

Scenarios on the Future of Conflict in the Asia-Pacific Region

Steady as She Goes

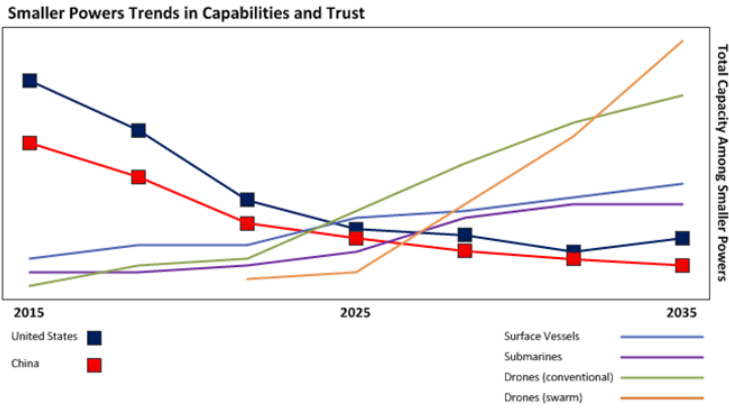
Great power competition and accelerating advances in current technologies fuel increased military modernization and innovation among the smaller powers of the Asia-Pacific.

As China continues to grow in military capabilities, the US continues to focus ever more attention and energy on ensuring US military dominance. China and the US try to avoid direct confrontations with each other, but China grows more provocative with the smaller powers of the region and actively works to upset regional relationships with the US. As a result, pressure in the region slowly ratchets up, with both great powers making the smaller regional players nervous and uncertain.

Smaller powers such as Vietnam, Malaysia, and Philippines are among the most exposed and, not wanting to have to trust or rely on either the US or China, pour even more energy into improving their capabilities. While they continue to expand their conventional naval and air capabilities, they can't simply buy their way to true competitiveness with the greater powers, and so they more aggressively pursue innovation through less conventional capabilities. Thus, the smaller states all "drone up" to counter Chinese, US, and even Indian conventional and numerical advantages. Readily acquiring a variety of platforms from traditional as well as open source suppliers, they take advantage of the deep and widespread advances in UAVs and other types of drones. These states also readily experiment with innovative "distributed" maritime operations, focusing on deep integration

among the naval, land, air, and unmanned platforms that comprise their armed forces, and in the process become the most doctrinally and operationally innovative actors within the region.

The result is a more complex dynamic among regional states, and one that has greater tension. More unplanned encounters and close calls, and new unpredictable patterns of behaviors emerge from the interaction between Chinese, US, and smaller power militaries in contested and crowded operating spaces. Increased Chinese capabilities and assertiveness, increasingly robust US demonstrations, and difficult-to-anticipate actions on the part of smaller states complicate the decision calculus of policy makers. Increasingly, those in the field report that smaller and smaller actions have larger and larger and more unpredictable outcomes.



Familiar Actors

Steaming into Gray Zones

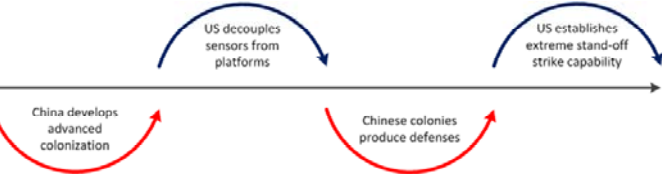
The region's great powers attempt asymmetric modernization in two different directions, leading to more emboldened actors and much greater turbulence and uncertainty in the region.

Concerns over dominance of the region drive both the US and China to aggressively pursue disruptive technological innovation. Both countries succeed, but in *two different directions*. China, intent on achieving de facto dominance out to the first island chain pursues technology families that aide a new strategy for control. The US, determined to ensure access across the South and East China Seas turns instead to a strategy of lowering the costs of area access by decoupling sensors and platforms.

China successfully invests in leading edge digital fabrication systems and physical human augmentation, arming their own seaborne version of America's western land rush, targeted across the 9-dash line. Chinese colonists, acting as construction crews/militia, are outfitted with a variety of exoskeleton augmentation systems to radically improve their stamina, strength, dexterity, and computer enhanced precision, greatly aiding in the creation of new land mass and fortified structures. Digital fabrication suites are the highly mobile and highly versatile manufacturing basis for the colonies, capable of producing a wide array of construction materials. The digital fab suites then become production networks for drone swarm production, supporting "flocks" of heuristically-driven UAVs that permanently take up airborne residence.

Where the Chinese pursue more and stronger fixed positioning through advanced colonization capabilities, the US shifts to a combination of flexibility, flow, and distributed sense making, based in part on major advances in machine learning and autonomous systems, as well as advances in human sense-making and new weapons platforms. The US deploys schools of small autonomous surface vessels as distributed and adaptive sensor networks connected to railgun- and hypersonic-carrying platforms located at extreme stand-off distances.

Both countries, emboldened by their new competing technologies and strategies, engage in riskier behavior. With neither side yet sure of how to gauge or engage the other, they produce greater tensions in the region with an increasing number of escalatory spikes across the South China Sea.



Extensions of Current Capabilities

Novel/Disruptive Capabilities

Red Blooms

A calamitous confluence of nationalism, climate change, insurgencies, piracy, and transnational crime dramatically destabilize the region and produce a fractured regional order.

Climate change accelerates and the impacts disproportionately affect the smaller states across Asia-Pacific: significant loss of coastal and island territory to sea level rise, which leads to mass migrations, natural disasters, massive food shortages, and even the creation of stateless (formerly island) nations. Regional states deploy their new naval assets on near-perpetual HADR, while networks of crowdsourcing volunteers deploy drones and crisis mapping for humanitarian assistance. As the displacement of island peoples increases, *seasteading* becomes an emergent reality, with NGOs facilitating the development of extensive refugee rigs and floating cities, designed by crowdsourced efforts and financed through global crowdfunding campaigns.

Amidst the climate-driven geopolitical shifts, violent non-state actors play a central role in adding to the regional disruption by driving conflict and undermining stability on multiple levels. These actors take advantage of resurgent nationalism and widespread anxieties, fomenting insurgencies and instability, successfully tearing apart socio-political fabric in several countries. Ultimately states such as Malaysia and the Philippines splinter apart under the combined stresses of climate disasters and conflict, which only adds to the ongoing and long-term humanitarian crisis in the region.

Before long the violent non-state actors in these situations mutate, with insurgencies, piracy, and transnational criminal organizations intersecting and alternately feeding and feeding off of the burgeoning black and gray markets as well as the market for human trafficking. Given the mass dislocation of people across the region – both climate change IDPs as well as refugees from conflict - these violent and criminal networks and organizations have a recruiting field day. The rapid evolution of these non-state actors in turn only reinforces the instincts of still-stable states in the region to lock down their borders and prevent ingress of refugees, which only serves to feed back onto the situation...

"Planning for Climate Nomads."
Atlantic Council, March 3, 2017
Our expert panel for the upcoming seminar, "Planning for Climate Nomads," scheduled for March 25 will explore the possibility of future stateless nations as climate change destroys the homes of island and coastal communities throughout the Asia-Pacific region.

"Region continues descent into chaos."
Washington Post, September 12, 20126
US State Department officials were noncommittal this morning at a press conference about the possibility of further US intervention in the Philippines after yesterday's collapse of the last vestiges of effective central governance. The Philippines thus joins Malaysia as the most recent failed state in the region.

"Rethinking Security and Anti-Piracy in South East Asia."
The Diplomat, July 20, 2035
The security situation in South East Asia, which has been spiraling down for the past several years, now requires a fundamental rethinking of US-led anti-piracy and intervention strategy. Despite the current strategy, attacks on refugee camps and on seasteading rigs have spiked in recent months, leading to increased casualties.

Unfamiliar Actors

Edge of the World

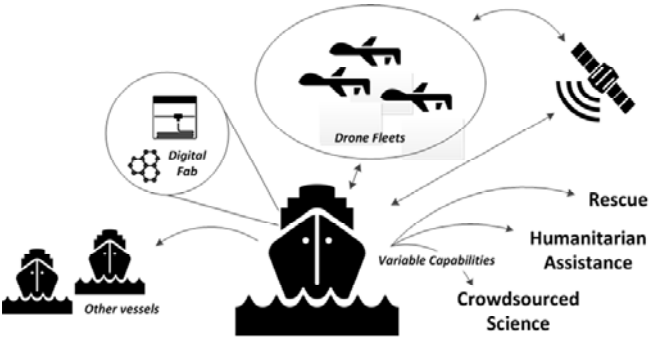
Empowered non-state actors become dissatisfied with the state of affairs within the world's economic and energy nexus and begin crowdsourcing a rules-based order in the Indo-Pacific

As globalization continues and as the global economy continues to evolve, more and more non-state actors, from multinational corporations to NGOs to networked social actors, begin to feel that they should exercise a greater influence on the policies and directions in Asia-Pacific, the economic and energy hub of the world. While corporations want stability and open markets, and NGOs and other socially-motivated actors are more interested in the safety and rights of citizens, all increasingly feel that the competing agendas in the region between powerful state actors like China and the US are detrimental to regional stability and is the type of old style, dangerous great power politics that should no longer be left unchecked.

Starting as a wide variety of unrelated efforts, "DIY" ISR networks take form across the region: community-built drones, balloon-based relay networks, and mobile sensing apps all proliferate. On a higher plane, hobby cubesat designers and private satellite providers offer even more capabilities. Together these platforms provide non-state actors – as well as state actors – with unprecedented data, and a number of private companies use it to address social challenges ranging from overfishing to disrupting piracy and narco trafficking. Beyond just surveillance and transparency, a non-national, non-state navy takes form. Referred to as "Greenpeace on steroids," this fleet is largely

crowdsourced and crowdfunded and conducts peace and safety operations, using advanced digital fab suites that enable them to produce virtually any type of system or equipment they might need: drones, emergency shelters, tools, or just rudimentary manufacturing supplies.

Neither the US nor China welcome all these non-state activities, yet they and other states find it increasingly difficult to simply stop them: increasingly enforced transparency enabled by such pervasive and open-source ISR; successful transnational problem-solving for difficult governance challenges; increasingly popular crowdsourced peace and safety interventions (always live-streamed, 24/7); and robust cyber activities deployed in defense of these non-state activities. Within this context even powerful countries like the US and China find themselves on the receiving end of private, philanthropic, and crowdsourced pushes for new norms and policies.



Background and Overview

The four scenarios created for the innovation workshop were developed to showcase alternative possible futures for conflict in Asia-Pacific out to the year 2035. These scenarios were developed in part to pose challenging, yet logical, future contexts in which the US Navy could find itself. In keeping with this intent, the scenarios for the most part featured changes in the region that deviate in many respects from the officially expected future.

Given the time and resource constraints involved in the project, VFS selected a 2x2 matrix for the underlying scenario framework. This is commonly known as the “critical uncertainties” approach in which a matrix is built by crossing two different axes, each representing an important uncertainty. The axes selected for this project included Familiar Actors ↔ Unfamiliar Actors and Extensions of Current Capabilities ↔ Novel/Disruptive Capabilities.

The image below lays out the resulting matrix with short narrative blurbs and the lists of key technologies that informed each scenario. *Steady as She Goes* represents the scenario closest to mainstream expectations for the future.

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Foresight Content for a Workshop on Unmanned Systems

