multilateral solutions to more contentious issues such as territorial disputes and energy security interests.

Strengthening Regional Partner Nations

Support of regional partners in regional institutions, particularly ASEAN is an affordable option for strengthening partner nations and also contributes to other USPACOM objectives. Furthermore, regional

state's preference for dealing with disputes and contentious issues through regional organizations may make this approach better received and decrease the likelihood that US involvement will escalate tensions with China.

Regional Impact of China's Strategy and Actions

China's strategy and actions will be conditioned to a great extent on the level and type of US engagement in the region. This suggests that the US has considerable influence over the manner in which China will interact with its regional neighbors in coming years. This is consistent with the more general finding that emerged from the project regarding how regional states balance protecting their security interests while furthering their economic interests when they rely on the US for security but are increasing their economic ties to China. States that are more dependent on China for their economic stability will be more vulnerable to economic pressure from China, while those with more diversified trading relationships will be less so. The United States' ability to maintain its security influence in the region will almost certainly increase if matched by increased US economic influence.

Strategic Recommendations

The findings and recommendations from this project suggest that continuing to rely on military strength to protect US regional interests, particularly in a fiscally constrained environment, may be a suboptimal approach. Rather, as the discussions on strategic communication, strengthening partner nations, and encouraging multilateral solutions all emphasize, regional cooperation may offer greater potential for the US to maintain its interests and influence in the region in the longer term. Table 1 below provides a summary of the major recommendations and their relation to USPACOM guiding principles.

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Table 1: Team recommendations and related USPACOM guiding principles

TEAM RECOMMENDATIONS	USPACOM Guiding Principles					
	Promote adherence to & defend internat'l rules	Modernize & strengthen alliances & partnerships	Force projection	Unity of effort	Strategic communication	Readiness to fight & win
Clarify US interests in the Asia-Pacific (CEIP, TAMU)					X	
Host multilateral exercises on non-controversial topics (e.g. disaster response) (Monitor 360)	X	X		X	X	
Increase regional cooperation on non-state actor threats (START)	X					
Work with US and regional coast guards (START)	X	X		X		
Provide greater support for crisis management mechanisms (CEIP, Monitor 360)	X	X				
Establish a coordinated force for defending sea lines of communication (CEIP)		X				X
Build capacity of partners to respond to minor disturbances (GMU)		X		X		
Clarify and strengthen US position on maritime disputes (CEIP)					X	
Establish joint forum for discussion of energy security issues (CEIP)	X	X				
Encourage energy supply route diversification (START)	X	X				
Strengthen ASEAN and affirm the importance of good national and regional governance (CEIP, START, TAMU)	X				X	
Establish more engagement with individual ASEAN states (CEIP, GMU, START)		X		X		
Develop long-term strategic dialogue with Beijing (CEIP)					X	
Build better bilateral relationships & channels of communication with China (Monitor 360)					X	
Use PRC leaders' motivational focus on development to facilitate mutually advantageous ties (UBC)	X					
Affirm China Dream economic discourse within context of regional prosperity (TAMU)					X	
Frame US interests in terms consistent with Chinese discourse, and avoid rhetorical entrapments that negatively portray Chinese frames (TAMU, UBC)					X	
Undertake a range of strategic assurances between US and China, (CEIP) and refrain from openly or directly threatening the dominance of the CCP and its leaders (UBC)					X	
Use Chinese discourse to identify possible issues of contention. Do not allow counter-productive Chinese narratives to go uncontested (TAMU)					X	
Develop strategic messaging capability (GMU)					X	X
Utilize selective military transparency to reveal or "leak" key capabilities to change Chinese perceptions of the relative military balance in the region (Monitor 360)						X
Monitor, track and trace how USG messaging is interpreted (TAMU)					X	
Embed USPACOM efforts in a wider USG approach to China (CEIP, TAMU, Monitor 360)				X		
Accelerate development of disruptive defensive technologies (GMU)			X			X

Conflict and Cooperation in the Asia-Pacific Region: A Strategic Net Assessment (CEIP)

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An array of current and long-term forces will drive both cooperation and conflict across the Asia-Pacific region over the next twenty-five years. There are five different security environments that could emerge in the Asia-Pacific region in that time period. They are (in order of likelihood):

- (1) Status Quo Redux (constrained economic and political competition alongside continuing cooperation);*
- (2) Asia-Pacific Cold War (deepening regional bipolarization and militarization, driven by a worsening U.S.-China strategic and economic rivalry);*
- (3) Pacific Asia-Pacific (reduced tension and increased U.S.-China and regional cooperation);*
- (4) Asian Hot Wars (episodic but fairly frequent military conflict in critical hot spots, emerging against a cold war backdrop); and,*
- (5) Challenged Region (a region beset by social, economic, and political instability and unrest separate from U.S.-China competition).*

In order to avoid conflictual outcomes, the United States should: identify U.S. interests in the Asia-Pacific; conduct an unprecedented U.S.-China strategic dialogue; undertake a range of strategic assurances between the United States and China; clarify and strengthen the U.S. position on maritime disputes; coordinate a force for sea lines of communication (SLOC) defense; provide greater support for crisis management mechanisms; establish a forum for the discussion of energy security issues; and, strengthen engagement with ASEAN and with individual member states.

The Asia-Pacific region is undergoing enormous change, fueled by rapid levels of economic growth and competition alongside deepening levels of regional and global integration, significant demographic and income shifts in key nations, rising nationalism, and a growing public awareness of—and assertiveness toward—many sensitive occurrences beyond national borders. These forces and others are generating a shift in the distribution and expression of economic, political, and military power across the region. In general, the region is moving away from the narrow domestic social concerns and bipolar ideological rivalries of the Cold War era, toward a far more complex security environment.

This security environment is marked by the emergence of several new power centers (notably China and, to a lesser extent, India, but also a range of dynamic smaller nations such as South Korea and Indonesia), more intense and crosscutting levels of regional cooperation and rivalry, and, in many states, an increasingly close relationship among domestic nationalism, rapid (and sometimes highly disruptive) social change, and external economic, military, and political events. Overall, these developments are intensifying certain types of interstate rivalries over issues of territorial sovereignty, resource competition, energy security, and market position and access. At the same time, they are creating incentives for cooperation in handling a growing array of common security-related problems, from climate change to pandemics, terrorism, and global financial instability.

This rapidly changing security environment poses a major and increasingly difficult challenge for the United States, the historically dominant military, political, and economic power in maritime Asia. Efforts to enhance regional cooperation, reassure allies and friends, and deter and shape potentially destabilizing behavior are demanding a more complex mixture of U.S. skills and understanding. At the same time, overall U.S. capabilities and influence in the region are diminishing in some areas, placing an even greater burden on U.S. decisionmakers to do more (and better) with relatively less.

This report examines the current and likely future long-term forces that will drive both cooperation and conflict across the Asia-Pacific region. It is part of a much larger project sponsored by the U.S. Pacific Command (PACOM), “Drivers of Conflict and Cooperation in the Asia-Pacific Region Over the Next 5–25 Years,” which comprises both classified and unclassified studies and activities undertaken by analysts at ten research institutes, universities, and consulting groups.

The analytical approach employed in this report is a “strategic net assessment,” similar to a Carnegie Endowment report published in 2013 on the long-term impact of the Chinese military on the U.S.-Japan alliance to 2030. That report identified a range of possible security environments involving the U.S.-Japan-China relationship that could emerge over the subsequent fifteen to twenty years, the possible major drivers for each environment, and the implications of that analysis for U.S. policy. The current report adopts a similar analytical approach—examining not only various military factors but also an equally important range of nonmilitary domestic and external variables likely to influence regional security behavior. In addition, it covers a wider variety of variables, over a longer time frame, and assesses the strategic future of the entire Asia-Pacific region.

This report identifies nearly forty current and possible future trends and features of the Asian security environment that will likely influence its long-term future, in areas ranging from historical memories and leadership outlooks to structural economic and demographic factors. One uncertain feature of the environment is the nature of U.S. initiatives affecting the region’s trends. According to the analysis contained in these pages, these sets of variables present more than a dozen types of strategic risks and opportunities for the United States and could evolve over the long term into five future security environments, from an episodic Asian hot war environment involving frequent but limited conflict, to a largely cooperative, mutually beneficial and peaceful region, as well as three overlapping middle-range futures.

Perhaps unsurprisingly, the environment deemed likely to emerge under the most probable combination of variables is some variant of the current, dynamic Asia-Pacific regional environment, marked by a mix of cooperative and competitive features. Such an environment is sustained by several enduring economic, political, and social factors. However, the report also concludes that this mixed environment could evolve in some extremely negative directions over the next twenty-five years, involving more severe political-military tensions and crises that eventually produce an Asian-Pacific Cold War environment or worse. The analysis also suggests that such dire outcomes could be mitigated or avoided altogether if specific types of actions are undertaken over the short, medium, and long term. These include a clear determination of U.S. and Chinese long-term primary and secondary interests, the development of a genuine U.S.-China strategic dialogue (involving input from U.S. allies and other key states), and the crafting of a resulting series of bilateral and multilateral security assurances.

The report clearly shows that the role of U.S. policies and behavior over the next twenty-five years will prove decisive in determining whatever future security environment emerges in the Asia-Pacific region. Indeed, American initiatives, in some instances involving new or controversial undertakings, will likely prove essential in averting conflict and maximizing the chances that a cooperative and peaceful region will emerge over the long term.

Key Findings

Five Possible Security Environments

Five different security environments could emerge in the Asia-Pacific region over the next twenty-five years (listed in order of likelihood):

I. Status Quo Redux: Constrained but ongoing economic and political competition alongside continuing cooperation in the Asia-Pacific region

II. Asia-Pacific Cold War: Deepening regional bipolarization and militarization, driven by a worsening U.S.-China strategic and economic rivalry in Asia

III. Pacific Asia-Pacific: Increased U.S.-China and regional cooperation and tension reduction

IV. Asian Hot Wars: Episodic but fairly frequent military conflict in critical hot spots, emerging against a cold war backdrop as described in the Asia-Pacific Cold War scenario

V. Challenged Region: A region beset by social, economic, and political instability and unrest separate from U.S.-China competition

Status Quo Redux

The Status Quo Redux security environment is characterized by constrained but ongoing economic and political competition alongside continuing cooperation in the Asia-Pacific region. Within this environment, national objectives and military doctrines in the United States and

China and across the Asia-Pacific would remain development-oriented and restrained or nonconfrontational, involving continued high levels of mutually beneficial economic and political engagement and cooperation in the management of transnational issues. At the same time, major suspicions and uncertainties would remain regarding the ultimate security intentions and capabilities of Beijing and Washington toward one another, especially over the long term. This would result in continuing efforts by the United States and China, as well as other countries, to strengthen counterbalancing military capabilities or maintain hedging options. Defense spending and military capital stocks would thus continue to increase, albeit not at rates above historical levels. Consequently, although engagement in the region would still be positive-sum, the security environment would likely witness intensifying patterns of military competition and rivalry.

Causal or Shaping Variables

For this environment to be present, the more destabilizing forms of domestic political and social unrest, including serious elite conflict and ultranationalistic pressures, would not emerge in key countries in the region, particularly China and the United States. Indeed, the absence of strong ultranationalist leadership is a vital condition for the continuation of the current mixed environment status quo. If economic growth remains high enough to avert domestic unrest and elite rifts, the likelihood of such extreme leadership shifts will remain low. Nevertheless, national leaders could provoke limited incidents or react to crises in destabilizing ways. The chances of such politically motivated provocations would increase if nationalist sentiments and overall public anxiety toward the regional and global environment continue to expand in the region. Although sustained economic growth would help prevent domestic instability in countries throughout the region, in the absence of credible and effective security assurances, it would also permit continued moderately high or steadily increasing levels of defense spending and conventional military capabilities. This could contribute to heightened security competition and an action-reaction dynamic that could escalate into a costly, destabilizing regional arms race.

Asia-Pacific Cold War

The Asia-Pacific Cold War security environment is characterized by deepening regional bipolarization and militarization, driven by a worsening U.S.-China strategic and economic rivalry in Asia. In the political or diplomatic sphere, this could involve zero-sum competitions for influence over the Korean Peninsula, intensive U.S. efforts to strengthen its alliances and obstruct or reverse the further integration of Taiwan with mainland China, U.S.-China competition over the political allegiance of large and small nonaligned powers, U.S. attempts to entice or pressure India into a strategic alliance against Beijing, more aggressive Chinese actions toward Taiwan and disputed maritime territories, and rivalry for dominant influence in important multilateral diplomatic forums and structures in the Asia-Pacific region and beyond. In the economic sphere, a U.S.-China cold war would likely involve intense efforts by both countries to expand bilateral and multilateral trade, investment, energy, and technology interactions across the region at the expense of the other side. In the military and defense sphere, this environment would almost by definition necessitate an expanding and intensifying security competition requiring high levels of defense spending and accumulating military capital stocks. It would probably also involve an intense arms race over the ability to control the first and second island

chain, and perhaps beyond. Ultimately, this environment is defined by a strong belief in both the United States and China that vital national interests could not be ensured without greatly restricting the capacity and influence of the other side.

Causal or Shaping Variables

An Asian-Pacific Cold War environment would most likely require the emergence of a combination of the most conflictual trends and features along with the disappearance of most—if not all—of the positive trends and features. Increasing competition for resources, declining benefits of mutual investment and trade, and less open and compatible economic and trading systems would reduce incentives to cooperate across the region. Similarly, steadily increasing regional tensions and insecurity associated with growing Chinese military, economic, and political influence in Asia and declining U.S. influence—including intensified security competition and an arms race more severe than in the case of the Status Quo Redux—would accentuate conflict in the region. However, defense spending and military capabilities would contribute to the emergence of such an environment only in the context of other factors, such as changes in leadership objectives, overreaction to unexpected developments, and severe miscalculations during political-military crises between Washington and Beijing. Such crises and miscalculations would become more likely in the absence of significant security assurances, confidence-building measures, or crisis management mechanisms.

Pacific Asia-Pacific

The Pacific Asia-Pacific security environment is characterized by increased U.S.-China and regional cooperation and reduced tension. This environment would evince a clear and sustained decrease in the number and severity of destabilizing events across the Asia-Pacific, including political-military crises, changes in alliances, tensions over trade and investment practices, and disputes over the management of regional and global security issues. Instead, most nations would concentrate a high level of resources and attention on domestic social and economic issues and the peaceful resolution or management of common transnational threats and issues of concern. Differences and even some significant disputes would certainly remain over a variety of issues, but they would not generate zero-sum approaches or solutions.

Causal or Shaping Variables

Such an environment would most certainly require a very stable and enduring balance of power across the region—especially between the United States and China—along with greater levels of overall trust and a high level of confidence that differences could be handled peacefully and in a manner beneficial to those involved. While an enduring balance of power could emerge even in the Asia-Pacific Cold War environment, only high levels of trust and the peaceful settlement of disputes, such as a long-term solution to tensions on the Korean Peninsula, would provide a basis for the kind of enduring positive cooperation that could generate a peaceful region. Such a development would require a near-reversal of the current negative dynamic driving security competition across much of the Asia-Pacific. This would necessitate prior domestic consensus on the interests of each state in the region, a clear grasp of how each state would react to specific developments, and agreement on a series of steps that recognize the legitimate features of

modernization required for national security while reducing the extent of possible threats to others. Ultimately, this would facilitate a far more cooperative atmosphere even as military capabilities increase overall.

Asian Hot Wars

The Asian Hot Wars security environment is characterized by episodic but fairly frequent military conflict in critical hot spots, emerging against a cold war backdrop as described in the Asia-Pacific Cold War scenario. Such military conflict could occur deliberately or escalate from unforeseen accidents. It would likely take place as a result of a dispute over Taiwan, maritime territories in the East or South China Seas, freedom of navigation issues along China's maritime periphery, or the Korean Peninsula. In this environment, both Washington and Beijing would develop war-oriented national objectives and military doctrines and would engage in intensely competitive efforts to expand influence across the Asia-Pacific through political, military, and economic means. Sustained, very high levels of defense spending and accumulated military capital stocks would likely be maintained among all major powers, as well as efforts to strengthen or create military alliances and other forms of adversarial behavior evident in the Asia-Pacific Cold War environment. Mutually hostile domestic political environments could further increase the rigidity of elite opinion and lead to a highly unstable political-diplomatic environment. Overall, this environment showcases an increased reliance on military instruments to advance interests, reduce vulnerabilities, and ensure credibility.

Causal or Shaping Variables

The key contributing factors to the Asian Hot Wars environment are similar to those of the Asia-Pacific Cold War. Indeed, this environment would almost certainly be preceded by many of the political, economic, and military trends and features that would produce an Asian cold war. As in the Asia-Pacific Cold War environment, decreasing benefits would be associated with mutual investment and trade, and economic and trading systems would be less open and compatible. Simultaneously, no credible bilateral or multilateral security assurance processes, confidence-building measures, or crisis management mechanisms would exist, and the major powers' conventional military means of deterring one another from escalating a crisis would be of questionable value. The environment would be characterized by sustained, high levels of defense spending and accumulated military capital stocks among all major powers, as well as those Southeast Asian nations involved in maritime or territorial disputes. Expanded capabilities of the military, law enforcement agencies, and commercial actors would result in increased numbers of vessels and aircraft and more frequent close encounters in contested waters, thus producing greater opportunities for conflict. Finally—and perhaps the most important condition for the emergence of this environment—would be the rise to power in both the United States and China of strong, ultranationalist leaderships dedicated to sustaining or upending the previous regional balance of power in favor of the United States.

Challenged Region

The Challenged Region security environment is characterized by social, economic, and political instability and unrest separate from U.S.-China competition. Political leaders would focus in a

sustained manner on dealing with urgent—indeed, virtually overwhelming—common problems such as climate change, pollution, pandemics, domestic political and social unrest, and terrorism, while the need or opportunity to pursue historical rivalries or engage in forms of security competition would decline. Ultimately, as in the Pacific Asia-Pacific environment, the level of interstate tension and conflict would be consistently low and the incentives to cooperate much higher. Defense spending would thus decline or remain level as states focused more resources on dealing with domestic and foreign regional and global challenges. Security concerns would remain, but their salience as urgent issues requiring attention would decline in the political calculations of leaders and the sentiments of the public.

Causal or Shaping Variables

Obviously, the most important catalyst for this environment would involve the emergence of major and pressing, long-term transnational, nontraditional threats to the safety, health, and security of populations and governments across the Asia-Pacific region. The severity of such threats would need to be very high and sustained over several years, thus clearly overshadowing other potential sources of national concern. This environment would thus not be as “pacific” as the Pacific Asia-Pacific environment in that serious nontraditional security threats would drive most interstate behavior. The absence of interstate conflict would result more from an urgent need for nations to cooperate in combating common problems than from a fundamental structural transformation in the region.

Strategic Risks and Opportunities

These five possible future regional security environments and the contributing factors for each together suggest several types and levels of strategic risk and opportunity for the United States and PACOM over the short, medium, and long term.

Strategic Risks

The most overall significant risk for the United States involves movement toward the competitive and conflictual side of the Status Quo Redux security environment. This risk would be most salient in the short to medium term (although it could emerge only over a longer time frame) and would result in the long-term danger of a transition toward an Asia-Pacific Cold War-type environment.

This type of evolution of the Asian security environment ultimately presents several primary and secondary risks. The first primary risk is a steady, strategic shift of resources in many Asian states away from peaceful and cooperative economic development toward greater arms development or racing, along with various types of zero-sum political, economic, and military security competition and rivalry. The second primary risk consists of an increased tendency among key regional states to engage in tests of resolve or efforts to “lock in” advantages over territorial and resource disputes in the seas along China’s maritime periphery. The third, occurring directly as a result of the previous risk, is a significant danger of the United States becoming embroiled in confrontations between local disputants, many of which are U.S. allies or

partners. The fourth primary risk involves a general weakening of relative U.S. power over the medium to long term and the overall cohesion of the U.S. alliance system in the Asia-Pacific.

The secondary risks presented by the changing security environment include: the possibility of increasing tensions over various types of bilateral and multilateral political and economic arrangements that favor some countries over others or seek to exclude specific countries; increasing domestic unrest and political repression in key states associated with economic, demographic, and political difficulties; and domestic instability and the rise of ultranationalist forces in China. Another secondary risk could result from U.S. miscalculations or overreaction in response to a more powerful and assertive China.

Strategic Opportunities

Fortunately, a range of factors conducive to current and future strategic opportunity also exists in the Asia-Pacific region. These factors could serve to restrain or even eliminate many of the strategic risks. They include common support for continued economic growth and access to resources; the absence of deeply adversarial and existential disputes; the high likelihood that Washington will continue to exercise strong, if not clearly dominant, economic, military, and political influence across the Asia-Pacific region; the possibility that a stronger, more secure, and confident Beijing might become more flexible and accommodating in the future, especially in altercations with neighbors; the possibility of more cooperation in dealing with North Korea; and the imperative on the part of most Asian states to maintain cooperation in addressing various types of future transnational, nontraditional security threats, from pandemics, terrorism, and piracy to the health of the international economic order and common energy security challenges.

Conditions Influencing the Prospects for Strategic Opportunities and Risks

The ability of the United States to minimize or eliminate strategic risks and maximize strategic opportunities over the short, medium, and long terms will depend on its ability to create or shape developments in five interrelated areas:

First, and arguably foremost, are the prospects for significant bilateral, multilateral, and regional security assurances or structures that could reduce the propensity of Asian states—especially the United States and China—to engage in zero-sum forms of strategic rivalry and arms races. Second, and closely related to the previous point is the extent of understandings reached between the political leaderships in Beijing and Washington regarding each other's national objectives, military doctrines, and potential use of force toward volatile issues or "hot spots" that could provoke intense confrontation and instability in the Asia-Pacific. Such volatile issues include North Korea, Taiwan, maritime and other territorial disputes involving third parties, maritime energy and resource requirements, and military surveillance activities in the vicinity of each side's territorial borders.

Third, the presence or absence of clear communication channels with, and avenues of influence and persuasion over, allies, partners, or key security interlocutors of the United States and China will prove increasingly important over time. Fourth, the ability of the United States to minimize strategic risks and maximize strategic opportunities will depend on the level of cooperation in managing critical common interests or preventing crises, including with regard to such issues as

the health of the global economic system, the security of vital sea lines of communication, global and regional terrorism, and weapons of mass destruction proliferation. Fifth, opportunities for risk minimization and opportunity maximization will depend on the dynamic relationship between the forces of nationalism and growing public awareness of the government's overseas policies and actions; national economic success or failure; and political leadership change in China, the United States, and third-party actors.

Diplomatic Recommendations

Much of the analysis in this report confirms that the evolution of the security environment in the Asia-Pacific over the next twenty-five to thirty years will be heavily—and in some cases decisively—influenced by the actions of the United States. In other words, the challenges and opportunities confronting the United States and PACOM in the Asia-Pacific are not simply developments to which Washington and Honolulu must respond; they exist and will evolve as a result of the actions U.S. leaders take now and in the future. While the United States remains the strongest and most influential power across the region, its ability to shape the region will likely diminish, especially if Asian (and particularly Chinese) economic growth continues at a relatively rapid pace, as expected. As a result, the development of a long-range strategy that can extract the maximum benefits out of an increasingly complex and possibly limiting security environment will be essential.

The analysis of this report suggests a range of possible policy recommendations for the U.S. government and PACOM.

First, the U.S. government should undertake an interagency discussion aimed at identifying the long-term primary, secondary, and tertiary strategic interests of the United States in the Asia-Pacific in the context of the dynamic changes identified in this report. This exercise should focus not only on process-oriented interests (for example, in continued cooperative political and economic endeavors or alliance relationships), but also on preferred regionwide patterns of political, economic, and military power among the major powers and institutions over the medium and long term.

Second, as part of an expanded effort to develop more effective means of strategic reassurance between the United States and China and, indirectly, with other Asian states, Washington should actively support the development of a strategic dialogue with Beijing. Such a dialogue should be long term, more integrative regarding a variety of concerns, and more strategy-centered than the current dialogues held with China.

Third, as near- to medium-term initiatives designed to provide greater strategic reassurance between Washington and Beijing while addressing each side's vital interests, a variety of specific reciprocal and joint actions should be considered. Some policy analysts have already offered suggestions that, while controversial and not all agreed upon by those contributing to this report, are worth considering. They can be found in the Appendix.

Fourth, Washington should sharpen its policy approach toward maritime disputes in the East and South China Seas. In the South China Sea, it should encourage the disputants to take steps to

lower the perceived value of the islands. The United States should also encourage the South China Sea disputants to enhance crisis management.

Fifth, Washington should undertake a sustained effort to develop joint maritime exercises and other activities among the United States, China, and other major Asian states designed to establish a coordinated force for sea lines of communication defense against both nonstate and state actors. Coordination in securing energy sea-lanes between the Middle East and Asia is a major opportunity in building mutual trust and collaborative mechanisms for maritime cooperation.

Sixth, Washington should consider a variety of crisis management mechanisms that could help avert or manage future political-military crises over maritime territorial disputes and other contentious issues. These include hotlines between the U.S. and Chinese militaries; an Incidents at Sea agreement covering interactions between U.S. (and Japanese) and Chinese ships and aircraft; the designation of one or more trusted individual emissaries to convey sensitive messages between the U.S. and Chinese sides in a crisis; and expanded joint fishing agreements among disputants in the East and South China Seas.

Seventh, in the energy realm, it is vital to begin dealing, in a regional forum, with strategic tensions in the Asia-Pacific region over control of energy resources and transportation routes.

Eighth, in the economic realm, the United States could consider promoting a free trade agreement with the Association of Southeast Asian Nations (ASEAN) that focuses on and takes full account of ASEAN priorities. The United States could focus on strengthening ASEAN institutions by endorsing their role as action-oriented institutions that are able and willing to tackle regional issues, including the protection of common fishing grounds, maritime rules of the road, environmental conservation in the Western Pacific, the management of pandemics, and perhaps even defense cooperation. The United States should also complement its ASEAN-centered approach with strategies toward individual ASEAN countries. Except in the most extreme cases, the United States should remain engaged in countries—at all levels—even where it has serious concerns about human rights and autocratic political systems. The United States will be better positioned to engage countries on human rights and democracy issues when it is seen as supportive of other, mutually beneficial, priorities.

Alternative Military-Political Approaches and Their Consequences

In addition to the largely diplomatic recommendations listed above, the analysis in this report suggests the applicability of the three major possible U.S. and allied military-political approaches to the evolving Asia-Pacific security environment that were presented in the aforementioned 2013 Carnegie Endowment report, *China's Military and the U.S.- Japan Alliance in 2030: A Strategic Net Assessment*. Each approach is primarily oriented toward creating sufficient levels of both deterrence and reassurance capabilities toward China, and each has its advantages and disadvantages.

The first possible approach would require that Washington and its allies maintain strong

U.S. freedom of action and the clear ability to prevail in conflicts through a robust operational concept based on a heavy forward presence and stressing deterrence over reassurance of China, while pursuing security-related cooperation with both China and (especially) other Asian nations. This strategy would involve the creation of a very robust operational approach that integrates a strengthened U.S. alliance structure into a system designed to neutralize entirely any future anti-access and area denial (A2/AD) or power projection capabilities that China might deploy over the next twenty-five years.

The second possible strategic approach would entail a more conditional and balanced offense/defense-oriented strategy to preserve key military advantages, involving incremental changes in current doctrine, more limited United States–Japan alliance actions, and a more equal emphasis on deterrence and reassurance in relations with China. This strategy, born largely of an anticipation of long-term economic and political constraints and concerns and a greater attention—in both Washington and Tokyo—to the potentially destabilizing aspects of the strategy described above, would involve the creation of a less ambitious operational doctrine. It would be focused on two issues: preserving alliance advantages in a more limited number of areas, and neutralizing those Chinese A2/AD-type capabilities located primarily outside the Chinese mainland and perhaps along China’s coastline, not in the vast interior.

The third strategic approach would focus on a more limited offensive, primarily defensive force posture and doctrine, with a greater reliance on lower-visibility, rear-deployed forces. This strategy, perhaps favored by those most concerned about the negative aspects of the two approaches described above, would entail a shift away from efforts to sustain existing military advantages and freedom of action throughout the first island chain via offense-oriented, forward-presence-based military strategies and alliance-centered political strategies. It would require movement toward a more genuinely balanced regional power structure based on defense-oriented, asymmetric strategies, and much greater efforts to defuse the likely sources of future crises through mutual accommodation and meaningful multilateral security structures.

HIGH -----PROBABILITY ----- LOW

Table 1: Outcomes

Variables	Status Quo Redux <i>Constrained economic and political competition alongside continuing cooperation.</i>	Asia-Pacific Cold War <i>Deepening regional bipolarization and militarization, driven by a worsening U.S.-China strategic and economic rivalry.</i>	Pacific Asia-Pacific <i>Reduced tension and increased U.S.-China and regional cooperation.</i>	Asian Hot Wars <i>Episodic military conflict in critical hot spots, emerging against a cold war backdrop.</i>	Challenged Region <i>A region beset by social, economic, and political instability separate from U.S.-China competition.</i>
Domestic Political and Social Stability	Economic growth and social order; little adverse impact on foreign relations; unlikely to witness the emergence of ultra-nationalist leaderships.	Economic and social instability; deliberate decision to move away from the status quo environment due to a political-military crisis or the emergence of ultra-nationalist leadership; these developments more likely in the absence of crisis management mechanisms.	Decreased number of disruptive or destabilizing events across the Asia-Pacific; growing attention to domestic social and economic issues; political and economic policies reduce internal instability and ultranationalist pressures.	Mutually hostile domestic political environments; the emergence in both the United States and China of ultranationalist leaderships; possible domestic instability in China.	Focus on domestic and transnational challenges; low economic growth rates; possible domestic instability in China.
Defense Spending and Military Capabilities	Moderately high or steadily increasing levels of defense spending; growing conventional military capabilities; increasing likelihood of U.S.-China (and other regional) arms racing.	Expanding and greatly intensifying security competition; high levels of defense spending and accumulating military capital stocks; intense arms race over the ability to control the first and second island chain (and perhaps beyond).	High levels of verifiable restraint in the development and deployment of certain types of military capabilities.	Sustained, very high levels of defense spending and accumulated military capital stocks; conventional military means of deterrence questionable; highly militarized region with lack of restraints.	Defense spending declines or remains level.
National Objectives, Military Doctrines, and Approaches to the Use of Force	National objectives and military doctrines remain development-oriented and non-confrontational; major suspicions and uncertainties remain about security intentions and capabilities, fueling strong security competition.	Zero-sum concept of national interests; major risk of conflict between Beijing and Washington; chances of conflict increase over time in the absence of security assurances.	Security competition enjoys low priority; credible reassurances regarding the handling of volatile issues.	War-oriented national objectives and military doctrines; efforts to strengthen or create military alliances; severe crises due to deterrence miscalculation and “tests” of resolve.	Drivers of security competition or crises become less important; focus on stabilizing such problems in order to permit resolving overwhelming transnational threats.
Interstate Bilateral and Multilateral Relationships	High levels of beneficial economic and political engagement; cooperation on transnational threats; U.S.-led hub-and-spokes alliance system remains a major feature of the regional security order, but sensitive issues (e.g. territorial disputes) likely remain unresolved.	Intense efforts to expand bilateral and multilateral trade at the expense of the other side; third parties pressured to choose sides (leading to polarization); cooperation on transnational issues virtually disappears; reductions in the level of economic interdependence among major powers.	Stable and enduring balance of power with greater levels of trust; investment in the resolution or management of transnational issues; creation of significant regional security structures that reduce distrust and threat perceptions; deepening levels of economic integration; development of more effective global energy cooperation.	Polarization as third parties pressured to choose sides; cooperation on transnational issues virtually disappears; no bilateral or multilateral security assurances, CBMs, or crisis management mechanisms; reductions in the level of economic interdependence among major powers.	Alliances and multilateral mechanisms increasingly focus on managing transnational issues; credible security assurance mechanisms and improvements in managing crises; transnational threats could produce tensions over who is to blame.

Dynamics of Conflict and Cooperation (UMD)

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1. Introduction

The National Consortium for the Study of Terrorism and Responses to Terrorism (START) was tasked with providing support to the *PACOM Assessment* project undertaken as a Strategic Multilayer Assessment (SMA) initiative. The project team is seeking to identify areas of strategic risk and opportunity in the Asia-Pacific region over the next two decades. Specifically, these capabilities should enable the Command to examine future political, security, societal, and economic trends; identify where U.S. strategic interests are in cooperation or conflict with Chinese and other interests worldwide, and in particular, to the East China Sea; and leverage opportunities when dealing with China in a “global context”. This analysis will focus on counter-piracy, the effect of external influences and changing naval capabilities in the Asia-Pacific.

2. Piracy and Counter-piracy Cooperation

As a part of the effort, START examined bilateral relationships and changing naval capabilities of the critical smaller powers in the region—Malaysia, Indonesia and Singapore—to assess counter-piracy as an area in which United States and Chinese interests coincide and in which opportunities for partnership will smaller countries exist. The international definitional standard for piracy comes from the United Nations Conventions on the Law of the Sea (UNCLOS), which defines piracy as any illegal acts of violence, detention, or depredation committed against crews of private aircraft and ships, as well as property on-board those craft, inclusive of intentionally supporting piratical activities such as craft operation. Despite the UNCLOS definition, maritime organizations all across the world have their own definitions, leading to a general lack of consensus on maritime anti-piracy enforcement.

Piracy is an ongoing and continuing issue for the smaller states; and may be a larger issue for these smaller states than the relationships between the major powers. For the purposes of this analysis, we define a piracy event as: *any non-state attack on another vessel, crew or cargo which could impede cargo delivery or crew safety*. For these countries, the number of piracy events dwarfs the sparse number of diplomatic state-to-state events, which average 12 events a year. Our analysis area was limited to piracy events occurring near Malaysia, Indonesia, Taiwan, and Singapore, with full knowledge that piracy effects other countries in the region not discussed here (especially Bangladesh), and that piracy is not unique to East and Southeast Asia (effecting East and West Africa as well).

On the whole, there were fewer recorded piracy events in 2014 than there were in 2000. Whereas Taiwan, over this period, has never generally generated record piracy attacks, in 2000,

Malaysia, Indonesia and Singapore all experienced piracy, with Indonesia in the relative lead for piracy attacks. Over the course of the next half decade, all the countries saw decreases in piracy, with Malaysia and then Singapore experiencing the largest decline in attacks. Indonesia, however, remains most-frequented location for piracy events. Since 2000, there have been 1,282 piracy events near Indonesia. In 2013 alone, 145 attacks were reported. Over the past 14 years, the trend in piracy has seen a return to pre-2009 levels, when reported pirate attacks were incredibly high. After 2004, the number of attacks began to decrease significantly as patrols and various hotspots relocated throughout the region. After 2009, however, the number of attacks have increased steady, with a potential second wave of decreasing potentially starting again in 2014.

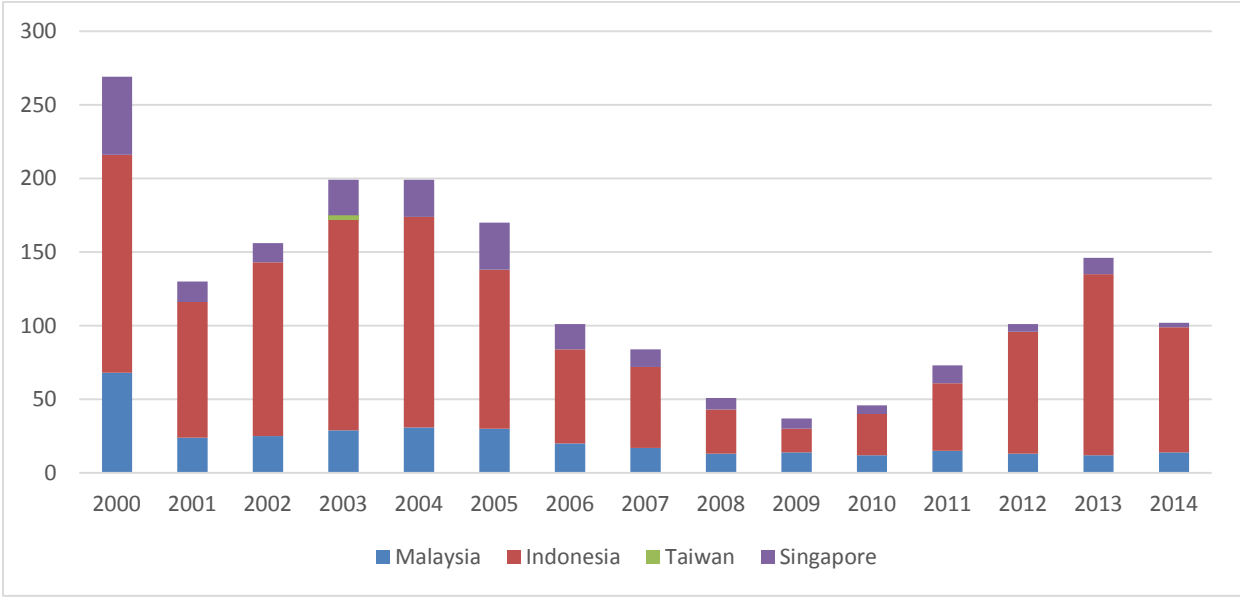


Figure 1: Aggregated Piracy Events (2000-2014)

Although each of the countries experiencing piracy were about to decrease the total number of attacks over time, as a proportion of the decreased piracy, it was Singapore that made the most relative progress. The figure below shows that Indonesia bears the brunt of any extant piracy and that Singapore has almost completely eradicated pirate operations in its waters by 2012.

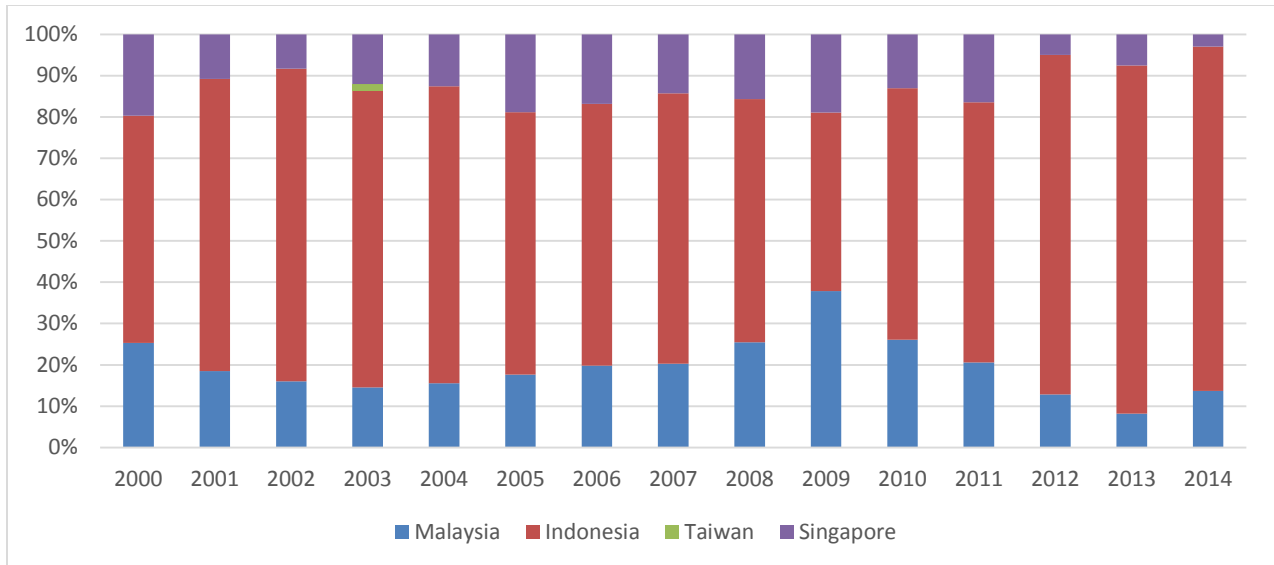


Figure 2: Distribution of Piracy Attacks (2000-2014)

We found:

- Malaysia, Singapore and Indonesia are on the frontlines of maritime shipping traffic, and by extension, maritime piracy
- Malaysia’s naval weakness limits its counter-piracy activity.
 - Many of Malaysia’s vessels have aged out of usefulness; without vessels to replace them, Malaysia has kept its older vessels in commission long past their suggested use-by date with the majority of the fleet having more than 30-year hulls.
- Indonesia has a relatively large navy, which is important for an archipelago state, but ill-equipped to conduct large, counter-piracy operations
 - Indonesia is highly dependent on foreign purchases and training to maintain its naval and anti-piracy capacities.
- Singapore’s navy is moderately sized and is mostly composed of corvettes and frigates.
 - Starting in 2008, Singapore commissioned patrol boats to supplement its maritime capabilities and combat piracy.
 - Singapore has built a maritime infrastructure to both build and support certain Naval Platforms (AWS, Corvettes, Patrol Boats) but still relies on making foreign military purchases for larger and more complex naval Platforms (Submarines, Frigates).

Counter-piracy is a bright spot of cooperation between states competing in other areas in Asia. Non-state actor threats, in particular piracy and smuggling, are issues of significant concern to regional actors with significant cooperative overlap: *Non-state actor threats, such as piracy, smuggling and maritime terrorism, are issues that negatively affect the security and economic interests of many regional states, without putting them in direct conflict with one another.*

Counter-piracy cooperation in Asia began in the 1990s between Japan and China—two countries with a very contentious relationship—through Chinese law enforcement and Japan’s Maritime Safety Agency, which was renamed to Japan Coast Guard in 2000. The success in reducing the amount of piracy Japan directly faced spurred additional attempts at multilateral counter-piracy cooperation through a variety of organizations, such as the ASEAN Regional Forum, the Asia–Europe Meeting, the International Maritime Organization and its Maritime Safety Committee and the International Maritime Bureau

The zenith of counter-piracy cooperation emerged in the Regional Cooperation Agreement on Combating Piracy and Armed Robbery against Ships in Asia (ReCAAP) by 16 countries in 2004, which has been the most successful of the counter-piracy agreements, despite the non-participation of Malaysia and Indonesia due to objections to the agreement. (Malaysia objects due to the basing of ReCAAP’s hub in Singapore; Indonesia objection’s stem from its concerns about maintaining its sovereignty). The cornerstone of ReCAAP’s success as a cooperative framework is the Information Network System (IFN), a 24-hour, web-based system that enables the collection, analysis and distribution of piracy information among ReCAAP member countries through the Information Sharing Center (ISC). The IFN and ISC improves the functionality of multilateral counter-piracy operations considerably: If a pirate vessel exits the maritime jurisdiction of a ReCAAP member state, the ISC notifies the nearest relevant authority in a member state to continue the pursuit. Despite not being members of ReCAAP, both Indonesia and Malaysia share information with the ISC.

3. Foreign Military Sales and External Influences

START’s External Weapons Transfer List (EWTL) Database maps contracting relationships between buyers and sellers, as well as details the purchased weapons systems’ capabilities. Past arms transfer and/or foreign military sales datasets strived to create a world-wide accounting of arms transfer volume, measure mostly in the dollar amount of contracts. The EWTL was created to address the shortcomings in the current standard database for foreign military sales, the Stockholm International Peace Research Institute’s (SIPRI) Arms Transfer Database. The design of the EWTL applies the military expertise of its creators to excavate connections between the design of the weapon system and the effective utilization of the system for 12 Asian countries. The EWTL contains over 566 entries covering weapons sales to 13 Asian countries: China, India, Indonesia, Japan, Malaysia, Myanmar, North Korea, the Philippines, Singapore, South Korea, Taiwan, Thailand, and Vietnam; the contracts covered are all those which began or were current during 2005 through 2015.

We found that overall, there is a general modernization and expansion of regional military capabilities (land, naval, and air) in the Asia-Pacific with an emphasis on naval procurement and upgrades.

- While both China and India are expanding their domestic weapons production capacities for naval platforms such as submarines, destroyers and frigates, those countries continue to rely heavily on foreign purchases for radar systems and air defense.
- Indonesia and Singapore rely heavily on foreign military sales to bolster their naval systems for counter-piracy and anti-smuggling naval operations.
- India is one of the largest weapons systems importers in the database, with most of their longest standing purchasing relationships with Israel and Russia. However, since the Second Bush II Administration, US defense ties to India are growing.
 - The share of United States foreign military sales to India began at roughly 10% in 2005, growing to about 20% under the Obama Administration. Russia and Israel equally divide the remaining market share.
- Japan has one of the strongest domestic defense industries for naval platforms and land forces but still relies on foreign purchases for radar and Aegis systems, mostly from the United States.
- Chinese diplomatic isolation of Taiwan is working: only the United States sells Taiwan weapons systems.
- Russia is the largest supplier of weapon systems in East and South-East Asia with China and India as its top clients.
 - China is heavily reliant on Russia for sensor systems and missile technology.
 - The major weapons supplier for India and China is Russia.

Country	Top Major Supplier	Second Major Supplier	Third Major Supplier
China	Russia (71%)	France (16%)	Switzerland (5%)
Japan	United States (77%)	France (6%)	United Kingdom (10%)
India	Russia (35%)	Israel (25%)	United States (10%)
South Korea	United States (57%)	Netherlands (10%)	Israel (10%)

Table 2: Top Buyer-Seller Relationships in the Asia-Pacific

4. Naval Power

START’s Naval Power Projection (NPP) Database details the military makeup of current naval powers in the Pacific Ocean comprised of 17 Asian countries. The database thereby enables the quantification of power over time, as well as a picture of vessel production and procurement across nations. Part of a larger project to assess likely regional changes in the next 20 years in

the Asia-Pacific, the NPP addresses a lack of recent and complete information on naval capacity in Asia.

Past naval datasets strived to create an exhaustive historical account of naval power world-wide, limiting the inference researchers could make about the balance of naval capabilities at any given time for a given world region. In contrast, the NPP limits its data categorization to active naval warships for countries in the Asia-Pacific region. By limiting the database's focus, it is more useful for both conventional weapons specialists and regional subject matter experts to discern naval defense policy for the including countries. To aid non-weapons specialists, the database introduces a new composite measure, the Power Ratio Index (PRI), to quantify relative naval capabilities of individual vessels, and in turn, the relative naval power of Asian-Pacific countries. The first of its kind, the PRI combines subject area knowledge with simulations weapons ratings, to create a simple rating system for naval power. The simulations consulted in the construction of the PRI are well established military simulations which base their scoring on historical records of the time periods and the results of military scenarios using turn-based decision making protocols: SSI Pacific General, NWS Iron and Steam, and NWS Fleet Command.

Below are the PRI score ranges for vessel types from largest and most powerful to the least powerful.

Power Ratio Ranges

Aircraft Carriers-

-Nuclear-15.0 to 25.0

-Modern-12

-Ski Jump/STOBAR (Short Take Off But Arrested Recovery)-8 to 10

Amphibious Assault Ships-8.0 to 10.0

Helicopter Carriers-8.0

Submarines-

-SSBNs-10.0 to 15.0

-SSNs-6.0 to 8.0

-SSGNs-9.0

-SSKs-1.0 to 6.0

Cruisers-5.0 to 8.0

Destroyers- 4.0 to 8.0

Frigates-2.0 to 5.0

Corvettes-.25 to 3.0

Fast Attack Crafts-.25 to 1.5

Amphibious Warfare Ships-.5 to 2.0

Fleet Replenishments- 1.0 to 2.0

We find that overall, there is a general modernization and expansion of regional naval capabilities in the Asia-Pacific, but the specific contours of naval modernization and expansion differ by country.

- Many of the navies in countries of interest are ill-equipped to deal with lingering non-traditional security threats, such as the maritime piracy growing in the Indian Ocean and plaguing the Straits of Malacca.
- China is modernizing at a faster rate than its neighbors. The vessels China has been acquiring since 2000 have progressively higher power ratios on average.
- Japan, Korea, Australia and India have fewer vessels and less combined power, but their vessels are on average .12 to 1.74 points more powerful than Chinese vessels.
 - China has 302 vessels, with a Power Ratio Sum of 912.5; Japan has 89 vessels , with a sum of 464
 - Japan has a high number of destroyers and submarines compared to other vessel types, suggesting its naval expansion efforts are aimed to maintaining its naval military predominance in the region.
- Relative to other countries, India has more vessels suited to anti-piracy and anti-smuggling missions. It has a high number of smaller warships designed to protect sea lanes and to patrol against enemy submarines, such as corvettes and conventional patrol vessels.
 - Even with its large number of corvettes and patrol vessels, it may still not be enough to protect India's 7,517km coastline from piracy, smuggling or terrorist intrusions.
- North Korea's naval power is illusory.
 - North Korea the fifth largest number of vessels (236), but the lowest Average Power Ratio which means that its vessels are individually considerably weaker due to the wear and tear that older ships exhibit which reduces their seaworthiness and the lack of modern technology.
 - North Korea does not control any vessels above 3.5 in the Power Ratio. Most of the Democratic Peoples' Republic of Korea submarines are small, outdated and represent little competition to the more modernized fleets above. The country has neither the GDP nor the diplomatic relations to acquire new powerful vessels other than what it can develop itself.

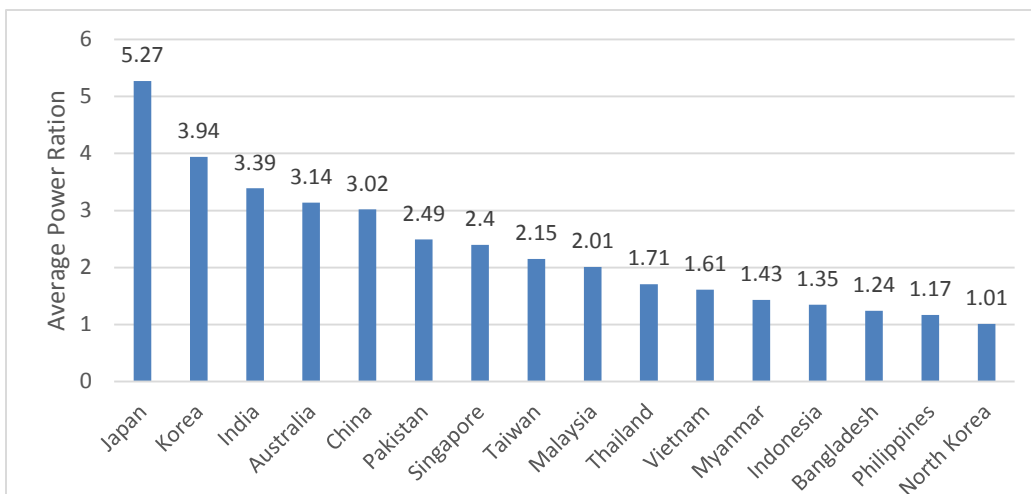


Figure 3: Average Power Ratio of Navies in the Asia-Pacific

Average Power Ratio takes the total naval power, in warships, of each state and divides it by the number of vessels in each country's fleet

By this measure, while Japan and Korea have smaller fleet sizes, the average vessel in their fleets is relatively powerful. In contrast, while China has a larger fleet, the individual vessels tend to be less powerful than those of its regional rivals

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1. Introduction

The purpose of this modeling and analysis project was to identify areas of strategic risk in the Asia-Pacific region over the next two decades; examine future political, security, societal, and economic trends; identify where US strategic interests are in cooperation or conflict with Chinese and other interests worldwide (in particular, the East China Sea), and identify drivers of conflict and convergence to allow the US to leverage opportunities when dealing with China in a “global context.” The project used inputs from a group of experts to outline areas of strategic risks and conflicting interests as well as potential opportunities for encouraging cooperation between the United States and Asia-Pacific regional actors with particular emphasis on East China Sea.

The key concept on which the effort was based was that of the Decision Calculus. It is described in some detail in Section 2. In order to address these issues, a number of activities, listed below, were conducted and are described in Sections 3 and 4.

1. Proposed a decision calculus construct for use in assessing strategic risk.
2. Developed a catalogue of shaping and engagement activities in response to regional disturbances.
3. Conducted a roundtable session with senior Air Force leaders to consider effects of these technologies that could alter key actor decision making relative to US interests.
4. Conducted an operational planning workshop where the decision calculus construct was applied to assess strategic risks..
5. Developed a Timed Influence Net (TIN) Strategic Risk model for use by PACOM and other planners.
6. Conducted computational experiments using the TIN model to develop the findings and observations presented in Section 5 and the insights and conclusions in Section 6.

2. Decision Calculus Construct

In the past, operational planning has focused primarily on developing concepts to defeat a potential adversary militarily. However, such an approach does not always satisfy political requirements. An alternative approach to influence the decision calculus of key regional actors was developed based on the Deterrence Operations Joint Ops Concept (DO-JOC). The concept which underlies this approach was named the Decision Calculus Construct (Figure 1).

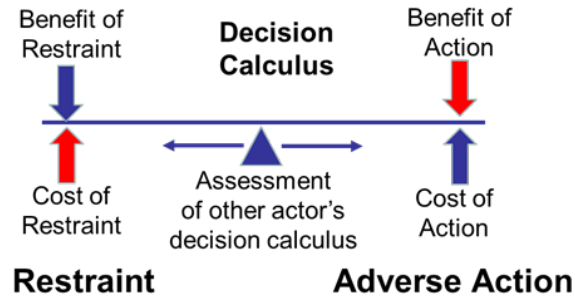


Figure 4: Decision Calculus Construct

Figure 1 depicts a balance between two activities: Adverse Action and Restraint (from taking Adverse Action). The study assumes that a Commander's intent is to shift the balance towards Restraint (from Adverse Actions) on the part of all the regional actors. The five influence vectors reflect the perceptions of the actor performing the decision calculus.

On the Adverse Action side of the balance are two opposing influences — Benefit of Action and Cost of Action. This is the traditional understanding of deterrence which stressed *impose cost* (in response to an action) and *deny benefit* of action as a means of deterring adverse behaviors. On the Restraint side of the balance are two influences - *cost of restraint* and *benefit of restraint* (not conducting the adverse activity). A potential perceived cost of restraint is that a government will lose power or face domestically, with partners or with competitors. Potential benefits could come from the international community or regional actors in the form of economic, political, or social advantages derived from the exercise of restraint.

The fifth, and perhaps most overlooked influence vector, is the Regional Actor's perception of the competitor's decision calculus. The Regional Actor's perception can tilt the balance toward Action (such as to gain advantage by acting first), or toward Restraint (when the competitor's likely proactive course of action is less onerous as the likely response course of action).

The DO-JOC posits that an actor must make cost-benefit decisions to either conduct an adverse action or exercise restraint. The central idea of the DO-JOC is to decisively influence the adversary's decision-making calculus in order to prevent hostile actions against US vital interests. This is the objective of joint operations designed to achieve deterrence. For purposes of this study, the central idea is to influence actor behaviors to support US strategic geopolitical interests. More specifically, to avoid the following: strategic miscalculation leading to nuclear weapon use, escalation of tensions between regional nuclear actors, actions that lead to conventional attacks against US interests, or perception among US allies that they cannot count on US extended deterrence and must develop their own capabilities.

Understanding how these factors are interrelated is critically important to determining how best to influence the decision-making calculus of adversaries. Success is not solely a function of whether adversaries perceive the costs of a given course of action (COA) as outweighing the benefits. Rather, adversaries weigh the perceived benefits and costs of a given course of

action in the context of their perceived consequences of restraint or inaction. For example, deterrence can fail even when the adversary perceives the costs of acting as outweighing the benefits of acting if he believes the costs of inaction are even higher still.

Joint military operations and activities traditionally contribute to the objective of deterrence by affecting the adversary's decision calculus elements in three ways: Deny benefits, impose costs, and encourage restraint. However, military capabilities can also enable other US and partner instruments of power to be more effective. This is called "Unified Action" of which "Whole of Government" operations are a subset. Direct military means include force projection, active and passive defenses, global strike (nuclear, conventional, and non-kinetic), and strategic communication, i.e., the alignment of actions with intended message. This is often confused with communication strategy. Enabling means include global situational awareness (ISR), command and control (C2), forward presence, security cooperation and military integration and interoperability, and assessment, metrics, and experimentation. Additionally, military planners can be of great assistance to other parts of government by helping them analyze the mission, develop and assess courses of action, and model effects of actions.

The perceived benefits and costs of a given Course of Action (COA) to either conduct an adverse behavior (relative to another actor's perception) or to exercise restraint have two essential elements that influence adversary decision-making. First, each benefit and cost has some relative value to the adversary, (i.e., how much does he perceive he will gain by reaping a given benefit or how much does he perceive he will lose by incurring a particular cost). Second, each benefit and cost has a relative probability estimate associated with it in the mind of the adversary; i.e., how likely does he believe it is that he will reap a given benefit or incur a particular cost by acting or not acting.

One additional factor profoundly influences an adversary's decision calculus: his risk-taking propensity. An adversary's risk-taking propensity affects the relationship between values and probabilities of benefits and costs when in the process of reaching a decision. Risk-averse adversaries will see very low probability but severe costs as a powerful deterrent, while risk acceptant adversaries will discount costs in their pursuit of significant gains.

Finally, an actor's decision calculus may be influenced by his perception of the other actors' decision calculus and the time he believes is available to reach a decision. It is important to note that perceptions are more important to an actor's decision calculus than the actual facts underlying these perceptions. Therefore, the conceptual model assumes that stability increases when the actors assess that each other's decision calculus will favor restraint over adverse action.

3. Technical Approach

This Decision Calculus Construct was used as a framework to examine the influences on the decision calculus of Asia-Pacific actors and explore opportunities to (a) Increase steady-state stability, (b) Dampen the impact of disturbances on regional stability, and (c) Posture for rapid restoral of stability once disturbed.

3.1 Technology Roundtable

A Technology Roundtable was held at the Pentagon on 13 Mar 2014 with Air Force senior-level (two and three-star) equivalent participants. The focus of this Roundtable was to identify disruptive technologies that would alter the strategic risk calculations in the PACOM AOR, with particular emphasis on nuclear deterrence and assurance. Also a catalogue of Shaping, Engagement, and Response Actions was developed for use as an operational planning reference and to support implementation of the Timed Influence net (TIN) model.

3.2 Strategic Risk Workshop

A Strategic Risk Workshop was held at Barksdale AFB on 25-27 Aug 2014 with operational planners from the USSTRATCOM Air Operations Center. The objective was to apply the Decision Calculus construct using potential PACOM disturbance scenarios to examine technologies that could alter the decision calculus of regional actors and identify opportunities for the USG to increase the effectiveness of its instruments of power in the region. The disturbance scenarios considered were:

- Natural disaster threatens collapse of regional government
- Sovereignty/access issue leads to threat of rare earth element embargo
- US partner proposes to initiate a disruptive technology program
- DPRK response to perceived US partner threat is to posture WMD forces for employment

For each scenario, the participants were divided into two teams, one team playing the US Government and its allies, and the other either China or the DPRK. They used a workflow (Figure 2) to guide their discussion which began with a review of Partner and Competitor considerations: The sequence of tasks they followed was:

- Identify likely actor objectives, stakes, and commitment
- Postulate redlines and signaling opportunities
- Review capabilities and force postures
- Review actor doctrine and likely CONOPS
- Identify likely actor expectations

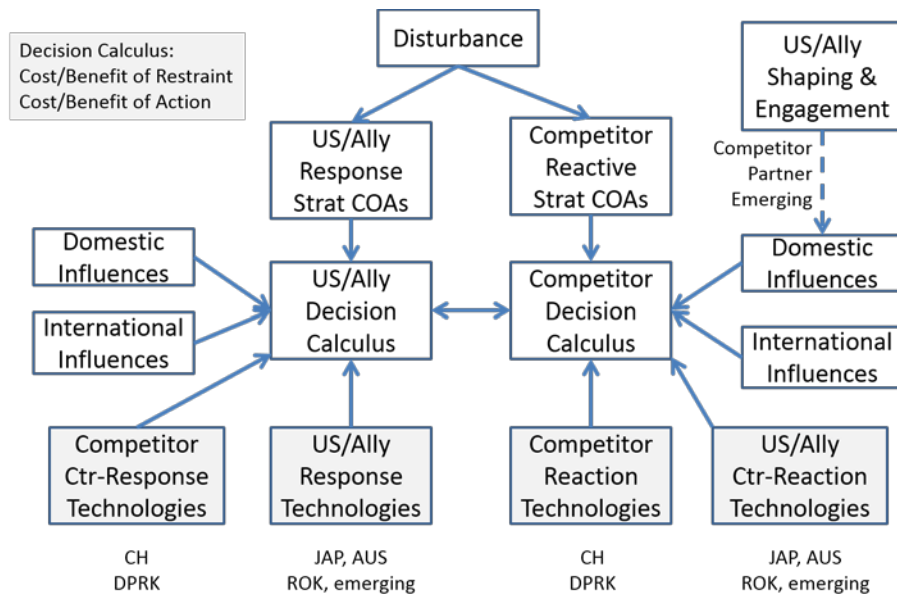


Figure 5: Workflow for Strategic Risk Workshop

This was followed by a cost-benefit analysis for the other actors (competitor team analyzed USG) using the decision calculus construct in Figure 1. The teams considered all five factors in the decision calculus concept. The teams were asked to consider the other team’s decision calculus and then they were brought together to compare and discuss their analyses. From these discussions it became clear that each team’s perception of the other team’s decision calculus influenced the relative impact of the influencers driving an adverse behavior (from that team’s behavior) versus the influencers driving a positive behavior. This relationship was reflected in the design of the Timed Influence Net (TIN) model.

3.3 PACOM Strategic Risk Timed Influence Net (TIN) Model

Timed Influence Nets, a variant of Bayesian Nets, are used to capture cause-effect relationships that relate timed sequences of actions to the probability of an effect or outcome occurring. TIN models are thus well suited to capture the diverse aspects of complex geopolitical stability issues. Specifically, TIN models can be used to gain insights into the effects of actions on one or more regional stability objectives, and can be adapted to reflect different actors, international environments, phase of military operations, and scenarios. A Timed Influence Net (TIN) model was developed using the GMU/SAL tool Pythia [1 – 10], which has been used for many years for academic research, was updated during the course of the study to facilitate its use by members of the operational community.

The PACOM Strategic Risk model links causal influences (both those which the USG can control, and those that are outside USG control) to effects which contribute to strategic risk in the

PACOM AOR. The model was created based on inputs from the SMA Project team, elicited information from Subject Matter Experts (SME), and documents and reports. The inputs to the Pythia model reflect major influences on the decision calculus of selected regional actors relative to adverse actions from a US perspective. These influencing factors can be changed to conduct computational experiments providing insights that can be applied by PACOM planners to minimize risk in the AOR. The model inputs (largely outside US government control) are actor core beliefs and technology changes. The inputs within US government control are shaping, engagement, deterrence, and regional disturbance response actions.

A large number of computational experiments using the PACOM Strategic Risk (TIN) model were conducted. To run an experiment, assumptions about all the inputs (actions) were made to establish a baseline case, then one or more of the inputs were changed, specifically, the probability of these actions taking place and the time they take place. This constituted a scenario. The scenario was executed and the impact of the change over time on the selected outputs is computed for display as probability profiles.

An abstracted view of the model is shown in Fig. 3 while the complete model is in Figure 4. On the left side of the model are all the inputs to the model. They represent beliefs and actions by the US, its regional allies, and adversaries. On the extreme right are the three key outcomes of interest. The set of 22 inputs was grouped into five categories: Core Beliefs, Technology, Shaping and Engaging Actions, Engaging and Detering Actions, and Disturbance Response. The key effects or outcomes are: China Strategic Risk, DPRK Strategic Risk, and US Partner Decision calculus to develop WMD.

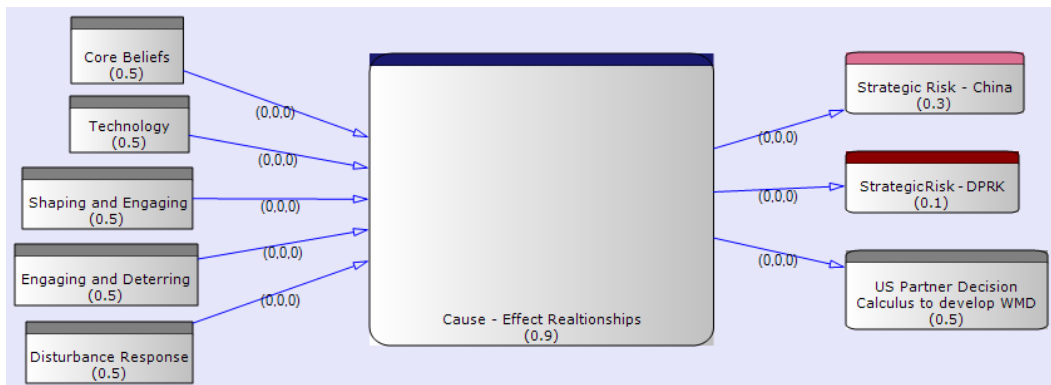


Figure 6: Inputs and Action types and Outcomes/Effects of the Strategic Risk Model

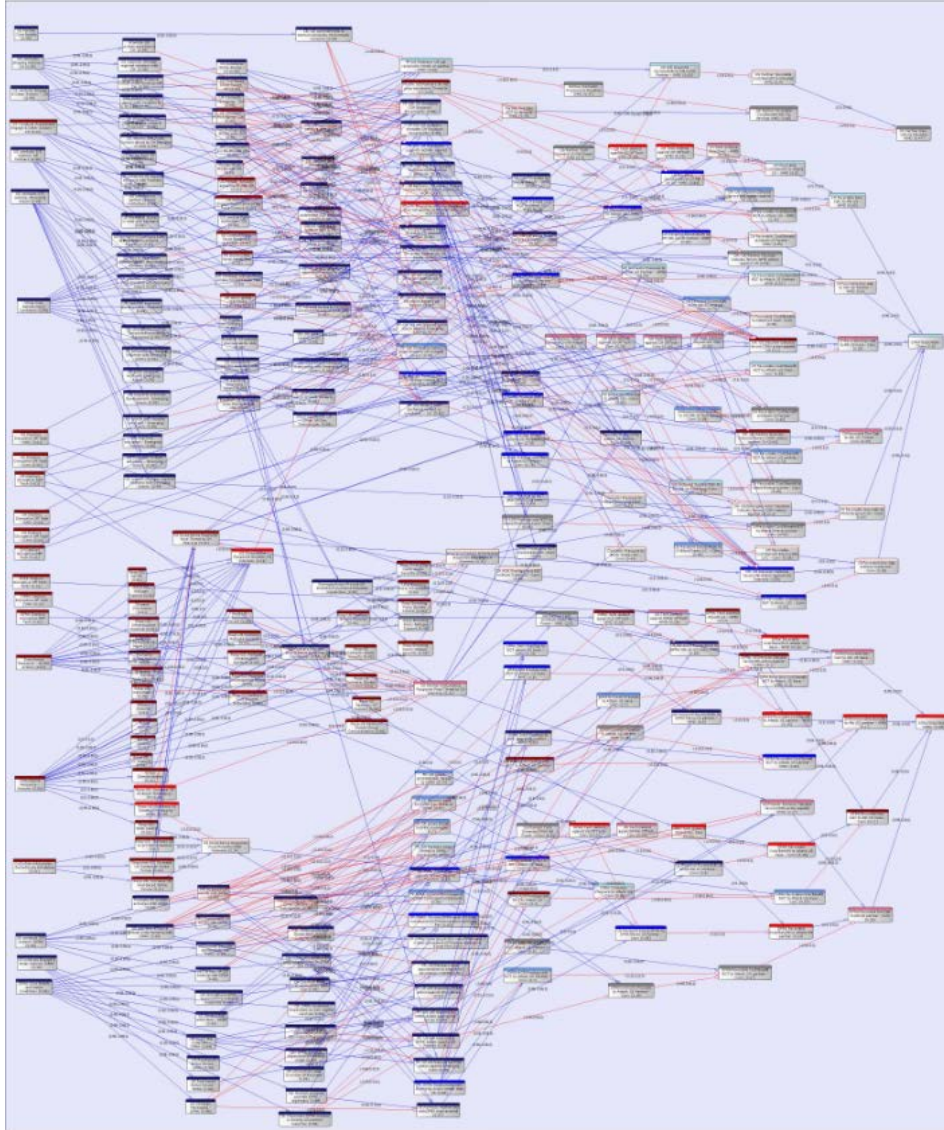


Figure 7: The TIN of the PACOM Strategic Risk Model

4. Strategic Risk Computational Experiments—Technology, Disturbance Responses, Shaping and Engagement activities

A large number of computational experiments using the PACOM Strategic Risk model were conducted. To run an experiment, assumptions about all the inputs (actions) were made to establish a baseline case, then one or more of the inputs were changed, specifically, the probability of these actions taking place and the time they take place. This constituted a scenario. The scenario was executed and the impact of the change over time on the selected outputs is computed for display as probability profiles. A few examples follow.

In Figure 5, China perceives current US offensive technology to be far superior, but US defensive technology is unable to counter Chinese offensive technology, with all other inputs

remaining the same. The three scenarios considered were (1) Disruptive US Conventional Offensive capability deployed at 12 months; (2) Disruptive China Offensive capability deployed at 24 months; and (3) Disruptive US Defensive capability deployed at 12 months followed by disruptive China Offensive capability at 24 months.

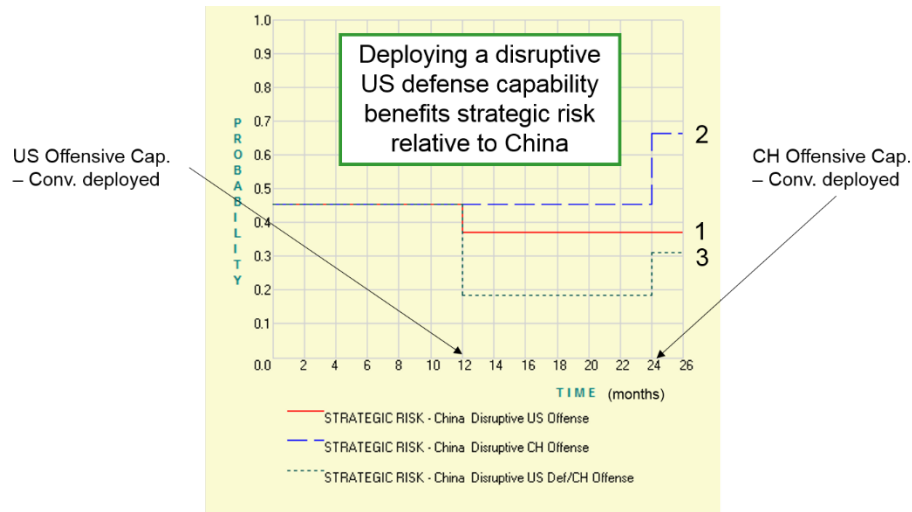


Figure 8: Probability Profile of Strategic Risk with China as a function of time

In another example (Figure 6), the model was used to look at disruptive technology with respect to the DPRK. The potential capability of DPRK disruptive technologies to target the US homeland was not considered in these computations. In the scenarios which follow, all inputs remain the same except those highlighted in the scenario description: (1) Disruptive DPRK WMD deployed at 24 months; (2) Disruptive DPRK Conventional Offensive capability deployed at 36 months; (3) Disruptive US Defensive capability deployed at 12 months followed by disruptive DPRK Conventional Offensive capability at 36 months.

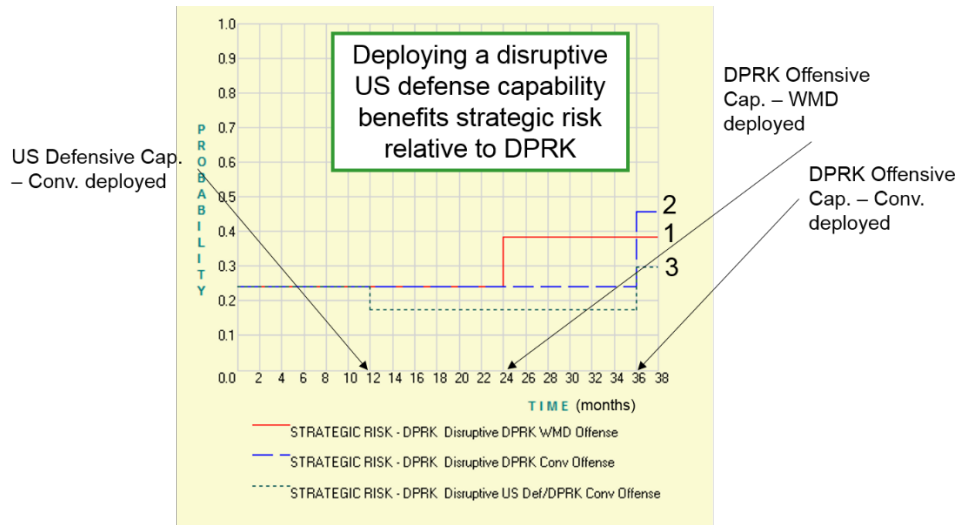


Figure 9: Probability Profile of Strategic Risk with DPRK as a function of time

A third computational experiment examined the impact of different response to five disturbance scenarios on four three outcome (effect) measures:

- (Probability of) Strategic Risk – CH
- (Probability of) Attack on US Base
- (Probability of) Attack on US Partner

The five illustrative scenarios were: (1) HA/DR Response by Regional Actors & US Enablers; (2) HA/DR and Security Response by Regional Actors Supported by US Enablers; (3) Scenario 2 plus overt deployment of US ISR Capabilities; (4) Scenario 3 plus long-range rotational strike forces; and (5) Scenario 3 plus forward-based strike forces.

The bar graph in Figure 7 illustrates the results from the computational experiments. The experiments appear to indicate that regional capacity to respond to minor HA/DR and security disturbances limit strategic risk from the disturbances. Additionally, the model suggests that Strategic Risk increases if forward strike force basing in response to a disturbance is misperceived as posturing for attack

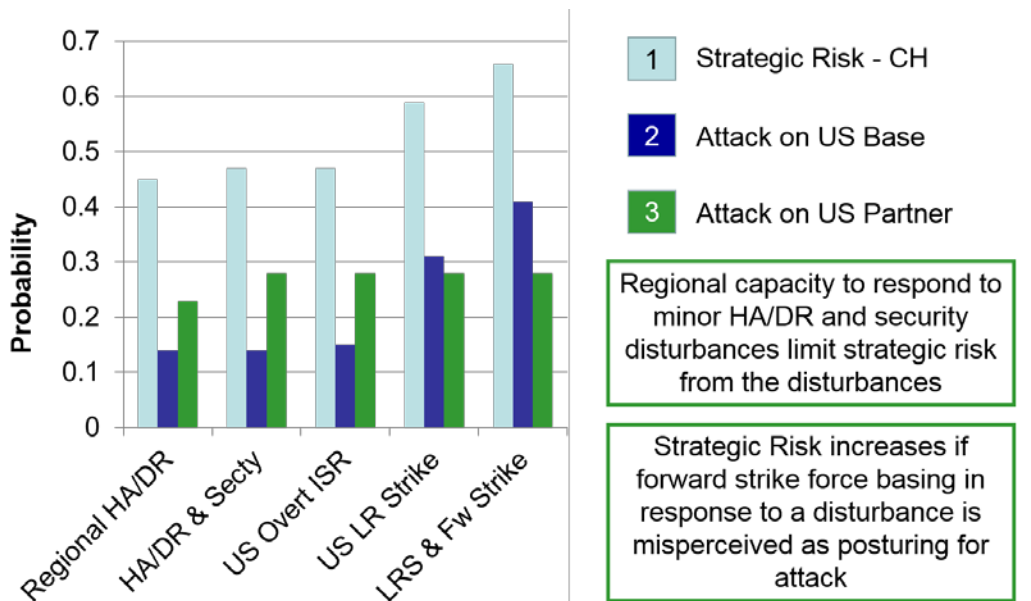


Figure 10: Humanitarian Assistance/Disaster Relief (HA/DR) & Security Response

5. Observations

Observations from the Technology Roundtable and computational experiments were:

- (1) A disruptive US Defensive technology that would significantly reduce an adversary's ability to target key US centers of gravity where US citizens (to include military forces) are located reduces risk significantly.
- (2) A disruptive Adversary Defensive technology that significantly reduces the ability of US and partners to respond effectively to an attack increases risk.
- (3) The increase in risk relative to China is dampened by the effect this technology would have on perceived decision calculus of the US and its partners, which would shift the pivot point to favor restraint.
- (4) Disruptive offensive technologies increase risk, but the impact of having this capability on will and intent (relative to Restraint and the US/partner decision calculus) is more significant than the impact of the technology on the cost/benefit for adverse action.

Observations from the Strategic Risk workshop and TIN computational experiments were:

- (1) Strengthening partner nations in the region for combat operations appears less effective than strengthening their capabilities to avoid creating disturbances themselves, and to respond to regional disturbances with the US in a supporting (non-threatening) way.
- (2) Building the capacity of emerging regional actors to effectively respond to disturbances affecting them and their neighbors (enabled by US and its partners) reduces risk of US/partner involvement in situations that could grow into military crises.

- (3) Development of strategic messaging capability would serve as a force multiplier to mitigate disturbances, restore stability following a disturbance, and potentially offset the impacts of disruptive technologies.
- (4) Capabilities needed for combat ops create less risk when brought into theater as part of a well-messaged peace and stability strategy (Pacific Rebalance) than when brought into theater in response to a disturbance. And, US enablers (such as ISR and C2) create a less negative response than moving strike forces in a period of crisis.

6. Conclusions and Recommendations

The insights obtained from this effort can be summarized as follows:

- Prepositioning enablers, establishing access agreements with emerging actors, and building capacity of emerging actors to respond to minor disruption balance requirements for a force capable of conducting theater engagement and security cooperation activities with a force ready to fight.
- The US can strengthen partner nations in the region in a constrained fiscal environment by focusing on building capacity to respond to disruptions and leveraging US and partner enablers.
- A disruptive US defensive capability (a good example brought to our attention is the deployment of electromagnetic railguns) will reduce US strategic risks.

This research suggested that employing a stability model based on influencing the decision calculus of key actors shows potential to address CDRPACOM's challenge to employ forces in the region in a way that reduces risk to US strategic objectives (peace and economic stability). It is also clear that a better understanding of the economic influences on strategic stability in the region is needed. Secondly, strategic messaging could be a powerful tool to influence the decision calculus of key actors. Accelerating development of disruptive defensive technologies appears to provide a solid approach for the US to reduce strategic risk while providing beneficial operational capabilities. Finally, building the capacity of emerging partners to respond to minor disturbances leveraging US and partner enablers appears to provide an effective use of US shaping and engagement resources.

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Chinese Internal Dynamics and the Future of the East China Sea (Monitor-360)

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Introduction: Pathways to Change

This paper starts from the critical question: **“How might internal dynamics lead Chinese decision-makers to significantly alter the geostrategic environment in the East China Sea over the next twenty years?”** Towards that end, it presents a set of plausible pathways that describe how internal dynamics may drive Chinese action in the East China Sea. These pathways are not designed to be mutually exclusive or collectively exhaustive, nor are they intended to predict exactly what will happen in the future. Rather, they serve to generate insight and foster discussion about a set of potential outcomes of relevance to the United States.

After framing the critical question, this paper explores a single **Gradual Change Pathway** that could unfold over the course of the next twenty years. This pathway, entitled “Non-Kinetic Coercion,” reflects a long-term Chinese approach of making opportunistic, and largely incremental, changes to the status quo and eventually expanding its territorial sovereignty. Next, it considers an alternative version of the future—or rather, four different alternative versions of the future—by exploring four distinct **Escalatory Change Pathways**, each of which could unfold over a different five-year period during the next twenty years. These Escalatory Change Pathways are driven by potential shifts in certain internal dynamics that could lead to Chinese escalation of the dispute. Each of these four pathways describes a different type of escalatory action.

Table 1 introduces all five Pathways and illustrates how they relate to each other. The Gradual Change Pathway is represented in **blue** and reflects a single twenty-year timeline. The Escalatory Change Pathways, represented in **red**, explore different ways China may diverge from the Gradual Change Pathway during each five-year increment over the next twenty years.

Table 3: Gradual and Escalatory Change Pathways

	Non-Kinetic Coercion (2015–2035) Chinese decision-makers pursue an approach of calculated, coercive pressure through non-kinetic operations in order to make steady but incremental changes to the status quo in the East China Sea over the next twenty years.
	Accidental Action (2015–2020) An otherwise manageable incident, such as a collision at sea, spirals out of control.
	Intentional Diversion from Internal Issues (2020–2025) The CCP escalates the East China Sea dispute to divert attention from domestic problems.
	Aggressive Military Posture (2025–2030) A sharp increase in defense spending leads Chinese leaders to adopt a more aggressive posture in the East China Sea.
	Unsanctioned Military Action (2030–2035) A Chinese military service, region, or commander at sea initiates conflict without permission from Beijing.

Overview of Key Findings

This report surfaces several key findings for PACOM planners, strategists, and communicators concerned with the East China Sea dispute:

- **All of the Gradual and Escalatory Change Pathways described by SMEs run counter to US interests, suggesting that the United States should consider adjusting its overall strategy in the East China Sea.** Escalatory Change Pathways carry increased short-term risk of conflict, threatening peace and prosperity in East Asia, but the Gradual Change Pathway’s absence of conflict does not equate to an absence of risk. A future that allows China to continue along its current gradual change trajectory still leads to an outcome of increased Chinese control of the East China Sea that threatens US interests, allies, and influence.
- **The United States will be most successful in shaping the future of the East China Sea by adopting a coordinated, whole-of-government approach.** The complexity of the East China Sea dispute in the context of the broader US-China relationship requires that rising tensions be met with a unified US effort to address the internal dynamics driving escalation. PACOM may be best suited to take the lead in some de-escalation efforts, such as managing Chinese overconfidence by selectively revealing US capabilities or technologies; however, it may take a secondary role in others. A successful response to each type of Escalatory

Change Pathway will require coordinated integration among multiple agencies.

- **Anticipating multiple future pathways can help US planners, strategists, and communicators identify the most promising opportunities to promote US interests as a pathway is developing.** By recognizing different types of Escalatory Change Pathways early in their development and understanding the Chinese internal dynamics that drive them, US planners, strategists, and communicators can be more deliberate in how they respond to a wide range of events in the region. Early recognition and tailored responses prepare the US government to help reduce tensions, preempt an Escalatory Change Pathway, and accelerate an outcome in the region that is better aligned with US interests.
- **Efforts to preempt an Escalatory Change Pathway and avoid spiraling insecurity before it can take hold will be more effective and efficient than acting after escalation has begun.** The situation in the East China Sea could escalate quickly, due to the sensitive history of this dispute and the wider tensions between China and Japan, potentially leaving little time for reactive de-escalation efforts. Furthermore, reacting to an escalatory action will likely require deploying greater resources and bargaining capital than preemptively shaping the environment because reactive action seeks to shift the decisions of other actors in a condensed and volatile time period.
- **Each Escalatory Change Pathway illuminates potential opportunities for de-escalation.** Just as the nature of escalation varies across the different pathways, so too does the appropriate response. For each Escalatory Change Pathway, this report identifies a different de-escalation objective that describes the underlying outcomes that PACOM and the US government more broadly should seek to achieve in order to manage the risk posed by each type of escalatory change. To achieve these objectives, the US government should consider how various channels of influence can best preempt, shape, and de-escalate rising tensions across different types of escalatory pathways. Table 2 (following page) summarizes these de-escalation objectives, considerations, and channels of influence.

Table 4: Preventing or Responding to Escalatory Change Pathways

TYPE OF ESCALATORY CHANGE	DE-ESCALATION OBJECTIVE	KEY DE-ESCALATION CONSIDERATIONS	CHANNELS OF INFLUENCE
Accidental Action: An otherwise manageable incident, such as a collision at sea, spirals out of control.	Build better bilateral relationships and channels of communication with Chinese counterparts at multiple levels—from operational to executive.	<ul style="list-style-type: none"> • Neutralize appeals to historical grievances • Facilitate internal and external communication mechanisms • Appeal to China’s desire for parity 	
Intentional Diversion from Internal Issues: Chinese leaders escalate the East China Sea dispute to divert attention from domestic problems.	Provide China with diplomatic space to climb down from provocations and save face in exchange for concrete policy changes.	<ul style="list-style-type: none"> • Downplay nationalist rhetoric • Manage Chinese overconfidence 	
Aggressive Military Posture: A sharp increase in defense spending leads Chinese leaders to adopt a more aggressive posture in the East China Sea.	Influence China’s perceptions of its relative military strength and provide creative solutions to stabilize the East China Sea.	<ul style="list-style-type: none"> • Strengthen deterrence by demonstrating unity among US allies • Bolster the perception of US military superiority • Propose new models of administrative control 	
Unsanctioned Action: A Chinese military service, region, or commander provokes an incident without permission from Beijing.	Leverage China’s desires for status and access to US expertise in order to incentivize Chinese civil-military cooperation.	<ul style="list-style-type: none"> • Provide status to encourage civil-military cooperation • Establish strong formal and informal communication channels 	

Channels of Influence are tools the United States can use to shape the strategic and operational environment of the East China Sea. This report identifies the following four as the most relevant:



Framing the Critical Question: Key Internal Dynamics

This paper’s Critical Question, **“How might internal dynamics lead Chinese decision-makers to significantly alter the geostrategic environment in the East China Sea over the next twenty years?”** reflects the role that internal dynamics will play in influencing Chinese leaders’ perception of and response to events.

While a broad range of internal dynamics influence Chinese policymaking writ large, this paper

analyzes the impact of five dynamics that emerged from regional SME interviews as the most relevant to Chinese leaders and their decision-making related to the future of the East China Sea: the trajectory and pace of economic growth, the CCP’s ability to manage political competition, the CCP’s ability to manage social unrest, the CCP’s ability to control the People’s Liberation Army (PLA), and the CCP and PLA’s perceptions of US military superiority in the region.

Each pathway explores different assumptions about these internal dynamics. For the Gradual Change Pathway, for example, each dynamic is assumed to remain stable: China’s economy will continue to grow, the CCP will be able to manage political competition and social unrest and will maintain control of the PLA, and China will continue to perceive that the regional balance of military superiority favors the United States and its allies. If these assumptions hold, it is likely that China will remain on its current trajectory and pursue its long-term strategic approach without much disruption. Each of the Escalatory Change Pathways, on the other hand, alters one or more of these assumptions, resulting in a diversion off the current pathway to a more escalatory series of events.

Gradual Change Pathway for 2015-2035: Non-Kinetic Coercion

Over the next twenty years, internal dynamics will fundamentally shape the drivers, constraints, and direction of Chinese foreign policy in the East China Sea. In this context, a number of factors suggest that Chinese decision-makers will make gradual changes to the status quo through non-kinetic coercive operations in order to establish *de facto* control in the East China Sea. While exploring the future is necessarily a speculative exercise, the consensus view of SMEs is that China’s current approach is one oriented toward non-kinetic coercion that produces incremental gains.

This Non-Kinetic Coercion Pathway assumes stability among the key internal dynamics in China. Given this stability, Chinese political leaders are likely to pursue an approach of steady, incremental change in the East China Sea for several reasons. First, the influence of China’s strategic culture on its foreign policy is likely to predispose political leaders to prefer psychological, legal, and other means of non-kinetic change in the East China Sea. Second, China may pursue non-kinetic operations if leaders perceive that the relative strength of the United States and Japan increases the costs of direct military action, outweighing the potential benefits of such action. Finally, political leaders may pursue non-kinetic operations if they assess that an unsuccessful military operation would threaten to disrupt social, economic, or political stability. The following table summarizes these stable internal dynamics.

Table 5: Assumptions about Internal Dynamics for the Non-Kinetic Coercion Pathway

Internal Dynamic	Assumption
Will China’s economy continue to grow at a sufficient pace?	Yes
Will the CCP be able to manage political competition?	Yes
Will the CCP be able to manage social unrest?	Yes
Will the CCP maintain control of the PLA?	Yes
Will China continue to perceive that the regional balance of military superiority favors the United States and its allies?	Yes

If these assumptions hold, Beijing will likely maintain its attempts to make steady, incremental gains in the East China Sea over the next twenty years without escalation.

Escalatory Pathway for 2015-2020: Accidental Action

Shifts in how China’s economic growth and civil-military relations develop between 2015 and 2020 may heighten the risk that an accidental encounter in the East China Sea spirals into conflict. A slowing economy could create a sense of desperation among political leaders anxious to remain in power, while poor coordination between China’s growing military, civilian, and national security bureaucracies may increase the chance of miscommunication or miscalculation in a crisis. These internal dynamics could create conditions in which an otherwise manageable incident, such as an accidental collision, serves as a catalyst that causes the situation to spiral out of control towards conflict.

This Accidental Action Pathway makes two assumptions about internal dynamics in China that are fundamentally different from the assumptions underlying the Gradual Change Pathway as summarized in the following table.

Table 6: Assumptions about Internal Dynamics for the Accidental Action Pathway

Internal Dynamic	Assumption
Will China’s economy continue to grow at a sufficient pace?	No
Will the CCP be able to manage political competition?	Yes
Will the CCP be able to manage social unrest?	Yes
Will the CCP maintain control of the PLA?	No
Will China continue to perceive that the regional balance of military superiority favors the United States and its allies?	Yes

These shifting internal dynamics could drive Sino-Japanese conflict over the Senkaku/Diaoyu Islands in the next five years. In order to preempt, shape, or de-escalate a crisis resulting from an accidental action, US government efforts should focus on **building better bilateral relationships and channels of communication with Chinese counterparts at multiple levels from operational to executive**. To this end, US strategists, planners, and communicators can leverage existing channels of influence to:

- Neutralize appeals to historical grievances (using Strategic Communications and Diplomacy)
- Facilitate internal and external communication mechanisms (using Mil-Mil Relations and Diplomacy)
- Appeal to China’s desire for parity (using Diplomacy and Force Posture)

Escalatory Pathway for 2020-2025: Intentional Diversion from Internal Issues

The potential for an Escalatory Change Pathway to emerge in the East China Sea between 2020 and 2025 will largely depend on how smoothly China navigates several potential transitions during that time period. China’s projected leadership change in 2022 and economic and military trend lines suggest significant changes in the internal dynamics that influence Chinese behavior during this time period. If these dynamics lead to political, economic, or social instability, the CCP may seek to

divert attention from these internal challenges by taking more aggressive actions externally, potentially in the East China Sea.

This Intentional Diversion Pathway makes three assumptions about internal dynamics in China that are fundamentally different from the assumptions underlying the Gradual Change Pathway. Specifically, this pathway posits that management of political competition within the CCP is more complex and uncertain, the CCP is challenged with meeting the social demands of the population, and the PLA perceives that the relative military balance in the East China Sea is shifting in its favor. Table 5 summarizes these internal dynamics.

Table 7: Assumptions about Internal Dynamics for the Intentional Diversion from Internal Issues Pathway

Internal Dynamic	Assumption
Will China’s economy continue to grow at a sufficient pace?	Yes
Will the CCP be able to manage political competition?	No
Will the CCP be able to manage social unrest?	No
Will the CCP maintain control of the PLA?	Yes
Will China continue to perceive that the regional balance of military superiority favors the United States and its allies?	No

These shifting internal dynamics could cause Chinese leaders to prioritize the immediate diversion of popular anger away from domestic concerns rather than a long-term gradual change approach, prompting the CCP to pursue an Escalatory Change Pathway in the East China Sea. In order to preempt, shape, or de-escalate a crisis resulting from an intentional diversion, US government efforts should focus on **providing China diplomatic space to climb down from provocations and save face in exchange for concrete changes in policies**. To this end, US strategists, planners, and communicators can leverage existing channels of influence to:

- Downplay nationalist rhetoric (using Strategic Communications and Diplomacy)
- Manage Chinese overconfidence (using Mil-Mil Relations and Diplomacy)

Escalatory Pathway for 2025-2030: Aggressive Military Posture

In the future, a surge in defense spending aimed at stimulating a slowing economy could drive a more aggressive Chinese military posture and increase the risk of escalation in the East China Sea. Such a policy action could have two important impacts on China’s military posture. First, greater military resources and capabilities may increase the influence of the PLA and the hawkish national security elite in the CCP. Second, such resources and capabilities may lead Chinese political and military leaders to have greater confidence in China’s relative strength in the East China Sea. If dynamics shift in this way, China may adopt a more aggressive military posture in the region.

This Aggressive Military Posture Pathway makes two assumptions about internal dynamics in China that are fundamentally different from the assumptions underlying the Gradual Change Pathway, summarized in the following table.

Table 8: Assumptions about Internal Dynamics for the Aggressive Military Posture Pathway

Internal Dynamic	Assumption
Will China’s economy continue to grow at a sufficient pace?	No

Will the CCP be able to manage political competition?	Yes
Will the CCP be able to manage social unrest?	Yes
Will the CCP maintain control of the PLA?	Yes
Will China continue to perceive that the regional balance of military superiority favors the United States and its allies?	No

These shifting internal dynamics—an economic decline that prompts massive investments in the military and the concomitant growth of the military’s political power as well as China’s perception of its strength—increase the likelihood of a more aggressive foreign policy. In order to preempt, shape, or de-escalate a crisis resulting from an aggressive military posture, US government efforts should focus on **influencing China’s perceptions of its relative military strength and providing creative solutions to stabilize the East China Sea**. To this end, US strategists, planners, and communicators can leverage existing channels of influence to:

- Strengthen deterrence by demonstrating unity among US allies, especially the Republic of Korea and Japan (using Mil-Mil Relations, Diplomacy, and Force Posture)
- Bolster the perception of US military superiority (using Mil-Mil Relations and Force Posture)
- Propose new models of administrative control (using Diplomacy and Strategic Communications)

Escalatory Pathway for 2030-2035: Unsanctioned Military Action

The risk of escalation between 2030 and 2035 will largely depend on how well Chinese leaders manage their decennial political transition, control the military, and distribute economic growth between social and defense priorities as long-term demographic trends are expected to increase social costs significantly. If these dynamics undermine civil-military relations and political stability, a military unit, region, or branch may provoke an incident—unsanctioned by Beijing—to prove their continued significance for Chinese national security.

The Unsanctioned Military Action Pathway changes three assumptions about internal dynamics in China. Specifically, this pathway posits that China’s economic growth slows, management of political competition within the CCP is more complex and uncertain, and the CCP’s control of the PLA erodes, as shown in Table 7.

Table 9: Assumptions about Internal Dynamics for the Unsanctioned Military Action Pathway

Internal Dynamic	Assumption
Will China’s economy continue to grow at a sufficient pace?	No
Will the CCP be able to manage political competition?	No
Will the CCP be able to manage social unrest?	Yes
Will the CCP maintain control of the PLA?	No
Will China continue to perceive that the regional balance of military superiority favors the United States and its allies?	Yes

These shifting internal dynamics could provide space for a frustrated military unit or region to instigate a crisis without central government permission. In order to preempt, shape, or de-escalate a crisis resulting from an unsanctioned military action, US government efforts should focus on **leveraging China’s desire for status and access to US expertise to incentivize Chinese civil-**

military cooperation. To this end, US strategists, planners, and communicators can apply existing channels of influence to:

- Leverage China's desire for global status to draw it into multinational exercises that encourage civil-military cooperation (using Mil-Mil Relations and Diplomacy)
- Establish strong formal and informal bilateral and trilateral communication channels (using Strategic Communication and Diplomacy)

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Thematic Content Analyses of Texts by Relevant Leaders and Groups (UBC)

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Executive Summary

Texts produced by selected members of the Chinese political and military elites were analyzed using Thematic Content Analysis (TCA), a method for transforming qualitative materials such as running text into quantitative data. TCA uses detailed scoring manuals for the assessment of a variety of psychological characteristics including cognitive, affective, motivational, interpersonal, and other processes. The results can be analyzed for reliability, validity, statistical significance, effect size/power, and other statistical features.

Although TCA can be applied to group products such as government policy statements, it is also frequently used to study individuals. In the present case, two TCA-based measures were applied to texts by the current top leadership of the PRC, some high-ranking military officers, and some individuals identified by experts as having the potential to reach the highest levels of the hierarchy. Individuals and subgroups were studied in different combinations and changing circumstances. A subset of this material is presented here; the complete work is available in Suedfeld and Morrison (2015).

Our analysis of the texts focused on two psychological characteristics. One is Integrative Complexity (IC), which shows the degree to which the individual's thinking is flexible, open to new information and new ideas, able to consider others' points of view, and perceive fine distinctions as well as relationships among different aspects of a problem. The other, Motive Imagery (MI), indicates the relative importance of three motives: high achievement, the exertion of influence or power on others, and engaging in friendly relationships. Such analyses have been reported in dozens of publications, involving leaders of many nations.

The IC of the Chinese leaders is somewhat higher than the published average of political and military leaders in other countries. Their MI shows high need for achievement: accomplishing goals, improving the country's position, and fostering development to higher levels than before. They are less motivated by the sheer exercise of power, and almost not at all by a felt need for friendly relations with others.

When the Chinese leaders are under stress (for example, when they have to manage the effects of a natural disaster, or they are organizing a major event such as the Olympics), they usually maintain or even increase their level of IC, indicating that they are likely to avoid drastic

changes of course and to use strategies that remain flexible and information-based. Forceful action is more likely in the face of domestic unrest, when their IC does decrease to some extent, or in response to a serious threat to the dominance or goals of the Communist Party.

The combination of relatively high Complexity and high Achievement motivation is the basis of a dedicated search for development and action that leads to that goal. It also indicates willingness to consider the views of others in conjunction with one's own position, to take into account new information that could lead to a change of policies, and to change policy or strategy gradually by small increments. Communications directed to these leaders designed with these characteristics in mind are more likely to have a positive impact than those that present only the other side's viewpoints, emphasize power relationships (or friendship), or advocate large-scale abrupt change.

Background

Most components of the SMA project, "Drivers of Conflict and Convergence in the Asia-Pacific Region in the Next 5-25 Years," focus on systemic and large-scale factors such as system dynamics (NPS), emerging technologies (GMU), and Chinese media (TAMU). In contrast, the UBC component focuses on psychological factors influencing the decision-making and information-processing characteristics of the Chinese leadership, using content analysis to perform "leader assessment at a distance." The REST (Reactions to Environmental Stress and Trauma) Laboratory at UBC has been conducting such studies for almost 40 years, primarily using Thematic Content Analysis (TCA). TCA transforms qualitative material such as written, oral, or recorded text into quantitative data. The process involves the development of detailed scoring manuals that are used to train scorers to a high level of reliability; the random selection and ordering of text extracts that have identifying information removed to avoid scorer bias; scoring by more than one qualified individual to calculate reliability; and standard statistical analyses of the results (Smith, 1992; Suedfeld, 2010). TCA manuals exist for scoring a range of psychological variables; in this study, Integrative Complexity (IC) and Motive Imagery (MI) were assessed.

Integrative Complexity (IC)

IC scoring has been widely used to monitor planning and decision-making, for example by national and international leaders and leadership groups during periods of stress and change (Suedfeld & Tetlock, 2014). Using a 7-point scale, scorers assess evidence that the author or speaker recognizes different aspects of a problem or different views about it (*differentiation*, scores of 2-4) and perceives relationships among these differentiated perceptions (*integration*, scores of 5-7) (Suedfeld et al., 1992). A score of 1 means no differentiation or integration; 2, 4, and 6 are assigned when there is some indication of the next higher score.

Table 10: Examples of paragraphs scored 1, 3, 5, and 7.

1	Arrogance and bias will not prevail in the long run. A small number of people hostile to China can in no way represent the international public opinion. We will enhance communication and exchanges with other countries so that they will be able to see a true China and people from abroad will not be confused by false statements.
3	We should speed up the development of equipment for reconnaissance and early warning, the automation of air defense command, and electronic warfare, and of "killer mace" weapons for hard destruction of the enemy, to narrow the "technology gap" between ourselves and powerful enemies. While developing new technology, we should also pay attention to drawing sustenance from our national culture and inheriting and carrying forward our army's tradition in being skilled at applying strategy, that is, as the experts say: Let thought and technology soar together.
5	We need to build a bridge of common cultural prosperity linking the two major civilizations of China and Europe. China represents in an important way the Eastern civilization, while Europe is the birthplace of the Western civilization. The Chinese people are fond of tea and the Belgians love beer. To me, the moderate tea drinker and the passionate beer lover represent two ways of understanding life and knowing the world, and I find them equally rewarding. When good friends get together, they may want to drink to their heart's content to show their friendship. They may also choose to sit down quietly and drink tea while chatting about their life. In China, we value the idea of preserving "harmony without uniformity", and here in the EU people stress the need to be "united in diversity". Let us work together for all flowers of human civilizations to blossom together.
7	China is in a stage where we must rely on the transformation and upgrading of the economy in order to sustain healthy development, so it is very important to coordinate in pushing forward stabilizing growth, restructuring, and promoting reform. Stabilizing growth can create effective space and conditions for restructuring, while restructuring can boost economic development, so the two are mutually complementary. Breaking through institutional barriers through reform can add new impetus to stabilizing growth and restructuring. Macro control must base itself on the present and set its sights on the future so as to make sure that the economy run within a reasonable range, and that the economic growth rate and employment level do not fall below the "lower limit" while price rises and others do not exceed the "upper limit." Within that reasonable range, we must focus on restructuring, promoting reform, and pushing forward the transformation and upgrading of the economy. In coordination, we must form a reasonable policy framework for macro control, and organically integrate restructuring and promoting reform with stabilizing growth, ensuring employment, or the policies of keeping inflation under control and preventing risks. The measures we take must serve multiple purposes, namely being able to achieve both stabilizing growth and restructuring with sights on both the present and the future so as to avoid drastic ups and downs in the economy.

Decision-making and responses to communications differ as a function of IC. A high level of IC indicates willingness to consider various positions and plans and their relationships to each other, attempts to understand opponents' points of view, and openness to making gradual,

nuanced changes in response to new information, including messages that recognize the strengths and weaknesses of several strategies or policies. People functioning at a low IC level do not easily change their minds or plans, but when they do, they may change in a more complete and drastic fashion (e.g., Schroder et al., 1967).

The careers of individual leaders has been linked to their ability to maintain or change IC as appropriate under varying conditions. Generally, maintaining relatively high IC during crises is conducive to long-term career success for politicians, diplomats, and generals (e.g., Suedfeld et al., 1986; Suedfeld, 2014; Wallace & Suedfeld, 1988). However, it can also seem indecisive or insufficiently dedicated, and lead to over-reliance on flawed or unimportant information (Suedfeld & Rank, 1976; Tetlock et al., 1993).

IC tends to remain stable or even rise during negotiations that lead to the peaceful settlement of international confrontations. Conversely, reductions of IC reliably precede as well as accompany decisions to use armed force, including surprise strategic attacks (reviewed in Suedfeld, 2010). Recent studies have also shown differences among groups varying in their willingness to commit or justify violence in the pursuit of ideological goals (Suedfeld et al., 2013).

Motive Imagery (MI)

MI scoring procedures are similar to those for IC. The motives scored are the needs for achievement (nAch), striving to reach high goals; power (nPow), persuading or forcing others to agree or comply; and affiliation (nAff), having warm relationships with others. These are highly relevant to leadership, and also represent the three most important dimensions found in a study of about 20 basic human motives (Winter, 1996).

Motive hierarchies influence career paths and decision tendencies for political leaders (Winter, 1991, 2007). For example, Winter (2002) has found that U.S. presidents whose first inaugural address was high in nPow were more likely to lead the nation into war, and on average are also rated more favorably by historians. Presidents with high nAff were more likely to sign arms-limitation agreements. Perhaps due to unwise loyalty to supporters who engaged in questionable activities, their administrations were marked by more scandals.

nAch in the inaugural addresses is strongly correlated with idealism, but not with rated greatness. The nAch of American entrepreneurs, on the other hand, is highly correlated with success. It may be that substantial policy changes in the political sphere require too much compromise and negotiation for achievement-driven idealists. Entrepreneurs who can follow their own vision do not have the same problem. Winter has hypothesized that “totalitarian leaders with high achievement motivation are also likely to be relatively more successful—at

least so long as there isn't a major rival faction” (personal communication, 2 Oct., 2014). This may explain the success of primarily nAch-oriented leaders in the PRC.

In an earlier study (Stewart & Suedfeld, 2012), IC and MI both predicted the outbreak of political violence, although IC did so more reliably from 4 to 2 weeks before the violent events. Together, decreasing IC and increasing nPow accounted for 73% of the variance in log-transformed violence.

MI is scored by the frequency with which each particular motivation is mentioned, per 1,000 words of text. Thus, in the first instance MI scores are not calculated as means; however, mean MI scores can be derived by averaging the frequency scores.

The IC and MI database consisted of transcripts and other verbal materials: speeches, interviews, memoranda, press releases, letters, etc. Many of the texts were obtained from the Open Source Center, and others were from various sources.

Subjects and Results

The leaders were identified by China experts within the SMA project. Table 9 shows the leaders included in the study, and their mean scores on the three major variables.

Table 11: Leaders included in this chapter and their TCA scores.

Leader	Position	# of Paras	IC	nAch	nAff	nPow
Civilian leaders						
Xi Jinping	CPC General Secretary and Politburo SC 1st Member; CMC Chairman; PRC President; “paramount leader”	826	2.10	5.16	1.01	1.08
Li Keqiang	Politburo SC 2nd Member, National Security Commission Vice-Chairman, PRC Premier; PRC Director of various leading groups on economic development	860	2.21	5.66	0.84	0.60
Zhang Dejiang	CPC Politburo SC 3rd Member, National People's Congress SC Chairman, National Security Commission Vice-Chairman	663	1.95	5.97	0.50	0.77
Wang Qishan	CPC Politburo SC 6th Member, Central Commission for Discipline Inspection, SC Member and Secretary	62	1.97	4.19	1.44	0.58
Yang Jiechi	CPC Central Committee Member;	254	1.94	3.86	1.29	0.55

	PRC State Councillor					
Wang Yi	CPC Central Committee Member; PRC Minister of Foreign Affairs	69	1.63	2.75	0.34	0.69
	Military leaders					
Fan Changlong	CPC Politburo Member; CMC Vice-Chairman; PLA General; PRC CMC Leading Group for Deepening Reform on National Defense Deputy Director	42	2.28	4.61	0.45	2.08
Xu Qiliang	CPC Politburo Member; CMC Vice-Chairman; PLA Air Force Commander	75	1.69	6.03	0.50	1.51
Fang Fenghui	CMC Member; PLA Chief of the General Staff	47	1.66	2.90	1.05	0.79
Wu Shengli	CMC Member; PLA Navy Commander-in-Chief	21	1.86	1.91	1.52	0.38
Ma Xiaotian	CMC Member; PLA Air Force Commander-in-Chief	50	1.85	1.52	0.43	0.65
	Potential future leaders					
Hu Chunhua	CPC Politburo Member, Guangdong Province Party Secretary; PRC Inner Mongolia Autonomous Region People's Congress SC Member and Chairman,	36	1.88	4.53	0.00	0.59
Sun Zhengcai	CPC Politburo Member, Chongqing Municipality Party Secretary	157	2.60	6.73	0.04	0.31
Zhao Leji	CPC Politburo Member, Politburo Secretariat Member, Central Committee Organization Department Head	29	1.93	4.59	0.00	2.29

In Table 10, the leaders and scores are aggregated by subgroups. More detailed analyses appear in our final report for the SMA PACOM project.

Table 12: IC and MI scores by subgroup.

	Mean IC	IC range	Mean nAch	nAch range	Mean nAff	nAff range	Mean nPow	nPow range
All	1.97	1.63 - 2.60	4.31	1.52 - 6.73	0.67	0.00 - 1.52	0.92	0.31 - 2.29
Military	1.87	1.66 - 2.28	3.39	1.52 - 6.03	0.79	0.43 - 1.52	1.08	0.38 - 2.08
Civilian	2.02	1.63 - 2.60	4.83	2.75 - 6.73	0.61	0.00 - 1.44	0.83	0.31 - 2.29
Current civilian	1.96	1.63 - 2.21	4.60	2.75 - 5.97	0.90	0.34 - 1.44	0.71	0.55 - 1.08
Future civilian	2.14	1.88 - 2.60	5.28	4.53 - 6.73	0.01	0.00 - 0.04	1.07	0.31 - 2.29

The IC means for the leadership group as a whole were below the level of clear differentiation, but actually in the upper half of the average scores of international leaders (Suedfeld, 2010). This level of IC indicates a strong commitment to one’s own position and policies, with some flexibility on strategies and decisions and some recognition of alternate or opposing views beyond mere rejection.

nAch was by far the most dominant motive of both civilian and military leaders; nPow was low to moderate, while nAff was quite low in both. The high level of nAch and low to moderate level of nPow, especially among the civilian leaders, implies that as a group they are more concerned with reaching goals of improvement and progress than with merely exercising force or persuasion. They demonstrate less need than Western politicians to engage in trade-offs and compromises in order to pursue their goals. In that, their scores resemble those of Western entrepreneurs (Winter, 2005).

The civilian-military differences in IC and MI echo the results of an earlier study of eminent international figures (Suedfeld, 2014). These differences may reflect the nature of military organizations, where the power hierarchy is clearer and *esprit de corps* is stronger than among civilian groups.

Potential top leaders (“Future civilian” category in Table 9) were somewhat higher in IC and considerably higher in nAch and nPow than current leaders; nAff was essentially absent from their motivational profile. But the IC difference is due entirely to Sun Zhengcai. His cohort members are actually somewhat lower in IC than the average of the current civilian leaders. If Sun does eventually reach a very high position, Chinese government policy may show

somewhat greater flexibility and openness to compromise than now; but otherwise, we can expect the future leadership to show no change from the present-day configuration.

Event-related scores for Xi Jinping.

Table 11 presents IC and MI changes for the paramount leader during periods varying in roughly estimated level of stress. In “Low Stress” periods, no specific crisis or serious challenge occurred (as far as is known). “Crisis” indicates a period in which serious problems had to be dealt with and serious decisions had to be made. For “Unanticipated Crises,” it is unlikely that the CPC either planned these events or had advance knowledge that they were likely to occur. Examples: the Urumqi riots, the Senkaku boat incident. In “Anticipated Crises,” the CPC’s actions either precipitated the event, or received advance public notice that the event was likely to occur. Examples: the announcement of Anti-Corruption Campaign, the campaign against Zhou Yongkang, the Hong Kong protests.

The demarcation between pairs of time phases is somewhat variable. In some cases crises or challenges overlapped chronologically, so that the pre-crisis period for one impending event was the same as the crisis or post-crisis period for another; in other cases, two problem situations may have occurred in the same time frame.

Table 13: Xi Jinping: IC and MI by crisis type and phase.

Crisis Type or Phase	# Paras	Mean IC	nAch	nAff	nPow
No crisis – low stress	82	2.58	5.84	0.82	0.62
Before unanticipated crisis	45	2.20	5.27	0.34	0.56
Before anticipated crisis	185	1.93	4.70	1.74	1.00
During crisis	366	1.99	5.59	0.92	1.16
Post-crisis	148	2.29	4.44	0.90	1.38

Xi’s IC was highest in periods when there was no crisis. It was lowest when he anticipated a crisis and during crises. His response to crises, especially ethnic unrest or political challenge, indicates disruptive stress, a tendency to close down on information search and processing, abandon the consideration of alternate policies and dissenting points of view, and reduce nuanced thinking. However, his IC rose in association with crises involving foreign affairs, such as collisions between Chinese and foreign vessels.

Xi Jinping was in charge of planning the Beijing 2008 Olympics, and his career advancement likely depended, in part, upon its success. Prior to the Olympics, during the first two weeks of March 2008, Tibetan unrest broke out around the anniversary of the Tibetan uprising (March

14), and spread from Tibet to other provinces with Tibetan populations. For seemingly unrelated reasons, Uyghur unrest broke out in mid-March, and continued into late September. On May 12, there was a 7.8-8.0 magnitude earthquake in Sichuan province, which killed tens of thousands, possibly over one hundred thousand, and left millions homeless. The Olympics (August) were generally considered a success. Xi's IC dropped considerably with the ethnic unrest and was almost equally low during the period of the earthquake and the Olympic games, but rose to its highest level after all of these crises had ended. This rise is typical of his IC post-crisis, when ways need to be developed to restore normality and perhaps prevent a recurrence; in any case, when the immediate stress level has been reduced. This pattern is similar to, but less dramatic than, Gen. Robert E. Lee's major rise in IC after the surrender at Appomattox; Suedfeld et al., 1986).

Xi's nPow was higher than his norm before anticipated and actual crises, and especially high after the end of crises. This latter change may indicate a decision that more forcefulness is needed to prevent a recurrence of similar problems. Figure 1 shows the most dramatic example of this, the Senkaku Boat Incident of November 2010, which started with a collision at sea and developed into a diplomatic *imbroglio* in which each country arrested and eventually released citizens of the other. After the resolution of the confrontation, Xi's nPow rose from under 1.0 to 7.82.

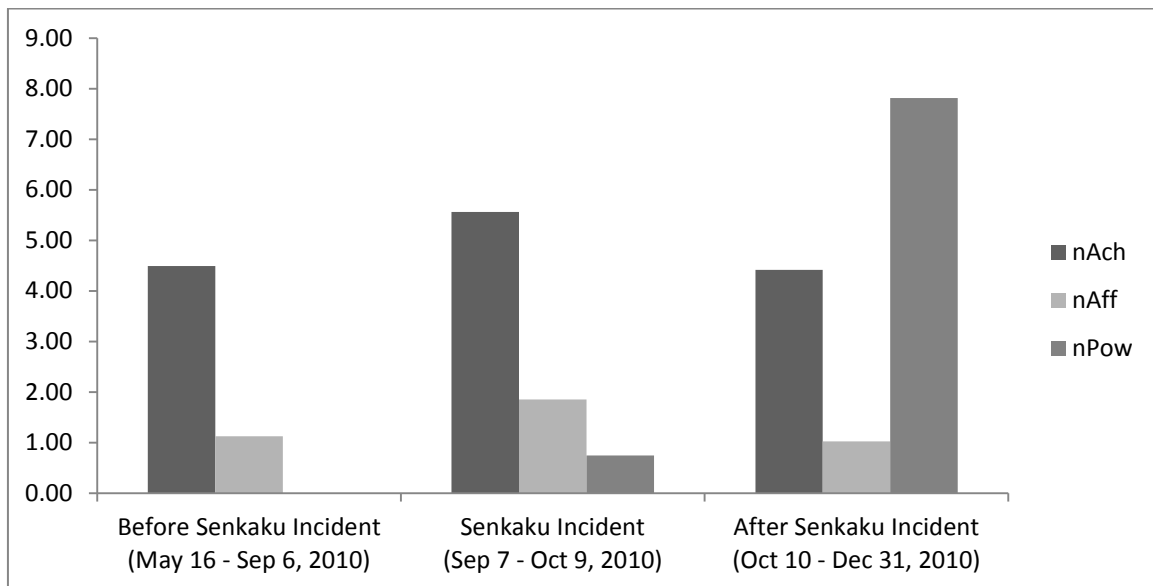


Figure 11: Xi Jinping's MI: Senkaku Boat Incident.

Discussion

National leaders must function within complicated and dynamic systems; in fact, systems within systems. Domestic and foreign, bilateral and multilateral, political, economic, technical, informational, military, cultural, ethnic – and other – variables must be considered in decision-making. All affect opportunities and constraints that a leader and leadership group must work with. However, individual personalities and small-group composition still allow for significant degrees of freedom as to how problems are defined and how decisions are made.

TCA of two important and relevant factors has enabled us to draw some inferences about the leadership of the PRC. It is pragmatic and achievement-oriented, emphasizing the further development of the Chinese economy and China's world position. Its thinking is to some extent flexible, information-oriented, and able to consider the points of view of other participants in the international community. These factors are dominant in the leadership's normal functioning as well as its response to a wide variety of problems, both domestic and international.

But things change when a serious challenge arises to China's internal harmony or to the Communist Party's unity and dominance. When that happens, the leaders' reactions emphasize the restoration of the *status quo ante*, reliance on straightforward and relatively rigid strategies, and the exertion of power. These characteristics are not only shown by the leadership group as a whole, but by the top leader, Xi Jinping, personally. He also shows a continued emphasis on power in the aftermath of such challenges, but coupled with a return to more flexible and complex thinking.

These characteristics should also affect the government's response to approaches from other nations. Messages that offer a variety of policies, explicitly recognize China's points of view, and refrain from challenging the dominance of the CPC, should have the most positive impact. Particularly in the aftermath of serious crises, communications should avoid the assertion of power in attempts to influence Chinese policy.

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Geopolitical Visions in Chinese Media (Texas A&M)

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Summary:

USPACOM requested that the SMA team initiate an effort to provide the Command analytical capability to identify areas of strategic risk and opportunity in the Asia-Pacific region over the next two decades. Specifically, these capabilities should enable the Command to examine future political, security, societal, and economic trends; identify where US strategic interests are in cooperation or conflict with Chinese and other interests worldwide, and in particular, with regard to the East China Sea; and leverage opportunities when dealing with China in a “global context”. Specific questions are listed in three tiered groupings in an addendum.

In order to better understand the strategic context in which the leadership of the Peoples’ Republic of China makes its foreign policy decisions, this study analyzed Chinese media (broadcast and web) in an effort to uncover key frames and cultural scripts that are likely to shape potential geopolitical relationships in the region. The team provided an overview of Chinese media and developed individual reports on cultural scripts in media coverage of several key issues: China’s relationships with its regional neighbors, the geopolitical dimensions of the “China Dream” (中国梦) discourse, and a summary of Chinese discourse around “New Style Great Power Relations” (新型大国关系). This report serves as the final summative report of that effort. At least five important policy implications stem from this analysis:

1. **Leverage an understanding of Chinese rhetorical frames to position PACOM activities for maximum impact**
2. **Do not allow counter-productive narratives to go uncontested**
3. **There is political room for collaboration**
4. **Proceed with caution and address differences in conceptual interpretation frankly**
5. **PACOM’s efforts will need robust interagency coordination**

Introduction:

This study is designed to support the effort to understand the likely trajectory of political, economic, and military trends in the Asia Pacific region by closely examining a variety of sources in Chinese media to determine the key geopolitical themes and narratives that guide Chinese policy-making, as well as the assumptions and arguments that are largely taken for granted by large segments of Chinese citizens. The analysis of media content is a recognized practice among numerous government agencies and private organizations for open source intelligence. This study sought to engage a variety of media to determine trends and patterns

that might provide a better understanding of key geopolitical themes and provide potential recommendations for messaging that enhances US policy objectives.

Although understanding today's news agenda will not predict China's policy over a two decade timeline, media coverage, agendas, and priorities do reveal deeper components of Chinese political culture, including assumptions, expectations, and worldviews. In addition, close analysis of media coverage can uncover cultural scripts (assumptions about values, priorities, and expectations) that might impact foreign affairs. Although "policies" can change quite quickly, cultural scripts and political culture are more enduring. They can provide constraints on future behavior as we contextualize current policy positioning.. Finally, media expresses "grand narratives" that capture the Chinese national mood/vision. An accurate assessment of such sentiments can help inform both the content and the manner in which PACOM engages with the region.

This analysis sought to answer several key questions. Some of these questions are articulated below:

- What are the issues that China's media identifies as key areas of potential conflict?
- How does Chinese media frame the issues related to these key risks?
- How can the US strengthen partner nations without seeming to "provoke" China?
- Are there issues/frames that can allow framing of PACOM activities as multilateral?
- What frames/narratives can be used to build regional cooperation?
- What role does Chinese media play in undermining regional cooperation?
- What are ways to frame US actions and strategy that minimize the potential for misunderstanding or conflict?

Chinese Media Environment

Even in the midst of widespread media reform policies over the last two decades, it remains true that all media in China operate under political constraints, and so, come under government regulation/control. Media continue to be seen as a key mechanism to consolidate the legitimacy and leading role of the Party (ideology, personnel, policy). The reforms since the 1990's have brought market-oriented pressures on media, but the political imperatives remain strong. China has an emerging mix of public/private ownership structures, but state-owned companies control most media. Likewise, advertising is growing in importance as a revenue source. The overall goal seems to be to mature the state-owned media to contribute to ongoing political stability of the state.

This study employed analysis of media content from a variety of media sources, from both commercial and governmental entities, collected using the Media Monitoring System. Although all of the content was obtained from the Internet, the sources represented a mix of traditional print and broadcast sources, as well as purely internet based media. China currently has almost 300 separate radio stations and over 300 television stations. CCTV (China Central Television) remains the dominant broadcasting voice, with 22 channels, supervised directly by the Propaganda Department. There are also a significant number of provincial channels, many with footprints beyond their provincial boundaries. The print sector also remains vibrant, with over 2200 newspapers and over 7000 magazines and journals. The largest are still government-owned, including People's Daily, Enlightenment Daily, and Liberation Daily. Our studies included

all of these sources, as well as Southern Weekend, based in Guangzhou, and owned by Nanfang Media Group, which is well-known for testing limits of investigative journalism and free speech.

Study One: China’s coverage of important global and regional neighbors.

In this initial study, we sought to identify important cultural scripts that might have a role in Chinese foreign policy. We searched for key terms that would reflect important relational terms (such as *Vietnam* and *little brother*), important diplomatic terms (such as *aggressive* or *cooperative*), or other recurring labels or terms that would help to explain historical analogies or narratives. We also conducted event specific analysis of key events, such as the disputed islands in the South China Sea, the Malaysian Airlines crash, and other events as appropriate.

Our findings revealed a number of important themes commonly found in most media coverage of China’s foreign policy. These themes show up in a variety of media sources and contexts. They include:

- China has never taken the first step to provoke trouble. China has only been forced to respond to the provocative actions by other parties. A growing China is not a threat to the world, but rather safeguards regional stability.
- China primarily seeks “equality” with other global powers in Asia. The media never indicate that China seeks to dominate the region.
- The US, in partnership with multiple regional partners, seeks to “contain” China through its economic and military dominance.
- The United States is overwhelmingly the most important foreign policy interlocutor for China. The US figured in almost 50% of all foreign policy-related articles. Second was Japan, with Russia typically third. This suggests the US remains by far China’s most important relationship—notwithstanding current Western concerns that China and Russia are forming an anti-US bloc.

Study Two: Geopolitical Implications of the China Dream discourse

This study explored the ways in which the “China Dream” (中国梦) figures in geopolitical themes in Chinese media. The China Dream has been a concept proposed by Xi Jinping as the guiding policy for the nation, and typically refers to the goal to achieve a “moderately prosperous” society by 2021, and to regain regional primacy by 2049. The government has pushed the discourse widely, has encouraged individual and collective responses, and has invited elaboration (although within constraints) of the concept from a wide section of the nation.

For this analysis, we examined 885 articles from 19 news sources, and found marked consistency in the themes about the China Dream. Four primary themes emerged, including economic development, a “return to strength”, cultural prestige, and ideological unity.



The most important of these themes is that of economic development, in which China's own economic growth not only provides prosperity for China's citizens, but also provides a mechanism for bilateral trade ties, and provides a boost for developing countries as well.

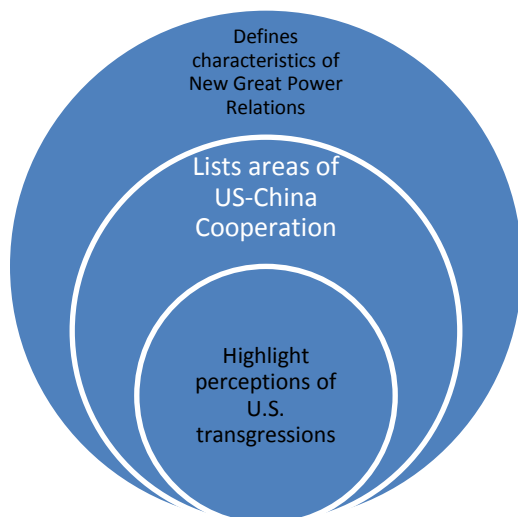
The second key theme was that of a "return to strength," in which China's past humiliations (the Opium Wars, Japanese aggression, etc.) are overcome, and China's security forces put to rest any concerns about the nation's ability to protect itself. One element of this discourse is that without security, the economic dimensions of the China Dream will not be fulfilled. The third element that emerged from this study was that of cultural prestige, in which China's cultural heritage operates as a sort of "soft power" dimension abroad. This discourse focused on China's cultural heritage, including its literature, art, philosophy, and historical achievements. Once China is able to successfully exploit its cultural heritage, it will acquire greater geopolitical prestige, which the nation deserves.

The final theme present in China's media about the China Dream is that of the continuing relevance of its governing ideology and the necessity of maintaining the leadership of the Chinese Communist Party. In other words, regardless of China's economic growth, its growing military power, and its 5000 year cultural heritage, China must continue to adhere to the "core socialist principles" that provide the foundation for national growth. This discourse stressed the continuity, rather than discontinuity, of the policies of the CCP.

All of this discourse stressed the value of the China Dream, not just for the Chinese nation, but also for the world. The discourse also followed a consistent logic; in the past China had been powerful and prosperous, but that it had been weakened by foreign aggression. Under the leadership of the CCP, however, China had overcome its struggles, and was on the path to return to its past cultural, economic, and political prestige. By continuing on the pathway, the "China Dream" would ultimately be realized, and China would be a resource for the rest of the world, as well as an "equal player" in global geopolitics.

Study Three: Chinese Media on "New Style Great Power Relations"

Our final study focused on how Chinese media portrayed the concept of the "new style of great power relations" (新型大国关系). This concept has been consistently offered as an alternative model for the rise of a great power, in which the pathologies of great power rise (i.e., conflict with existing powers) would be minimized. The Chinese goal has been to use a



new style of cooperative, rather than competitive, relations, primarily with the United States. For this study, we analyzed 541 articles from 21 different media sources.

The greatest number of articles focused on defining NSGPR as a concept which would identify areas of collaboration

and cooperation, focusing on international and regional issues, while enhancing economic and military ties. Approximately 75% of the studies sought to define the concept by identifying potential areas of potential collaboration, while another 25% identified areas of “US transgression,” or incidents/issues in which the US is seen as ignoring or undermining China’s attempt to implement a collaborative style of relations.

In terms of areas for cooperation, the most cited component was in the economic realm, (e.g. increased trade, bilateral investment, and infrastructure). A second area identified as having great potential for collaboration was in military to military ties, especially in fighting terrorism and policy coordination. Other areas identified for collaboration also included in foreign policy issues (such as North Korea or Iran), environmental and energy issues, and finally, cultural exchanges.

As noted, much of the negative coverage focused on US failures to reciprocate China’s gestures. Negative coverage often focused on US hesitancy to embrace the concept, acting out of a “Cold War” mentality, or ignoring China’s legitimate national interests. Such articles often highlighted US reconnaissance activity, arms sales to Taiwan, or the US position on the South China Sea island disputes as evidence for US unwillingness to engage China as an equal geopolitical power. As in our findings from the first study, the US remained the overwhelming focus for NSGPR (the US was mentioned over 9600 times in our data set, compared to only 1163 mentions for the next most oft-cited power, Japan). Russia was mentioned third most often, with just over 700 mentions in our data set. Clearly, China’s NSGPR is intended primarily, almost exclusively, for the United States.

Our analysis also uncovered an interesting rhetorical trope or strategy, which helps to explain Chinese thinking on this issue. First, the discourse shapes the parameters of NSGPR as being about common interests and areas of collaboration. Then, the articles would apply these parameters to US actions or challenge US intentions in a specific context. Finally, the articles would demonstrate how US actions undermine the parameters supposedly “agreed upon” in the first instance, and challenge the US to conform to the expectations outlined in the discourse. This rhetorical strategy leaves the US with little choice: either the US can refuse to engage on the concept, in which case the US seems opposed to collaborative, positive, mutually beneficial US-China relations; or the US can “play ball” in which case, the US is called to task for failing to live up to Chinese expectations.

Conclusions and Recommendations

These three studies have explored important geopolitical themes inherent in Chinese media that could potentially have value in the development and articulation of US policy. We found a remarkable consistency across media sources in their treatment of these themes, although there was clearly variance in how different media outlets would focus on certain themes. For example, economic media tended to focus on economic issues, while military

outlets focused more on military or security dimensions. But we found very little variance in the basic principles or themes in these three studies, and we found little wandering away from the parameters of the basic themes as laid out by the government. Even among the most liberal outlets, there was little deviation from the basic principles established by the government.

There are several important findings that emerge. First, the US is overwhelmingly the key focus for Chinese discourse about international relations. Although regional disputes and neighbors matter, they matter far less than the relationship with the United States, and most geopolitical discussions center around its impact on relations with the US. Second, Chinese thinking about geopolitical relationships remains tightly oriented to official discourse, which has proved flexible enough to accommodate numerous new issues. The basic parameters of Chinese thinking reflect China's rise to geopolitical prominence, but without the necessity of conflict with existing powers (again, primarily the US). All of these studies demonstrate that Chinese media adhere closely to governmental discourse. We have been unable to identify areas where any type of Chinese media doesn't reflect and reify governmental discourse about China's geopolitical relationship. Chinese media, even that which is considered most liberal in domestic policy, adhere closely to governmental norms in geopolitical coverage.

There are also at least five important policy implications from this analysis:

1. **Leverage an understanding of Chinese frames to position PACOM activities for maximum impact:** By identifying the dominant frames and themes in Chinese media, it is possible to begin to articulate US policy priorities within those frames. US engagement with China tends to focus on a different set of frames (such as "responsible stakeholder" or "human rights") that are at variance with Chinese frames, and thus, tends to not enter Chinese consciousness or are seen as intrinsically oppositional to Chinese priorities. By more explicitly framing US policies within the frames and norms of Chinese media, it might be possible to articulate those concerns to a broader Chinese audience.
2. **Do not allow counter-productive narratives to go uncontested:** US policies are often portrayed in Chinese media in a negative light (i.e., undermining new style great power relations), and this portrayal is rarely countered in US discourse. By understanding how these frames are articulated, it is possible to advance US policies within a framework of collaborative, rather than competitive, ties.
3. **There is political room for collaboration:** In the event that PACOM seeks common ground from which to build more cooperative relations with China, this study found evidence suggesting that domestic Chinese media portrayals of some of the most prominent "guiding concepts" that have been articulated by Xi Jinping could provide entrees that can be leveraged to foster a more cooperative tone in the military-diplomatic relationship.
4. **Proceed with caution and address differences frankly:** Although there are areas that might be ripe for greater cooperation, PACOM would be well-advised to proceed cautiously and be aware of potential rhetorical traps. Specifically, we recommend that any engagement for cooperative purposes that seeks to leverage

some of these dominant themes and concepts be proactively defined by PACOM. Areas of difference in interpretation or emphasis or specific meanings that China might have regarding some of these ambiguous and vague concepts should be directly and forthrightly addressed even as PACOM might seek to build a more cooperative footing based on some of these ideas.

5. **Need for interagency coordination:** Any effort to proceed along a cooperative vector with China is likely going to need broader support beyond just PACOM. If PACOM is looking to actively seek out areas for regional cooperation, we find that there is rhetorical material in the Chinese media discourse that can be used to support that effort. However, a successful cooperative engagement approach would be reliant on being enmeshed in a larger US interagency approach to China.

Addendum One: List of websites observed:

- News 163
- Sina
- Sohu
- Ifeng
- Ministry of Defense
- CCP Website
- Xinhua
- ChinaMil
- XMRF
- Tlexue
- China Elections
- Enlightenment Daily
- Ministry of Foreign Affairs
- Caixin
- Cankao Xiaoxi
- Global Times
- QQ News
- Zhongguo Bao
- Taiwan Affairs Office
- Renmin Ribao
- Jingji Cankao Bao
- Nanfang Dushi Bao
- Qingdao News
- Southern Weekly
- Central People's Government

A System Dynamics Approach to Modeling Drivers of Conflict and Convergence in the Asia-Pacific Region in the Next 5-25 Years (NPS)

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Introduction

This project is part of a Strategic Multi-Layer Assessment (SMA) for the U.S. Pacific Command (PACOM) entitled “Drivers of Conflict and Convergence in the Asia-Pacific Region in the Next 5-25 Years.” In general, the SMA process provides planning support to Commands for complex operational imperatives requiring multi-agency, multi-disciplinary solutions that are not currently within core Service/Agency competencies. This SMA was expected to develop an outline of areas of strategic risks and conflicting interests as well as potential opportunities for encouraging cooperation between the United States and Asia-Pacific regional actors with particular emphasis on the East China Sea. The project period of performance was March 2014 to April 2015.

Background

A potential shortcoming in current conceptualizations of conflict and cooperation is the inability to integrate our knowledge of the multiple dimensions of the problem—military, trade, demographics, technology, natural resources—into an integrated whole. Treatments of the problem, whether in academic or public discourse, invariably emphasize one aspect or problem area. This fragmentation of knowledge is not a reflection of the way the world works, but rather is the result of the analytic lens we impose—our natural predisposition when confronting a difficult problem to take things apart and treat the parts separately (analysis). The challenge in addressing conflict is to “put things back together” again, after they have been examined in pieces (synthesis). Such a holistic perspective does not deny the independent roles of the separate factors, but rather synthesizes them into a broader framework incorporating the interactions between them—interactions that tend to get lost when the individual components are analyzed.

Human systems are driven by feedback loops in which both free choice and constraint are present. In a bounded system, the application of system dynamics can provide both conceptual and qualitative insight. By understanding the mechanisms of these feedback loops, it may be possible to maintain the desired dynamic equilibrium of the system to achieve or maintain stability. The use of fairly simple system dynamics models for each of the various sectors provided a structure for insight about the behaviors involved.

Purpose

The Naval Postgraduate School (NPS) partnered in this SMA by studying the dynamics of the issues involved within the context of a systems approach to address the limitations of current conceptualizations. Among the key issues of mutual concern are U.S.-China economic trade barriers and imbalances, food security, agricultural policies, water management, climate change and carbon-based fuel alternatives, scarcity of resources (from soil nutrients to mineral for manufacturing), freedom / denial of access and intrusion issues (Exclusive Economic Zone (EEZ), cyberspace, et al), military challenges and opportunities, high technology and academic exchanges, human rights, national demographics and their impacts on economies, human migration, Third World development, and others. Failing to recognize the systemic nature of the issues surrounding the drivers of conflict and convergence and their interconnectedness, and bifurcating “Economic” and “Strategic/Security” topics, puts the United States government at a disadvantage, since China almost certainly views all of these issues within the context of a unified strategy.

Objective

The primary objective of this strategic assessment project was to inform decision makers of the complexity of the environment in which they and their competitors operate and to broaden the horizon of their strategic thinking. Research in the areas of complexity and systems thinking covers a spectrum of concepts that frame regional and global environments. Common in much of this analysis is a focus on determining system boundaries, endogenous and exogenous impacts, identification and implementation of feedback loops, and an appreciation of the delays and time frames required to provide a sufficient understanding of relationships within and between systems. An efficacious strategic planning process must be focused on enhancing the ability of decision makers to make sense of an uncertain and complex environment.

Scope

The NPS effort built upon existing understanding of the sources and consequences of conflict as articulated in the Carnegie study (Carnegie Endowment for International Peace 2014). The system dynamics modeling effort provided the systems thinking methodology and tools to integrate multiple perspectives (economic, political, demographic, technological, etc.) into an integrated whole. Dynamic feedback relationships, which are typically represented more qualitatively in other studies, were modeled explicitly in systems dynamic terms and their significance was explored through simulation.

Approach

The NPS approach employed systems thinking and system dynamics methodologies to analyze, within a single coherent framework, major issues of common U.S./China concern which display non-linear and dynamic behavior. The system dynamics discipline and methodology was created by Jay Forrester at Massachusetts Institute of Technology. System dynamics is a powerful method to gain useful insight into situations of dynamic complexity and policy resistance

(Sterman 2000), situations which in turn have a direct bearing on strategic thinking and planning.

In order to address the tasking provided by PACOM and the Office of the Secretary of Defense (OSD), a team of systems engineering and system dynamics students and faculty from NPS worked with partner academics and practitioners identified in the SMA study to formulate the structures and key variables in several simple system dynamics sector models. These sector models capture, for instance, the bounded problem sets associated with U.S.-China relations in the areas of security/defense (including escalation), economics, energy, demographics and internal stability, and environmental concerns/resources. Sectors were modeled endogenously and linked together to study how the collective effects of policy decisions in one sector spread to others (the system of systems) in order to evaluate the potential behavior of the relationship over a 25 year time horizon. The models allow decisions-makers to use a “flight control simulator” or “dashboard” to perturbate system variables to better understand non-linear, potential outcomes over time. While this modeling is non-predictive, it is intended to enhance foresight in a complex strategic environment by exploring both the risk and the opportunity space.

Model Description

Given the general construct for system dynamics modeling, the first step towards development of a comprehensive model was the identification of the overall model boundary and the key variables that define each segment of the model. Key variables were grouped into by segments, and then causal loops diagrams were developed to indicate relationships with emphasis on feedback mechanisms. Figure 9 presents a high level overview of the NPS model. The grey

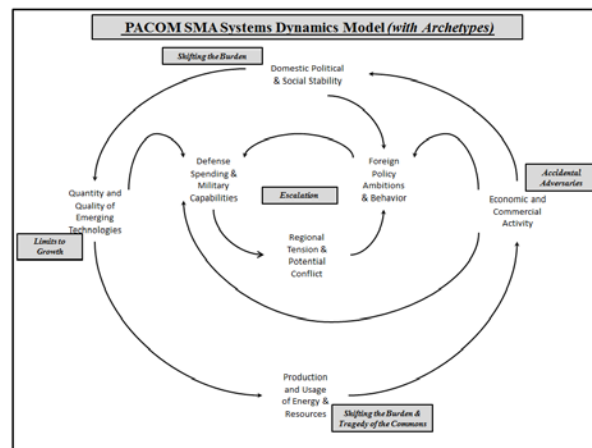


Figure 12: Asia-Pacific Conflict and Convergence Model (with Archetypes)

rectangular labels in the diagram refer to archetype patterns identified in Chapter 6 of Peter M. Senge’s “The Fifth Discipline: The Art and Practice of the Learning Organization” (2006). Once

contributions from other SMA partners were received, the model structures were altered as necessary. Data from those partner reports were also used in support of the models.

The causal loop diagrams for each sector were used as the basis for developing computer models that could then be executed as a simulation. This project used a commercial SD software package, iThink® 10.0.6 from iseesystems, Inc., to encode the models and to create model diagrams that display the model structure to the user. The iThink model diagrams are shown in Figures 10 through 14. In each diagram rectangles represent a “stock”, a term in SD modeling that refers to a variable of interest that can change over time. The pipe-like icons entering and departing stocks are “flows” which represent the rate of stock growth or decline as a function. The circles connected to stocks, flows, and other circles by lines represent variables that are used to calculate stock levels, flow rates, or other values. The green rectangular icons in Figure 10 represent unexpanded output graphs that were used for debugging the model.

Energy Demand and Resources Sub-Model

Figure 10 is a graphical depiction of the overall iThink 10.0.6 SD model for China’s energy demand and energy resources consumption. China’s energy demand is modeled in three categories; household energy demand, heavy industry energy demand, and non-industrial energy demand. China’s energy resources consumption was modeled in four categories; coal, oil, liquefied natural gas and liquefied petroleum gas, and nuclear-hydroelectric-renewables.

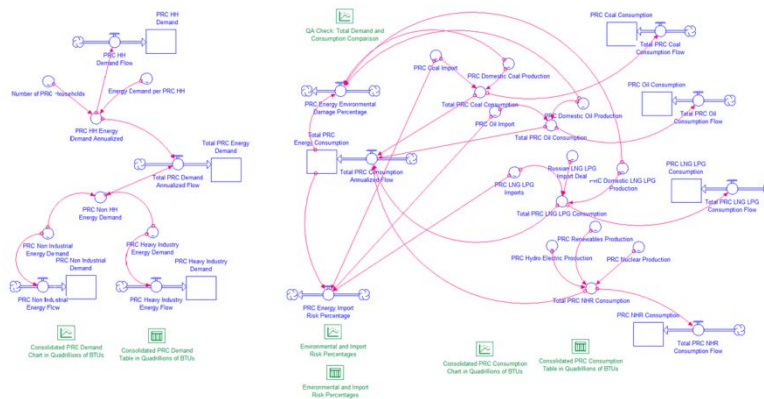


Figure 13: China’s Energy Demand and Energy Resources Consumption Sub-Model

Economic Sub-Model

The Economic Sub-Model is shown in Figure 11. The Economic Sub-Model directly contributes to potentially escalating regional tension and the potential for conflict. The sub-model was developed using open source trend and proven resources model data provided by the United Nations for 2012. All the economic data was converted to 2012 US dollars for comparison purposes. Other data sources (e.g. the International Monetary Fund, the World Bank) were considered for inclusion but ultimately not used at this time. The UN economic data was used

with a statistics package curve-fitting application to generate equations that reflect projected U.S. and Chinese economic performance through 2012.

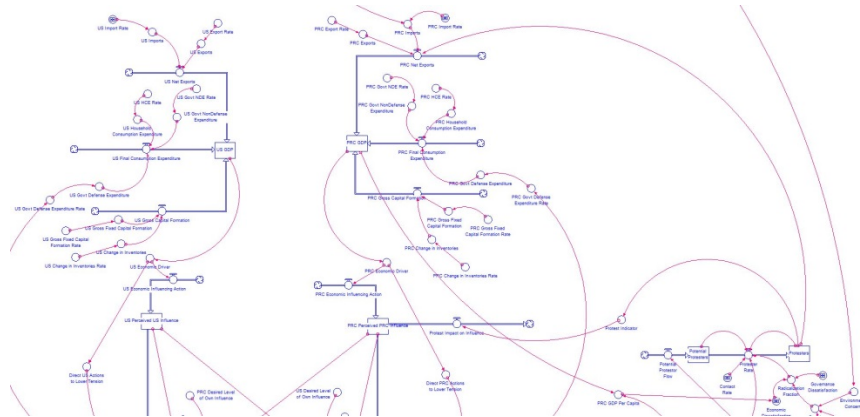


Figure 14: PACOM SMA Economic Sub-Model

Tension Sub-model

Tension is the metric used as a surrogate for U.S.-China relations. High tension levels suggest that conflict is likely to occur while lower tension levels indicate that the nations involved are pursuing normal diplomatic relations. The tension model (Figure 12) is driven by perceptions and desires of influence in the region. The Chinese have a perception of their influence in the

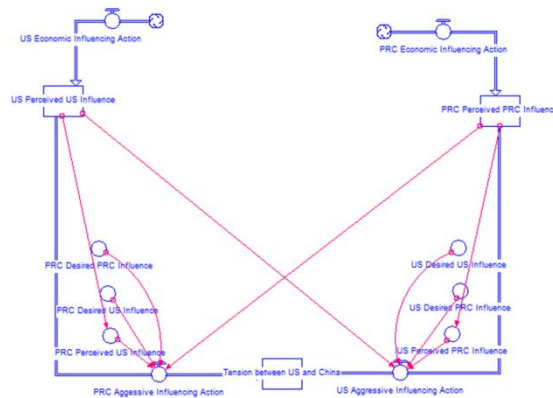


Figure 15: Tension Sub-Model

region and a perception of the United States' influence in the region. The Chinese also have a desired level of influence the region and an assumed goal of limiting other nations influence in the region. If the Chinese desired influence is less than their perceived influence then the Chinese will take action to close the gap between their perceived influence and their desired influence in the region. Such an action will probably be seen by the United States as an aggressive action, raising the level of tension. Similarly, if the Chinese perceive a difference between their perceived level of U.S. influence in the region and their desired U.S. influence, this will likely lead to actions to counter the perceived deficit. Such an action by the U.S. would probably be perceived by China as an aggressive action, also raising the level of tension.

Military Actions Sub-Model

The U.S. currently has the predominant military influence in the Pacific region. China will likely take actions over the next 25 years to limit U.S. influence and freedom of action in the region. Third party nations such as North Korea, Taiwan, or Japan could also take destabilizing actions that would raise tensions between the U.S. and China. Based on conversations with subject matter experts at CEIP, START and Monitor 360, five categories of military and quasi-military actions were developed: North Korean, intentional quasi-military, unintentional quasi-military, Taiwanese, and third-party. These actions are considered to be destabilizing events that increase tension as seen in Figure 13.

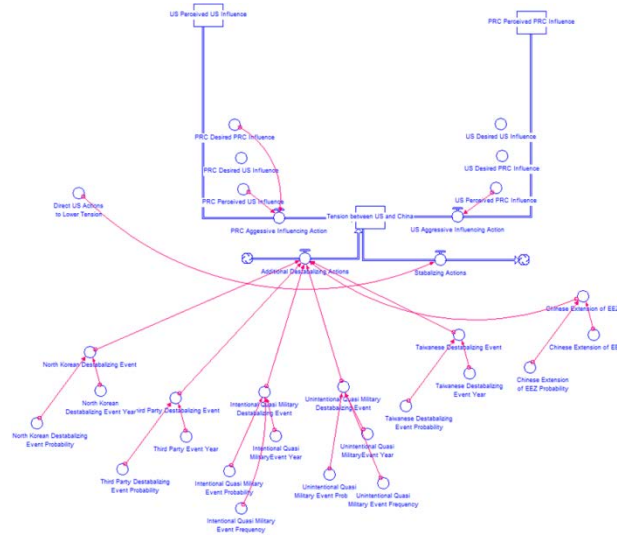


Figure 16: Tension Sub-Model with Military Actions

Demographics and Stability Sub-Model

The PACOM Stability Sub-Model (Figure 14) is composed of two components – a Chinese Demographics Sub-Model and a Protestor Sub-Model. A demographic model is necessary to consider when modeling potential political or social instability because different factors will

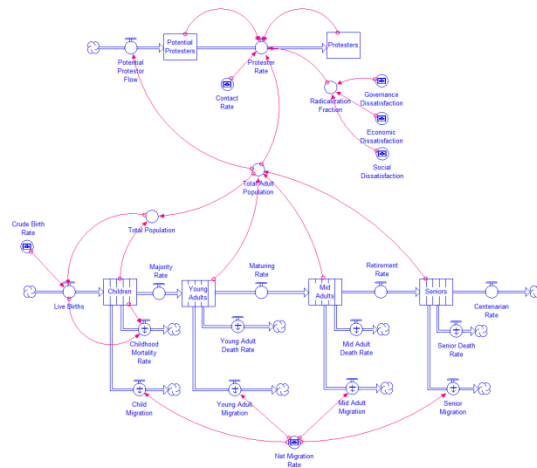


Figure 17: PACOM SMA Demographics and Stability Sub-Model

affect different segments of the population in different manners. For example, if one of the factors affecting stability is the level of dissatisfaction with the social support mechanisms for the aged population 65 years or older, then that issue is more prominent when a large portion of the population is age 65+ or soon facing retirement. Likewise, the segment of the population most likely to participate in destabilizing actions as a result of dissatisfaction is adults over 18 years old.

The basic structure of the Protestor Sub-Model is that of a classical infectious disease model. The same structure has been used to model the adoption of new ideas or technologies. The model consists of two pools of people; the Potential Protestors (those adults who could decide or be persuaded to engage in extra-legal actions) and Protestors (those people willing to take part in extra-legal actions). A person who is dissatisfied with some aspect of government or society does not present an existential threat to the existing order unless that individual takes actions against the government. You can be as dissatisfied as you want, as long as you don't do anything about it.

Interface Description

The term “Dashboard Flight Simulator” (Figure 15) refers to a streamlined user interface to the PACOM SMA SD model. The iThink® 10.0.6 software offers an Interface layer on which user

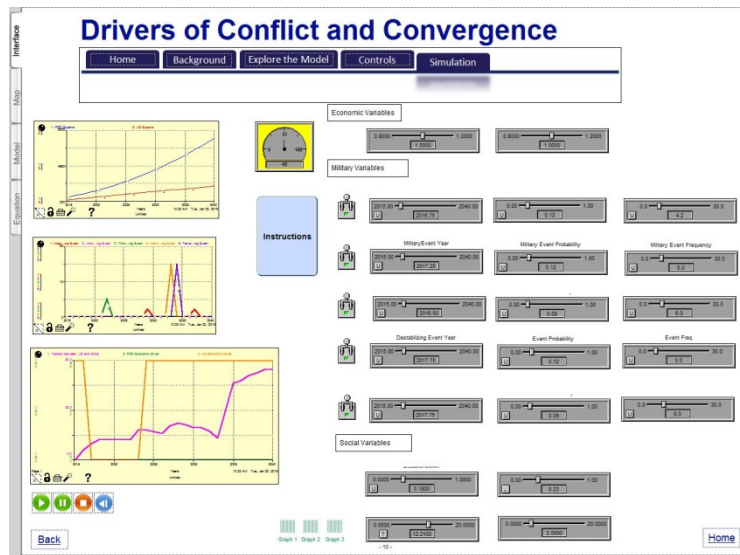


Figure 18: PACOM SMA Dashboard Flight Simulator Interface

controls, model inputs and outputs can be arranged to give users a cleaner interface without the need to delve into the details of the actual models. Simulation controls are provided to facilitate repetitive simulation runs, thus encouraging users to conduct “what if” analysis by varying the values of the inputs.

The Dashboard Flight Simulator is divided into three functional areas; inputs, outputs, and controls. The graphs on the left side display results (outputs) of the simulation runs. Underneath the graphs are a series of simulation controls that let the user start, pause, stop, and reset simulation runs. On the right side of the screen (grey boxes) is an area containing user input controls, in this case toggle switches and sliders that let the user decide which potential destabilizing events will occur, and the likelihood and frequency of such events occurring.

Model Demonstration

The following example illustrates how the SD model might be used during a wargame simulation to gain insights into the dynamics of the U.S.-China relationship. A series of model screenshots are used to provide a simple demonstration. Figure 8 establishes a baseline where no changes are made to the underlying model and the three graphs correspond to (top to bottom) U.S. Defense Expenditure, Tension Resulting from External Destabilizing Events, and the Number of Protesters in China. We will refer to Protesters as “dissatisfied citizens” in our following discussion, as this better represents their long-term disposition as potential protesters rather than citizens actively protesting. While any number of variables may be

shown, in this example the user decided to observe the impact destabilizing events may have on U.S. and Chinese military spending and the potential number of protestors within China.

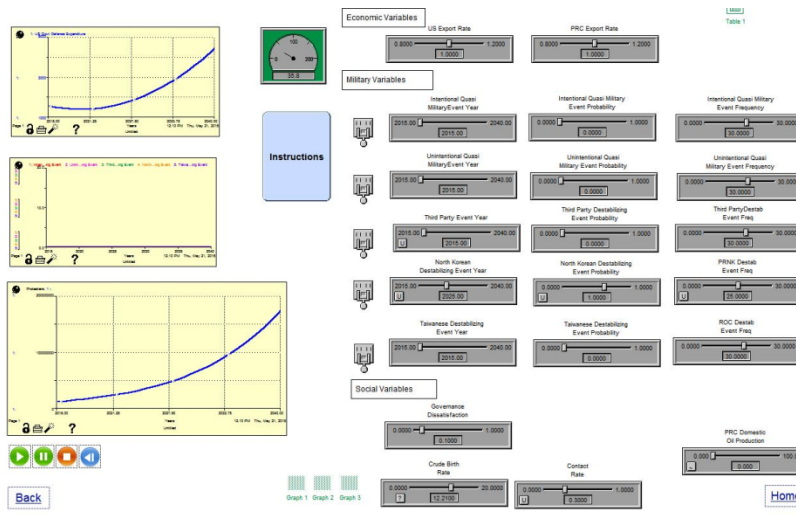


Figure 19: Dashboard Interface Demonstration: Baseline Model

Note that this example chooses to include the full interface rather than focus in detail on the graphs on the left side of the interface. While this makes it difficult to view the exact numbers on each graph, this example is intended to demonstrate how the model can be used to identify general trends and identify relationships between variables, rather than make specific numerical predictions. The tool contains more numerical detail which can be used to demonstrate the impact of each modeling event in this demonstration.

Suppose during a wargame an exercise injection is introduced consisting of a destabilizing incident on the Korean Peninsula in 2025. The user would open the Dashboard Flight Simulator Interface and switch off all the destabilizing events in order to run a baseline case with no destabilizing events (as shown in Figure 16). The user would decide which model variable(s) are of interest to observe the impact of the exercise inject. The user would then modify one of the graphs (e.g. the top graph) on the interface to display U.S. and Chinese military spending as a function of time. After making sure the bottom graph, which shows the number of dissatisfied citizens in China, is set to show comparative runs (meaning that the graphs will populate with new information on top of the information obtained in previous model runs), the user then examines the impact that the destabilizing event has on each variable of interest (Figure 17).

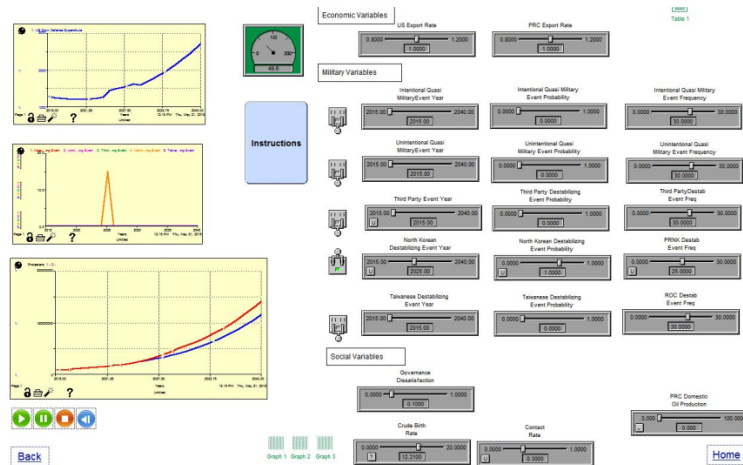


Figure 20: Dashboard Interface Demonstration: Korean Destabilizing Event

Notice the changes in each of the graphs. The center graph, showing the tension resulting from a destabilizing event, now shows a spike during the year 2025 corresponding to the Korean event. The top graph shows an associated increase in defense spending, which persists for five years and subsequently reverts to expected levels. The bottom graph, where the blue line corresponds to the baseline run and the red line corresponds to the new run, shows an increase in the number of dissatisfied citizens beginning around the time of the event and not returning to expected levels at any point, suggesting that any increase in the number of dissatisfied citizens is difficult to correct.

The same model context can be used to examine an alternative scenario that demonstrates that large perturbations are not necessary to prompt substantial changes to the model behavior. In Figure 18, the Korean destabilizing event is removed from the model (accomplished through the use of the associated on/off switch) but an alternative wargame inject of increased Chinese reliance on domestic oil is introduced.

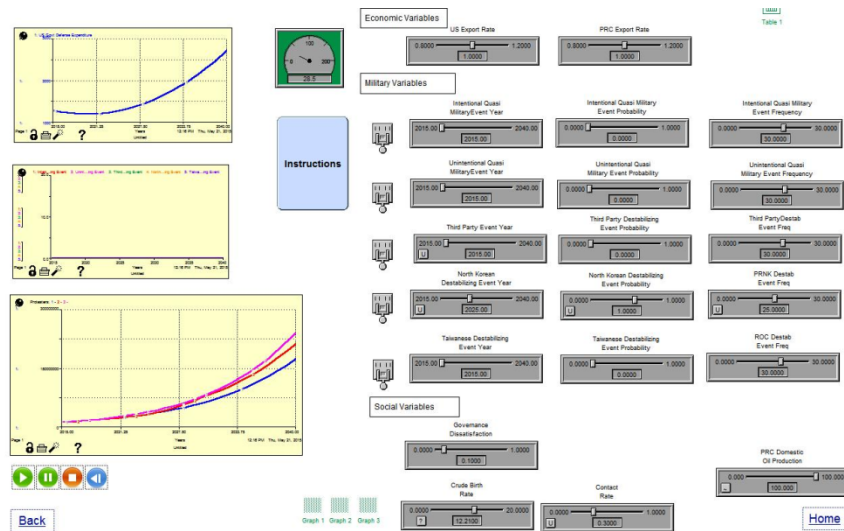


Figure 21: Dashboard Interface Demonstration: Increased Chinese Domestic Oil Consumption

Note that the top two graphs mirror the baseline case, but the bottom graph suggests that this persistent reliance on oil (which is assumed to occur as a percentage increase from 2025-2040) actually has a greater impact on the number of dissatisfied citizens than does the previously introduced destabilizing event on the Korean peninsula (as shown by the purple line). Detailed examination of the graphs shows that the destabilizing event will result in a 23% increase in the number of dissatisfied citizens while the increased reliance on domestic sources of oil will result in a 37% increase in the number of dissatisfied citizens. The relationship between those potentially impactful future events can be examined through a third potential wargame inject, where the multiplying effect of both an increased reliance on domestic oil in China and a destabilizing event on the Korean peninsula are modeled (Figure 19).

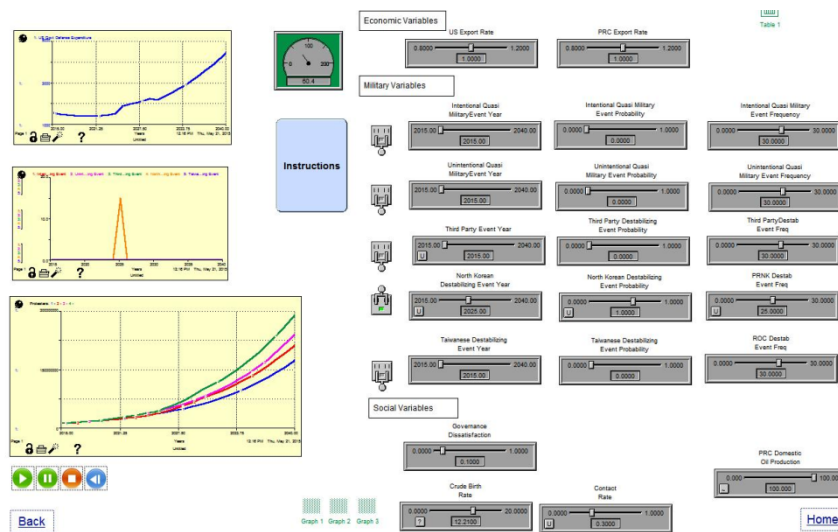


Figure 22: Dashboard Interface Demonstration: Increased Chinese Domestic Oil Consumption and Korean Peninsula Destabilizing Event

Notice that the top graph again shows a brief increase in defense spending resulting from the destabilization of the Korean peninsula. The bottom graph now shows the multiplying effect of both potential wargame injects (green line). Further examination of the graph within the tool suggests that the increased reliance on domestic oil and the destabilizing event in 2025 results in a 66% increase in the number of dissatisfied citizens, a far greater impact than when either event was modeled in isolation. Using the tool to examine the final number of dissatisfied citizens reinforces the utility of the model in identifying relationships between events and variables. Specifically, if the results of wargame injects one and two were considered separately and a prediction was made about the potential impact of both injects occurring simultaneously, simply summing the number of dissatisfied citizens of each individual model run would underestimate the number of dissatisfied citizens by 11% when compared to the model run that considered the events simultaneously. Stated differently, the true utility of the model is the ability to model the interactions between events/variables, the impact of which may be misrepresented through an isolated study of each event or variable.

Results

International relations are complex interactions in which multiple actors (both nation-states and non-nation-states) are presumably pursuing agendas to maximize their own interests and freedom of action. These interactions led to secondary and tertiary effects that are often difficult to foresee, and could possibly even have deleterious effects on national interests. System dynamics modeling provides a way to holistically integrate and visualize relationships and simulate outcomes based on these highly interconnected, non-linear relationships. The PACOM SMA SD model integrates economic, energy, military and political stability views into a greater picture that can inform PACOM strategic planners and provide a tool for planners to examine possible scenarios within the U.S.-China relationship.

Conclusions and Recommendations

The system dynamics viewpoint is useful for strategic planning due to its inherent synthesizing nature. At some level of national or theater planning, there must be recognition that there is no single factor in the Asia-Pacific region that will be the dominant factor in determining the relationship between the U.S. and China. Rather, it is a dynamic, interconnected network of factors that as a whole will determine how both players pursue their objectives. The SD model is not a predictive tool, but a tool that surfaces the relationships and mechanisms that strategic planners should take into consideration when thinking about the future. The NPS Team recommends that the PACOM SMA SD model be made available to PACOM strategic planners for their use. Any feedback may be incorporated into a revised SD model.

Several improvements can be added to the current model, resources permitting. The current PACOM SMA SD model focuses mostly on the U.S.-China relationship and the level of tension in the PACOM Area of Responsibility (AOR) between the U.S. and China. There are other important regional actors (North and South Korea, India, Japan, Taiwan, Indonesia, Malaysia, Philippines) that could be added to the model. Based on feedback from use of the PACOM SMA Dashboard Flight Simulator Interface during the ICONS simulation, the interface can be improved to increase its clarity and usefulness to potential users.

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Key points of this Chapter

- System dynamics modeling is a methodology of modeling that captures relationships among entities and feedback mechanisms that result in non-linear, dynamic behavior of systems.
- The NPS PACOM SMA system dynamics model represents four key sectors (energy demand and energy resource consumption, economics, demographics and domestic stability, and military actions) and relates them to each other and to the level of tension between the U.S. and China.
- The PACOM SD model is not predictive, but it meant to be used as a learning tool and a decision/policy making tool.
- The SD methodology used to address PACOM concerns can be generalized and applied across other combatant commands (e.g. EUCOM, CENTCOM, SOUTHCOM, etc.).