

FORUM



STRATEGIC SEAS

**Balancing Maritime Force Upgrades,
Aggression by the People's Republic of China,
and Threats to Sovereignty**

features

10 **New Opportunities for Maritime Modernization**

South Korea and Australia offer options to boost Southeast Asia's naval capabilities.

16 **Skirting Sanctions**

With the help of many, North Korea sidesteps U.N. restrictions.

22 **Cobra Gold 2018**

Live fire, civic action, disaster relief mark multinational exercise.

30 **Maritime Numbers Game**

Understanding and responding to China's three sea forces.

36 **China's Maritime Strategy**

How should the U.S. and its allies and partners respond?

44 **Canal Conundrum**

Thailand could sacrifice its sovereignty for questionable gains from Chinese-built waterway.

52 **Unity of Effort**

An international team pulls together to save soccer youths from a flooded Thai cave.





departments

4 Indo-Pacific View

5 Contributors

6 Across the Region

News from the Indo-Pacific.

8 Terrorist Update

U.S. puts group linked to India attack on terror list.

60 Voice

The Asian Development Bank's president promotes efforts to fight corruption.

62 World Horizons

Africa's future brainiacs, Estonia's free DNA tests and Antarctica's cool vegetables.

64 Media & Tech

Recycling rare metals in South Korea and encouraging investors in Vietnam.

65 Contemplations

Asia's cities encouraged to balance development and environmental sustainability.

66 This & That

News of the interesting, unusual and entertaining.

67 Parting Shot

A Republic of Korea Soldier participates in a Cobra Gold 2018 drill on Hat Yao beach in Chonburi province, eastern Thailand.



ABOUT THE COVER:

Navy ships assemble to form a multinational fleet for a photo exercise off the coast of Hawaii during Rim of Pacific 2018, which included 26 nations.

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DYLAN M. KINEE/U.S. NAVY



Dear Readers,

Welcome to *Indo-Pacific Defense FORUM's* 2018 fourth-quarter edition on maritime modernization.

Today, Indo-Pacific nations face many complex maritime challenges that underpin regional security, including invasion threats by aggressive neighbors; crimes, such as human trafficking, piracy, and illegal fishing; and

maritime and territorial disputes in the South China and East China Seas. To maintain peace, the United States and its allies and partners are working together to increase their collective maritime military capacity to preserve freedom of the seas, deter conflict and coercion, and promote adherence to international standards, laws, and norms.

In response to the upswing in assertive posturing and naval power-projection in the region, most notably by China, nations are increasing defense spending to modernize their maritime forces, acquiring submarines, warships, patrol boats, and surveillance aircraft.

In this edition of *FORUM*, three guest authors analyze China's ambitions as a maritime power. First, Dr. Andrew S. Erickson, a professor at the U.S. Naval War College's China Maritime Studies Institute, explains the significance of the expansion of China's three sea forces. China specialist Liza Tobin, who works at U.S. Indo-Pacific Command, provides a thoughtful overview of the institutional reforms behind China's maritime strategy. Retired Republic of Korea Navy Capt. Sukjoon Yoon presents opportunities for nations such as Australia and South Korea to help expand the naval capabilities of Southeast Asian nations.

FORUM rounds out this issue with a staff-written article that emphasizes the critical role international sanctions will continue to play against North Korea until its denuclearization is complete. Despite scattered efforts to skirt the measures, the concerted sanctions proved instrumental in pressuring North Korea to meet with U.S. President Donald Trump in Singapore on June 12, 2018. Ensuring compliance will require not only multinational maritime cooperation among Indo-Pacific nations but also a global recognition of the shared duty to enforce the ongoing sanctions until the desired end state is achieved.

I hope this edition propels the regional conversation on these leading maritime challenges, and I welcome your comments. Please contact the *FORUM* staff at ipdf@ipdefenseforum.com with your perspectives.

All the best,

P. S. DAVIDSON
Admiral, U.S. Navy
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CAPT. SUKJOON YOON is a retired Republic of Korea Navy officer and a research fellow at the Korea Institute for Military Affairs. For this issue of *FORUM*, he writes about opportunities presented by Australia and South Korea to bolster the naval capabilities of Southeast Asian nations.

Featured on Page 10



DR. ANDREW S. ERICKSON is a professor of strategy at the U.S. Naval War College's (NWC's) China Maritime Studies Institute and an associate in research at Harvard University's John King Fairbank Center for Chinese Studies. He is a term member of the Council on Foreign Relations and has taught courses at NWC and Yonsei

University. He received the NWC's inaugural Civilian Faculty Research Excellence Award in 2017, among his many awards. A widely published author, he blogs at www.andrewserickson.com. Featured on Page 30



LIZA TOBIN works at the U.S. Indo-Pacific Command as a China specialist. She recently published an in-depth article on China's maritime strategy in the *Naval War College Review* and an article on the same topic on the War on the Rocks website, which *FORUM* reprinted for this edition. Featured on Page 36



CMDR. PINYO RUNGRUENG serves as commander, SEAL Team 2, Naval Special Warfare Group 1, Royal Thai Navy Special Warfare Command. For the past 13 years, he has aided the operations chief of the Thai Navy SEALs by performing operational tasks within the unit. Cmdr. Pinyo holds a bachelor's degree in engineering from

the Naval Academy. He served as operations officer at the Command and Control Center during a mission to rescue 12 soccer youths and their coach from a flooded cave in Thailand. He shares insider details about that rescue for this edition of *FORUM*. Featured on Page 52

2019 PACIFIC OPERATIONAL SCIENCE AND TECHNOLOGY CONFERENCE AND EXPO

CONTRIBUTING TO A FREE AND OPEN INDO-PACIFIC THROUGH SCIENCE AND TECHNOLOGY

From March 4 to 8, 2019, the U.S. Indo-Pacific Command (USINDOPACOM) Science and Technology (S&T) Office and TechConnect will co-host the Pacific Operational Science and Technology (POST) Conference at the Sheraton Waikiki Hotel in Honolulu, Hawaii, and the Kaneohe Bay Theater at Marine Corps Base Hawaii.

USINDOPACOM will bring together senior U.S. Department of Defense leaders from across the services and agencies, senior leaders from the international S&T community, industry executives and engineers, and university representatives and scientists to collaborate on how we can contribute to a free and open Indo-Pacific through S&T. The conference will focus on S&T supporting the National Defense Strategy, modernizing key capabilities, and strengthening alliances and partnerships.

During the invitation-only sessions, we will conduct a USINDOPACOM S&T portfolio review and discuss ongoing and future joint S&T projects. Additionally, you will be able to leverage the codified requirements from the two combatant commands and sub-unified command in the region to shape your S&T portfolio in support of the warfighter.

Science and technology are critical enablers for improving operational effectiveness and efficiencies in the vast, diverse and complex area of responsibility. Join S&T leadership as we advance capabilities and strengthen alliances and partnerships in support of peace, stability and security in the Indo-Pacific.

For more information, visit <https://events.techconnect.org/POST/>



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ENERGY COMPANIES EXPAND — IN SOUTHEAST ASIA —

THAILAND

Thai energy companies are on a roll. The national oil and gas champion, a coal mining and power utility, upstart solar and wind companies, virtually all are expanding across Southeast Asia, applying practices and technology developed at home. Thailand is reaping the benefits of two decades of government energy policies that have supported the sector. Companies are also profiting from oil and gas prices that are recovering from a three-year slump, increasing electricity demand due to economic growth, and renewable technologies that have become competitive with fossil fuels.

Also, while the military junta that has ruled Thailand since mid-2014 has put no stamp of its own on the energy sector, it has targeted infrastructure spending to boost the economy and has prioritized investment in high-tech industries. Long-standing reform policies have turned Thailand's state energy company PTT into a successful international oil and gas producer, encouraged the development of power producers such as Electricity Generating, and fostered the emergence of renewable startups such as Energy Absolute.

"The power businesses in Thailand have developed expertise in this sector, and are now well-placed to support energy development across the region," said Robert Grant, Asia Pacific head at Canadian-listed SNC-Lavalin, an engineering and construction firm focused on energy, infrastructure and mining.

The 10 members of the Association of Southeast Asian Nations (ASEAN) together have a population of more than 600 million people, with a collective gross domestic product of nearly U.S. \$3 trillion, according to research company Statista.

ASEAN's energy use rose by 60 percent in the past 15 years, according to the International Energy Agency, which also says the region's demand could grow another two-thirds by 2040. Companies aiming to take part in the growth in ASEAN and beyond include B. Grimm Power, a Thai power developer that already has assets in Vietnam and Laos, and Banpu Power, which is building a coal-fired plant in China.

"You can already see increased activity by Thai investors in the ASEAN region," Grant said.

The expansion has been reflected in the local stock exchange, with shares of energy companies growing nearly 75 percent since the start of 2016, against a broader market gain of less than half that. It's also sparked a rash of listings, with Thai power companies having raised more than U.S. \$2 billion from initial public offerings (IPOs) in 2016 and 2017.

Thailand's third-biggest generator, Gulf Energy, in December 2017 held the biggest listing the country has seen in a decade, at more than U.S. \$700 million. Gulf said it expects revenue to grow by 18 percent in 2018, fueled in part by a major solar investment in Vietnam. The IPO funds will be used to repay loans and finance new regional power plants, it says. Reuters

MOODY'S RAISES *credit rating*

Moody's upgraded Indonesia's credit rating in April 2018 due to increased confidence the government will maintain its recent track record of responsibly managing the national budget and interest rate policy.

In a boost for President Joko Widodo's ambitious plans to carpet Indonesia with modern roads, ports, rail and airports, Moody's Investors Service said state-owned

enterprises taking on more debt to fund those projects does not pose a "significant risk."

The upgrade raised Indonesia's sovereign credit rating to Baa2 from the lowest investment grade rating.

Citing improved economic management and the central bank's focus on controlling inflation, Moody's said "these policies and larger financial reserves are strengthening

Indonesia's capacity to respond to shocks."

A higher credit rating can reduce the cost of borrowing overseas and encourage foreign investment.

Indonesia, with a population of more than 260 million, is Southeast Asia's largest economy but still faces challenges to improve the health and education of its population and transparency of its government. The Associated Press



INCREASING CONNECTIVITY BY RAIL, WATER

India agreed in April 2018 to construct a rail link to Nepal's capital, Kathmandu, and to open inland waterways in the landlocked Himalayan nation that has also been courted by China with transport deals.

The agreement emerged at the end of talks in New Delhi between Indian Prime Minister Narendra Modi and his Nepali counterpart K.P. Sharma Oli, making his first foreign visit to India after returning to power in early 2018.

During his earlier tenure, Oli sealed deals with Beijing in 2016 to use Chinese roads and ports, seeking to reduce Nepal's dependence on India for trade and transit.

The planned railway line from the border town of Raxaul to Kathmandu would be the mountainous nation's



Nepali Prime Minister K.P. Sharma Oli, second from left, greets his Indian counterpart, Narendra Modi, in April 2018. Oli's wife, Radhika Shakya Oli, left, gestures during the ceremonial reception at India's Rashtrapati Bhavan presidential palace in New Delhi.

most ambitious railway project. Nepal currently only has rail links on its southern plains.

"As a first step ... India would carry out preparatory survey work within one year," according to a joint statement issued after the talks to finalize the details of the line.

Nepali officials say they are already in talks with China over an extension of the Chinese railway network into

Nepal from Tibet as part of China's One Belt, One Road policy that Nepal joined in 2017.

Analysts said the latest Indian move was spurred by China's expansive infrastructure projects in Nepal as both Asian giants jostle for influence.

The plan to develop inland waterways will give Nepali cargo additional access to sea routes and boost its trade, officials said. Reuters

U.S. PUTS GROUP LINKED TO INDIA ATTACK ON TERROR LIST





LEFT: Activists in New Delhi, India, burn posters of Hafiz Saeed in November 2015 to mark the anniversary of the 2008 attacks on Mumbai. The placards read: “Down with terrorist Hafiz Saeed” and “Bring accused of 26/11 attacks to India.”

Saifullah Khalid, president of the Milli Muslim League, addresses news reporters in Islamabad, Pakistan. The league has been designated a terrorist organization by the United States. THE ASSOCIATED PRESS

REUTERS

The United States placed a Pakistani political group called the Milli Muslim League (MML) on its list of foreign terrorist organizations in early April 2018, saying it was merely an alias for a militant group blamed for a bloody 2008 attack in India.

The MML is controlled by Islamist leader Hafiz Saeed, who has a U.S. \$10 million bounty on his head. The group shot to prominence after fielding a candidate in a September 2017 election to fill a seat vacated by deposed Prime Minister Nawaz Sharif.

Saeed is the founder of Lashkar-e Tayyiba (LeT), which is also on the U.S. terrorist list and blamed by the United States and India for a four-day militant attack on the Indian city of Mumbai in 2008 in which 166 people were killed. Saeed has repeatedly denied involvement in the attack.

The U.S. State Department said the Milli Muslim League alias had been added to the LeT’s designations as a terrorist group.

“These designations seek to deny LeT the resources it needs to plan and carry out further terrorist attacks,” the State Department said in a prepared statement. “Make no mistake: Whatever LeT chooses to call itself, it remains a violent terrorist group. The United States supports all efforts to ensure that LeT does not have a political voice until it gives up violence as a tool of influence.”

Pakistan’s Ministry of Foreign Affairs did not immediately respond to a request for comment. Saeed was placed under house arrest in January 2017 after years of living freely in Pakistan, but a court ordered his release in November 2017.

India welcomed the U.S. decision, saying Pakistan has failed to crack down on militants.

“Terrorist individuals and entities are allowed to change names and continue to operate freely from territory under Pakistan’s control,” an Indian foreign office spokesman said in New Delhi. “The designation ... highlights Pakistan’s failure to fulfil its international obligation to dismantle terrorist sanctuaries and disrupt terror financing.”

Pakistan previously denied any state involvement in the Mumbai attack or links with LeT and other militant groups. It placed the LeT on a list of banned organizations in 2002. In October 2017, Pakistan’s electoral commission barred the MML from contesting elections, saying it had links to militant groups and could not be registered.

In March 2018, the Islamabad High Court ordered the election commission to register the party. Under pressure from the United States, the United Nations and international institutions to crack down on terrorist financing, Pakistan drew up secret plans in December 2017 for a takeover of charities linked to Saeed. He has since taken the government decision to court.

The background of the entire page is a composite image. The top half shows a bright sunset or sunrise over a dark blue ocean, with the sun's glow creating a lens flare effect. The bottom half of the page is a solid teal color with a subtle, wavy texture that mimics the surface of the water.

NEW OPPORTUNITIES FOR

MARITIME MODERNIZATION

CAPT. (RET.) SUKJOON YOON/KOREA INSTITUTE FOR MILITARY AFFAIRS

South Korea and Australia offer options to boost Southeast Asia's naval capabilities

The members of the Association of Southeast Asian Nations (ASEAN) are developing naval strategies and modernizing their navies. This presents opportunities for South Korea and Australia to build special complementary relationships with ASEAN members as they seek to improve their defense-industrial capabilities.

There are several pertinent questions to understand first. Why does ASEAN need naval modernization? Why does ASEAN require special complementary relationships with Asian partners, rather than with the United States or the European Union? Why should Southeast Asian nations look to South Korea and Australia for help, rather than China? What can South Korea and Australia offer to meet the requirements of Southeast Asian naval modernization processes? What are the benefits to ASEAN, and to South Korea and Australia, in sustaining a close naval relationship?

ASEAN's defense-industrial capabilities are expected to see a boost from centralized military procurement and expanded cooperation on developing affordable new naval weapons and systems as part of their naval modernization programs. The recent conspicuous expansion of the People's Liberation Army Navy (PLAN) in the sensitive seas of the region — most obviously in the South China Sea — has prompted a general reform of national defense industries, with the emphasis on consolidating and centralizing fragmented defense industries, establishing self-sufficient domestic industrial capabilities, diversifying research and development investment, pursuing defense cooperation agreements and jointly developing or acquiring next-generation assets. Achieving these aims will require ASEAN members to coordinate their defense policies

and to collaborate with other regional states, which presents significant challenges.

ASEAN members disagree on defense procurement policy. Some Indo-Pacific partners and others want to look outside the region. Facing the urgent need to deal with a perceived maritime threat from China, the choice of partners to enhance Southeast Asia's defense-industrial capabilities impacts national sovereignty as well as national security. Some ASEAN members would like to demonstrate their freedom and independence to cooperate with whichever partners they choose, but others



Malaysia's Navy corvette, KD Lekir, left, and Thailand's Navy frigate, HTMS Naresuan, take part in a maritime review along the strait near Changi Naval Base in Singapore. AFP/GETTY IMAGES

fear that diversification could undermine their long-standing security partnerships with the United States and Europe. To integrate their defense-industrial programs with their national security priorities, ASEAN members must balance geopolitical factors against their need for affordable defense capabilities.

If ASEAN members are ready to change their mindset by shifting their defense-industrial cooperation from the United States and Europe to the middle powers of the region, then the best available partners for affordable naval modernization are South Korea and Australia.





A Singapore Navy diver storms into the gallery during a military display at Singapore's 52nd National Day celebration at Marina Bay. REUTERS

The Southeast Asian states thus face a choice: Is it more important to maintain historical relationships with Western defense suppliers, as part of a broader geopolitical alignment with the West, or should ASEAN members seek defense-industrial cooperation with the middle powers of the region? The latter option would allow for an emphasis on capability-based defense-industrial cooperation, and there would be significant economic advantages accruing from a common security and defense policy at the national and regional levels, with

high-quality technology-based jobs and potential spin-offs from military investment. National sovereignty issues are also reflected in a desire to pursue a distinctive “Asian way,” with some aspiring to an Asian echo of Europe’s “ever closer union.” Most agree on the need to deter the threat

from China, but ASEAN members remain split on which defense partners would best achieve this aim.

If ASEAN members are ready to change their mindset by shifting their defense-industrial cooperation from the United States and Europe to the middle powers of the region, then the best

available partners for affordable naval modernization are South Korea and Australia. Both countries have sophisticated research and development capabilities, strong and supportive foreign/naval policies and are capable of large-scale naval production programs. Collaboration with South Korea and Australia offers many advantages: Rich cultural interactions with ASEAN members including appreciation for “Asian values,” timely replacement of older naval assets, competitive pricing, reliable and transparent naval acquisition processes and the prospect of future defense-industrial development and ensuing spin-offs from naval modernization.

STRONG MIDDLE POWERS

The Republic of Korea Navy (ROKN) and Royal Australian Navy (RAN) have long been recognized as agile and effective naval forces, with considerable experience of maritime security cooperation with other partners, including the U.S. Navy and the Japanese Maritime Self-Defense Force. Their multinational naval cooperation has been demonstrated in maritime security exercises and in responding to regional maritime emergencies requiring search and

Republic of Korea Marines and Navy personnel conduct a crackdown against China's illegal fishing in the Han River Estuary Neutral Zone off Ganghwa Island, Republic of Korea. The area has been a neutral zone since the end of the Korean War and is off-limits to all civilian vessels.

GETTY IMAGES

rescue, humanitarian assistance, and disaster relief operations, often collaborating with the PLAN. They are now seeking to further develop their roles as established strategic middle powers in the Indo-Pacific region. They are widely admired for their cooperative strategic approach and have made great efforts to remain on friendly terms with both the United States and China. In this, South Korea and Australia are role models for many other countries in the region, which are hoping to avoid having to choose between the great powers.

It is natural for the ROKN and the RAN to sustain close interoperable partnerships with the Southeast Asian navies of Indonesia, Malaysia, Singapore and the Philippines. Some of these countries participated in the United Nations forces that fought in the Korean War against North Korea and China. ASEAN members have already benefited from coastal patrol vessels supplied by the ROKN and the RAN to enhance capabilities to resist Chinese maritime assertiveness

in the South China Sea. There are also broader collective advantages accruing from developing a complementary relationship between ASEAN members and the ROKN and the RAN. Naval modernization is a useful stepping stone toward realizing a much wider range of shared interests.

South Korea and Australia have an opportunity to build a regional system of defense-industrial cooperation that can last for decades, developing skilled workforces, advanced manufacturing bases and military technological capabilities. All these factors will facilitate entry into the global supply chain of the defense industry, and the ROKN and the RAN will be simultaneously working with ASEAN for the common security of the region. Indeed, bilateral defense- and naval-industrial cooperation is already expanding. For example, Daewoo Shipbuilding and Marine Engineering and Hanjin Heavy Industries are working with Indonesian domestic shipyards to build landing helicopter docks and submarines.

CHALLENGES REMAIN

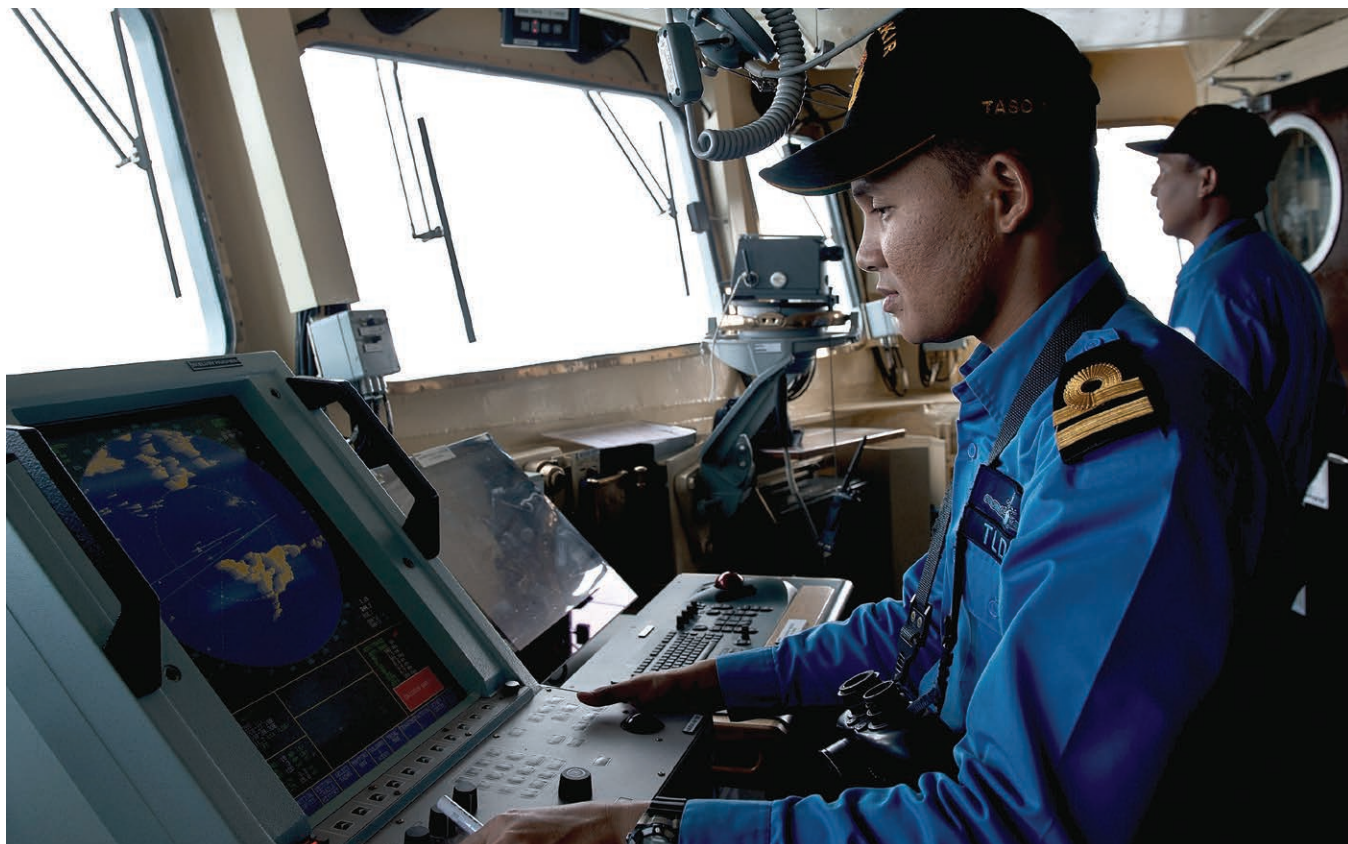
Although South Korea and Australia can provide naval and coast guard assets that are cheaper and more specific to ASEAN's requirements, this is unlikely to be a game-changer in the maritime disputes between China and ASEAN, nor will it provide much impetus for a transformation of the regional maritime security environment.

China continues to destabilize the maritime good order of the region, and the best option for

**Philippine Navy
Capt. Roy Vincent
Trinidad, right, talks
to Australian Navy
officers while the
Royal Australian
Navy's HMAS
Adelaide visits the
Philippines to boost
bilateral relations.**

THE ASSOCIATED PRESS





improving maritime security is surely to establish broader networks of maritime cooperation among the middle powers of the region and between these and the weaker powers. Concrete suggestions to bring South Korea and Australia closer include:

- Developing common goals for networked defense-industrial cooperation at both the policy and operational levels through “2+2 Talks” between the foreign and defense ministers.
- “Navy-to-Navy Staff Talks” between the ROKN and the RAN.
- Holding political-military games and conferences.
- Maintaining interoperability between the two navies to facilitate joint naval cooperation.
- Forging links between military or civil defense attaché officers’ networks.
- Pursuing defense coordination between government-sponsored and civilian-owned defense companies.

Of course, South Korea and Australia should be simultaneously seeking to deepen their relationship with ASEAN.

Nevertheless, even with closer bilateral naval industrial cooperation between South Korea and Australia, and between these countries and ASEAN

Royal Malaysian Navy personnel conduct a search and rescue mission for boat people near the Thai-Malaysian border. AFP/GETTY IMAGES

members, serious challenges will remain. The best way for South Korea and Australia to meet these challenges is to focus on capability-sharing defense cooperation rather than on competition. Since they both have an essential domestic requirement for new weapons and systems to be interoperable with the U.S. military, this is another reason for them to cooperate. A common standard of interoperability can then become another factor, on top of affordability and quicker delivery, to help South Korea and Australia persuade political factions within ASEAN that are reluctant to move away from their established U.S. and European suppliers. South Korea and Australia should cooperate to provide a defense and naval cooperative framework for ASEAN members, transferring high technology to support their defense-industrial programs and to boost indigenous defense-industrial capabilities. Such a complementary defense and naval partnership between South Korea and Australia could form the cornerstone of a closer regional defense and security relationship into the foreseeable future. □

The online news magazine The Diplomat originally published this article on October 27, 2017. It has been edited to fit FORUM's format.



Skirting SANCTIONS

With the help of many, North Korea sidesteps U.N. restrictions

FORUM STAFF

In the months leading up to the historic summit between the United States and North Korea, sanctions targeting everything from North Korea's seafood and labor exports to punishments against noncompliant banks were tailored to rein in the outlaw regime's nuclear weapons and missile programs. Yet, a United Nations report released in March 2018 revealed that North Korea violated U.N. sanctions in 2017 by exporting at least U.S. \$200 million in coal and other banned commodities.

Workers process silk in the Kim Jong Suk Silk Mill in Pyongyang, North Korea. U.N. sanctions prohibit North Korea from exporting textiles, such as the ones produced at the mill. AFP/GETTY IMAGES

North Korea even shipped banned supplies to Syria, such as acid-resistant tiles, valves and thermometers, dozens of times over a decade to help Syria's chemical weapons program, the report said. For allies who want North Korea to change its behavior,

U.N. spokesman Stephane Dujarric offered this challenge: "I think the overarching message is that all member states have a duty and responsibility to abide by the sanctions that are in place," *The New York Times* newspaper reported.

PRESSURE CAMPAIGN

Even with North Korea's efforts to evade sanctions, the measures had some effect. When North Korean dictator Kim Jong Un in March 2018 said he wouldn't conduct more missile or nuclear tests until he met with U.S. President Donald Trump, U.S. officials hailed the breakthrough as the result of a pressure campaign against Pyongyang.

"It [pressure campaign] has us now to a point where we may be able to pursue a diplomatic solution to the complete denuclearization of the Korean Peninsula," said Lt. Gen. H.R. McMaster, then national security advisor to President Trump, according to *Time* magazine. "So, we're determined to pursue that course."

The measures helped pull Kim to the negotiating table. The June 12, 2018, meeting between Kim and Trump was an international spectacle and led to a joint statement in which Kim agreed to denuclearize in exchange for security guarantees from the United States. Trump said the sanctions would stay in place, however, until he sees how North Korea is living up to its promise to abandon the development of nuclear weapons.

The pressure on Kim's poverty-stricken country had been building for some time. The U.N. in 2017 approved its toughest sanctions ever against



Nikki Haley, U.S. ambassador to the United Nations, votes with other members of the U.N. Security Council to impose new sanctions on North Korea in December 2017. GETTY IMAGES

to China — the country's largest trading partner — decreased rapidly as Beijing started trading fully participating in the U.N. sanctions program. By late 2017, China was reporting no imports of aluminum, coal, copper, iron, lead or zinc from North Korea. It continues, however, to export fuel, corn, cotton, palm oil, rice, rubber and stainless steel to North Korea while importing fertilizer, lumber and steel, according to a report by Bloomberg.com.

While it may take more time for the effects of tougher sanctions to become apparent, Kim's government likely agreed to the summit because it feared what was coming next. "Many of the tougher measures will take more time, widespread and rigorous implementation to be fully effective," William Newcomb, a former member of the U.N. Panel of Experts, told BBC News. "Early indications of what is in store in the future are likely becoming more apparent to Pyongyang."

North Korea, effectively making about 90 percent of North Korea's exports illegal under international law, according to Nikki Haley, the U.S. ambassador to the U.N.

"Today, we are attempting to take the future of the North Korean nuclear program out of the hands of its outlaw regime," Haley said in September 2017, according to a story in *The Washington Post* newspaper. "Today, we are saying the world will never accept a nuclear-armed North Korea."

The U.N. sanctions also banned North Korea's textile exports and put limits on Pyongyang's

MORE WORK AHEAD

North Korea needed help to earn U.S. \$200 million from selling banned commodities. North Korea shipped coal to ports in many countries, including China and Russia, often using false paperwork that showed the coal had a country of origin other than North Korea. North Korea "is already flouting the most recent resolutions by exploiting global oil supply chains, complicit foreign nationals, offshore company registries and the international banking system," the U.N. monitors wrote in their 213-page report in 2018.

While it may take more time for the effects of tougher sanctions to become apparent, Kim's government likely agreed to the summit because it feared what was coming next.

oil imports. These sanctions were in addition to previous ones that limited North Korea's ability to export coal, iron ore and seafood. Over many years, the U.N. expanded the sanctions to include freezing assets of people involved in North Korea's nuclear program, and bans on the export of electrical equipment, minerals, food and agricultural products, and laborers. While the effectiveness of these efforts has been debated for years as Pyongyang continued its nuclear weapon and long-range missile program and tests, some international experts said they played a role in North Korea's decision to suspend tests.

North Korean exports declined by 30 percent in 2017, according to a BBC News report. Exports

The report specifically criticized Russia and China for failing to enforce sanctions on items including coal, luxury goods and oil. Sanctions have yet to be matched, the report said, "by the requisite political will, international coordination, prioritization and resource allocation necessary to drive effective implementation." China, which accounts for 90 percent of North Korea's trade, has been serving as the lead facilitator of black market North Korean trade, according to the U.N. Throughout 2017, China and Russia continued to enable the violation of U.N. sanctions by importing coal, copper, iron ore and steel from North Korea.

China's participation in the sanctions program



The North Korean military puts its weaponry on full display during a military parade to mark the 105th anniversary of the birth of the nation's late leader, Kim Il Sung. AFP/GETTY IMAGES



U.S. President Donald Trump shakes hands with North Korean leader Kim Jong Un at the Singapore summit after Kim's country skirted months of economic sanctions. REUTERS

could be the determining factor in whether they succeed. "Remember that China does, in fact, account for about 90 percent of North Korea's merchandise trade; there is other service income emanating from here and there that is harder to track, although there has been pressure on countries to expel diplomats engaged in business," Stephan Haggard, a visiting fellow at the Peterson Institute of International Economics, told *FORUM*. "There is going to be some small country leakage, but the main question is: How much is China doing? The rest is small change — not completely unimportant, but expected. North Korea cannot sustain itself from small amounts of trade with Malaysia or Namibia."

Another member of the U.N. Security Council is also key. Russia, according to U.N. and media reports, continues to engage in banned trade with North Korea. Reuters reported in December 2017 that

Russian tankers on at least three occasions supplied fuel to North Korea by transferring cargo at sea.

The U.N. report said a "coordinated effort by Member States is crucial to curb these rampant illicit activities." The heightened sanctions, the report said, have created lucrative markets for North Korea-backed traders "seeking to procure petroleum while exporting the country's natural resources. The profit margins involved, coupled with the offshore nature of much of the affected oil, maritime and finance sectors, necessitate far greater private sector due diligence, information-sharing and self-policing."

WEAPONS TRADE FUNDS REGIME

Despite worldwide condemnation of North Korea's nuclear and missile tests, countries continued to engage in banned weapons deals with the regime. From Africa to the Indo-Pacific, the U.N. "investigated a wide array of prohibited military cooperation projects," the report said, "including ongoing ballistic missile cooperation with the Syrian Arab Republic and Myanmar [Burma], widespread conventional arms deals and cyber operations to steal military secrets."

The U.N. found that North Korean diplomats continue to play a key role in fueling the country's prohibited programs, providing "logistical support for arms transfers, military technicians and intelligence operations, acting as fronts for designated entities and individuals and engaging in commercial activities that violate the resolutions and the Vienna Convention on Diplomatic Relations."

U.N. investigators reported in 2017 that an air shipment from China containing North Korean military communications equipment was intercepted in an unnamed country on its way to the African country of Eritrea. U.N. experts also investigated Egypt's seizure in August 2016 of a North Korean vessel, the Jie Shun, which was carrying 2.3 metric tons of iron ore and 30,000 rocket-propelled grenades. The U.N. report did not list a destination country.

BANKS ALLOWING ACCESS

The sanctions are also geared to keep North Korea from accessing the global banking system. The regime, however, continues to access international banks "through deceptive practices combined with critical deficiencies in the implementation of financial sanctions,"

the U.N. report said. North Korean financial institutions have more than 30 overseas representatives "who live and move freely across borders in the Middle East and Asia, where they control bank accounts, facilitate transactions and deal in bulk cash." Corporate service providers present a "key vulnerability in the implementation of financial sanctions," allowing North Korea to create front companies offshore and in Asian financial centers to help move money worldwide.

The U.S. sanctioned a Chinese bank for facilitating access to these financial markets. In June 2017, the U.S. Treasury Department imposed penalties on the Bank of Dandong, cutting it off from access to U.S. financial institutions. The Treasury Department labeled the bank a "foreign financial institution of primary money laundering concern." The Treasury Department had also sanctioned two individuals from China, as well as a Chinese company, Dalian Global Unity Shipping Co. Ltd.

"This bank has served as a gateway for North Korea to access the U.S. and international financial systems, facilitating millions of dollars of transactions for companies involved in North Korea's nuclear and ballistic



missile programs,” U.S. Treasury Secretary Steven Mnuchin said. “The United States will not stand for such action.”

SHELL GAME AT SEA

North Korea goes to great lengths to conceal its shipments of banned commodities. “In continuing its illicit coal exports, the country combined deceptive navigation patterns, signals manipulation, trans-shipment and fraudulent documentation to obscure the origin of the coal,” the March 2018 U.N. report said.

Not all deceptions are complex, however. In some cases, it’s a matter of a simple name change. The Jin Teng, sanctioned by the U.S. in March 2016, became the Shen Da 8 and then the Hang Yu 1, according to a report by Bloomberg News. The Jin Tai 7, also sanctioned by the U.S., changed its name to Sheng Da 6 and then to Bothwin 7. Both ships remain on the list of ships the U.S. has sanctioned. The Bothwin 7 visited the port of Lianyungang, China, in January 2018, the same month the Hang Yu 1 stopped at the Port of Ningbo-Zhoushan, China. Both ships are based in Pyongyang and sanctioned by the U.N.

U.N. members are keenly aware of the pattern and are fine-tuning their efforts. In February 2018, the U.S. Treasury Department announced a slew of new sanctions against 27 entities and 28 vessels in a move aimed to “significantly hinder North

Korea’s ability to conduct evasive maritime activities that facilitate illicit coal and fuel transports, and limit the regime’s ability to ship goods through international waters.” The U.N. panel added that North Korea has been able to continue its smuggling activities partly through

the use of foreign flag registries. About half of the banned vessels had been flagged in Mongolia but were delisted after the imposition of sanctions. Many have since migrated to the flag of Tanzania, the U.N. report said.

A UNITED EFFORT

The key to achieving the goal — denuclearizing the Korean Peninsula — could hinge on how fully U.N. members participate. Even with patchy participation, the Peterson Institute’s Haggard said the program is likely having some impact. The sanctions “probably contributed to some import substitution: domestic firms — both public and private — figuring out how to make things that were previously imported, or simply doing without,” Haggard said. “But the biggest effect is that foreign exchange earnings from exports are in short supply. Unless the government

North Korea launched an intercontinental ballistic missile, called the Hwasong-15, in November 2017 in violation of U.N. sanctions. REUTERS



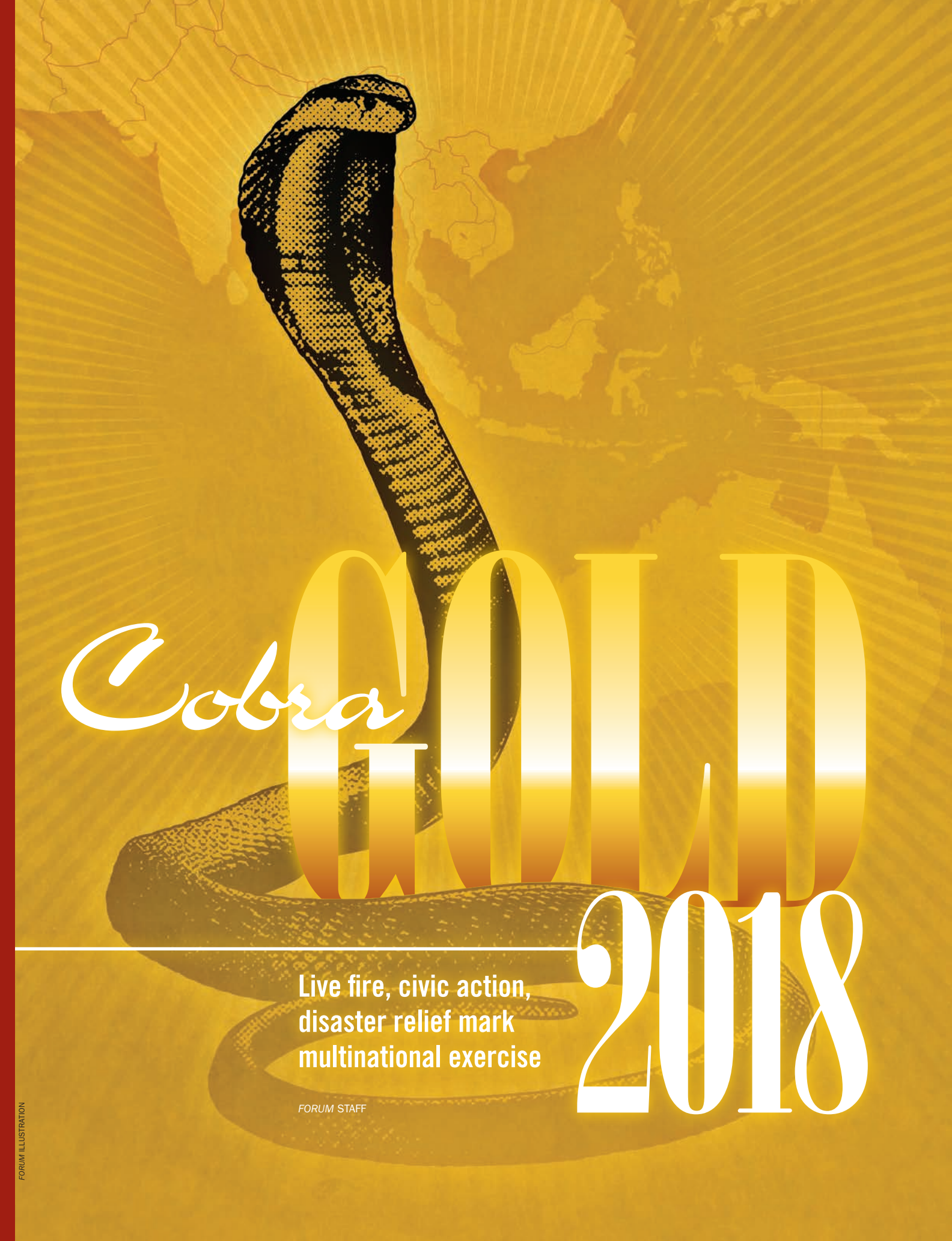
The North Korean cargo ship Jin Teng, shown here delivering palm oil kernels to a port in the Philippines, was sanctioned by the U.N. and the U.S. for violating sanctions. The North Koreans have renamed it twice to avoid detection. It became the Shen Da 8 and the Hang Yu 1. AFP/GETTY IMAGES

can secure credit or release foreign exchange holdings from its own accounts, it means that there should be scarcities appearing in coming months.”

A decision by China to strongly impose the sanctions would be critical. Beijing has been slower than many U.N. members to ramp up sanctions. China, according to the Council on Foreign Relations, is North Korea’s main source of food and energy. It has historically opposed harsh international sanctions in part because it fears the collapse of Kim’s regime and an influx of refugees into China.

North Korea’s nuclear and missile tests, however, spurred China into taking a harsher tone toward its longtime ally. After North Korea launched a ballistic missile in November 2017, China expressed “grave concern and opposition.” It backed some U.N. sanctions, but not before some measures of a draft version were dropped, including an oil embargo and the authorization to use force when ships do not comply with mandated inspections.

Yet, North Korea eventually agreed to negotiate to ease the standoff over its weapons programs, spurring some optimism. “Any time you have sanctions, there is going to be leakage [people who don’t abide by sanctions] because it is lucrative to do so; brokers and smugglers emerge to handle this illicit business,” Haggard said. “But we have to keep the larger picture in mind — that major commodity categories are coming under pressure, and the firms that have the size to handle large shipments of commodities like coal and iron ore, probably textiles and marine products, are generally proscribed from doing so. I think the sanctions are having an effect, and that is why the North Koreans are coming back to the table.” □



Cobra GOLD 2018

Live fire, civic action,
disaster relief mark
multinational exercise

FORUM STAFF



Thai Soldiers display flags at the opening ceremony of Cobra Gold 2018 at the U-Tapao Airport in Rayong province, Thailand.

THE ASSOCIATED PRESS

They engaged in live-fire exercises. They stormed a beach while attack aircraft provided cover. They even tested their survival skills in the steamy jungles of Thailand by drinking snake's blood.

Despite the litany of experiences that were as diverse as the participants, the most enduring legacy of Cobra Gold 2018 wasn't a crisp amphibious assault, a well-aimed mortar round or even the school buildings constructed for Thai communities. Cobra Gold's hallmark has always been the lasting friendships forged between military forces of partner nations.

"Global security challenges require global solutions," said Adm. Harry B. Harris, Jr., then commander of U.S. Indo-Pacific Command, during closing ceremonies of Cobra Gold 2018, the largest multinational military exercise in the Indo-Pacific. "So, I'm inspired by our deep alliance with Thailand and committed to expanding our partnerships with like-minded nations as we all work together to keep this region secure, to keep this region prosperous and to keep this region peaceful."

Cobra Gold 2018, co-hosted by Thailand and the U.S. in February 2018, attracted 29 countries to Thailand. Seven nations — Indonesia, Japan, Malaysia, Singapore, South Korea, Thailand and the U.S. — fully participated by providing personnel and equipment to the exercise. A Thai Cobra Gold veteran agreed with Harris that relationship building is the most important indicator of success.

"It helps develop and strengthen the relationships between all seven participating nations," said Col. Khajornsak "Jorn" Pullphothong, director of the

Exercise Control Division of the Royal Thai Armed Forces. "It's [Cobra Gold] improving every year."

Jorn told *FORUM* that ties established during past iterations of Cobra Gold paid off when an earthquake struck Nepal in April 2015, killing 9,000 people and injuring 22,000. Because the Thai military had worked with Malaysia and Singapore during previous Cobra Gold exercises, the countries quickly formed a response team when they arrived in Nepal. "We didn't need to develop everything from zero," Jorn said. "We trust each other."

The partnership between the host nations also contributes to regional security. "The Royal Thai Army and the U.S. have a longstanding relationship that has contributed to security and stability in the region," said Col. Anthony Lugo, commander of the 2nd Infantry Brigade Combat Team, 25th Infantry Division. "The partnered training efforts taking place today will ensure that our two forces will be ready to rapidly deploy in response to crises in the region tomorrow."

Storming the beach

In a finely tuned symphony of ships, landing craft and attack aircraft, Marines from South Korea, Thailand and the U.S. engineered an amphibious assault on Thailand's Hat Yao Beach as Cobra Gold 2018 kicked off. The simulated assault began 3.2 kilometers off the coast, where amphibious ships launched landing craft in conjunction with flight operations. The seamless display of interoperability was no happenstance.



Republic of Korea amphibious assault vehicles create smoke screens as they approach Hat Yao beach during Cobra Gold 2018.

THE ASSOCIATED PRESS



Republic of Korea Marines participate in an amphibious assault exercise in Chonburi province, Thailand.

REUTERS

“This amphibious assault was the culmination of months of planning. I am proud of the safe and superb execution from all involved,” said U.S. Navy Rear Adm. Brad Cooper, commander of the Amphibious Force 7th Fleet and deputy commander of

the Cobra Gold Amphibious Task Force. “From a Navy-to-Navy perspective, our relationship with Thailand has always been strong, and this exercise reinforces our bonds and ability to respond together as a combined force.”

Personnel aboard the ships, landing craft and aircraft spent days rehearsing for the assault to make sure the timing of each wave met objectives. Liaison officers staffed each ship to ensure that each nation’s intentions were understood.

“Working together like this is evidence of the alliance we share,” said Lt. Youngwon Kim, a Republic of Korea Navy officer who served aboard the amphibious assault ship USS Bonhomme Richard, according to a story published by the U.S. Marine Corps.

Keeping the peace

Trouble is always brewing on the fictional continent of Pacifica. On a map that mirrors the western United States, the imaginary countries of Sonora and Mojave are in conflict again. After Sonora invaded Mojave, the leaders of Cobra Gold’s Command Post Exercise included several

surprises for their training participants to gauge how they would keep supply lines running, gather intelligence, detain enemy combatants and enforce the peace.

The scenario was patterned after Iraq’s invasion of Kuwait in 1990. In addition to managing United Nations peacekeeping operations, military personnel also supervised a noncombatant evacuation. The surprises kept coming. While trying to enforce the peace, participants were faced with a simulated explosion at a Mojave hospital that caused many casualties. Meanwhile, Sonora was blaming the multinational Combined Task Force for the blast. The task force had to identify the source of the explosion.

The exercise also challenged commanders to resolve complex humanitarian issues, so participants were guided by representatives of the International Committee of the Red Cross (ICRC) and the U.N. High Commissioner for Refugees.

“By playing it through realistically, it opens up conversations and better understanding between organizations,” said Paul Baker, ICRC delegate for military and armed groups in Southeast Asia. “It’s important that forces understand the role of the ICRC in conflict. It was great of the planners to include us in this exercise.”

Lt. Col. Norhayati Hassan of the Malaysian Joint Forces Headquarters said the Command Post Exercise provided a new experience for Malaysian officers who haven’t been exposed to multinational operations.



“The benefit of working with all of these multinational forces is understanding what they bring to the table at a time of disaster.”

~ U.S. Army Maj. Robert L. Vandertuin, head of the combined joint civil-military operations task force for Cobra Gold

“In a war room with other forces, you get support from others to share capabilities and capacity,” she said. For Malaysian forces, she said, the exercise opened their eyes. “They are not used to joint operations,” she said, “and this is a coalition.”

Preparing for disasters

In the world’s most disaster-prone region, humanitarian assistance and disaster relief took center stage. Countries that battle earthquakes, typhoons, landslides and floods worked together on scenarios involving rescues, evacuations and emergency medical treatment.

At Thailand’s 49-acre Disaster Relief Training Center in Chachoengsao province, a disaster response team fast-roped from a helicopter to a mock disaster scene. Rescuers combed the rubble of a collapsed building to search for victims before taking them to a field hospital for assessment.

“You have multinational doctors working together in a field hospital, conducting triage and assessment of patients who were hurt in the building collapse,” explained U.S. Army Maj.

Robert L. Vandertuin, head of the combined joint civil-military operations task force for Cobra Gold.

One of the valuable experiences, he said, was the chance to assess the capabilities of partner nations, so they can be tapped when real disasters occur.

“The benefit of working with all of these multinational forces is understanding what they bring to the table at a time of disaster,” he said.

Col. Thienthas Paamuangliam, deputy director of Thailand’s Disaster Relief Training Center, said the 2-year-old training center can simulate everything from a mountain rescue to flash floods to a building collapse.



U.S. and Thai Army Soldiers conduct combat engineer training during a live-fire exercise.

STAFF SGT. DAVID N. BECKSTROM/U.S. ARMY

**A Royal Thai
M60A1 battle tank
advances toward a
target during a live-
fire exercise.**

SGT. REBECCA L. FLOTO/
U.S. MARINE CORPS



“This is a place where we learn, and we share everything we’ve learned,” he said.

In addition to the mock rescue, Cobra Gold included a noncombatant evacuation operation, which governments order when their citizens are in danger in a foreign country. These operations are typically spurred by a natural disaster or a deteriorating security situation. Exercise trainers simulated the processing of Japanese nationals who were being evacuated from a foreign country. Japanese participants in the exercise pretended to have forgotten important documents, while others were assigned medical conditions that needed assessment.

After having their passports checked, the evacuees received a security pat-down before moving to a reception area. There, they were separated by nationality and asked to show proper documentation. Eventually, they were placed on a C-130 aircraft for a short flight before landing at the same airport.

Lasting reminder

Cobra Gold’s impact in Thailand extends beyond the excitement of having visiting militaries training

together in country. Civic action is always a pillar of Cobra Gold, and the 2018 iteration was no exception. Military engineers built six school-improvement projects throughout the country. By the time Cobra Gold ended, the militaries had placed 124 pillars and more than 15,000 concrete blocks. At a school building at Banthungsohongsa, Thailand, service members from Indonesia, Thailand and the U.S. gathered for a pillar-raising ceremony. The main pillar was blessed by Buddhist monks.

“I feel honored and glad [we are receiving] this construction, which will benefit Thai students,” said Banthungsohongsa School Principal Wanching Koolhakool. “It’s going to be a place for learning activities for the kindergarten grade and will be able to support more than 40 students.”

After a dedication of another school building, a top Thai Army official told *FORUM* the engineering projects create public support for the military.

“We have to use the field [for military exercises], and sometimes we would possibly destroy crops in the old days,” said Gen. Pornpipat Benyasri, chief of staff of the



Royal Thai Armed Forces Chief of Staff Gen. Pornpipat Benyasri explains how the Cobra Gold tradition of building multipurpose facilities at local schools helps unite the public with the Thai military.

CPL. JUSTIN HUFFTY/U.S. MARINE CORPS



A U.S. Marine drinks the blood of a cobra during a jungle survival exercise.

REUTERS

“Survival is an important skill for all troops to learn, especially troops who may only have experience in urban combat but not in jungle survival.”

*~ Royal Thai Marine Corps
Master Sgt. Pairoj Prasansai,
jungle survival training instructor*

Royal Thai Armed Forces. “When the Army is doing an exercise, we have something to return to them to compensate what we have possibly destroyed.”

Now the goal is broader than replacing damaged property. It’s about creating strong civil-military relationships. “Now we have changed our doctrine,” the general said. “The Army must have the civilians by our side.”

Jungle training

The rations and water were consumed, and resupply was still days away. The sun continued to beat down on the humid Thai jungle, where South Korean and U.S. Marines were being trained by Thai experts on jungle survival skills.

“Survival is an important skill for all troops to learn, especially troops who may only have experience in urban combat but not in jungle survival,” said Royal Thai Marine Corps Master Sgt. Pairoj Prasansai, a jungle survival training instructor.

The course taught Marines how to find water sources, start fires, distinguish between edible vegetation and dangerous plants and even learn what insects to eat. The course is better known, however, for its signature event.

“In the wilderness, you can drink the blood of a snake to stay hydrated,” Prasansai told the Marines as he picked up a cobra. “Snakes can provide you with both the food and water you need to survive.”

After preparing the snake, students were given the opportunity to drink the cobra’s blood.

“It tastes like blood with a hint of fish,” said U.S. Marine Corps Sgt. Christopher Fiffie, according to an account posted by the U.S. Marine Corps. Many students said they gained valuable knowledge from the exercise training.

“I’ve never done anything like this before, and I didn’t know you could eat most of those plants,” said U.S. Marine Corps Sgt. William Singleton. “Seeing the different animals that you can eat is pretty mind-blowing. It will help us recognize [edible food sources] easier in the wilderness.”

Long-term payoff

“This year marks the 37th iteration of Cobra Gold, the largest theater security operation exercise in Asia with nearly 30 nations participating in the various training events. That level of military participation,” Adm. Harris offered, “demonstrates a growing commitment to do the hard work and increases interoperability among our militaries now, so that we know what works when crisis strikes.”

Repeating exercises and building upon those experiences pays off when partner nations face crises or military conflicts together. “Ancient wisdom holds what modern experience confirms,” Harris said. “We don’t rise to the level of our expectations. We fall to the level of our training.” □



Maritime NUMBERS GAME



UNDERSTANDING AND RESPONDING TO CHINA'S THREE SEA FORCES

DR. ANDREW S. ERICKSON/U.S. NAVAL WAR COLLEGE

Powered by the world's largest shipbuilding industry, as well as the world's second-largest economy and defense budget under Xi Jinping's ambitious leadership, China is becoming a major sea power in its own right and in its own way.

China's armed forces comprise three major organizations, each with a maritime subcomponent that is already the world's largest such sea force by number of ships. The People's Liberation Army (PLA) contains the PLA Navy (PLAN); the People's Armed Police has formally been put in charge of most maritime law enforcement forces in the China coast guard (CCG); and the People's Armed Forces Militia contains a growing proportion of seagoing units, the People's Armed Forces Maritime Militia (PAFMM).

Not seeking war but determined to change the status quo coercively, Beijing employs its enormous second and third sea forces in so-called maritime gray zone operations to further its disputed sovereignty claims in the near seas (Yellow, East and South China seas). Typically, its first sea force provides coordination and deterrence from over the horizon.

THREE SEA FORCES

China's first sea force, the PLAN, already has the most ships of any navy. "The PLAN is the largest navy in Asia, with more than 300 surface ships, submarines, amphibious ships and patrol craft," according to the Pentagon's 2017 China Military Power Report. By 2020, the PLAN will have 313-342 warships, the U.S. Office of Naval Intelligence forecasts. Meanwhile, as of April 13, 2018, the U.S. Navy had 285 "deployable battle force ships," according to its official website.

China's second sea force, the coast guard, is likewise the world's largest, with more hulls than those of all its regional neighbors combined: 225 ships over 500 tons capable of operating offshore

and another 1,050-plus confined to closer waters, for a total of 1,275. In 2020, the CCG is projected to have a total of 1,300-plus ships: 260 large vessels capable of operating offshore, many capable of operating worldwide, and another 1,050-plus smaller vessels confined to closer waters.

From 2005 to 2020, this represents a 15-year net increase of 400 total coast guard ships. That includes 202 additional ships capable of operating offshore, representing 350 percent growth in the latter category.

“The PLAN is the largest navy in Asia, with more than 300 surface ships, submarines, amphibious ships and patrol craft.”

— Pentagon 2017 China Military Power Report

In terms of qualitative improvement, China has now replaced its older, less-capable large patrol ships. It is applying lessons learned from scrutinizing the “gold standard” U.S. and Japanese coast guards, as well as the CCG's increasing experience operating farther offshore for longer periods. The resulting new ship features include helicopters, interceptor boats, deck guns, high-capacity water cannons and improved seakeeping. With a length of 165 meters, a beam of 20-plus meters, and at 10,000-plus tons full load, China's two Zhaotou-class cutters are the world's largest coast guard vessels and displace more than most modern naval destroyers. Most newly built CCG ships have helicopter decks, some with hangars. Many new CCG ships have quick-launch boat ramps on the fantail, allowing for rapid

A Taiwan Navy helicopter flies over a Taiwan Navy minesweeper during military exercises off Kaohsiung in January 2018. Taiwan conducted two days of joint forces exercises to show its determination to defend itself from Chinese threats. THE ASSOCIATED PRESS

deployment of interceptor boats. These include approximately 10-meters-long fast interceptor boats with twin outboard engines enabling high speeds for visit, board, search and seizure law enforcement against fishing vessels or other ships. Many new ships have 30 mm guns mounted, with a few of the larger ships carrying 76 mm main guns. Most recently constructed CCG ships now have high-output water cannons mounted high on their superstructure.

China's third sea force, the PAFMM, is a state-organized, developed and controlled force operating under a direct military chain of command to conduct Chinese national activities. It is locally supported, but it answers to the top of China's centralized bureaucracy: Commander

in Chief Xi himself. The part-time elite units engaged in many of these incidents incorporate marine industry workers (for example, fishermen) directly into China's armed forces. While retaining day jobs, they are organized and trained in the PAFMM, often by China's navy, and activated on demand.

Since 2015, starting in Sansha City in the Paracels, China has been developing a full-time militia force: more professional, militarized, well-paid units including military recruits, crewing 84 large vessels built with water cannons and external rails for spraying and ramming.

Lacking fishing responsibilities, personnel train for manifold peacetime and wartime contingencies, including with light arms, and deploy regularly to disputed South China Sea features even during fishing moratoriums.

CHINA'S NAVAL STRATEGY NOW COMBINES "Near-Seas Defense" and "Far-Seas Protection"



FAR SEAS VERSUS NEAR SEAS OPERATIONS

China's second and third sea forces are helping to operationalize a naval strategy that has evolved from "near-coast defense" to a combination of "near-seas defense" and "far-seas protection." Beijing's maritime force posture is shifting from a coordinated three-sea-force focus on regional seas to supplementing that ongoing effort with a further division of labor in which PAFMM and CCG roles and missions have expanded to backfill behind the PLAN as it significantly increases its overseas missions and presence.

Adm. Harry B. Harris, Jr., then-Commander of the U.S. Indo-Pacific Command, testified in February 2018 before the U.S. House Armed Services Committee: "Across the South China Sea, China's air force, navy, coast guard and maritime militia all maintain a robust presence. Routine patrols and exercises ensure Chinese forces are in and around all the features, not just the ones they occupy. China routinely challenges the presence of non-Chinese forces, including other claimant nations and especially the U.S., often overstating its authority and insisting foreign forces either stay away or obtain Chinese permission to operate."



China's first aircraft carrier, the Liaoning, cruises into Hong Kong for a port call.

THE ASSOCIATED PRESS

In the near seas, China employs the CCG and PAFMM in gray zone operations against vessels from its maritime neighbors, as well as the U.S. at a level designed to frustrate effective response by the other parties involved.

China has used these forces to advance its disputed sovereignty claims in international sea incidents throughout the South China Sea, as well as in the East China Sea. This undermines vital U.S. interests in maintaining the regional status quo, including the rules and norms on which peace and prosperity depend.

Today, Chinese sea forces are enveloping

the Philippines-claimed Sandy Cay shoal (near Thitu Island), around which China has sustained a presence of at least two PAFMM vessels since August 2017. The CCG regularly challenges Japanese administration of the Senkaku Islands. Chinese maritime law enforcement and PAFMM vessels and personnel cooperated in the 2014 controversial repulsion of Vietnamese vessels from disputed waters surrounding China National Offshore Oil Corp.'s Hai Yang Shi You 981 oil rig, 2012 seizure of Scarborough Shoal from the Philippines, and 2009 harassment of USNS Impeccable.



A Chinese coast guard vessel, right, passes near the Chinese oil rig, Hai Yang Shi You 981, in the South China Sea in June 2014. Vietnam challenged the location of the rig, saying it was in Vietnam's 200-mile exclusive economic zone. Several weeks later, China moved the rig toward Hainan.

REUTERS

During the past two decades, PAFMM units have participated in China's 2015 maneuvers around USS Lassen, 2014 harassment of USNS Howard O. Lorenzen, 2014 blockade of the Second Thomas Shoal, harassment of multiple Vietnamese government and survey vessels; and occupation and development of Mischief Reef, resulting in a 1995 incident with the Philippines.

RECOMMENDATIONS

As the U.S. National Security Strategy 2017 emphasizes, China is engaged in continuous competition with America — which it views as neither fully at peace nor at war. To continue to safeguard U.S. interests and maintain a free and open Indo-Pacific, the U.S. Navy must continue to grow numerically, maintain a robust presence, and — together with its domestic and foreign allies and partners — deter even the most determined aggression with sufficient numbers of long-range strike systems.

Numbers matter significantly when it comes to maintaining presence and influence in vital seas: Even the most advanced ship simply cannot be in more than one place simultaneously. Case in point: the growing U.S.-China strategic competition where Washington plays a distant away game. U.S. Coast Guard cutters are focused near American

waters, far from any international disputes, while the U.S. Navy is dispersed globally, with many ships separated from maritime East Asia by responsibilities, geography and time. By contrast, all three major Chinese sea forces remain focused first and foremost on the contested near seas and their immediate approaches, close to China's homeland, land-based air and missile coverage, and supply lines.

Meanwhile, the U.S. and its allies and partners must increase their efforts to counter China's erosive gray zone activities, currently the focus of its efforts to impose its national laws and disputed sovereignty claims on features and maritime spaces to which its neighbors and the international community have legitimate rights.

To help complicate and counteract the Chinese maritime coercion that former Adm. Harris rightly emphasized, the U.S. should further demonstrate proactive leadership in the Indo-Pacific by sharing more information on all three PRC sea forces, emphasizing the cooperative nature of collective security, and encouraging allies and partners to invest in capabilities that complement those of the U.S. A particularly promising area for leveraging like-minded stakeholders is to further pursue collaborative approaches to maritime domain awareness that help them monitor proximate



waters and airspace and share resulting information. Assisting less capable partners with hardware and training will help them not only to better help themselves and enhance status quo-supporting presence but also to populate the common operational picture.

Additionally, the U.S. can leverage Chinese weaknesses and constraints more effectively to limit negative behavior. At the strategic level, the U.S. can curtail the ability of China's gray zone forces to operate without scrutiny and with plausible deniability, however implausible, by publicly revealing their true nature and demonstrating resolve to impose consequences for unlawful actions.

- First, the U.S. should demonstrate greater awareness of China's actions to change its behavior.
- Second, the U.S. should communicate consequences of unacceptable actions.
- Third, the U.S. should utilize all relevant venues for strategic communications.
- Fourth, the U.S. should deal with China's sea forces holistically. Washington should state clearly that it expects all three — including the PAFMM — to abide by the same internationally recognized standards of law, seamanship and communications to which U.S. maritime forces adhere, including the International Collision

Regulations and other international rules of the road at sea.

To regain the operational initiative, the U.S. must better deter and punish any Chinese use of the PAFMM in ways that are inimical to U.S. interests to break China's asymmetric advantage through calibrated escalation as needed.

- First, the U.S. needs to accept some friction and force Beijing to choose between de-escalating — the preferred U.S. outcome — or to move up against a U.S. red line that China would prefer to avoid.
- Second, Washington must support its allies and partners on the front lines of keeping maritime East Asia peaceful and open to all to help them help themselves and the region alike.
- Third, Washington should consider enhanced rules of engagement and signal to Beijing accordingly. The U.S. should not tolerate any attempt to interfere with or compromise the safety, operations or mission accomplishment of any U.S. government vessel.
- Fourth, to support the above, Washington must develop a broad array of credible consequences including punishment options that rapidly and creatively impose costs just high enough to exceed any ill-gotten Chinese gains. □

Navy personnel from the Chinese People's Liberation Army Navy participate in a military display in April 2018 in the South China Sea, where China continues to increase its aggressive activities, including building military facilities on artificial "islands" recently constructed in contested territory.

REUTERS



CHINA'S MARITIME STRATEGY

How should the U.S. and its
allies and partners respond?

LIZA TOBIN

If Beijing hopes to achieve “the great rejuvenation of the Chinese nation” by the middle of the 21st century, it must become a “maritime great power,” according to Chinese President Xi Jinping. What does this goal mean to China’s leaders, and what are the implications of Beijing’s latest round of institutional reforms to make it so? The Chinese Communist Party (CCP) has an all-encompassing strategy to increase its maritime power. This strategy includes several major areas of focus: developing the “blue economy,” preserving marine environments, exploiting maritime resources and protecting China’s “rights and interests” in near and distant seas.

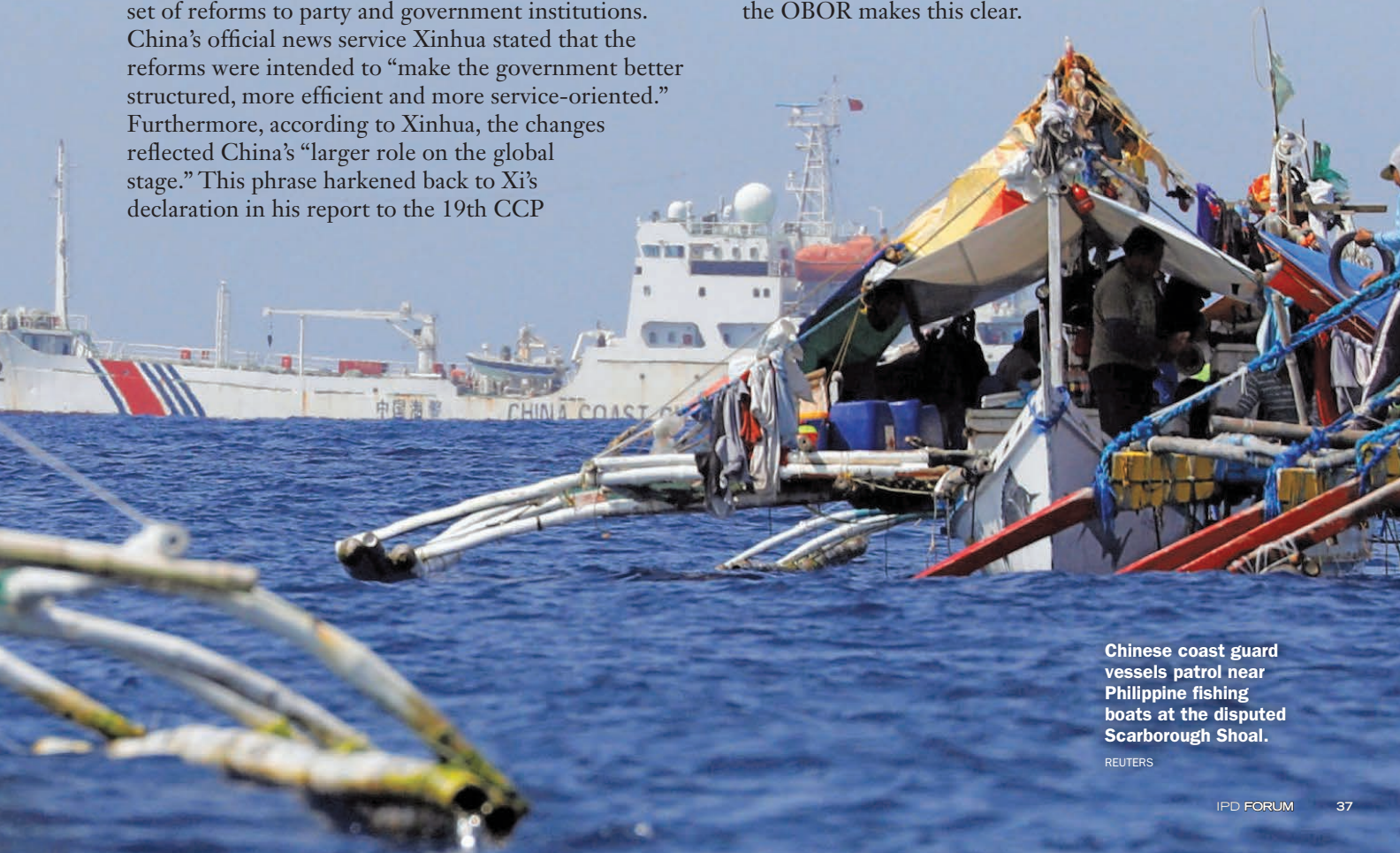
The goal of building China into a maritime great power is not new. It has appeared in authoritative party documents since 2012, although the roles of China’s multiple maritime-related departments have been muddled. As a Chinese government-affiliated maritime scholar stated in 2016, China’s maritime agencies “each do things their own way,” hindering coordination. Beijing’s most recent attempt to tackle this problem reveals a bid to advance China’s transformation into a comprehensive maritime power with a larger role in global affairs.

In March 2018, Beijing announced three major changes to maritime institutions as part of a sweeping set of reforms to party and government institutions. China’s official news service Xinhua stated that the reforms were intended to “make the government better structured, more efficient and more service-oriented.” Furthermore, according to Xinhua, the changes reflected China’s “larger role on the global stage.” This phrase harkened back to Xi’s declaration in his report to the 19th CCP



Chinese President Xi Jinping attends the closing session of the National People’s Congress at the Great Hall of the People in Beijing on March 20, 2018. REUTERS

Congress in October 2017 that China is “moving closer to center stage.” Beijing openly has stated its aspirations to play a bigger role in shaping global governance, and the ocean features prominently in its efforts. China’s so-called 21st-century Maritime Silk Road, part of the much-vaunted One Belt, One Road (OBOR), is key. It aims to build convergence between China and other countries on economic, political and security matters in line with China’s preferences for global governance. Beijing’s 2017 Vision for Maritime Cooperation Under the OBOR makes this clear.



Chinese coast guard vessels patrol near Philippine fishing boats at the disputed Scarborough Shoal. REUTERS

Beijing has consolidated its maritime bureaucracy in the past. In 2013, it merged several maritime law enforcement entities under the State Oceanic Administration and established the Chinese coast guard under its purview. Dr. Ryan Martinson, an assistant professor at the U.S. Naval War College's China Maritime Studies Institute, has shown that these reforms improved coordination and streamlined command and control of maritime law enforcement forces, although he noted that the process remained incomplete.

The March 2018 reforms were revealed in a plan titled "Deepening Reform of Party and Government Institutions." It included three changes to the maritime bureaucracy. First, the work of protecting maritime rights and interests, a major focus in China's maritime strategy, will be integrated more comprehensively in China's overall foreign policy approach. Second, the Chinese coast guard will no longer report to the civilian State Oceanic Administration but will now report to the People's Armed Police. The latter entity recently began reporting exclusively to the central military commission. Third, the State Oceanic Administration was slated to become defunct, with its remaining responsibilities split between the new Ministry of Natural Resources and Ministry of Ecology and Environment. (The plan notes that the Oceanic Administration will continue to be listed on the Natural Resources Ministry's organizational chart but does not explain why.)

Intensifying Maritime Diplomacy

The first change reflects an adaptation of China's policymaking organs to suit the maritime strategy's growing importance in China's foreign policy. The plan stated that the Central Leading Small Group for Protecting Maritime Rights and Interests (henceforth Maritime Leading Group) will be abolished and its responsibilities will be absorbed into the Central Foreign Affairs Committee. The intent of merging the two groups, according to the plan, is to improve coordination of the "resources and manpower of diplomatic and maritime departments." Regarding maritime rights and interests, the committee will be responsible for guiding implementation of party decisions, organizing intelligence collection and analysis, coordinating responses to emergencies, and directing research on major issues.

Changes in China's external situation since 2012, when the Maritime Leading Group was established under then-Vice President Xi Jinping, help illuminate the rationale for the reform. In 2012, tensions were mounting in the South China Sea (SCS), in particular between China and the Philippines over control of the Scarborough Shoal. These conditions helped to raise the urgency for Beijing to synchronize its disparate maritime law enforcement entities to safeguard China's perceived rights and interests. Both the creation of the Maritime Leading Group and the 2013 consolidation of multiple



agencies under the State Oceanic Administration responded to this need at the time for better internal coordination.

Six years later, China touts significant progress in the South China Sea. Beijing has undertaken an extensive buildup of military infrastructure, troops and equipment to safeguard its claimed features, developments that Chinese officials now defend openly in contrast to earlier coyness. On the diplomatic front, Beijing frequently expresses satisfaction with what it calls "prevailing calm" in the SCS (although it still objects to "destabilizing" U.S. military operations there). According to Xinhua, China has "successfully achieved administrative control



over the situation in the SCS and maintained overall stability in surrounding maritime areas.” Furthermore, Xinhua has stated, China’s diplomacy toward the Philippines and the Association of Southeast Asian Nations (ASEAN) has helped to “gradually eliminate the negative impact of the SCS arbitration case.” (Xinhua is referring to the 2016 case the Philippines brought against Chinese claims to the International Tribunal for the Law of the Sea, which was decided in favor of the Philippines.) Against the backdrop of these developments, Beijing is poised to integrate the maritime portfolio more thoroughly with China’s push for a growing global role.

Looking ahead, the U.S. government and its allies

should carefully monitor how China is consolidating its lessons learned in the SCS. How is it applying what it has learned about diplomatic, military, economic, legal and other tools of national power? How is it applying these lessons to areas further afield where it perceives it has rights and interests? Geographically, these areas include the Indian Ocean and the Western Pacific. They also includes other locations linked to China’s OBOR, which originally focused on Eurasia and Africa but has extended to include Latin America and the Arctic. Functionally,

Chinese President Xi Jinping delivers his speech at the closing session of the National People’s Congress in Beijing.

REUTERS

The U.S. and its allies should carefully monitor how China is consolidating its lessons learned in the South China Sea.



China's first domestically manufactured aircraft carrier, known as Type 001A, the country's second aircraft carrier after the Liaoning, leaves port in the northeast city of Dalian in May 2018.

AFP/GETTY IMAGES

they include what Chinese sources refer to as “new” or unconventional domains: deep seas, polar regions, outer space and cyberspace (the first two pertain directly to maritime issues). Beijing is clear that it intends to play a bigger role in shaping global governance of all of these domains.

Centralizing Military Control of the Coast Guard

The second change reflects an effort to strengthen military command and control over China’s maritime law enforcement forces. This is part of a broader push to strengthen CCP control over all levers of national power. According to the reform plan, the coast guard will be removed from civilian control under the State Oceanic Administration and integrated into the People’s Armed Police, which has reported exclusively to the central military commission since January 2018. Previously, it had a dual military-civilian chain of command, reporting to both the military commission and the state council. China’s Defense Ministry said the change was meant to “strengthen the absolute leadership of the Party” over the armed forces. According to the *South China Morning Post* newspaper, Beijing sought to limit local authorities’ ability to deploy armed police to deal with local disasters or crises and potentially challenge the center’s authority.

Because of the reforms in March 2018, the coast guard now has an exclusively military chain of command and has lost the patina of a civilian law enforcement entity. Martinson has shown that the coast guard already had military functions. The reforms essentially bring its institutional status in line with operational realities.

At this early stage, the implications for foreign governments and militaries are uncertain, because many details about the

coast guard’s new command and control structure probably remain unresolved. On the one hand, there are potential opportunities for the United States. Removing the coast guard’s civilian facade may enable clearer communication between U.S. and Chinese armed forces (coast guard and navy) to facilitate

safer interactions at sea. This outcome hinges in part on the U.S. military’s ability to engage Chinese counterparts in detailed exchanges about the reform. This could occur through existing, working-level bilateral exchanges aimed at improving maritime and aviation safety and professionalism, including the Military Maritime Consultative Agreement. The U.S. should try to include the Chinese coast guard in such discussions and seek clarity about changes to the coast guard’s command and control structure and roles in peacetime and conflict. Similarly, the United States should advocate for bilateral discussions of China’s maritime militia, an armed reserve force that China uses to assert and defend its maritime claims. The Chinese side may be reluctant to discuss these issues due to internal organization hurdles and the unsettled nature of the reforms. However, U.S. officials can remind Chinese interlocutors of Xi Jinping’s recent guidance at a politburo meeting that China should further integrate its multiple maritime forces. Xi stated that China’s “five-in-one party-government-military-police-civilian” forces gave China a “unique advantage” in border and coastal defense. The U.S. should assert that it needs better understanding of these “five-in-one” forces and how they fit together to facilitate safe interactions at sea.

The reform has potentially worrisome implications for the United States. Lyle Morris, a senior policy analyst at the Rand Corp., recently argued that the changes may pave the way for the coast guard to take on additional military functions and give the coast guard more flexibility to act aggressively in disputed waters in the East and South China seas. This possibility further underlines the importance of seeking greater clarity from Beijing about its reforms and reinforcing existing mechanisms to safely manage unplanned encounters at sea.

Institutionalizing Environmental and Resource Concerns

The third change attempts to improve execution of two core elements of China’s maritime strategy: preservation of marine environments and exploitation of ocean resources (energy, fish and minerals). According to the reform plan, remaining elements in the State Oceanic Administration’s portfolio will be split between the new Ministry of Natural Resources and Ministry of Ecology and Environment. The Natural Resources Ministry will replace the State Oceanic Administration’s former parent organization, the Ministry of Land and Resources. Its portfolio will be expanded to include part of the climate change portfolio previously held by China’s economic super-ministry, the National Development and Reform Commission, as well as the portfolio of the abolished state Bureau of Surveying and Mapping. According to State Councilor Wang Yong, the Natural Resources Ministry will “comprehensively manage mountains,



An aerial shot shows Subi reef, which China first took possession of in 1988. It is one of seven outposts in the Spratly Islands that China has militarized.

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ASIA MARITIME TRANSPARENCY INITIATIVE

waters, forests, fields, lakes and grasslands.” For its part, the Ministry of Ecology and Environment will replace the Ministry of Environment and will “integrate decentralized ecological environmental protection responsibilities” that were previously spread among multiple agencies. This will include absorbing environmental protection duties formerly undertaken by the State Oceanic Administration.

Both the Natural Resources and Environmental ministries will likely retain some civilian law enforcement duties, suggesting that these changes — banal as they may sound to outsiders — are important to track for analysts monitoring China’s behavior in the East and South China seas. One Chinese author assessed that the Environmental Ministry probably would manage law enforcement of environmental protection issues, the Natural Resources Ministry would enforce laws related to resource management and space utilization, and the coast guard would deal with issues such as maritime security, countersmuggling and unspecified “outwardly facing duties.” Additional clarification is needed. However, what is clear is that these ministries will become expanded versions of their previous selves — and likely be more powerful. As ministries, they will presumably have more clout than the State Oceanic Administration had (as a subministerial organization). This may help them advance and synchronize two important but frequently contradicting priorities: economic development (which is dependent on resource utilization, including from the oceans) and environmental protection.

These changes spring out of larger requirements in China’s national strategy. Xi in his report to the 19th CCP Congress stated a goal to build a “Beautiful China” by 2035, “where the skies are blue, the land is green, and the water is clear.” As a People’s Daily newspaper commentary noted, beautiful oceans are an integral part of a “Beautiful China.” In the 19th CCP Congress report, Xi further called for the establishment of regulatory agencies to undertake the tasks of building a “Beautiful China”: managing state-owned natural resources, monitoring natural



ecosystems and developing a system of nature reserves composed mainly of national parks. China has seen numerous acute failures to protect its environment to date — degrading its natural environment in exchange for rapid economic growth. Now, at least rhetorically, Beijing is doubling down on prioritization of environmental protection.

It is too soon to tell whether this latest shuffling of environmental and resource bureaucracies will succeed where previous efforts to forge a more sustainable approach have failed. What is important is the growing prioritization of the ocean and its resources in China’s overall approach to its development and security interests. In the words of a State Oceanic Administration researcher, China in the future will depend on “exploring, developing and using the ocean at new heights and depths.” According to another Chinese author, these pursuits are not limited to China’s jurisdictional seas but also include the “new” maritime domains (deep seas and polar regions) and resource exploitation in seas under foreign jurisdiction.

U.S. Implications

How should the United States respond? Eliciting more clarity from Chinese counterparts on the coast guard and maritime militia is only part of the answer. China’s maritime strategy integrates economic, environmental, diplomatic and military objectives. The United States should formulate an approach to match. Some of China’s long-term maritime objectives — such as preservation of marine environments — converge with U.S. national interests. Others — including China’s efforts to secure

its maritime rights and interests in near seas and globally — are at odds. Managing the divergent aspects falls heavily, though not exclusively, to the U.S. Defense Department, but its leverage will be limited without cohesive effort from other parts of the government. In bilateral exchanges, China's maritime ambitions should be dealt with at the state-to-state level in addition to military-to-military channels.

Among the array of challenges that China's maritime strategy raises, its efforts in the legal realm most urgently demand increased U.S. attention. Beijing seeks to impose its preferences for global governance on the international maritime legal regime. The implications for Washington and its allies if Beijing succeeds are acute. Beijing's preferences include an attrition of U.S. military alliances, presence and operations near China, resulting in an erosion of America's ability to project force and provide security in the region. China also seeks a much stronger role for itself as a "great power" in polar regions and deep seas, paving the way for a future in which Chinese interests and values are dominant in these global commons. Furthermore, China is trying to build up its domestic maritime courts' international clout, aiming to strengthen its ability to assert its sovereignty claims with other countries.

A key gap hampering China's legal efforts is the lack of a Chinese domestic "basic law of the sea." According to a Chinese government-affiliated scholar, while numerous Chinese laws address discrete maritime issues, a unified maritime law is needed to place China's maritime strategy on a more solid legal footing and clarify Beijing's priorities. The law would address the proper balance between national security and economic development concerns in the maritime strategy. Similarly, it would provide guidance on balancing positive relations with neighbors, on the one hand, and assertion of Chinese maritime sovereignty claims on the other. Likewise, it would address the balance between economic development and environmental protection. The SCS — with multiple claimants vying over economic, military and environmental interests — exemplifies these competing priorities.

A holistic U.S. response should exploit the gaps in China's strategy and sew up seams in the U.S. approach. At least three U.S. policy recommendations stand out in this regard. First, the United States should ratify the U.N. Convention on the Law of the Sea. Such a move would be an important signal of Washington's enduring commitment to an international rules-based order. Second, Washington's Free and Open Indo-Pacific Strategy, introduced in 2017 and still under formulation, should articulate a positive counterpoint to Beijing's vision for global governance in the maritime domain. It should reinforce economic, environmental, diplomatic, legal and security concepts that have served U.S., regional, global and Chinese interests for decades. It

should draw attention to China's efforts to reshape these concepts according to its own preferences and values. These largely rhetorical efforts should be matched by sustained U.S. military presence, maritime security cooperation, and diplomatic engagement with allies and partners — not only in the Indo-Pacific but also globally as the reach of China's maritime strategy expands. Third, the U.S. should propose maritime strategy and law as topics for future high-level U.S.-China talks. The U.S.-China Law Enforcement and Cybersecurity Dialogue is one possible venue. Washington should use these exchanges to understand the maritime legal concepts Beijing is promoting and to push back where these concepts are at odds with longstanding international rules and norms. The U.S. aim should be to shape Chinese legal concepts as they emerge — before they are ratified in a Chinese basic law of the sea.

Clearer Waters, Deeper Seas

All three institutional changes highlight areas where Beijing sees a need to refine execution of its maritime strategy to take on a larger role on the global stage. If the reforms achieve what Beijing intends, observers should expect China's maritime strategy to

become a more explicit element of its foreign policy, in particular Xi's promotion of a "community with a shared future for mankind." For Xi, building this community means the party's interests and values will gain greater traction in global governance. Second, observers should see clearer command and control of China's maritime law enforcement forces under the Central Military Commission as serving the party's strategic goal of rejuvenating China. Last, observers should watch for a more effective balance between the party's aspirations to use the ocean to make China rich and beautiful. Beijing's success in each of these endeavors is uncertain, but its intentions are clear. The U.S. and its allies and partners need equally clear objectives. □

**A holistic U.S.
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Liza Tobin originally published the above article on the War on the Rocks website, a platform for foreign policy and national security issues. It has been edited to fit FORUM's format.

CANAL

CONUNDRUM

Thailand could sacrifice its sovereignty for questionable gains from Chinese-built waterway

FORUM STAFF



Ships are anchored near a refinery on Singapore's Bukom Island. More than 30 percent of the world's trade passes through the Malacca Strait each year, including about 80 percent of China's oil supply from the Middle East and Africa. REUTERS

China is pushing for construction of a man-made waterway that cuts through Thailand to connect the South China Sea with the Andaman Sea, linking the Indian and Pacific oceans and slashing transit times between them by two to three days. The proposed Kra Canal, or Thai Canal, as it has been officially renamed by the Thai government, would stretch more than 100 kilometers across the Kra Isthmus and replace trade routes through the Malacca Strait and Singapore. It could be built within five to 10 years of the plan's approval, proponents said.

The idea of building such a water route dates to the 17th century, but it is now being discussed as part of China's One Belt, One Road (OBOR), which concerns many of Thailand's neighbors. China would likely fund

to project naval power to the Andaman Sea and the eastern Indian Ocean.

"In theory, the Kra Canal could benefit India and the region by taking pressure off the overcrowded Malacca Straits," a senior Indian naval commander told the *Business Standard*, an Indian English-language daily newspaper, in April 2018. "In practice, there's reason to worry about what Chinese involvement in this project will mean for the balance of power in the Indian Ocean."

About 33 percent of global trade, or nearly 84,000 ships, passes through the Malacca Strait annually, as does about 80 percent of China's oil supply from the Middle East and Africa, according to the Seatrade Maritime News website. The new sea lane, which would be 450 meters wide and 25 meters deep, would cut shipping routes between the Indian Ocean and Pacific Ocean by 1,200 kilometers and

accommodate the world's largest oil tankers. The World Bank forecasts that traffic in the Malacca Strait will exceed its maximum annual capacity of 122,000 ships by 2020.

The canal would offer China a military solution for what its former President Hu Jintao referred to as the "Malacca dilemma." That is, the new route would offer an alternative to the Malacca Strait route, which could be closed to China by other regional powers if a conflict arose in the Indo-Pacific.

Moreover, China would predictably militarize the canal, the senior Indian naval commander told the *Business Standard*. China militarized many of its infrastructure

investments in the Indo-Pacific, despite repeated denials of its intentions and ongoing activities to build military facilities and install military equipment on such sites. Prime examples include the artificial features China built in recent years in the South China Sea, replete with air and naval bases, and various dual-use port projects from Gwadar in Pakistan to Djibouti in Africa for which China is using sovereign debt traps to gradually usurp control.



REUTERS

A container ship arrives in a Singapore port in June 2017.

and ultimately control the canal, estimated to cost more than U.S. \$30 billion to build.

Fear is spreading across the Indo-Pacific region that the canal represents another building block in China's master plan to dominate the region, although Chinese and Thai officials have denied such a project is under serious consideration. The canal would provide strategic military advantages for China, analysts contend, beyond enhancing its ability

The proposed canal could also benefit Thailand militarily, as well as China, by enabling naval forces to transit between Thailand's east and west coasts, military analysts said.

OPAQUE SUPPORT

Thailand's government has continued to claim that it has no plans to support the project. "There are still other problems in the area, therefore they must be prioritized," Thai government spokesman Lt. Gen. Sansern Kaewkamnerd said in February 2017. He added that Prime Minister Prayut Chan-o-cha has insisted his government does not have a policy on the project, according to *The Straits Times*, an English-language daily newspaper in Singapore.

However, Chinese and Thai entities signed a memorandum of understanding in May 2015 to advance the project, according to the online magazine *The Diplomat*, despite denials of official government involvement at the time. China notoriously uses purportedly private Chinese companies to run government-funded infrastructure projects. The China-Thailand Kra Infrastructure Investment and Development company, based in Guangzhou, China, and Asia Union Group, headed by former Thai Premier Chavalit Yongchaiyudh, signed the agreement. In addition, a feasibility study was completed in 2016, and Chinese entities have surveyed a proposed route, according to media accounts.

The Thai Canal Association for Study and Development, an organization formed by retired Thai generals and chaired by former Thai Army chief Gen. Pongthep Thesprateep, is leading the drive for the project inside Thailand, according to an August 2017 report on the Nikkei Asian Review website. In late March 2018, the group called for a national committee to study the U.S. \$30 billion project, which would mainly be funded through China's OBOR. A series of conferences in Bangkok orchestrated by the Thai-Chinese Cultural and Economic Association, which is closely tied to Beijing, and the European Association for Business and Commerce in September 2017 and February 2018 also have helped

heat up interest in the canal.

Concern that Chinese control of the project could erode Thailand's sovereignty is widespread, however, even if engineers determine it to be technically feasible.

"The history of the Panama and Suez canals shows, despite the unquestionable economic advantages of a canal, one country's funding of its construction on the territory of another country usually leads to the spread of significant influence by the first country," Gen. Ivica Kinder, director of Croatia's Military Security and Intelligence Agency, told the *Business Standard*.

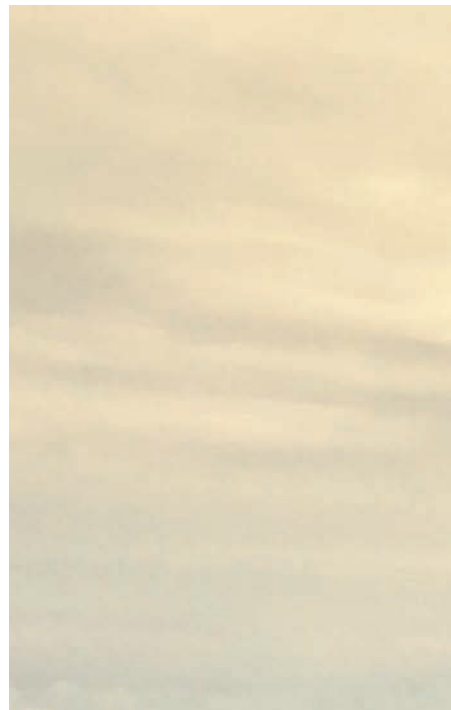
Moreover, China's management of infrastructure projects has historically proven subpar compared to that of the U.S., France and other established democracies.



Sri Lankan villagers gather to protest outside the inauguration ceremony of an industrial zone in Mirijjawila village in Ambalantota, Sri Lanka, in January 2017. They object to the plan to take over private land for the industrial zone in which China will set up factories and have a major stake. THE ASSOCIATED PRESS

QUESTIONABLE TRACK RECORD

China has attempted myriad other such projects around the world that have had negative consequences for participating nations. The planned U.S. \$40 billion canal in Nicaragua that would rival the Panama Canal is a leading example. Nicaragua gave Chinese businessman



“THE PROPOSED CANAL ROUTE WOULD RUN PAST TOURIST AREAS IN THE ANDAMAN SEA THAT GENERATE ABOUT 40 PERCENT OF THE TOTAL REVENUE FROM THE TOURISM INDUSTRY.”

– Thon Thamrongnawasawat, a marine expert from Bangkok’s Kasetsart University



Ships move along the coast of Singapore in July 2017. More than 84,000 ships transit the Malacca Strait each year, many of them passing through the port of Singapore. REUTERS



FORUM ILLUSTRATION

Wang Jing and his company exclusive rights to build an interoceanic canal and its supporting projects in 2013 and nothing has materialized, according to media reports. In a deal that many legal experts say violated the country's national sovereignty, Nicaraguan President Daniel Ortega ordered his loyalist congress to rubber-stamp legislation that handed over the country's rights to the canal for 50 years to Wang, but no construction has begun, according to a July 2017 account in *The Miami Herald* newspaper.

Instead, observers worry Nicaragua has been the victim of a massive corruption plot. "There are fears that Wang could now use his 50-year concession to sell the rights to ports, airports and tourism complexes, with zero benefit for the Nicaraguan people. It would be a textbook case of how authoritarian regimes often become the most incompetent, and the most corrupt," journalist Andres Oppenheimer reported in *The Miami Herald*.

Countries are increasingly wary of how China's predatory financing of many infrastructure projects works out for recipient nations even when the projects are built. In country after country, where China loaned money to governments for such projects, China ends up controlling the natural assets and a chunk of the country's sovereignty.

China loaned billions of dollars to Djibouti, for example, and then used this leverage to lease land for a military base there. Similarly, China's backing of Sri Lanka's Hambantota port ended up unfavorably for the "partner" nation. Sri Lanka was forced to give China control of the port in December 2017. A plan to create a new Chinese-controlled business district to service Sri Lanka's nearby port of Colombo has also proven to benefit China at the seeming expense of Sri Lankan citizens.

If successful, a project of this size could add from 1 to 2 percent to Thailand's gross domestic product. China would supply most of the labor, however. This coupled with the fact that it's unclear how much of the project's supplies will be locally sourced casts doubt on the amount of the resulting economic activity that would directly benefit Thailand, analysts said.

Such deals typically begin with financing arrangements that set up the borrower nation for failure by creating unmanageable debt programs and yielding scant gains for citizens, such as jobs and economic windfalls that China promises. Beijing "encourages dependency using opaque contracts, predatory loan practices, and corrupt deals that mire nations in debt and undercut their sovereignty,



denying them their long-term, self-sustaining growth,” then-U.S. Secretary of State Rex Tillerson explained on March 6, 2018.

“These experiences should serve as a warning that the OBOR is essentially an imperial project that aims to bring to fruition the mythical Middle Kingdom. States caught in debt bondage to China risk losing both their most valuable natural assets and their very sovereignty,” Brahma Chellaney, a professor at the New Delhi-based Center for Policy Research, wrote in a December 2017 article on the Project Syndicate website.

China’s predation in Sri Lanka becomes more interesting if the Thai Canal project goes forward. Sri Lanka’s Chinese-controlled ports would benefit from the construction of the canal, as David Brewster wrote in an August 14, 2017, article on the Lowy

Institute’s website, because Sri Lanka “lies astride the busy sea lanes of the northern Indian Ocean, making it an obvious choice for a new shipping hub.”

The canal plan also features the creation of a U.S. \$22 billion special economic zone that includes building cities and artificial islands to bolster Thailand’s infrastructure in the region, the Nikkei Asian Review reported. Thailand would then incur almost double the original debt burden to bring the project to fruition.

ADDITIONAL RISKS, OBSTACLES

China’s track record on delivering large infrastructure projects is sketchy at home and abroad. More than half of such projects run by China were poorly managed, a 2016 study by Oxford University’s Said Business School found. The projects entailed cost overruns, a

Sri Lankan protesters block traffic and shout slogans during a demonstration against a port city project in Colombo, Sri Lanka, in March 2015. Protesters say the project weakens the country’s sovereignty by granting the Chinese government control of an expanse of land near the port.

THE ASSOCIATED PRESS



lack of economic benefit to the community, poor returns for investors and generally produced low-quality products, according to the study, which examined 95 large Chinese road and rail projects and compared them to hundreds of infrastructure projects run by established democracies.

“From our sample, the evidence suggests that for over half of the infrastructure investments in China made in the last three decades, the costs are larger than the benefits they generate, which means the projects destroy economic value instead of generating it,” said Dr. Atif Ansar, lead author of the report, “Does Infrastructure Investment Lead to Economic Growth or Economic Fragility? Evidence from China,” published in the *Oxford Review of Economic Policy*.

China often pushes for political deals that lack transparency in the contracting process and give its state-owned enterprises exclusive bidding rights to

projects, which contributes to poor management. In Kenya, Chinese companies delivered the high-profile Standard Gauge Railway to connect Kenya’s largest port city, Mombasa, to its capital, Nairobi, at a cost of U.S. \$5.6 million per kilometer, which was roughly triple the international standard and four times the original estimate, according to a report by the Economist Intelligence Unit.

China’s focus is typically on geopolitical value of overseas projects rather than their economic value, according to a May 2017 report in the Diplomat, an online magazine, by Hong Kong-based journalist Spencer Sheehan.

“China’s drive to build its political influence in Africa and Asia through infrastructure has resulted in faulty power plants in Botswana and loss-making railway projects in Laos,” he wrote.



Protesters hold a banner that reads “No to Canal” during a July 2017 march at Ometepe Island against the construction of an interoceanic canal in Nicaragua. REUTERS

Poorly selected and poorly executed projects also increase the chance that a debtor nation will default on the loans by China and cede control of the assets to China, Sheehan explained.

The Oxford University study also found that investing in large-scale, physical infrastructure projects may not be a viable development strategy for other developing countries in the first place. “It is a myth that China grew thanks largely to heavy infrastructure investment,” Ansar and his colleagues concluded.

Moreover, any economic gains from foreign infrastructure projects are usually mostly enjoyed by the Chinese firms that participate. In the case of the Thai Canal, several Chinese firms are lobbying the Thai government to build the canal. A leading proponent is Longhao, the firm that built the artificial islands in the South China Sea, according to the *Business Standard*. Longhao envisions bringing 30,000 Chinese workers to Thailand to handle construction work.

Worldwide, Chinese projects are notorious for putting environmental concerns second to Beijing’s geopolitical ambitions. The canal project could hurt Thailand’s tourism industry and damage its fisheries, some critics have purported. “The proposed canal route would run past tourist areas in the Andaman Sea that generate about 40 percent of the total revenue from the tourism industry,” said Thon Thamrongnawasawat, a marine expert from Bangkok’s Kasetsart University, the *Business Standard* reported. The route would pass popular tourist destinations Phuket and Krabi islands, according to The Nation, an English news site in Thailand.

Other military experts are also worried construction of the canal could divide the country in half and, because of its location, increase tensions in southern Thailand. The waterway would create a geographic split between Buddhist regions and mainly Muslim provinces in the south. “The construction of the Kra Canal would further exacerbate the volatile region, creating

further divisions within the country,” Rhea Menon, a researcher at Carnegie India, wrote in the April 6, 2018, issue of *The Diplomat*.

OPPORTUNITY COSTS

To ensure regional stability in the Indo-Pacific, Thailand must carefully weigh the advantages and disadvantages of such an infrastructure project. Moreover, the economic advantages of the canal have been overstated by its proponents, some analysts contend. The ramifications of the canal in the broader security picture must be more thoroughly examined, military experts from the region warn.

From a purely economic perspective, the project may simply redistribute revenue and traffic in the region and not increase overall economic value, some leading financial analysts contend. Other more cost-effective alternatives such as a land bridge by rail over Thailand’s Kra Isthmus should also be thoroughly evaluated, they suggested.

Construction of the canal could also be detrimental to Thailand’s relationship with other members of the Association of Southeast Asian Nations, including Indonesia, Singapore and Malaysia, which would lose shipping business to Thailand. Although it may take a decade for the supporting facilities to be built, Singapore, for example, could eventually lose between 30 to 50 percent of its shipping business,

according to some estimates.

“The thought of losing business to the Kra Canal is troubling for the states along the Strait of Malacca — Malaysia, Indonesia and Singapore. Bangkok’s relations with these countries will figure prominently in its decision over whether to follow through with the project,” according to a November 2017 analysis by Stratfor, a digital publication that provides a geopolitical intelligence platform.

China will benefit the most from such a canal because it will build it and control it, most observers and analysts agreed. Although China is likely the only investor that could bring the project to life, according to Stratfor, “it has kept its interest in the new waterway as quiet as possible to avoid jeopardizing its ties with other countries in the region.” □



Thai Prime Minister Prayut Chan-o-cha speaks during the Mekong Greater Sub-Region Summit in Hanoi, Vietnam, in March 2018. REUTERS

unity
OF EFFORT





AN INTERNATIONAL TEAM **PULLS TOGETHER** TO SAVE SOCCER YOUTHS FROM A FLOODED THAI CAVE

CMDR. PINYO RUNGRUENG

When Thai Navy SEALs arrived at Tham Luang Nang Non cave on June 24, 2018, they faced daunting challenges in trying to find 12 boys, ages 11 to 17, and their soccer coach.

A continuous rainfall raised water levels. Inside the dark cave, extremely cold water flowed with rapid currents. The SEALs had to work around dangerous stalactites and stalagmites, electrical and telephone lines, rough surfaces, and crooked cave passages that were cramped and unlevel. No maps of the cave interior were available, and adapting to these environmental conditions took precious time.

The Thai Navy SEALs might not have been called to the scene as quickly as they were if not for a twist of fate.

The SEALs commander assigned me to operational control tasked with deploying 14 members of the First Special Forces Group by Thai Navy aircraft to Chiang Rai province. I stayed behind to coordinate operations and support the transport of materiel from U-Tapao Royal Thai Navy Airfield to Chiang Rai airport. The operation continued to provide daily troop and equipment support after it appeared that the mission objective might not be achieved. Various agencies and 127 Navy SEALs provided supplies that were mobilized in seven waves.

ASSESSING THE SITUATION

Rescuers and aid agencies did not immediately have a firm grasp of the situation at the area of operations. The Thai Navy Central Command first sent a five-man special operations team. We had planned to get additional support from the Mekong River Special Operations Unit, but it was unavailable. Instead, 14 Thai Navy SEALs deployed to the cave area, and they determined the need for staffing and equipment.

First, the team requested protective and life-support equipment. Then, we modified many operational methods. Before assigning tasks, we needed to assess the abilities of the divers reporting to duty from various groups, under the supervision of the Thai Navy SEALs. At one point, we used divers to transport air tanks inside

the cave to chamber three, a dry area about a half-kilometer from the entrance. The divers took on that task, and we came to know that the group's skill level was high enough to deliver air tanks all the way to a slope called Nuen Nom Sao, about 1.6 kilometers into the cave, where the path diverged in three directions.

LOCATING THE TEAM

Following the Thai Navy SEALs' plan, rescuers made search attempts with the support of foreign divers who took turns extending the ropes by 200 meters per team. Three main teams operated: Thai Navy SEALs, British divers and an independent group of European divers. Finally, after more than seven days of fruitless searching, the British team extended the last set of ropes and discovered the children on July 2, 2018.

The focus then turned to finding a way to get the team out with support from domestic and foreign divers. Using cave information supplied by the Thai Navy SEALs to Command and Control, we began to consider other ways to bring the children out, because an underwater cave rescue would be extremely difficult and dangerous. The day came, however, when pressing factors led us to decide to move quickly and bring them out.

The oxygen level within the cave had severely diminished. Rain fell hard, meaning water levels inside the cave would flood higher within the next three or four days.

We created a plan based on the capacity and abilities of Thai Navy SEALs personnel and equipment available at that time. However, assessments showed an extremely high risk, so we had to use other methods to prolong

Thai military personnel prepare to leave the cave staging area after rescuers saved 12 soccer players and their coach in July 2018. REUTERS



CAVE RESCUE

2018 TIMELINE OF EVENTS

JUNE 24

Upon assignment to the mission, 14 Thai Navy SEALs entered the area and immediately got to work after the briefing.

JUNE 25

Rescuers conducted a search, penetrating a previously blocked passageway inside the cave, and divers going in 400 meters found handprints and footprints.



Scuba tanks arrive at the Thai Navy SEALs' cave rescue command post. GETTY IMAGES

time, such as running oxygen lines into the cave to increase oxygen levels. Some foreign divers viewed this as a wasted effort, but we had to do it. It was the only thing we could do at the time, and we felt it was better than doing nothing. We also continued to consider alternatives, including looking for an opening on the mountain to drill a passage down to the children to bring them out that way.

UNDERWATER RESCUE RISKS RUN HIGH

Due to the great risks involved, a higher agency instructed the rescue coordination center to figure out a way that would not risk the children's lives.

We — the Thai Navy SEALs — thought that such a way did not exist. Every one of us at Command and Control was under extreme pressure because of the public's high expectations. The foreign dive teams also pushed to bring the children out as soon as possible, even if there was a good chance not all of them would survive.

From a risk management point of view, this was the way to go. However, from a psychological point of view, we had to make use of the time at hand to find the best possible way to operate and reduce the risk.

The Thai government, British divers, U.S. Indo-Pacific Command divers and Australian police divers

JULY 2 A Thai Navy SEALs dive team, an independent European dive team and a British dive team alternated in placing leading ropes from the three-way junction. Each team placed 200 meters of rope and once the British divers placed the last 200 meters of rope, additional rope was used to extend the lead deeper into the cave where divers found the 13 trapped people.

JULY 3 Medical assistance, food and water, and mental health support were provided. This took place in two steps. Step 1: Four divers with life-support equipment and power cells went in to provide assistance to the victims and keep them company, while also making assessments of the internal structure to ensure safety. Step 2: Three divers and one doctor went in to help with medical treatment, provide food and water, and help victims with physical and mental recovery.

collaborated and provided information to recruit additional expert cave divers, including Dr. Richard Harris, who came from Australia to join the mission. This made our work much easier and reduced the risk significantly, because we now had 13 skilled cave divers with a great deal of experience.

The units jointly developed a plan and presented it to the administrative control center, with final approval coming from Thailand's Ministry of Interior. We conducted joint rehearsals of the plan, which also involved testing the dive equipment for the children.

We knew the importance of doing this properly. Had we rushed at the beginning to bring the children out, the mission might not have had the wonderful — even miraculous — success it did.

UNSUCCESSFUL OPERATIONS

An operation of this magnitude presented many unique challenges. A series of chambers — linked by winding tunnels — between the cave's main entrance and the soccer team added to the complications.

- The initial plan was to lay a phone line from chamber three, where rescuers located the front

Thai military personnel try to connect pipes to prevent water from entering the cave where 12 boys and their soccer coach were trapped. THE ASSOCIATED PRESS



JULY 7 The Royal Thai Navy Command and Control and U.S. divers worked together to develop a plan. The team announced the plan to the various units and initiated rehearsal of the operations. Rescuers prepared full-face masks and delivered food and necessities to the children with the support of international divers, including dive teams from the United Kingdom, Europe, the U.S., Australia and China.

JULY 8 Following the rescue plan, divers brought out four children on the first attempt. The plan was for the entire rescue to occur over a period of four days, split into three rounds. Each of the rounds included two steps: 12 hours for preparation and 12 hours for the actual rescue.

tactical operations, from the three-way fork at Neun Nom Sao, 1.6 kilometers inside the cave, to the destination, about 2.5 kilometers inside the cave. But it could not be completed because the team lacked 5-millimeter-thick diving suits and would have risked hypothermia.

- Installation of 3/8-inch oxygen pipes to raise the oxygen level within the cave area where the 13 victims were trapped could only be brought as far as chamber three, about 1.1 kilometers from the soccer team members. The divers could not drag the oxygen pipes past blockages inside the cave within the time constraints. However, the pipes at least proved useful in increasing the oxygen level in chamber three where the rescue operations were taking place. The large number of personnel inside had consequentially raised the rate of oxygen use.
- Some of the items and tools brought to chamber three and to where the 13 trapped cave victims were located were damaged because the packaging did not withstand the water pressure during underwater navigation. Confusion also spread among the support team responsible for placing the items at certain locations.
- The death of former SEALs diver Lt. Cmdr. Saman Kunan caused the team to halt operations and review practices and operational safety. His loss became motivation to continue our work in strong spirits. Unit commanders and senior naval chiefs encouraged and motivated us, displaying a strong sense of leadership. Most of our personnel did not lose heart nor appear discouraged about the mission.

OBSTACLES AND PROBLEMS

During the execution phase of the rescue, some agencies entered the area of operations without involvement in the plan and without authority. This

caused additional confusion and endangered the victims. The search and rescue center had assigned the Thai Navy SEALs to supervise operations and set up the Command and Control Center for the rescue, with the support of international divers. We conducted an operational briefing session with “rock drills” to inform the various units. However, some agencies did not participate in the exercises, causing problems in executing some details of the operation.

Some requests for supplies from third parties did not go through the SEALs Command and Control Center, causing an excess of materiel and tools and a lack of storage space.

Certain agencies and individuals participating in Thai Navy SEALs operations and people arriving to offer support violated operational security measures, causing negative consequences to the operations and news leaks.

There was confusion of information coming from competing media organizations that wanted fast news rather than accurate news. This caused confusion in the operations. This could have been resolved by establishing a news center at the search and rescue center from the beginning of operations throughout the end of the mission.

LESSONS LEARNED

Our units had no experience, training or certification in cave diving. We need to consider organizing a cave diving course to prepare ourselves for future events like this, both at home and in support of partner countries.

Thai officers supervise the rescue mission inside Tham Luang Nang Non cave. GETTY IMAGES

JULY 9 In the second round of the rescue plan, divers were able to bring out four more children.

JULY 10 In the third round, four children and the coach were brought out. Four members of the Thai Navy SEALs dive team emerged, and the rescue mission was complete.





Rescued Thai soccer coach Ekkapol Chantawong, left, and the 12 members of his soccer team pay tribute during a July 2018 news conference in Chiang Rai to volunteer and former Navy SEALs diver Lt. Cmdr. Saman Kunan, who died during the rescue operation. AFP/GETTY IMAGES

The dive units' basic diving equipment was inadequate and not in prime condition. Additionally, we had not previously acquired cave diving equipment, so we need to consider proposing these procurements.

Lead organizers established Command, Control and Communications in front of the cave using checkpoints, personnel and equipment to reduce confusion from outside units and from inaccurate information (the so-called fog of war). Additionally, a factor in the mission's success was the use of systems that facilitated the use of equipment and maintained continuous situational awareness (for example, OODA Loop — observe, orient, decide and act) to enable prompt problem solving.

Thailand, the host nation, had the lead in the administration and planning of operations. Some countries tried to play leadership roles, but the Thai Navy SEALs maintained a continual leadership role in planning, command and control throughout the rescue and until the successful completion of the mission.

U.S. SUPPORT

The United States also deployed highly capable personnel to assist in the rescue, and they gave their all, greatly impressing the Thai Navy SEALs, both in their participation in planning stages and the advice they provided in the coordination process, which resulted in the mission's success. We saw this in our day-to-day operations. A U.S. official

was always on duty, 24 hours a day, at the Operations Control Group, offering to perform operations inside the cave without hesitation whenever necessary in accordance with Command and Control's plans. This greatly impressed the Thai Navy SEALs and other operation teams.

Besides that, during times of crisis when critical decisions had to be made, a high-ranking U.S. official — who asked to remain anonymous — came in to offer opinions and advice. He stayed with us the entire time without ever going to the media or giving interviews about the work in the cave. This impressed me very much.

I, a Thai Navy SEAL, made a true friend out of this experience. If in the future this friend needs any





assistance from me, I will be happy to help immediately.

AN ATMOSPHERE OF TRUST

This experience brought together a lot of teams, domestic and foreign, that volunteered to take on duties and responsibilities for different reasons. For many, their “capital investment” was their own knowledge and abilities, which were many and varied. Contributors included a compressed air group, a water pump group, an oxygen tank transport group, a group for putting reserve air tanks in place, and another to give aid and treatment for the children in the cave. The efforts also included the group that brought

the kids out of the cave and the group that took care of them once they were out. I believe the people in those groups used their knowledge and abilities to the fullest extent. It is difficult to give special credit to any single person, group or agency. I believe that no one was a hero, but that there was only a grand cooperation of everyone in the world who hoped that the kids would be safe, who wouldn’t let anything stand in the way, no matter nationality, religion or belief, because their — and our — happiness is in making others happy. □

Cmdr. Pinyo Rungrueng serves as commander, SEAL Team 2, Naval Special Warfare Group 1, Royal Thai Navy Special Warfare Command. As the operations officer for the rescue mission, he provided this first-person account for *FORUM*.

The rescued boys and their soccer coach arrive for a news conference in the northern province of Chiang Rai, Thailand, on July 18, 2018.

REUTERS

Corruption, Money Laundering and Tax Evasion

The Asian Development Bank's president outlines ways the organization fights financial threats

TAKEHIKO NAKAO

The Asian Development Bank (ADB) continues to lead the way in Asia and the Pacific in supporting global efforts to tackle corruption, money laundering and tax evasion. It is estimated that from U.S. \$800 billion to U.S. \$2 trillion is lost globally every year due to these illicit activities. These are funds that could instead be used by developing countries to achieve their sustainable development goal (SDG) commitments.

Corruption, money laundering and tax evasion damage economic development as well as fairness among people. In addition, there is growing consensus that these activities are threats to the basic fabric of

society, including safety and security, and to political stability. Safety, security and political stability are essential conditions for ADB and other partners to effectively implement projects and programs for development.

CORRUPTION – A THREAT TO SAFETY AND SECURITY

According to the Organization for Economic Co-operation and Development (OECD) and the International Criminal Police Organization, known as Interpol, corruption breeds organized crime and terrorism. Corrupt individuals and terrorists take



Container ships dot the Yangshan port in Shanghai. The Asian Development Bank has implemented anti-corruption, anti-money laundering programs along with tax evasion deterrents to ensure a prosperous Indo-Pacific economy. THE ASSOCIATED PRESS

advantage of gray areas and gaps in legal and financial systems. These gray areas and gaps provide avenues for money laundering, tax evasion and illicit financial flows and allow criminals and terrorist organizations the means to operate.

The United Nations Security Council in several of its resolutions has recognized that terrorist groups function like international criminal syndicates in terms of generating funds and using money laundering. Corruption, money laundering and tax evasion cut across borders and affect even the most developed countries. However, they are most harmful to developing countries and are particularly devastating for states considered fragile and conflict-affected, several of which are in Asia and the Pacific.

If corruption, money laundering and tax evasion are allowed to take root, there is no question that we will live in a world that is less safe and secure.

ADB'S COMMITMENT AND ROLE

How is ADB supporting its developing member countries (DMCs) to address the threat of corruption, money laundering and tax evasion?

First, ADB has adhered to zero-tolerance policies to prevent corrupt activities from negatively impacting the delivery of our projects and programs in our DMCs. More recently, in 2015, in our sovereign operations, we introduced new rules to ensure that integrity due diligence is conducted on all private sector participants such as contractors and commercial co-financiers. In the same year, in our nonsovereign operations, we revised the rules to tighten controls to combat corruption, money laundering and terrorist financing. I ask all ADB staff to continue to rigorously and seriously apply these important rules.

Second, fighting corruption, money laundering, tax evasion and terrorist financing cannot be achieved by any single institution. It requires all countries to cooperate to close the loopholes and gray areas where illicit activities can thrive and proliferate. With this understanding, ADB works closely with other international organizations on these issues. Besides being an observer of the Financial Action Task Force, ADB is an observer of the Asia/Pacific Group on Money Laundering and the Eurasian Group on Combating Money Laundering and Financing of Terrorism. ADB also actively supports the Global Forum on Transparency and Exchange of Information for Tax Purposes and helps our DMCs join this forum and benefit from the automatic exchange of tax information between countries.

Third, to further assist our DMCs in tax transparency and integrity, ADB's board of directors approved in 2016

an update to our anti-corruption policy. The policy expands ADB's mandate to include the prevention of cross-border tax evasion (in addition to anti-corruption and money laundering). Based on this updated policy, we are increasing our technical assistance to DMCs for tax transparency and integrity. For example, we approved a U.S. \$2 million regional technical assistance grant that will enhance the capacity of DMCs to meet international standards for tax transparency, counter tax evasion and protect themselves against aggressive forms of tax planning. This technical assistance will be delivered in partnership with the OECD, the International Monetary Fund and the Pacific Financial Technical Assistance Centre, among others.

Fourth, we have started new initiatives for mobilizing more resources for capacity-building efforts by our DMCs. In July 2017, ADB established the Domestic Resource Mobilization Trust Fund. It will support DMCs in closing tax loopholes in their financial sectors, enhancing tax compliance, and developing transparent and efficient tax administration. The trust fund is supported by the government of Japan. We are encouraging other bilateral and multilateral partners to contribute to this trust fund.

Fifth, ADB is now considering a new long-term Strategy 2030, which will strengthen our support in the

areas of corruption, money laundering and tax evasion. The focus of this new strategy is to support DMCs in achieving the SDGs. As you know, the SDGs are about poverty reduction, health, education, gender and the environment. The SDGs also include strengthening governance. Goal 16 of the SDGs calls for the promotion of peaceful and inclusive societies, which is necessary for sustainable development. Goal 17 is about helping developing countries strengthen domestic resource mobilization. ADB will increase support in these areas.

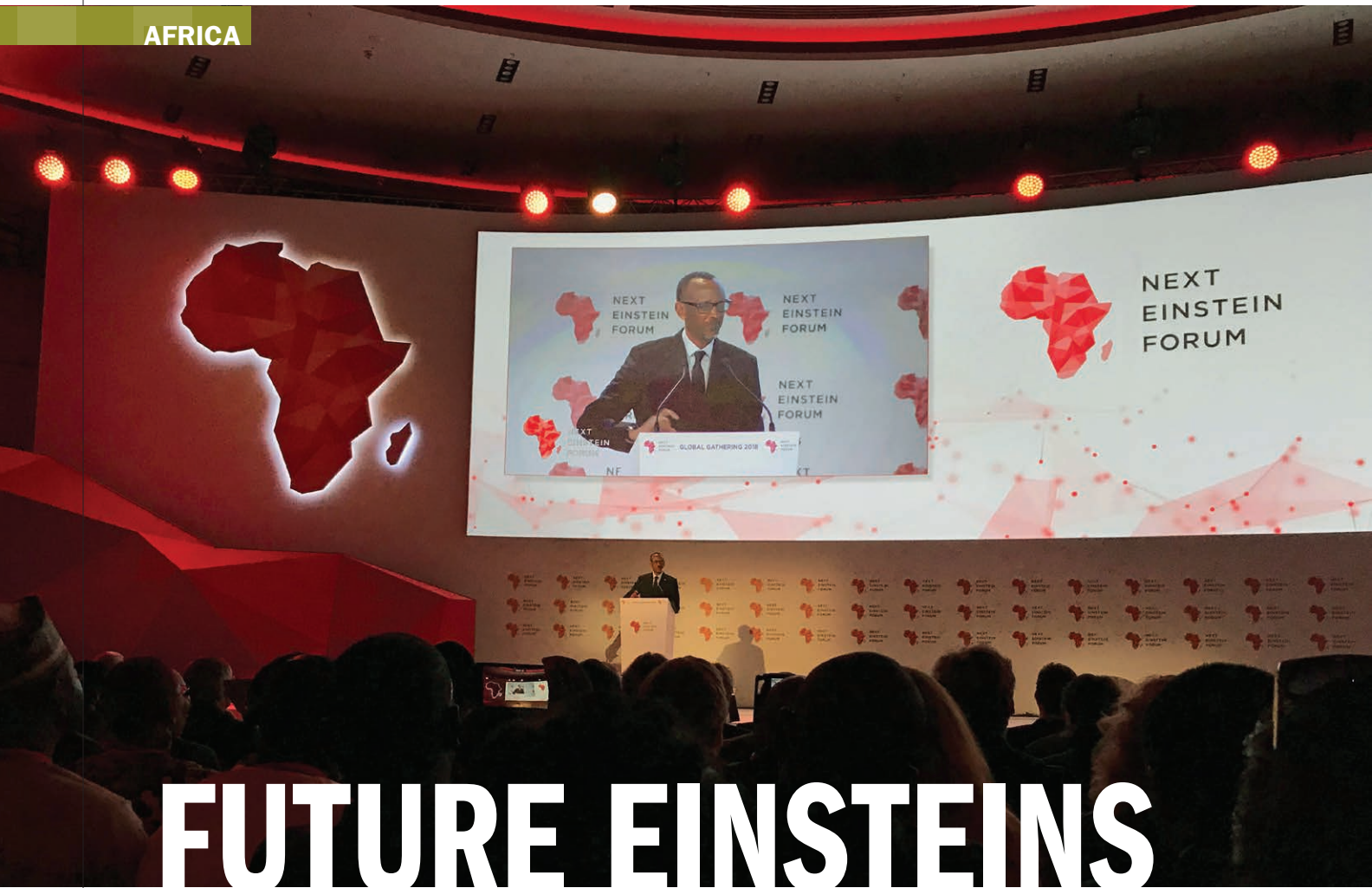
In conclusion, we have a professional obligation to fight corruption, money laundering and other illicit activities. This fight is necessary to advance economic development in the Asia and Pacific region and to promote social equity. It is also essential for our even more basic needs, that is security and safety.

I ask all ADB staff to be champions in this fight. I urge vice presidents, directors generals and country directors to be wholeheartedly and proactively engaged in it. Action by each of us and by all of us to combat corruption, money laundering and other illicit activities is what our anti-corruption campaign, iACT, stands for.



Asian Development Bank (ADB) President Takehiko Nakao delivered these remarks at the International Anti-corruption Day celebration on December 8, 2017, at ADB headquarters in Manila, Philippines. The speech has been edited to fit FORUM's format.

AFRICA



FUTURE EINSTEINS

South African geneticist Vinet Coetzee held up a malaria-diagnosing scanner that she said can be developed for use in Africa's rural areas without the need for blood samples or lab tests.

"This can be rapid, affordable and noninvasive," she said. "It can reduce health inequality and bring us one step closer to a world free of malaria."

The prototype was among the research projects highlighted at the Next Einstein Forum conference in March 2018 in Rwanda to encourage the development of young scientists across Africa. Organizers called it the largest-ever gathering of scientists on the continent.

"We can go from a dark continent to a bright continent," said Nigerian chemistry professor Peter Ngene, who described how he plans to use nanotechnology to store solar energy efficiently in hydrogen batteries.

Rwandan President Paul Kagame, pictured, chair of the African Union, opened the gathering by linking

scientific progress to Africa's development at large.

"Knowledge economies are prosperous economies," he said. "Today, more than ever before, adequate math and science proficiency is a prerequisite for a nation to attain high-income status and the gains in health and well-being that go along with it."

"Knowledge economies are prosperous economies."

~ Rwandan President Paul Kagame

The president added: "For too long, Africa has allowed itself to be left behind." As the continent catches up, it cannot afford to leave out women and girls, Kagame said, urging Africans not to accept the global gender gap in science as inevitable.

The Associated Press



ANTARCTICA

COLD VEGGIES

Scientists in Antarctica have harvested their first crop of vegetables grown without soil, daylight or pesticides as part of a project designed to help astronauts cultivate fresh food on other planets.

Researchers at Germany's Neumayer Station III say they've picked 3.6 kilograms of salad greens, 18 cucumbers and 70 radishes grown inside a high-tech greenhouse as temperatures outside dropped below minus 20 degrees Celsius.

The German Aerospace Center DLR, which coordinates the project, said scientists hope to harvest 4 to 5 kilograms of fruit and vegetables a week.

While NASA has successfully grown greens on the International Space Station, DLR's Daniel Schubert said the Antarctic project aims to produce a wider range of vegetables that might one day be grown on Mars or the moon.

The Associated Press

ESTONIA

Free DNA Tests

Estonia is offering residents free genetic profiling in a nationwide experiment aimed at minimizing risks for typical diseases and encouraging a healthier lifestyle through personalized data reports.

Lili Milani, a researcher with the Estonian Genome Center at the University of Tartu, said the program kicked off in March 2018 and will initially cover 100,000 volunteers in the Baltic country of 1.3 million. Participants are required to donate DNA samples from blood and consent to storing their data in the Estonian Biobank, which has collected health records and biological samples from Estonians since 2000.

"Cardiovascular diseases are the No. 1 killer in Estonia," Milani said, adding that authorities and scientists were hoping the genetic screening data could answer questions on living habits and diet for better health care.

"Lifestyle always outweighs genes," she said.

DNA samples will be analyzed for more than 600,000 genetic variants linked to common diseases such as heart diseases, diabetes and cancer. Family doctors will then tell participants about the results. However, participants can choose in advance how much information they wish to receive to avoid unnecessary anxiety.

The Estonian government has allocated 5 million euros (U.S. \$6.2 million) for the project in 2018.

The Associated Press



'URBAN MINING' IN SOUTH KOREA SAVES RARE BATTERY MATERIALS

Workers at a rural South Korean factory in Gunsan are busy extracting some of the world's most coveted metals, used in the batteries that power electric cars. They're not digging in the ground or refining ore, however. Instead, they are sorting through a pile of lithium-ion batteries from old mobile phones and laptops.

As China's aggressive hunt for overseas cobalt and lithium for electric vehicles pushes up prices and causes a global shortage of the key metals, South Korea is increasingly turning to such "urban mining" to recover cobalt, lithium and other scarce metals from electronic waste.

In 2016, the most recent year from which data are available, metals worth 19.6 trillion won (U.S. \$18.38 billion)

were extracted from recycled materials, meeting roughly 22 percent of the country's total metal demand, according to a report by the Korea Institute of Industrial Technology.

The scarcity is unlikely to abate anytime soon, as China, the world's biggest user of metals, snaps up mineral resources in countries such as the Democratic Republic of the Congo and Chile. Park Jai-koo, an urban mining expert at Hanyang University in Seoul, said electronic waste recycling can help mitigate high prices and limit reliance on outside sources for rare metals. "South Korea needs to secure resources, but mostly all of them are imported," Park said. "Urban mining is more likely to become a way to go." Reuters

INVESTORS IN VIETNAM *Learn to Live with Corruption Crackdown*

A crackdown on corruption in Vietnam unnerved some foreign investors when it intensified in 2017, but they are now getting much more sanguine about it. Some even say the business climate is improving as a result. While the campaign by the government of Communist Party General Secretary Nguyen Phu Trong has slowed some deal making in a country already plagued by Soviet-era bureaucracy, it has not deterred foreign investors from putting their money in Vietnam.

Vietnam's economy grew 6.8 percent in 2017, the strongest pace since 2010, while foreign direct inflows hit record highs for two years in a row, reaching U.S. \$17.5 billion in 2017. To some foreign investors, the crackdown was long overdue. Nearly two-thirds of Vietnam's people have had to pay a bribe to get access to public services, Transparency International said in a 2017 report. Out of 16 Asian countries surveyed, only India fared worse.

The anti-corruption drive is a good signal to many foreign investors, said Somhatai Panichewa, chief executive of Amata VN Pcl, a unit of Thailand's top industrial estate operator Amata, which in January 2018 announced major investments in Vietnam. "We think the government is serious about showing the public that investing in Vietnam is no longer 'know-who' but about 'know-how,'" she said.

That doesn't mean the business conditions are easy for foreign investors. Executives on the ground must navigate a minefield of new challenges, said Adam Sitkoff, executive director of the American Chamber of Commerce in Hanoi. However, it has also shed light on deep-seated graft, mismanagement and nepotism within state owned enterprises (SOEs) in the country at a time when a long-delayed privatization drive is accelerating.

Vietnam has failed to meet its privatization targets in previous years but has plans for over 100 initial public offerings as well as partial stake sales in about 400 companies by 2020. "It seems that managers of SOEs — at least the most important ones — are now more cautious in their activity, in particular in relation to equitization [partial privatization], divestment and so on," the European Chamber of Commerce said in a statement. Reuters



Asia's Cities Encouraged To Balance Development AND ENVIRONMENTAL SUSTAINABILITY

He may never set foot in New Clark City, but taxi driver Edgard Labitag hopes the Philippines' first green, disaster-resilient, high-tech metropolis will ease the pressure on Manila — meaning fewer hours stuck in traffic and more time with his children. On a sweltering Sunday afternoon, the 42-year-old at the wheel bemoaned another shift spent inching along the infamously congested streets of the capital city of 13 million people. “Crowding, pollution and traffic — this is what people say about Manila,” he said, gesturing at the gridlock. “But luckily, the government has a plan ... and [Philippine President Rodrigo] Duterte is the right man to see it through.”

That plan is New Clark, a 9,450-hectare city that government officials say will be bigger in physical size than New York's Manhattan by the time it is completed in 25 to 30 years — and have an expected population of more than 1.2 million. The aim is to build a city equipped to deal with climate shocks in one of the world's most cyclone-affected regions and to promote healthy, eco-friendly and sustainable living by putting nature at the heart of development, urban experts say.

Reflecting a rising trend from Japan and India to the United States, New Clark seeks to challenge conventional urban planning by uniting government, developers, business and the public — and proving that green and resilient cities can be cost-effective. “The objective is not simply to build a disaster-resilient city, but rather a successful, innovative and economically competitive city that is also disaster-resilient,” said Benjamin Preston, a researcher at Rand Corp., a global think tank.

New Clark is still in its infancy, but officials say Duterte is fast-tracking the project as the Philippines, one of Asia's fastest-growing economies in 2017, seeks to boost spending on infrastructure to create jobs and attract more foreign firms.

Yet, even as the government races to build New Clark and tackle Manila's booming population, density and congestion, it must plan the new city with care and avoid past mistakes, says the state-run Bases Conversion and Development Authority (BCDA).

“We need to strike a balance between fast-paced development that maximizes value for the private sector and protecting open spaces and making the city walkable, green and resilient,” said Vince Dizon, president of the BCDA, which oversees the project.

Despite the range of planned infrastructure, only a third of the U.S. \$14 billion city's land will be developed, with two-thirds reserved for green spaces and agriculture, the government said. Houston, Texas, in the U.S. and nearby Singapore provided inspiration on how to plan the city in an integrated manner in which water management and green spaces are linked closely to urban systems, according to Dutch architect Matthijs Bouw.

By focusing on nature and allowing plenty of open space along rivers, for example, New Clark can benefit beyond protecting itself from floods, said Bouw, who has worked on the master plan for the city with the government.

“Putting green areas on the agenda not only helps with water storage and drainage, but creates community spaces and guides street design in a way that benefits pedestrians and bikes ... so social resilience also gets strengthened,” Bouw said.

Economists at Rand are seeking to demonstrate the social, environmental and economic gains from building resilience and are developing a business case to prove that green urban planning is not only an option for wealthy economies. “Increasingly, we are seeing middle-income countries realize that planning and investing in green areas in cities is critical for their development — and cost-competitive,” said Oesha Thakoerdin of the Asian Development Bank, which is backing the New Clark project.

Urban experts say New Clark City could not only set a shining example for Southeast Asia in terms of balancing rapid economic development with social and environmental policies but may also mark a turning point closer to home.

It “has the potential to take pressure off Manila so that Manila can also invest in building a more resilient future,” said Lauren Sorkin, director for Asia-Pacific with 100 Resilient Cities, a network backed by The Rockefeller Foundation.

Manila is one of the world's densest cities, with 14,500 people per square kilometer, almost triple London's level, U.N. data shows. Congestion could cost the capital U.S. \$155 million a day in lost productivity by 2030, a Japanese government study found.

Reuters



OH, DEER!



Faced with a growing number of tourists injured from deer bites, authorities in Nara Park in Nara, Japan, have issued tips on feeding the hundreds of animals that help attract more than 13 million visitors annually from around the world. The picturesque park in the ancient city is home to 1,200 Sika deer, which are protected as a national treasure. They can even be found roaming the streets in search of special tasty crackers offered by tourists.

Their cute and calm demeanor can be deceptive, and tourists with crackers can find themselves surrounded by aggressive animals. Signs erected at the stalls where the crackers are sold offer tips in Chinese, English and Japanese: "A polite request from the deer when feeding them." Small children should be accompanied by adults, and "deer sign language" should be employed, showing both hands to the animals when feeding time is over.

"As they are wild animals, they get angry if people tease them," Nara official Yuichiro Kitabata said. "For example, if you keep them waiting when feeding, they can bite you ... but not all tourists know they are wild, believing they are kept in the park," he added.

With a rise in the number of foreign tourists, the number of those injured by deer surged to a record 180 in the last fiscal year ending in March 2018 from 118 the previous year, according to Kitabata. Agence France-Presse

JAPANESE MAN, WORLD'S OLDEST AT 112

A 112-year-old Japanese man, born months before Albert Einstein published his theory of special relativity, was recognized in April 2018 as the world's oldest man.

Masazo Nonaka, born on July 25, 1905, took the title after Francisco Nunez Olivera of Spain died at age 113, Guinness World Records said. A farmer and lumberjack in his youth, Nonaka later ran a hot spring inn in his hometown of Ashoro, on Hokkaido island, 900 kilometers north of Tokyo, and raised two sons and three daughters.

Nonaka enjoys dipping in a spa and is fond of sweets, especially a strawberry sponge cake. He was joined at an award ceremony by relatives and officials. Reuters





PROUD PARTNERSHIP

A Republic of Korea Soldier aims his rifle on Hat Yao beach in Chonburi province, eastern Thailand, during Cobra Gold 18. The 37th iteration of the Indo-Pacific's largest multinational military exercise, co-hosted by Thailand and the United States, attracted 29 countries to Thailand. Seven nations — Indonesia, Japan, Malaysia, Singapore, South Korea, Thailand and the U.S. — fully participated by providing personnel and equipment to the exercise. “We are proud partners of the Thais for nearly 40 years at Cobra Gold,” said Peter M. Haymond, deputy chief of mission at the U.S. Embassy in Bangkok, Thailand.

Photo By: **SAKCHAI LALIT** | The Associated Press

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