

FORUM



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CRITICAL**

**Cooperation
Partnership
Capability**

Integrated Deterrence

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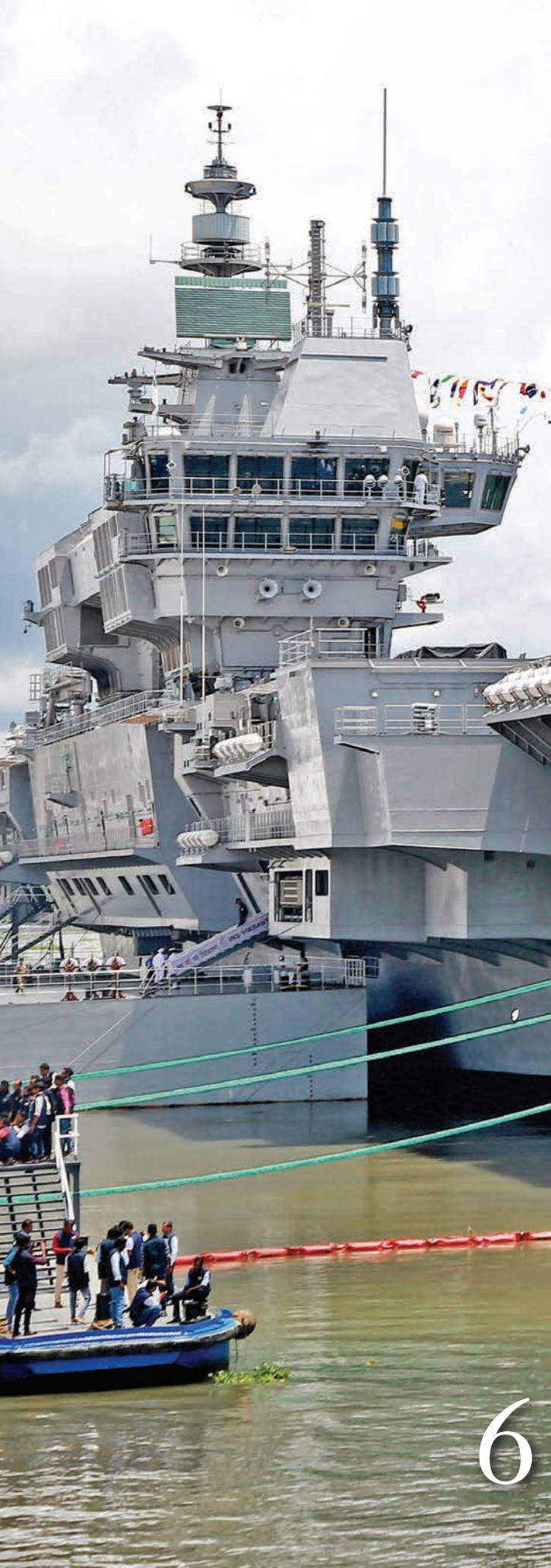
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ABOUT THE COVER:

Clockwise from upper left:
Indonesian Soldiers drill during
Super Garuda Shield 22 in Baturaja,
Indonesia; an Australian Soldier
secures a beach during Rim of the
Pacific (RIMPAC) 2022; Republic
of Korea Marines conduct an
amphibious landing during RIMPAC
2022; Japanese and U.S. Soldiers
train on a HIMARS multiple rocket
launcher system in Amami, Japan.

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Dear Readers,

Welcome to Indo-Pacific Defense FORUM's issue on integrated deterrence. United States Defense Secretary Lloyd Austin introduced integrated deterrence as a centerpiece of the 2022 U.S. National Defense Strategy, describing it as a novel approach to achieving deterrence.

"Integrated deterrence means using all of the capabilities in all warfighting domains: air, land, sea, space and cyber," Austin said in February 2022. "But most important, [integrated deterrence means] using the capability and capacity that's resident in our partners and allies."

According to the U.S. Defense Department, "Integrated deterrence entails developing and combining our strengths to maximum effect, by working seamlessly across warfighting domains, theaters, the spectrum of conflict, other instruments of U.S. national power, and our unmatched network of alliances and partnerships. Integrated deterrence is enabled by combat-credible forces, backstopped by a safe, secure and effective nuclear deterrent."

During Austin's tenure, integrated deterrence has gained importance for security. "The United States is on the verge of a new phase — one where, for the first time, we face two major nuclear powers as strategic competitors. The People's Republic of China is expanding and modernizing and diversifying its nuclear forces. And Russia is also modernizing and expanding its nuclear arsenal," Austin said in a December 2022 speech at the U.S. Strategic Command (USSTRATCOM) change of command ceremony at Offutt Air Force Base, Nebraska.

"Our nuclear capabilities don't exist in a vacuum. So, we must integrate our nuclear deterrent across all domains, including space and cyberspace. We must also reduce the risk that escalation in one domain could spill over into another," Austin continued.

USSTRATCOM "is working to build a truly integrated deterrence. And that lies at the heart of our National Defense Strategy, which includes our Nuclear Posture Review," Austin said, adding, "that type of integration is more essential than ever to prevent conflict and catastrophe."

U.S. Air Force Brig. Gen. Glenn T. Harris and U.S. Army Maj. John Yanikov of USSTRATCOM open this issue of FORUM with an overview of why nuclear deterrence remains at the core of strategic deterrence for the U.S. and its allies and partners. Moreover, they write that modernizing nuclear and other defense capabilities is essential for effective deterrence.

In a related article, U.S. Navy Adm. Samuel Paparo, commander of the U.S. Pacific Fleet, details the role of information operations in integrated deterrence. Combining deterrence with information helps allies and partners change competitors' perceptions of risks and costs, he explains.

Several articles, meanwhile, articulate why the Chinese Communist Party's aggression must be deterred, from its human rights abuses against Uyghurs and other minorities in northwestern China's Xinjiang region to its expansionism and seizure of territory in the South China Sea through coercion and military actions that upend international norms.

Additional articles examine how maritime domain awareness and emerging technologies, as well as civilian-military cooperation, contribute to integrated deterrence.

We hope these articles encourage regional conversations on the importance of achieving integrated deterrence. We welcome your comments. Please contact us at ipdf@ipdefenseforum.com to share your thoughts.

All the best,

FORUM Staff

IPD FORUM

Integrated Deterrence

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USINDOPACOM LEADERSHIP

JOHN C. AQUILINO
Admiral, USN Commander



STEPHEN D. SKLENKA
*Lieutenant General, USMC
Deputy Commander*

JEFFREY T. ANDERSON
*Rear Admiral, USN
Director for Operations*

CONTACT US

IPD FORUM

Indo-Pacific Defense FORUM
Program Manager,
HQ USINDOPACOM Box 64013
Camp H.M. Smith, HI 96861 USA

ipdefenseforum.com

email:

ipdf@ipdefenseforum.com

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BRIG. GEN. GLENN T. HARRIS is the deputy director of Global Operations for the United States Strategic Command (USSTRATCOM) at Offutt Air Force Base, Nebraska. He is the command lead for nuclear operations and responsible for the day-to-day readiness of U.S. nuclear command and control and strategic deterrent forces. He is also responsible for synchronizing component, joint and coalition operations, and for directing assigned forces to achieve USSTRATCOM and national objectives.



U.S. ARMY MAJ. JOHN YANIKOV is the Military Information Support Operations (MISO) branch chief in USSTRATCOM's Global Operations Directorate. As command lead, he oversees MISO planning, integration and execution. He received his commission into the Army through Millersville University in 2007 and earned a master's degree in defense and strategic studies from the University of Texas, El Paso, in 2021. He has served in various positions, including as a company commander and battalion operations officer at Fort Bragg, North Carolina, under U.S. Army Special Operations Command. **Featured on Page 10**



MAJ. BRYAN C. NEAL is a U.S. Army strategic intelligence officer in the Defense Attaché Service, supporting U.S. Defense Department operations in Oceania and the Philippines. He earned a master's degree in strategic intelligence with a focus on China from the National Intelligence University in 2021. He was a field artillery officer at the tactical and operational levels for a decade, including serving as a fire support instructor at the U.S. Army Fires Center of Excellence at Fort Sill, Oklahoma. **Featured on Page 18**



DR. SHALE HOROWITZ is a political science professor at the University of Wisconsin-Milwaukee. He has researched international and ethnic conflict, with an emphasis on East and South Asia, the politics of international trade and finance, and the politics of market transition and institutional change in post-communist countries and East Asia. He has conducted research in China, India, South Korea, Taiwan, Eastern Europe and the former Soviet Union. **Featured on Page 34**



AIYANA PASCHAL is the public affairs officer at the Center for Excellence in Disaster Management and Humanitarian Assistance in Hawaii. Paschal previously was a public affairs officer at U.S. Cyber Command in Fort Meade, Maryland. She served six years in the U.S. Navy as a mass communication specialist, attending the Defense Information School and serving at various commands, including aboard the aircraft carrier USS Nimitz, the Defense POW/MIA Accounting Agency and Defense Media Activity Pacific. **Featured on Page 48**



PETER CONNOLLY is an expert in international relations, security and strategy who recently completed his dissertation at the Australian National University. He served 33 years as an Australian Army infantry officer, including in operational service in Afghanistan, Solomon Islands, Somalia and Timor-Leste. He also worked in Australia's Parliament House and the U.S. Defense Department before directing international engagement for the Australian Army and its research center. **Featured on Page 56**

Join the Discussion

WE WANT TO HEAR FROM YOU!

Indo-Pacific Defense FORUM serves military and security personnel in the Indo-Pacific region. A product of U.S. Indo-Pacific Command, the quarterly magazine provides high-quality, in-depth content on security efforts across the region — from counterterrorism to international cooperation to natural disasters.

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Poland, South Korea Seal U.S. \$3 Billion MILITARY AIRCRAFT DEALS



REUTERS

Poland signed deals worth U.S. \$3 billion with South Korea in September 2022 for the purchase of 48 Korean FA-50 fighter planes as the Central European country took urgent steps to increase its deterrence and defense capabilities amid Russia's war on neighboring Ukraine.

The two deals for the purchase of Fighting Falcon combat and training planes, pictured, follow contracts signed a month earlier for the acquisition by Poland of U.S. \$5.8 billion worth of South Korean tanks and howitzers.

Polish Defense Minister Mariusz Blaszczak, who also is deputy prime minister, said the deals represent "another historic day when new perspectives are opening before Poland's Armed Forces."

Eom Dong-hwan, head of Seoul's Defense Acquisition Program Administration, said the contracts elevated the nations' cooperation. "Until recently, we were partners. Now we can say that we are allies," he said.

Under one agreement, worth U.S. \$700 million, the first 12 planes

are to be delivered in the second half of 2023. The second deal, estimated at U.S. \$2.3 billion, is for 36 planes to be delivered between 2025 and 2028.

Polish President Andrzej Duda, who is the Armed Forces' supreme commander, said the purchase of the FA-50 fighters will "make it possible for us to fully give up the use of the (Soviet-made) MiG-29 and the Su-22."

He said Seoul sees the deals as an "opening for the Korean fighter planes to the European Union and NATO markets." *The Associated Press*

Indo-Pacific Countries Launch Major Trade Talks

Economic ministers from more than a dozen Indo-Pacific countries launched negotiations in September 2022 on the United States' first major regional trade engagement effort in nearly a decade.

U.S. Trade Representative Katherine Tai said the Indo-Pacific Economic Framework talks in Los Angeles, California, were aimed at addressing future challenges and achieving "sustainable and equitable growth" in the region.

U.S. President Joe Biden launched the initiative during a May 2022 trip to Tokyo.

Tai, who led the talks with U.S. Commerce Secretary Gina Raimondo, said the ambitious initiative was progressing. The talks include ministers from Australia, Brunei, Fiji, India, Indonesia, Japan, Malaysia, New Zealand, the Philippines, Singapore, South Korea, Thailand and Vietnam. Together with the U.S., the participants represent about 40% of global gross domestic product.

"This framework will be a durable model for the rest of the world to follow," Tai said, adding it would bring economic value for small businesses. She said the initiative would target issues

such as the digital economy, labor, environment, agriculture and trade. (Pictured: U.S. Trade Representative Katherine Tai, left, and U.S.

Commerce Secretary Gina Raimondo attend the Indo-Pacific Economic Ministerial in Los Angeles, California, in September 2022.)

Citing "extraordinary progress in recent months," Raimondo said the initiative could lead to more stable and resilient supply chains, while accelerating work on clean energy technologies and anti-corruption commitments. *Reuters*



AFP/GETTY IMAGES

PHILIPPINES, SINGAPORE AFFIRM DEFENSE TIES, MARITIME STABILITY

Philippine President Ferdinand Marcos Jr. concluded a two-nation Southeast Asian tour in Singapore in September 2022, where he and government leaders agreed to boost counterterrorism cooperation and affirmed the importance of peace in the South China Sea.

Marcos arrived in Singapore after a state visit to Indonesia — his first foreign trip as president since his May 2022 election.

Marcos, together with Singapore President Halimah Yacob and Prime Minister Lee Hsien Loong, agreed to strengthen cooperation on information and telecommunications technology. (Pictured: Philippine President Ferdinand Marcos Jr. and First Lady Louise Araneta-Marcos attend an orchid-naming ceremony in their honor at Singapore's National Orchid Garden in September 2022.)



"The leaders welcomed the wide-ranging and robust cooperation between both countries, including in trade and investment, counterterrorism, healthcare and digital cooperation," a joint statement said.

They also reaffirmed long-standing bilateral and defense ties and welcomed the signing of an agreement between their militaries to set up a joint Singapore-based team to share counterterrorism information.

The leaders also discussed competing South China Sea claims, as well as the deepening political crisis in Myanmar nearly two years after a military coup.

The leaders agreed on the importance of a "peaceful resolution of disputes without resorting to threat or use of force, in accordance with international law, including the 1982 United Nations Convention on the Law of the Sea (UNCLOS)," according to the statement.

They also emphasized the need to promote an environment conducive to the negotiations for a South China Sea code of conduct. Benar News

Indian Navy Commissions Biggest Aircraft Carrier in Domestic Defense Push

India commissioned its first domestically manufactured aircraft carrier in September 2022, underlining New Delhi's efforts to boost domestic production to supply a military deployed on two contentious borders.

After 17 years of construction and tests, Indian Prime Minister Narendra Modi commissioned the INS Vikrant, pictured — the Navy's second operational aircraft carrier and the largest warship ever built in India — at the Cochin Shipyard Ltd. in Kochi, Kerala.

"Today, India has joined those countries in the world which can manufacture such a huge aircraft carrier with indigenous technology," Modi said. "It is a symbol of indigenous potential, indigenous resources and indigenous skills."

Designed to accommodate a crew of 1,600 and 30 aircraft, the INS Vikrant initially will carry Russian-designed MIG-29K aircraft that already operate from India's other carrier, the INS Vikramaditya, which India bought from Russia.

Two manufacturers, the United States-based Boeing and France's Dassault, are seeking to provide India with more than two dozen jets for the INS Vikrant.

India is one of the world's largest arms importers, spending U.S. \$12.4 billion between 2018 and 2021, but it has been seeking to develop its own manufacturing capabilities as key supplier Russia faces sanctions over its unprovoked invasion of Ukraine.

India has identified about 8,000 imported defense items worth about U.S. \$1 trillion that it wants domestic firms to manufacture, according to its Defence Ministry.

"India is working with all its might to become self-reliant," Modi said, referring to domestically built Tejas light-combat aircraft and artillery.

The INS Vikrant will allow the Indian Navy to operate an aircraft carrier on each seaboard, alongside its 10 destroyers, 12 frigates and 20 corvettes.

"Security concerns in the Indo-Pacific region and the Indian Ocean have long been ignored," Modi said. "But today this area is a major defense priority for our country." Reuters



FORMER INSURGENTS RELINQUISH WEAPONS

Ex-rebels in Mindanao complete arms decommissioning

BENAR NEWS

Former separatist insurgents in the southern Philippines relinquished thousands of firearms as part of a peace deal with the nation's central government, their leader announced in late September 2022.

Murad Ebrahim, also known as Ahod Balawag Ebrahim, made the announcement during the opening of parliamentary sessions in the Bangsamoro Autonomous Region in Mindanao as President Ferdinand Marcos Jr. visited the heavily Muslim southern region of the mainly

Murad Ebrahim, chairman of the Moro Islamic Liberation Front, has called for former rebels to hand over their weapons as part of a peace deal with the Philippine government. GETTY IMAGES

Catholic Philippines and addressed the region's lawmakers.

About 5,500 former combatants planned to surrender about 2,400 weapons in the last phase of decommissioning, Murad said. "We are committed to sustain the momentum and the trust you have given us," he said at the ceremony attended by Marcos.

Murad, in charge of the region's transitional authority, heads the Moro Islamic Liberation Front (MILF), a former armed separatist group that signed a peace deal with Manila eight years ago. The pact ending MILF's decadeslong insurgency stipulated that former rebels must surrender their weapons.

The process was supposed to be completed in three phases, beginning in 2019, but was disrupted by the COVID-19 pandemic. The MILF already had turned in more than 5,000 firearms, according to government figures. The Philippine Department of National Defense estimated the former guerrillas had about 40,000 firearms.





Under the decommissioning, each former combatant who turns in weapons will receive a cash payment, including funds for education.

Despite not supporting Marcos in the May 2022 general election, Murad assured him of his cooperation and support. Murad had accused Marcos' namesake father and the military under the late dictator of ransacking Muslim areas and massacring communities.

'HISTORICAL JUSTICE, PROGRESS, PEACE'

Marcos spoke of his commitment to peace in the region. "As your president, I assure you, the Bangsamoro Transition Authority (BTA), and all the Bangsamoro people of this administration's full and unwavering commitment to the peace process," he said at the plenary.

"The path to lasting peace is always under construction. But we walk this path together. And we walk not because it's an easy one. We walk this path together because even with its difficulties, we know that at the end of the journey is historical justice, progress, peace, stability, and the unity that the people in our nation have long aspired for," he added.

Marcos said his administration would push

for socioeconomic development and intervention to promote peace in areas affected by decades of conflict. "I encourage the BTA to pass measures that will secure the welfare of the people, particularly in health care, fisheries, transportation, digital infrastructure and e-governance," he said.

The MILF leadership also invited Nur Misuari, leader of the Moro National Liberation Front (MNLF), from which the MILF split in 1978, to attend the parliamentary sessions. The MNLF signed its own peace pact with the government in 1996 and Misuari subsequently became governor of the Muslim autonomous region. The government, however, considered the pact a failure.

Misuari later rebelled against the government, and the MNLF lay siege to southern Zamboanga City in 2013, leaving more than 200 people dead. When Marcos' predecessor, Rodrigo Duterte, took office in 2016, he cleared Misuari of rebellion charges in a bid to quell Muslim dissatisfaction.

In late September 2022, Misuari stood on the stage with Murad, and the two former fighters hugged in front of Marcos. "We reached out to MNLF as we vowed to work together for a united Bangsamoro," Murad said.

Philippine President Ferdinand Marcos Jr., center, speaks with Murad Ebrahim as Nur Misuari, third from left, looks on during parliamentary sessions in the Bangsamoro Autonomous Region in September 2022.

GETTY IMAGES



— IMPROVING —

STRATEGIC DETERRENCE

U.S. STRATEGIC COMMAND MODERNIZES ITS CAPABILITIES

BRIG. GEN. GLENN T. HARRIS/U.S. AIR FORCE AND MAJ. JOHN YANIKOV/U.S. ARMY, U.S. STRATEGIC COMMAND

There is a reason that nuclear deterrence remains the most important mission within the United States military. U.S. Navy Adm. Charles Richard, former commander of U.S. Strategic Command (USSTRATCOM), the command in charge of deterring strategic attacks and providing a decisive response should deterrence fail, explained: “Every operational plan in the Department of Defense (DOD), and every other capability we have, rests on an assumption that strategic deterrence will hold. And if strategic deterrence, and in particular nuclear deterrence, doesn’t hold, none of our other plans and no other capability that we have, is going to work as designed.”

To ensure nuclear deterrence remains credible as the bedrock of U.S. national security, it must undergo critical modernization of its traditional triad weapons systems — ground, sea and air platforms that can launch nuclear weapons. In addition, evolving from the conventional operational approach to deterrence to a more robust concept of integrated deterrence will better help the U.S. maintain its credible nuclear capability for the foreseeable future and ensure stability across the globe. Under this concept, the capabilities of the nuclear triad are tied to and incorporated with other strategic capabilities such as cyber, space and missile defense, and even civilian academia, industry and allies,

Nuclear deterrence results from the shared understanding among competitors that each has a ready and reliable ability to respond in kind to a nuclear attack. The key traditional component to maintaining nuclear deterrence is fielding viable weapons systems. Today’s U.S. nuclear triad consists



A U.S. Air Force B-2 Spirit bomber deployed from Whiteman Air Force Base, Missouri, lands at Royal Air Force Fairford in the United Kingdom in a demonstration of global security. TECH. SGT. MIGUEL LARA III/U.S. AIR FORCE

of 14 ballistic missile submarines (SSBNs) armed with submarine-launched ballistic missiles (SLBMs), 400 land-based intercontinental ballistic missiles (ICBMs) and 60 nuclear-capable heavy bomber aircraft. Collectively, the U.S. triad seeks to ensure that no adversary believes it could launch a strategic attack, under any circumstance, that eliminates the U.S. ability to respond and inflict unacceptable damage. To this end, each leg of the triad provides unique and complementary attributes, making U.S. strategic forces responsive, survivable and flexible.

Minuteman III ICBMs make up the most responsive leg of the nuclear triad. Since 1959,



A rendering of a Columbia-class ballistic missile submarine that will replace the U.S. Navy's Ohio-class fleet. U.S. NAVY

Minuteman missiles have remained on around-the-clock alert, providing a quick-to-respond component of America's strategic deterrence program. The ICBMs are spread among 400 hardened, underground silos — with an additional 50 silos kept in “warm” status — assigned to multiple military bases, presenting a targeting problem for any adversary. The hardened and dispersed nature of U.S. ICBMs requires an adversary to commit to a massive attack against the U.S. homeland to have a chance of disabling all ICBMs, thus enhancing deterrence.

The Minuteman III arsenal capitalizes on a routine “remove and replace” update approach that has allowed it to achieve a 100% alert rate since it was first deployed. Secure communication systems provide the U.S. president and secretary of defense with highly reliable, virtually instantaneous direct contact with each launch crew. Launch crews in control centers perform continuous alerts with all remote missile launch sites. Should command capability be lost between a launch control center and a remote missile launch facility, specially configured E-6B airborne launch control center aircraft would automatically assume command and control of the isolated missile(s). Airborne missile combat crews would execute the president's orders, making the land-based ICBM leg of the triad also survivable.

STEALTH AND PRECISION

The sea-based leg of the nuclear triad, in which the Ohio-class SSBNs serve as undetectable launch platforms, is the most survivable. The SSBNs are designed for stealth, extended patrols and the precise delivery of nuclear warheads. On average, the submarines spend 80 days at sea, followed by 35 days in port for maintenance. Each submarine has two crews, Blue and Gold, which alternate patrols. This maximizes the submarine's strategic availability, reduces the number of submarines required to meet strategic requirements and allows for optimal crew training, readiness and morale. Each SSBN carries up to 24 SLBMs with multiple, independently targeted warheads. The Trident II D5 missiles, which have a 7,000-kilometer range, allow the U.S. to place any adversary's hardened and valued assets at risk. SSBNs are highly mobile and can be moved to a variety of launch points to avoid overflight concerns, providing additional assurance to allies and increasing operational flexibility.

Bombers are the most flexible leg of the U.S. nuclear triad. Consisting of B-52H Stratofortress and B-2A Spirit aircraft, the air platform provides nuclear strike capability quickly anywhere on the globe while evading most adversaries' advanced defenses. U.S. bombers have nearly unlimited range, given their midair refueling capability and, when

combined with the range of their air-launched cruise missiles (ALCMs), can threaten a high percentage of targets within an adversary's territory. They can reach any potential target worldwide from their U.S. bases, or be forward deployed during peacetime, crisis or conflict — a tangible reminder to potential adversaries of U.S. commitments to defend the security of its allies and partners.

Both types of bomber can carry nuclear and conventional weapons tailored to the mission. The B-52 can drop or launch the widest array of weapons in the U.S. arsenal, including gravity and cluster bombs, precision-guided missiles, and joint direct attack munitions. The B-2 provides unmatched penetration flexibility. Its stealth characteristics give it the unique ability to infiltrate an enemy's most sophisticated defenses and threaten its most heavily defended targets. The bombers can also be loaded and unloaded under compressed timelines, giving national leadership the ability to call off a strike after aircraft takeoff.

THE ULTIMATE FOUNDATION

Combined, these nuclear forces are the ultimate foundation of U.S. national security. The U.S. government's commitment to modernize the nuclear triad further illustrates this. Although each weapons system receives regular and routine updates to meet changing technologies and evolving mission requirements, all three legs must be modernized to ensure they retain their deterrent capability. This means existing platforms will be replaced with new weapons systems or completely overhauled and equipped with the latest technology. Such recapitalization of the nuclear force is underway and over the next 20 years will comprise, at its highest point, up to an estimated 3.7% of the DOD budget.

Previous and ongoing updates to the Minuteman III have expanded the missile's targeting options, while improving accuracy and survivability. However, the U.S. Air Force has determined that continuing to extend the Minuteman III's life cycle would cost about the same as a replacement ICBM. In addition, a new ICBM would better meet future requirements while lowering sustainment costs over its life cycle. Therefore, the DOD has declared the future of the ICBM to be the Sentinel program.

The Sentinel program will feature a modular architecture that can incorporate emerging technologies to adapt to rapidly evolving threat environments. This will lower costs and help the program operate well into the 2070s. The program will also modernize launch facilities, improve command and control, and increase safety and security, with upgrades beginning in 2029.

The sea-based leg of the U.S. nuclear triad is also scheduled to benefit from updated and new

weapons systems. After serving longer than any other U.S. nuclear-powered submarine, the 14 Ohio-class SSBNs will be replaced by at least 12 Columbia-class SSBNs. The project will bring advances in navigation, maneuverability, command and control, and quieting technologies. The Columbia-class, expected to be the stealthiest submarine to date, will feature a nuclear reactor that does not require midlife refueling, reducing operational costs while still meeting mission requirements.



A rendering of a B-21 Raider bomber at Ellsworth Air Force Base, South Dakota, one of the bases hosting the U.S. Air Force's new stealth aircraft. NORTHROP GRUMMAN

The U.S. Columbia-class and the United Kingdom's Dreadnought-class submarines will carry the current Trident II D5 SLBM, providing the allies with greater interoperability and significant cost savings by eliminating the need for different missile compartment designs. The Columbia-class SSBNs, which will initially carry 16 Trident II D5 SLBMs, are designed to operate into the 2080s. The Trident II D5 SLBMs will operate into the 2040s.

Meanwhile, the air-based leg of the U.S. nuclear triad is replacing one type of bomber and updating the other. The B-52, originally deployed in 1961, has undergone life extensions and upgrades and is slated to remain in service beyond 2040. The B-2 will be supplemented in the mid-2020s and eventually replaced by the B-21 Raider, which the U.S. Air Force introduced in late 2022. The B-21 is a next-generation, stealth bomber designed to be long-range, highly survivable, and capable of carrying conventional and nuclear ordnance. With a planned minimum inventory of 100 aircraft, the B-21 will join the nation's nuclear triad as a flexible deterrent option.

Additionally, to support the triad's air-based leg, the AGM-86B ALCM, which first deployed in 1982 and was designed to defend against Soviet threats, will



An unarmed Minuteman III intercontinental ballistic missile launches from Vandenberg Space Force Base in California during a test in 2020. U.S. AIR FORCE

be replaced by the long-range standoff missile. The stealth cruise missile will have enhanced accuracy, range and reliability over previous generations of ALCMs, increasing the probability of mission success while decreasing risk to the aircrew.

The U.S. nuclear triad's effectiveness will not only be determined by the modernization of its weapons systems, but also by the modernization of a secure nuclear command, control and communications (NC3) system. NC3 is integral to ensuring that nuclear weapons are available for instant, deliberate use, but never used mistakenly. The NC3 system performs five crucial functions: detection, warning and attack characterization; adaptive nuclear planning; decision-making conferencing; receiving presidential orders; and enabling force management. The system includes terrestrial and space-based sensors that monitor the globe for threats, and a communications architecture that connects the nation's decision-makers to its nuclear forces under any conditions.

To complement the nuclear triad's new capabilities, the NC3 system is being upgraded to NC3 Next, which Richard, the former USSTRATCOM commander, described as a rolling initiative of improvements to all aspects of the complex network. Some NC3 platforms were developed in the 1980s and, since then, the People's Republic of China (PRC) and Russia have developed capabilities that could threaten the legacy system. NC3 Next will feature more than 200 platforms, from radios and terminals embedded in about 60 systems to satellites used to send encrypted strategic communications to nuclear submarines, as well as the E-6B Airborne Command Post or the E-4B National Airborne Operations Center aircraft, known as the "Doomsday plane," that would assume command should ground-based systems be neutralized.

One key node of the system has already been modernized. In 2019, USSTRATCOM opened its Command and Control Facility (C2F) at Offutt Air Force Base in Nebraska. As the heart of the nation's nuclear command, the facility was the first step in modernizing the entire nuclear enterprise and will support the modernization of all other strategic assets, such as the nuclear triad and NC3.

The U.S. \$1.4 billion, 85,100-square-meter facility is manned by over 3,000 personnel and has more than 1,000 kilometers of information technology cable to support the long-term viability and credibility of the nation's strategic deterrent force. The C2F is designed to evolve along with emerging threats and capabilities, enabling the U.S. to adapt and remain flexible far into the future.

INTEGRATED DETERRENCE

The U.S.'s investment in modernizing its strategic weapons systems seeks to maintain balance, given

the Chinese Communist Party's (CCP) and Russia's high levels of defense spending to modernize their conventional and nuclear forces. Nuclear weapons are becoming a more important aspect of Chinese military strategy and remain a foundational aspect of Russia's. The CCP, according to Richard, is undergoing a "nuclear breakout" — on track to double, if not triple, its nuclear warheads by 2030 while also improving the capability and capacity of its missile defense system. Russia's defense ministry has said that 90% of its strategic nuclear forces have been modernized in recent years.



Senior leaders from more than a dozen nations and three international organizations convene for a Nimble Titan seminar at the Marine Establishment Amsterdam in the Netherlands to discuss multinational missile defense. DOTTIE WHITE/U.S. ARMY

Although Russia and the CCP each have nuclear triads, "a nation's nuclear stockpile is a crude measure of its overall capability," Richard cautioned. "We must consider the delivery system, accuracy, range, readiness, training, concept of operations and many other things to fully understand what a nation is capable of doing. Yes ... we have a larger stockpile than China does right now. But two-thirds of what we have is operationally unavailable to me due to treaty constraints. And I have to deter Russia and others, including outliers like North Korea, with what we have, all at the same time." For that reason, any comparison to the bipolar Cold War, where the U.S. was in nuclear parity with only one peer nation, is lacking. Today's strategic environment is characterized by two capable peers that want to change the world order, and the U.S. with its allies seeking to defend that rules-based order. The PRC and Russia can unilaterally escalate a conflict to any level of hostility, in any domain, in any geographic location, at any time, according to Richard.

Therefore, it is imperative to view deterrence as more than the modernization of the nuclear triad

weapons systems and NC3. Moreover, competitor nations continue to develop capabilities that defy traditional domains and boundaries. An enhanced and expanded view of deterrence looks across all domains, including integrated missile defense (IMD), space and cyber, as well as understanding how partnerships, such as those with allies or with a nation's intellectual and industrial base, are needed to support future capabilities. This integrated deterrence approach provides the inherent flexibility needed to plan and execute tailored strategies for all adversaries.



A Terminal High Altitude Area Defense (THAAD) interceptor is launched during a test. U.S. MISSILE DEFENSE AGENCY

Integrating missile defense into the nuclear triad, NC3 Next and national nuclear policy increases capabilities and options, and hopefully prevents any conflict from becoming nuclear. IMD is an essential, continuous mission, whether in peacetime, crisis or conflict, helping protect territory, populations and forces against air and missile attacks. The U.S. currently fields three theater-level missile defense systems to target incoming short-, medium- and intermediate-range ballistic missiles in defense of the homeland and regional areas. These are the land-based Patriot Advanced Capability (PAC-3) and THAAD systems, as well as the sea-based Aegis system, although Aegis Ashore can also be deployed on land. Each system targets a rocket or missile in its terminal phase — after a warhead reenters the atmosphere — using radar and satellite systems to detect, classify and track the threat.

When deployed appropriately, IMD systems provide a range of options while denying an adversary the ability to use a missile attack to achieve its aims. To that end, missile defense establishes a more credible deterrence by encouraging restraint of adversaries. In addition, a robust and reliable missile defense program

imposes costs on competitors by forcing them to spend more resources on their missile arsenals.

The PRC and Russia are developing advanced platforms to challenge current terrestrial-based radar architecture, such as the Russian dual-use Zircon and Chinese hypersonic glide vehicles. To address potential imbalances in capabilities, the U.S. is developing the Next-Generation Interceptor, hypersonic glide interceptors, and a high-energy laser and other directed-energy technology to complement existing missile defense systems and counter future missile threats.

Early warning of advanced missiles of all types also must be complemented by global planning to achieve strategic, integrated deterrence. Competitors' systems are not designed with regard for boundaries, geographic or operational. In addition to a warning, tracking and neutralizing system, the U.S. will need an alternative posture to account for instances where there is a lack of warning. The ability to command and control missile defense forces underpins their usefulness in deterrence. NC3 Next and Joint All-Domain Command and Control (JADC2) systems are key parts of integrating missile defense and making it more effective for deterrence. JADC2 will provide a means of more quickly sharing information across the joint force, ensuring the best sensors and shooters are available to counter threats to nuclear and conventional forces. The integration of command and control of missile defense systems can help the U.S. deter adversary weapons, such as low-yield nuclear weapons, without needing to match a competitor system for system.

RETHINKING OPERATIONAL DETERRENCE

The nuclear triad, NC3 and IMD are linked as key elements of deterrence. In today's multidomain environment, integration also happens across space, cyber and gray zones, defined as competitive interactions among state and nonstate actors that fall between traditional war and peace. This complexity means the U.S. military will need to increasingly integrate academic and industry communities to meet current and future deterrence challenges. While nuclear threats differ from those of the past, the benefit of investing in intellectual capacity still applies. In the U.S., for example, the Rand Corp. think tank was created to study the Cold War and explore deterrence theory. Some of that era's greatest theorists, such as Thomas Schelling and Herman Kahn, ventured "outside the box" of traditional military and government approaches to develop the initial nuclear deterrence theories that served the world well for decades.

USSTRATCOM is rethinking operational deterrence theory to include a more comprehensive integrated deterrence philosophy. By changing

The Ohio-class submarine USS Nebraska test-fires an unarmed Trident II D5 missile off the coast of California in 2018. U.S. NAVY



how deterrence is viewed fundamentally, a better understanding can be gained about how it still applies in today's environment, and how it will help to inform strategies when executing plans in support of a common, comprehensive defense. Integrated deterrence philosophy prioritizes the incorporation of U.S. allies and partners into all aspects of collective deterrence.

Allied and partner interoperability preserves freedom of action, increases knowledge and options, and enables effective cooperative defense. Efforts to bolster strategic relationships with partners continue through war games such as Nimble Titan. Twenty-four countries and three international organizations participate in the exercise, which focuses on multinational integration aimed at enhancing interoperability and defense concepts. The collaboration reinforces that the U.S. and its allies and partners are prepared against strategic attack through these integrated deterrence systems. A strong, integrated nuclear deterrent program also contributes to U.S. nonproliferation goals by limiting the incentive for allies and partners to develop nuclear weapons.

Multilateral exercises also help deter North Korea, the PRC, Russia and others from believing they can benefit from using nuclear weapons or threatening their use. In this way, even with the

scale and intensity of changes to the strategic environment, integrated deterrence can help keep the world stable and at peace. With each modernization and advancement in the systems that comprise U.S. and allied integrated deterrence, nuclear competitors and potential competitors should increasingly see the investment as too much to overcome and opt instead for joining the U.S. in reducing prospects for nuclear conflict or miscalculation.

As adversary threats continue to grow, the importance of deterrence endures. However, the U.S. and its allies are now tailoring and evolving nuclear deterrence for the dynamic environment they face. Strategic deterrence requires integration of capabilities across all domains throughout the U.S. military and beyond. Above and beyond the nuclear triad, modernizing NC3 systems and investing in other capabilities, such as IMD, will increase options and enhance deterrence.

For 70 years, deterrence has helped the world avoid a catastrophic nuclear conflict. It continues to underwrite all U.S. military operations and diplomacy across the globe. Integrated deterrence will remain the backstop and foundation of U.S. national security for the foreseeable future. □

The background image shows a HIMARS missile launch in a desert landscape. A large plume of white smoke and dust trails from the launch point in the lower left towards the upper right. The terrain is arid and brown, with some sparse vegetation. In the distance, there are hills and a cloudy sky. The title text is overlaid on the upper half of the image.

WEAPONS WITH DUAL MISSIONS

A HIMARS system fires a missile during the Rim of the Pacific multilateral exercise in Hawaii in July 2022. REUTERS



**LAND-BASED
PRECISION FIRES
PROTECT TERRITORY,
PROMOTE DETERRENCE**

MAJ. BRYAN C. NEAL/U.S. ARMY

Forward-deployed Strategic Long-Range Precision Fires (SLRPF) are major assets in the United States' arsenal to leverage if the nation, along with its allies and partners, is forced to respond militarily to aggressive actions in the Indo-Pacific region, including those by the Chinese Communist Party (CCP). Strategically placed, these mobile U.S. Army warfighting systems provide significant deterrence in conjunction with existing and constantly improving multidomain — air, cyber, land, sea, space and electromagnetic spectrum — capabilities.

Distribution of SLRPF systems allows like-minded nations to maintain a Free and Open Indo-Pacific by providing strategic overmatch to adversaries' advanced missile technologies and power projection platforms.

SLRPF are large-caliber, heavy-hitting weapons — including missiles, cannons and other artillery — designed to pierce enemy lines and destroy key targets at extended ranges. Like other signature U.S. Army systems, however, they must evolve with warfare's rapidly changing nature to remain effective.

"Improving the strength and agility of the Army's field artillery systems and munitions will allow our Soldiers to deliver more precise and punishing effects on future battlefields," said Maj. Gen. John Rafferty, who served as director of the U.S. Army Futures Command's Long Range Precision Fires Cross-Functional Team from May 2018 to June 2022. The group, based at Fort Sill, Oklahoma, is charged with navigating how to advance Long Range Precision Fires for a new era of warfare. The program is the Army's tactical modernization priority, and exploring possibilities for the systems involves tapping the expertise of the Army's Combat Capabilities Development Command along with input from industry and academia.

Installation of the systems is a key part of a plan by the U.S. and its allies and partners to address CCP threats in the South China and East China seas, and elsewhere. Success entails cooperation among nations, such as Australia, Japan, South Korea and the U.S., along with the Association of Southeast Asian Nations (ASEAN), India, New Zealand and Pacific Island Countries. By bolstering an unparalleled network of allies and partners that share a vision, including respect for a rules-based international order, the nations can deter aggression, ensuring collective security and prosperity.

The U.S. Indo-Pacific Command's (USINDOPACOM) area of responsibility is the U.S. Department of Defense's priority theater. Adm. John C. Aquilino, Commander of USINDOPACOM, stated that every domain in the region is contested by the People's Republic of China (PRC), and the U.S. must remain ahead of the PRC's capabilities with technological advances in artificial intelligence, offensive fires, directed energy, hypersonics and quantum computing, with advances integrated into the joint allied/partnership force as quickly as possible.

A flight test conducted at Vandenberg Space Force Base, California, in October 2021, validated Army SLRPF's ability to fire missiles beyond 499 kilometers, which exceeds the 300-kilometer range of the existing Army Tactical Missile System. The Army plans to roll out the first operational Precision Strike Missiles (PrSM) in 2023, and the United Kingdom has announced it will field a PrSM in 2024 as part of an upgrade to its M270 Multiple Launch Rocket System. The new missile system is composed of existing launchers armed with the Army's next-generation PrSMs and can destroy aerial threats, missile launchers, command and control centers, assembly/staging areas and other mission-critical targets. The missiles have a multimode seeker that locks onto enemy radar and radio signals, opening the door to strikes against maritime as well as traditional ground-based targets.

AN INCENTIVE FOR DIPLOMACY

It is likely that increasing U.S. and ally/partner military deterrence in the manner described by Aquilino and other U.S. military leaders will give pause to the CCP's expansionist tendencies and improve the likelihood of diplomatic solutions to the potential flashpoints in the South China and East China seas.

The U.S. needs to move away from big, expensive, "prestige" platforms such as ships and aircraft that can be targeted with less expensive anti-access/area denial systems and invest in smaller, less costly and easily manufactured weaponry. To rebalance deterrence in the region, the U.S. should focus on improving area denial weapons.

"A combat-credible, conventional deterrent posture is necessary to prevent conflict, protect U.S. interests, and to assure our allies and partners," Adm. Philip S. Davidson, then USINDOPACOM commander, testified before the U.S. Congress in March 2021. "Absent a convincing deterrent, the People's Republic of China will be emboldened to take action to undermine the rules-based international order and the values represented in our vision for a Free and Open Indo-Pacific."

The goal of U.S.-led deterrence in the Indo-Pacific is to place enemy forces at risk and to make any hostile action, such as a potential CCP invasion of self-governed Taiwan, too costly to execute.

The Indo-Pacific is characterized by vast expanses of ocean and archipelagos of thousands of islands of varying size and terrain. Factoring these geographic characteristics into planning for a conventional deterrent in an environment shaped, in part, by the PRC's posture requires regionally distributed long-range precision strike capabilities.

The SLRPF system would offer strategic and financial advantages over legacy weapons. The Army PrSM is an example of the concept. Using a legacy platform such as the High Mobility Artillery Rocket System (HIMARS) or the Multiple Launch Rocket System (MLRS), the PrSM can launch an anti-ship missile more than 500 kilometers, putting enemy naval

vessels at risk. Meanwhile, manned aircraft have limited range and flight duration, are vulnerable to sophisticated adversarial air defense systems and lack the persistent, all-weather deterrent provided by SLRPF.

The SLRPF system's proficiencies are hugely beneficial. "I think having a deep portfolio of range capabilities in the Pacific gives you lots of options because there are so many different locations that you can imagine firing from," Rafferty told the website Defense News in September 2020. "And mixing and matching long-range capabilities from all those sorts of different locations creates an incredible dilemma for the enemy."

The Multi-Domain Task Force (MDTF) is the Army's answer to the requirements for operational and strategic precision fires with varying missile, air defense, intelligence and cyber elements that together facilitate capabilities to defend a given area — the cornerstone of a combat-credible deterrence.

The Army's SLRPF weapons and their ranges available to the MDTF include:

- The long-range hypersonic weapon (2,775 kilometers)
- The PrSM, compatible with HIMARS/MLRS launchers (500 kilometers)
- The midrange capability (SM-6 missile, ground-launched Tomahawk Land Attack Missile and PrSM Spiral 3) (1,800 kilometers)
- The Extended-Range Guided Multiple Launch Rocket System, compatible with HIMARS/MLRS launchers (150 kilometers)
- The Ground-Launched Small Diameter Bomb, compatible with HIMARS/MLRS launchers (150 kilometers)

These weapons will counter those installed by the Chinese People's Liberation Army's (PLA) Rocket Force, most of which are positioned in eastern China within range of where the PLA anticipates the most likely confrontations: the South China and East China seas, the Korean Peninsula and Taiwan. Deploying mobile, ground-launched SLRPF systems in the region will complicate the calculus of PLA planners and increase the resources needed to target the systems.

"While Beijing might conceivably elect to target the handful of nearby bases capable of accommodating U.S. heavy bombers, and force U.S. surface warships to stand off from China's coasts, finding hundreds of Army ground launchers that are constantly moving would be a Herculean task well beyond the capacity of Chinese forces," Forbes magazine reported in October 2021.

Another factor to consider is the type of SLRPF system deployed. Hypersonic missiles, which can travel more than five times the speed of sound, are easily distinguishable from other Army SLRPF systems. Placing a hypersonic system without it being quickly identified would be difficult. Conversely, PrSM missile ammunition pods are practically indistinguishable from legacy HIMARS and MLRS pods, and adversaries would

be hard-pressed to determine which missiles are being launched. This could provide additional flexibility in deploying advanced missile capabilities and potentially decrease the magnitude of the CCP's response.



Members of a U.S. Army operations squadron pose before the launch of a Precision Strike Missile from a HIMARS field artillery launcher in October 2021. AIRMAN 1ST CLASS KADIELLE SHAW/U.S. AIR FORCE

LOOMING QUESTIONS

Where will the U.S. and its allies and partners place SLRPF systems? The military assets ideally should be strategically postured forward to deter, and if deterrence fails, effectively respond in kind to adversarial aggression to restore stability and security in the region.

The U.S. must assure allies and partners of its strong and enduring commitment to the region, and that it will counteract CCP coercion. In turn, countries that agree to host an Army SLRPF system likely will view their decision as bolstering deterrence against a Chinese regime that is increasingly assertive, coercive, and dismissive of international rules and norms.

Stationed fires in South Korea are placed to deter North Korean aggression and to stabilize the region. They are not positioned as a threat to the PRC.

"Together with our allies and partners, our professionally trained and lethal joint military force, posture forward will provide the deterrence required while enabling diplomacy from a position of strength to ensure peace, stability and prosperity for all in the region," Aquilino said during his congressional confirmation hearing in March 2021.

How might the CCP respond to SLRPF systems? Experts have identified three key factors likely to determine the answer:

- **Deterrence** — the ability of the U.S. and its allies and partners to balance the PLA's presence in the South China and East China seas and elsewhere by introducing their own formidable force.

**A Precision Strike Missile
launches in a test fire at
Vandenberg Space Force Base,
California, in October 2021.**

ANTHONY MENDEZ/U.S. SPACE FORCE





- **Economic power** — our collective ability to counter the CCP’s use of trade, lending and other economic levers unfettered by adherence to international laws and norms.
- **Allied cohesion** — the degree to which allies and partners, including Quad members Australia, India, Japan and the U.S., and like-minded nations such as the Philippines and South Korea, can build and maintain consensus and interoperability.

To preempt deployment of SLRPF systems, the CCP would likely turn to bribes, bluster and veiled threats, including propaganda campaigns to persuade pivotal nations to refuse access to the U.S. for placement of the systems. If that fails, Beijing will likely resort to economic coercion and cyberattacks in an attempt to achieve its political objectives without armed conflict.

With an increasingly assertive CCP, a credible deterrent is imperative, and U.S. Army land-based SLRPF systems should be the foundation of that deterrent. Given its cross-domain capabilities and

flexibility, the U.S. Army MDTF is the ideal unit to introduce this emerging technology to the region. The CCP will no doubt counter with rhetoric and coercion to prevent the U.S. Army from gaining positions in the First Island Chain. But by preparing for such a response, the U.S. and its allies and partners can gain and maintain regional control.

Many U.S. partners and allies hope to procure HIMARS and MLRS based on their value to Ukrainian forces defending against Russian invaders. It’s a great opportunity to get these systems in like-minded nations’ hands.

“In complex and high-tech operational environments, reaching and neutralizing threats quickly and accurately will be of utmost importance,” Rafferty said. “Thankfully, the capabilities we see already emerging as a result of strategic investments in modernization will expand the range, lethality and impact of our surface-to-surface fires, keeping the Army, the joint force and our allies a crucial step ahead of any near-peer adversaries.” □

INFORMATION OPERATIONS KEY TO DETERRENCE

Altering Competitors' Perceptions of Risks, Costs



Adm. Samuel Paparo, commander of the U.S. Pacific Fleet, delivered this speech October 18, 2022, at the 11th annual Indo-Pacific Information Operations & Electronic Warfare Symposium in Hawaii, hosted by the U.S. Indo-Pacific Command. It has been edited to fit FORUM's format.



Thanks to each and every one of you for being here. I see some old friends in the room also and some old shipmates. But most of all, I see a lot of allies and partners across all the military services. I see profound participation among the civilian community and industry, and it underscores a particular fact — a strength. And that strength takes all of us, and all of us are here and engaged.

The overall topic of our symposium is deterrence.

And in deterrence, information operations are first, middle and last.

My definition of deterrence is that it is a combination of the capability and the will to exert, to impose costs that are intolerable compared to what one would achieve with malign behavior.

And then, most importantly, is your adversary's cognition that you, in fact, have the capability and the will to deter.

What exactly are we trying to achieve?

First and foremost, our legitimacy is based on the fact that everybody in this room seeks to uphold the status quo and deter anyone from upending the status quo with the use of force.

You could change your borders; you could change your conditions. But it must be through negotiation, through the principles of human dignity and self-determination among all peoples.

What we are seeking to preserve within the status quo in a Free and Open Indo-Pacific, and in fact, the world, are nations that:

- Respect the rule of law and international norms.
- Champion individual rights and liberties.
- Promote good governance.
- Adhere to shared values and freedoms.
- Benefit from multilateral institutions.

- Support and defend open access to seas, the skies and outer space.
- Engage in fair and open commerce.

What we seek to deter, specifically:

- The People's Republic of China (PRC) from expansionism and seizure of land, seas, nutrients and mineral resources by coercion and/or military actions outside of international norms, no matter how much they try to craft a misleading narrative or justify their arguments with quasi-illegal, second-derivative legal actions, absurd as they are.
- Continued aggression by Russia. And we've seen viscerally just what the flavor of that aggression is in Central Europe.
- North Korea from threatening its neighbors and the international community with nuclear weapons.

We are living in incredibly consequential times. And, in fact, that's why I see the urgency in our shared mission.

This conference is about information operations to preserve the status quo of free and sovereign nations and deter countries and actions that would upend the current system — a system that has benefited all mankind. Since the end of World War II, it has lifted 60% of the world out of the throes of poverty.

Information operations — and, in support of information operations, electronic warfare — is designed to influence and affect the cognitive state and reinforce the perception and the belief that cost-imposition of aggressive expansionism, coercion and military actions will exceed any benefits that can be gained.

We do this via strategic communications, the communications between senior leaders and even among

The U.S. Navy guided-missile destroyer USS Benfold operates in the Philippine Sea in June 2022.

PETTY OFFICER 2ND CLASS ARTHUR ROSEN/U.S. NAVY



U.S. Air Force B-1B bombers and F-16 fighters fly with Republic of Korea Air Force F-35 fighters during Vigilant Storm drills in South Korea in November 2022.

THE ASSOCIATED PRESS



Republic of Korea and U.S. forces prepare for a joint river-crossing drill in Yeosu, South Korea, in October 2022.

THE ASSOCIATED PRESS



“Marrying deterrence and information helps us to alter our competitors’ perceptions of risk, cost and benefits, and demonstrates our ability to control escalation.”

Japan Maritime Self-Defense Force, Republic of Korea Navy, Royal Australian Navy and Royal Canadian Navy ships sail in formation during a regional deployment in August 2022.

THE ASSOCIATED PRESS



U.S. Coast Guard personnel prepare to board a vessel in the eastern Pacific Ocean while patrolling for illegal fishing in August 2022.

THE ASSOCIATED PRESS



adversaries in our key leader engagements.

We do so under information operations, surveillance and reconnaissance, and networks that assure our battlespace awareness and our ability to operate in the battlespace.

And then, finally, is the operational security that each nation brings to bear in its defense.

U.S. Defense Secretary Lloyd Austin has spoken about integrated deterrence maximizing effects across warfare domains and theaters and the spectrum of conflict through all instruments of military power, and especially with our unmatched capability and our network of alliances and partnerships, which is absolutely the asymmetric advantage.

Marrying deterrence and information helps us to alter our competitors' perceptions of risk, cost and benefits, and demonstrates our ability to control escalation.

Consider where we are in time. As I speak, the Chinese Communist Party's (CCP) 20th Party Congress is ongoing, leading to an unprecedented third term of office [for General Secretary Xi Jinping]. The PRC is veering from its 30-year tradition of consensus and sensible foreign policy into something that looks much more autocratic.

Our own desire [is] to adhere to the international rules-based order rather than the creation of a new order as proposed by our potential adversaries through innocuous-sounding phrases like "common prosperity."

This is the system where the PRC is the center and "all affairs under heaven" are determined through its autocracy. The rule of law is not what we see in the PRC; it is the rule by law. That is, taking some second-derivative

interpretation of an international law or custom, declaring it the law of the universe and then acting as if it were so.

Let's be clear about what rejuvenation means. National rejuvenation means the party control of economies. It means military modernization to support that. And it means the changing of international borders by force. That is the true meaning of national rejuvenation.

As allies and partners, we cannot normalize this intentional malign behavior by the PRC and the CCP, which we see in the form of:

- Military expansionism in the South China Sea.
- Coercion and pressure in the waters and skies surrounding Taiwan.
- Military coercion and pressure in the waters and skies surrounding the Senkaku Islands.
- Military actions along the Line of Actual Control [separating India and China].
- Repression of freedoms and liberties in Hong Kong.
- Predatory economic behavior, ranging from illegal fishing to theft of intellectual property to debt entrapment worldwide, including the PRC's handling of disagreements with Australia, Canada and Lithuania.

So, this is not about containing the PRC's economic and military growth. It's about ensuring that we as free and sovereign nations ensure its actions and behaviors do not disrupt the peace and stability of the region or the international rules-based order. □



Free Uyghurs

CALLING OUT

REPRESSION

Mounting Criticism, Sanctions Target CCP's Inhumane Treatment of Uyghurs

FORUM STAFF

Forced labor of Uyghurs and other Indigenous minorities continues to fuel manufacturing in China's Xinjiang region, according to a flurry of investigations, including a critical United Nations report. The research also reveals that the Chinese Communist Party (CCP) is largely acting through the state-run Xinjiang Production and Construction Corps (XPCC) to repress the ethnic groups.

Although an increasing number of nations and international bodies have called out the CCP and increased sanctions against the exploitative regime, stronger measures may be needed to curtail the abusive practices, which include torture and genocide, the reports indicated.

"The Chinese government is interpreting the distinct identity, religion and culture of Uyghurs and other Turkic peoples in Xinjiang, who are predominantly Muslim, as both a national security threat and as a cultural threat to Chinese unity," Irina Bukarin, the lead analyst on a May 2022 report by the nonprofit Center for Advanced Defense Studies (C4ADS), based in Washington, D.C., told National Public Radio. "And as such, they've been imprisoning Uyghurs and forcing them into coercive labor conditions, uprooting them from the communities,

and sending them to work in fields and factories hundreds of miles from their families."

The XPCC functions as a quasi-regional government, paramilitary organization, prison operator, media empire and educational system and is one of the world's largest state-run enterprises, according to a July 2022 report by the Helena Kennedy Centre for International Justice at Sheffield Hallam University in the United Kingdom. "The central government of the PRC [People's Republic of China] considers the XPCC a 'special system of integration of government, military and enterprise.'"

The XPCC subdues the Uyghurs and exploits their labor for ventures that supply the PRC — and much of the world — with products and services. These efforts have intensified under the leadership of CCP General Secretary Xi Jinping, who claims Uyghurs are potentially disruptive or even terrorists.

In late August 2022, three months after visiting Xinjiang, then-U.N. human rights chief Michelle Bachelet released a long-awaited report that asserted the PRC's detention of Uyghurs and other minorities may constitute crimes against humanity. The 46-page assessment noted rights violations, including torture, that demand worldwide attention.



Ethnic Uyghurs toil at a farm near Lukqun in Xinjiang, where the Chinese Communist Party uses widespread forced labor, rights groups say. REUTERS



“The region, its people and their identities are seen as critical security threats to China’s cultural integrity, the stability of the state’s borders, and the absolute authority of the CCP.”

– Helena Kennedy Centre for International Justice



The Xinjiang region in northwest China is home to about 12 million Uyghurs, most of whom are Muslim. REUTERS

Beijing, which had demanded that Bachelet not release the report, portrayed her findings as part of a Western campaign to smear its reputation. A Chinese diplomat said the PRC would no longer cooperate with the U.N. human rights office, The Associated Press (AP) reported.

“What’s happening in Xinjiang is the worst humanitarian disaster of our time,” Chinese legal scholar and human rights activist Teng Biao said. “For most of the people being detained in the internment camps, their only crime is being a [Uyghur], a Muslim, or refusing to give up their cultural or religious identity — like wearing long beards, wearing veils in public places, and refusing to watch state television, refusing to drink alcohol, having more babies, having been to foreign countries, applying for passports, possessing a Quran, talking to relatives or family members living overseas, so on and so on,” Teng said in a Council on Foreign Relations (CFR) virtual discussion in July 2021. Teng has a doctorate in legal philosophy from Peking University and taught at China University of Political Science and Law before leaving his native country.

Since 2017, the Chinese government has imprisoned more than 1 million people in Xinjiang and subjected others to surveillance, religious restrictions, forced labor and mandatory sterilizations, the CFR, an independent think tank, reported. Aerial photographs published by the Australian Strategic Policy Institute (ASPI) showed a dramatic expansion of a vast network of government internment camps in the region from April 2017 to August 2018. CCP officials deny that the so-called vocational training centers infringe on Uyghurs’ human rights.

Many detainees labor under conditions that “may amount to enslavement as a crime against humanity,” Tomoya Obokata, the U.N.’s special rapporteur on contemporary forms of slavery, concluded in mid-August 2022.

The CCP wants Uyghurs to conform to its standardized version of Chinese identity, abandoning their culture, religious beliefs and any desire for independence. The XPCC encourages Han Chinese, the nation’s largest ethnic group, to move to Xinjiang and strives to suppress Uyghur birth rates, according to The Guardian newspaper.

After hearing from internment camp survivors and experts on the region, the Uyghur Tribunal, a U.K.-based group, determined that birth control and sterilization measures imposed on the Uyghurs constitute genocide.

Geoffrey Nice, a U.K. lawyer who chaired hearings that preceded the tribunal’s nonbinding ruling in December 2021, said that the panel found the PRC carried out “a deliberate, systematic and concerted policy” to bring about “long-term reduction of Uyghur and other ethnic minority populations,” according to the BBC. The panel also found evidence of crimes against humanity, torture and sexual violence.

The panel concluded that Xi and other senior Chinese officials bear “primary responsibility” for abuses against Muslim minorities in Xinjiang, Nice said.

Although nations, including the United States, have banned the import of goods produced in Xinjiang, such sanctions may have limited success. “When discussing the XPCC specifically, its goals are not purely commercial, so its repressive behavior is unlikely to be changed by impacts to its businesses alone,” Nicole Morgret, a human rights analyst with C4ADS, told FORUM.

‘CRIMINALIZATION OF NORMAL BEHAVIOR’

The CCP, through the XPCC, controls nearly every aspect of life in Xinjiang. Security cameras are everywhere, and people are encouraged to spy on their neighbors. “There’s pervasive and highly intrusive surveillance, meaning that party officials literally can now peer into the homes and even the beds of Uyghurs,” James Leibold, a senior fellow at ASPI, said during the CFR virtual event.

According to multiple reports, the XPCC has taken many people’s property and forced them into factory or farm work while banning native languages, religious practices and ethnic dress. Resisters are detained in work camps where they are indoctrinated in Han Chinese culture. Many Uyghurs have simply disappeared. Vestiges of their lives are destroyed. Possessions considered valuable, such as arable land, are confiscated.

“The region, its people and their identities are seen as critical security threats to China’s cultural integrity, the stability of the state’s borders, and the absolute authority of the CCP,” the Helena Kennedy Centre reported. “In the last five years, in particular, the XPCC has played a critical role in suppressing Uyghur life, culture, and identity.” The XPCC’s tactics are “largely unprecedented among global political or corporate configurations; all analogies fail to capture its expansive function, reach, and powers,” the report found.

Chen Quanguo, then the CCP chief in Xinjiang, issued orders in 2017 and 2018 to “round up all those who should be rounded up,” which led to internment camp construction and prison expansions. Chinese authorities barred journalists and foreign investigators from the facilities. Amid worldwide criticism, the CCP continued sending people to prisons and extrajudicial detention facilities, Xinjiang experts told CFR.

Darren Byler, an anthropologist who has studied the Uyghurs, told the AP in July 2021 that many detainees had not committed “real crimes by any standards” and were incarcerated without due process. “It’s the criminalization of normal behavior,” he said.

Indoctrination also takes place beyond the walls of government facilities. “We should bear in mind that human rights abuse is ... also in daily lives of all Uyghurs and other Muslim and ethnic minorities in Xinjiang,” Teng said in the CFR discussion. Outside the camps, Uyghurs “have continued to suffer from an increasingly severe crackdown and totalitarian surveillance by the Chinese authorities.”

Advocacy groups Amnesty International and

Human Rights Watch accuse Beijing of crimes against humanity in Xinjiang. Among the abuses are forced labor, sterilizations and mandatory compliance with CCP assimilation, including restrictions on religious practices. The repression seeks to render Uyghurs docile and dependent on the state, the Helena Kennedy Centre reported, amounting to “a reign of terror.”



Protesters outside the Chinese Embassy in London express support for Uyghurs repressed by the CCP. REUTERS

WHO ARE THE UYGHURS?

Although the Xinjiang Uyghur Autonomous Region comprises almost one-sixth of China's land mass, its 26 million residents account for less than 2% of the PRC's populace of 1.4 billion. It is home to about 12 million Uyghurs, most of whom are Muslim, along with other ethnic groups and transplanted Han Chinese, according to the BBC. Ruled for centuries by warlords and various regimes, Xinjiang's Indigenous peoples congregated mostly in a smattering of oases in the land of rugged mountains and vast deserts.

Uyghur, Turkic and other groups who traditionally have lived in this region have much stronger cultural and historical ties with people in Central Asia to the west than with Chinese to the east. Historically, some Chinese states engaged with this area through diplomacy and trade; others sought to conquer and impose China's political and social systems, as in Xinjiang today.

Conquered by the Qing Empire in the 18th century, Xinjiang has been an “autonomous region” of the PRC since the Chinese Civil War ended in 1949. The PRC in 1954 established the XPCC, an organization initially composed largely of former People's Liberation Army soldiers. Its mission: control the Indigenous population and exploit the region's labor and resources with a “gun in one hand” and a “plough in the other,” according to the Helena Kennedy Centre. Disbanded in 1975 following the PRC's Cultural Revolution, the XPCC was reestablished in 1981 and took on an enhanced role as a corporate conglomerate under direct control of the central government.

Suppression of Uyghurs who demanded independence

in 2009 preceded today's repressive government practices. The CCP cast the uprising's supporters as terrorists and, exploiting global fears of terrorism, rebuffed critics of the Uyghurs' treatment, according to The Strategy Bridge, a nonprofit online journal and podcast.

Since its crackdown began, the Chinese government has cited as justification the “three evils” of ethnic separatism, religious extremism and violent terrorism, the U.S. State Department reported.

The XPCC, meanwhile, has evolved into a global operation connected to thousands of companies. Initially an agricultural enterprise producing crops including cotton, tomatoes and peppers, its interests now extend to energy, mining, chemicals, oil and gas extraction, logistics, apparel, electronics, wine, food processing, insurance, and tourism. A major artery of the PRC's One Belt, One Road infrastructure scheme cuts through the region, providing access to markets in Central Asia and Eastern Europe.

The CCP wants to dilute the Uyghur population, especially in southern Xinjiang, and ultimately erase its culture and religion, ASPI's Leibold told the CFR. It has destroyed mosques and cemeteries, and Xi has said that Islam in the PRC must be “in the Chinese context,” the state-run Xinhua News reported in July 2022. Uyghurs, whose language is related to Turkish, are forced to learn Mandarin, including children separated from their families and sent to boarding schools or orphanages, where they also are subjected to CCP propaganda, the U.S. State Department reported in June 2022.

“From cradle to grave, Uyghur people are subjected to centrally directed indoctrination delivered by the XPCC,” according to the Helena Kennedy Centre. “The XPCC's deliberate program of social engineering requires that every minoritized citizen shed their cultural heritage, language and religious beliefs in favor of Han practices and Xi Jinping ideology.”

WHAT'S NEXT?

Governments, businesses and consumers worldwide help sustain forced labor in Xinjiang, though many don't know it. The XPCC has direct or indirect holdings with thousands of corporate entities worldwide, according to data provider Sayari, making it difficult, though not impossible, to determine whether a product is connected to the XPCC. “The forced labor and abuse that Turkic peoples in Xinjiang face does not stay within the region's borders, but spills into the world through global systems of trade and finance. These global ties can allow for increased profits at the expense of human rights, and unless countered, mean that international stakeholders tacitly enable such crimes,” C4ADS reported in May 2022.

Another C4ADS report, released in late June 2022, concluded Xinjiang is fast becoming a center of Chinese manufacturing. The report said 4,480 manufacturing companies were founded there in 2021, up from 1,604 in 2009.

Much of the XPCC's growth is a result of the CCP's



Detention facilities such as this one in Hotan in southwest Xinjiang have multiplied dramatically since 2017. GETTY IMAGES

ability to control the narrative. Through propaganda and tapping into fear, intimidation and racism, the government-directed corporation has flourished to the detriment of its Uyghur laborers, Teng said in the CFR discussion. Former camp detainee Omir Bekali, a Uyghur who now lives in the Netherlands, said Chinese people “don’t know what’s really going on” because of the CCP’s censorship apparatus. “If you want to know the reality, speak to the victims,” Bekali told the AP in September 2022. “The government controls the media, they keep on saying lies.”

Reliable information and coordinated worldwide sanctions are key to exposing the XPCC’s tactics, Foreign Affairs magazine reported in July 2021. “Nobody should be under any illusion that it will be easy to alter the Chinese government’s behavior in Xinjiang. Beijing is unlikely to ever admit it is feeling the heat of international pressure or changing its policies toward the Uyghur people.”

Although some human rights groups and Uyghur exiles criticized Bachelet for not declaring the CCP’s atrocities in Xinjiang as genocide, international attention generated by her findings could still have an effect. “The U.N. report added little to what is already known, but the fact that it came from the world’s leading human rights body, of not one government but hundreds, gave relief and hope to many victims,” according to The Guardian.

U.N. Secretary-General Antonio Guterres urged the PRC to follow Bachelet’s recommendations, including releasing people detained arbitrarily and revealing the location of Uyghurs in Xinjiang who have not been heard from by relatives abroad, Radio Free Asia reported in September 2022. The U.N. report also urged the PRC to investigate alleged human rights abuses in detention centers.

Additionally, experts say, international boycotts of products from Xinjiang, while moderately successful,

must be strengthened. “The necessary data and methods for combating financial support of oppression in Xinjiang are available, and it is time for stakeholders to make use of them,” according to the C4ADS report in June 2022. XPCC products reach domestic and global markets in various ways, the report said. The corporation’s subsidiaries trade publicly on Chinese financial markets. XPCC also has foreign subsidiaries, and it sells directly to domestic and regional companies, which feed products into the global supply chain. “Awareness of and attention to these avenues for moving products can reduce reliance on them,” the report said.

However, banning products made with forced labor in Xinjiang poses a dilemma if it conflicts with a nation’s compelling domestic needs. Take solar panels, for instance. The PRC dominates the world’s supply of solar panels, but U.S. Customs agents have seized Chinese-made products since the federal Uyghur Forced Labor Prevention Act took effect in June 2022. While this affects the ability of the U.S. to implement its August 2022 commitment to transition to renewable energy, the U.S. Customs and Border Patrol between June 2022 and January 2023 identified more than 2,692 shipments as potentially violating terms of the Uyghur Forced Labor Prevention Act. Nearly half of the shipments held were solar panels or related components.

It’s a quandary similar to one faced by nations that condemn Russia’s unprovoked invasion of Ukraine yet hesitate to boycott much-needed Russian oil and minerals. Despite such hurdles, coordinated international action shows that the world won’t ignore the CCP’s orchestrated elimination of an entire ethnoreligious group, Foreign Affairs reported in July 2021. “The Uyghur people deserve nothing less.” □



China's New Economic Era

**How Xi Jinping's Activist, Top-Down
Leadership Harms Growth Prospects,
Limits Citizens' Opportunities**

DR. SHALE HOROWITZ/UNIVERSITY OF WISCONSIN-MILWAUKEE
PHOTOS BY THE ASSOCIATED PRESS

FORUM ILLUSTRATION



Since coming to power in 2012, Xi Jinping, the Chinese Communist Party's (CCP) general secretary, has systematically overturned the "Reform and Opening Up" institutional and policy consensus, which was created by Deng Xiaoping in the late 1970s and sustained by Xi's two immediate predecessors, Jiang Zemin and Hu Jintao. Since 2020, a flurry of policies has disrupted China's already slowing economy. These include a many-sided regulatory assault on China's most advanced high-tech businesses; sudden debt restrictions that plunged the real estate sector into crisis; and a stubborn "zero-COVID" policy that forced ongoing, unpredictable lockdowns. How should these policies be understood, and what do they mean for China's future?

Xi Defines 'New Era'

Xi's official philosophy, enshrined in the CCP constitution in 2017, is called "Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era." He derived it from "Socialism with Chinese Characteristics," coined by Deng for the new, market-oriented economic policies of the Reform and Opening Up era of 1978 through 2012. "New era" means that Xi is breaking with the Deng era, and "Xi Jinping thought" means that Xi will decide why and how this will be done.

In many high-profile public speeches at party and state meetings, Xi has proclaimed new directions in politics, economics and foreign policy. In politics, he contends the CCP must restore its former internal solidarity, political control and cultural dominance. Behind this party-oriented facade, Xi used a sweeping "anti-corruption"



COVID-19 restrictions closed shopping malls and most other businesses in Beijing in mid-2020.

campaign to purge actual and potential political rivals, take direct control over policymaking in all important areas, sweep away Deng's 10-year term limit for top leaders and restore Mao-style hero worship for himself. In economics, Xi insisted that there would no longer be an overriding emphasis on growth. Going beyond the toothless platitudes of Hu, Xi stated that state ownership and greater state oversight and regulation would be used to impose more reliable party-state control over the economy; and that such control would be used more decisively to serve party ideological goals, such as serving common prosperity (greater equality) and socialist culture (a blend of party loyalty, traditional morality and Chinese nationalism). In foreign policy, Deng's patient, get-along approach — often summarized as "concealing strength and never being the highlight" — is to be supplanted by "the Chinese dream of national rejuvenation," in which China uses its rising military, economic and cultural power to "move closer to center stage" in the world.

Xi's economic policies got off to a slow start. His first term, from 2012-17, focused on consolidating personal power and party-state political control. Economic policies

included strengthening the financial and market positions of state-owned enterprises and stopping the potentially destabilizing, state-constraining experiment in liberalizing capital markets. Beginning in 2017, and intensifying from 2020, Xi's economic policies have become more aggressive, unpredictable and disruptive. What these policies share is that greater party-state control and oversight is either the goal, the dominant method used to achieve another goal, or both.

Showing Jack Ma Who's Boss

Xi's crackdown on the high-tech online services sector — including search, social media, payments and finance, gaming, shopping, and food delivery — has subjected China's most successful, high-profile private companies to public criticism, threatening investigations, and greater regulation and party control. This has been justified as serving the public good, including safeguarding consumer data, limiting big firms' monopoly power, maintaining financial and economic stability, and protecting public morals. Perhaps more importantly, tech firms have been compelled to show due deference to the party-state and to subordinate their interests and goals to those of the party-state.

The best-known case is that of the Ant Group, the online financial services giant whose initial public offering was blocked in late 2020, reportedly on Xi's direct order, after its founder, billionaire Jack Ma, criticized state regulators for hindering innovation. Ant's business model, which opened lending channels to consumers and small businesses, threatened the market dominance of the large state-owned banks, which lend primarily to state-owned enterprises (SOEs) and large, well-connected

private companies. Ant and other financial technology firms faced new restrictions on their business models and lending practices as they were brought under the stricter regulatory regime governing traditional banks and financial institutions.

About the same time, Beijing ramped up efforts to bring big data and its uses under party-state control. Tech companies compiling large customer datasets — including giants such as Alibaba, Tencent and ByteDance — must keep the data in China, conform to new restrictions on data gathering and make data available to the state, which wants to oversee how it's used. The state wants to not only guard consumer privacy but also to use the data to serve the oversight and propaganda purposes of the CCP's high-tech surveillance regime. The party-state will also have the leeway to use companies' data — including that of foreign companies — to promote development of preferred Chinese companies, in much the same way it does by forcing technology transfer or stealing technology via cyber theft.

Other new regulations target perceived threats to public morals or quality of life. Tencent and other online gaming companies have seen fewer game approvals and more limits on content, including restricting minors to three hours of gaming a week. Limits were placed on mass and social media popularization of celebrities and their often extravagant, dissolute lifestyles. In 2021, state regulators directed companies to “strictly control the selection of program actors and guests, and uphold political literacy, moral conduct, artistic level and social evaluation as selection standards.” Perhaps most surprisingly, also in 2021, Beijing launched a frontal attack on China's culture of educational overachievement. The large, fast-growing private education business, which provided after-school tutoring to millions of children, threatened to “form another education system outside the national education system,” the education ministry warned.

Education companies or divisions serving students through ninth grade were banned from operating as for-profit businesses. Prices and tutoring time also came under regulatory control. Market values collapsed, and large-scale layoffs followed. Suddenly fearing the worst, wealthy tech entrepreneurs rushed to donate to party-approved charitable purposes.

Leaving aside mandatory fines for violating regulations — such as U.S. \$530 million for Meituan, U.S. \$1.2 billion for Didi and U.S. \$2.8 billion for Alibaba (all in 2021-22) — “contributions” from company bosses include U.S. \$1.5 billion from Pinduoduo, U.S. \$2.2 billion from Xiaomi, U.S. \$2.3 billion from Meituan, U.S. \$15 billion from Tencent and U.S. \$15.5 billion from Alibaba. At the company management level, there are also stronger oversight roles for party committees and sales of significant shareholder stakes to SOEs.

All of these increases in party-state control and oversight tend to reduce growth prospects in mutually reinforcing ways. These include limitations on product

Alibaba Group co-founder Jack Ma gave up his role as chairman and disappeared from public view from October 2020 to January 2021 following a Chinese government crackdown on his businesses. He has rarely been seen in public since.





and service development; antitrust restrictions on market share and on leveraging businesses to promote related ones; restrictions on possessing and using customer data; stricter content restrictions related to public morals and political fealty; greater oversight and second-guessing of management decisions, both large and small; capricious, politicized enforcement of regulations; and uncertainty about retaining future profit streams. Stock market prices are one immediate sign of the damage. From February to August 2021, China's six biggest tech companies lost 40% of their value. The two largest, Alibaba and Tencent, lost more than half their value since peaks in 2020 and 2021. Predictably, harsher regulatory environments are even more difficult for startups and smaller companies, tending to increase market concentration and reduce innovation over the longer run.

Showing Chinese Savers Who's Boss

The Chinese are famously thrifty. Because the state manages domestic stock markets and limits foreign investment outflows, Chinese urban households hold 78% of their life savings in residential real estate, compared to 35% of United States households. As China's fast economic growth coincided with rapid urbanization, apartment prices have exploded — in recent years, reaching what economists consider to be unsustainable “bubble” levels, with potentially destabilizing levels of consumer and developer debt. In 2019, home prices in China were roughly twice as expensive as in the U.S. relative to income levels. As of June 2021, house prices relative to disposable income were four to five times higher in Shanghai, Beijing and Shenzhen, as compared to San Francisco and New York. At the same time, vacancy rates are high among owners of two or more homes, and rental returns are low.

Economists argue that there is no safe way to prick a bubble. Yet Xi, who warned in 2017 that housing “is for living in, not for speculation,” showed little caution. In August 2020, he implemented three “red lines,”

Workers pass the logo of e-commerce giant Alibaba Group during a Beijing technology expo. In late 2020, Chinese authorities halted a U.S. \$34.5 billion initial public offering by Ant Group, an affiliate of Alibaba.

measures that abruptly restricted real estate development companies' debt levels. With large developers long emphasizing rapid growth, debt had reached high levels, while tapping unorthodox sources such as advanced sales to buyers and supplier IOUs. With many large developers such as Evergrande suddenly unable to borrow, property prices fell and construction faltered, followed by a wave of international debt defaults. Many buyers watched construction stop on already-financed or paid-for apartments. Some responded by withholding mortgage payments.

Xi has offloaded the problem onto provincial and local governments, which are expected to make sure that advance buyers receive their apartments and to limit the damage to the property sector. Selective bailouts and government takeovers of troubled projects are underway, along with ad hoc local efforts to stimulate residential construction. SOEs focused on infrastructure projects are backstopping the land sales market to keep revenues flowing to local governments. But there is little sign of reconsidering the original failed policy and broadly substituting more moderate debt regulations. Overbuilding and slowing urbanization meant that China's property market was destined to slow. However, the sudden, rigid approach has badly damaged developer and local government finances and shaken consumer confidence. The real estate sector, which is estimated to account for over 20% of China's economy, seems likely to remain depressed.

Showing the Virus Who's Boss

Following its catastrophic neglect and mismanagement of COVID-19 when it first emerged in Wuhan, China,

In spite of ongoing, unpredictable disruptions to supply chains and to investment and consumer confidence, Xi persisted with the zero-COVID policy.

the CCP's intense testing, tracking and lockdown regime initially proved effective.

That success, however, carried the seeds of later problems. Xi pursued vaccine nationalism — relying on less-effective, homegrown vaccines to show that the PRC could solve its problems alone. Meanwhile, millions of elderly Chinese worried about the safety of those vaccines and decided that lockdowns rendered vaccination unnecessary. Then came more transmissible variants, which led to recurring, often long-lasting lockdowns of major Chinese cities and districts — including a two-month lockdown of Shanghai, China's biggest city and economic capital.

In spite of ongoing, unpredictable disruptions to supply chains and to investment and consumer confidence, Xi persisted with the zero-Covid policy until late 2022—when he abruptly dropped all efforts to limit the virus' spread. Why did the CCP not transition sooner to opening up and living with the virus? First, Xi does not easily back down and was loath to admit a problem with one of his signature successes. Second, millions of elderly Chinese remained unvaccinated and Chinese vaccines

have uncertain effectiveness. Third, zero-COVID policies have installed another useful layer of surveillance and control. COVID travel restriction technology has already been used, for example, to limit protests in Zhengzhou against banks failing to make cash available to depositors.

If Xi was so committed to the zero-Covid policy, why was the turn to opening up so sudden and unconditional? It seems that Xi was determined to persist until the virus simply defeated the CCP's best efforts. Constant lockdowns and intrusive mandatory testing regimes were becoming necessary more and more frequently, across larger and larger segments of China's economy. This badly disrupted China's supply chains and business activity, savaging employment and undermining finances. Protests erupted in China's cities on a scale and breadth unseen since 1989. Local government finances were in crisis.

Xi saw little choice but to retreat, but the consequences are dire because over-confidence had led to little preparation. There had been no effort to bring in apparently more effective foreign vaccines and anti-viral treatments at scale. There had been little effort to prepare China's medical system by stockpiling basic medicines and

Cranes sit dormant at an Evergrande housing development in Beijing in September 2021. Despite pledging to make housing more available, Xi Jinping's policies tightened credit to some developers, causing a rash of international debt defaults that cascaded into a long-term real estate crisis.





Workers erect metal barriers around a Beijing neighborhood during a government-imposed COVID-19 lockdown in June 2022.

building up the hospital and clinical infrastructure. As the economic crisis culminated, the decision was made to rush toward herd immunity to revive the economy. Hundreds of millions of cases duly erupted in the cities. The party-state made no effort to stop the traditional lunar new year migration back home — inevitably spreading the carnage to the countryside, with its older population and more primitive medical care. It's doubtful that there will ever be transparency about how many died, including how many died unnecessarily because of the party-state's overconfidence, poor preparation and economically driven rush to open.

Showing the Economy Who's Boss

Xi inherited two major sources of slowing economic growth. First, growth rates naturally decline as poor countries become richer. Second, CCP policy legacies further constrain growth. The former one-child policy has yielded rapid workforce declines. A conglomeration of other regulatory policies — the urban residential permit system, restrictions on rural land use and a relatively narrow path to economic success that's concentrated in a few major cities — limits access to economic opportunities and slows productivity gains.

Xi's goals and methods, meanwhile, have produced a further raft of growth-slowng policies. These are driven partly by Xi's desire to de-emphasize growth relative to "common prosperity" or by ad hoc efforts to raise living standards of China's lower and middle classes. However, Xi's overriding goal — trumping all

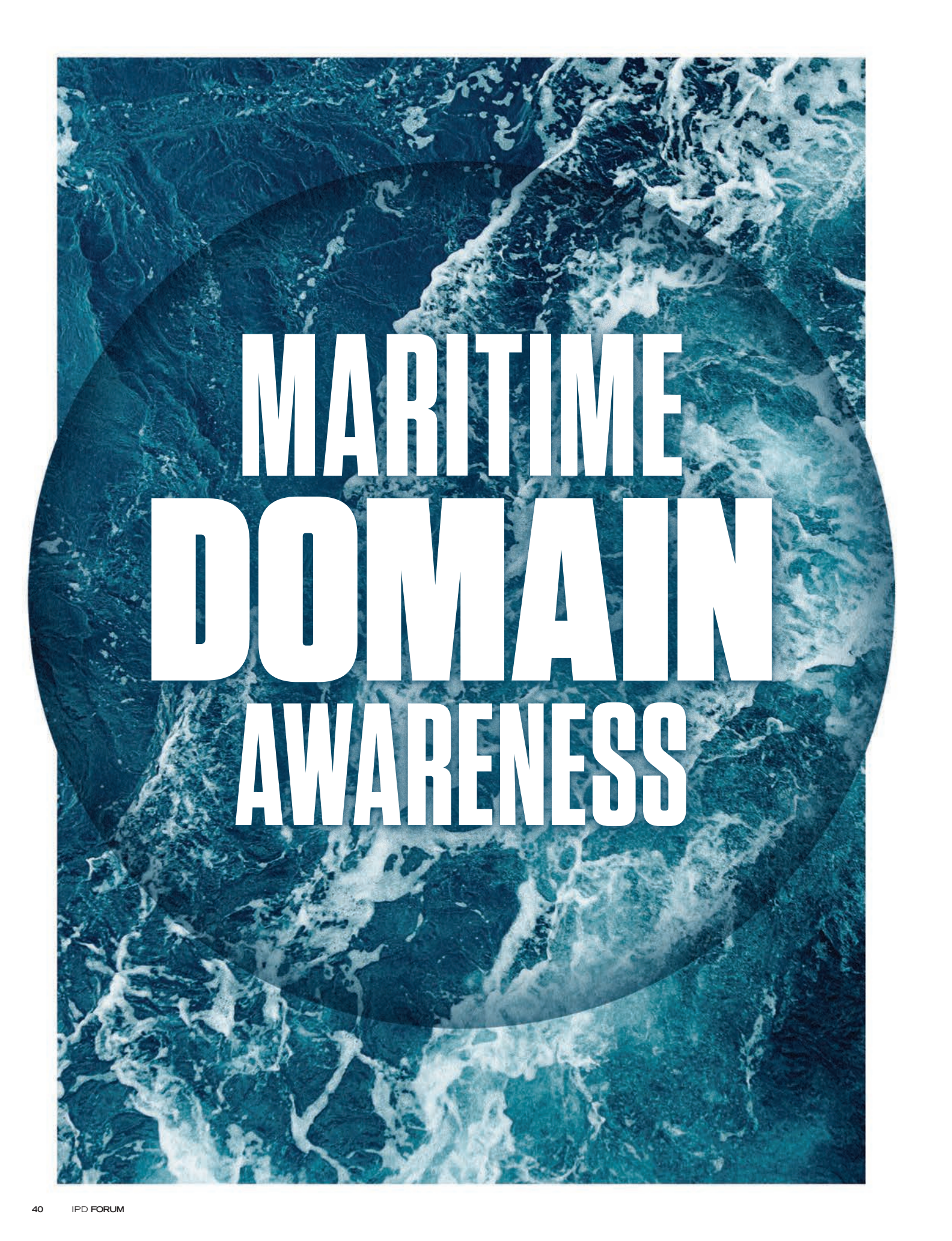
economic goals — is reinforcing the party-state's power and control. His preferred method of achieving that is by imposing grandiose, largely unrelated and often contradictory top-down policies to gain particular outcomes. As Xi's policies further slow growth, he is likely to try solving the resulting problems with more of the same.

Xi's Slower-Growing China is More Dangerous

Slower growth weakens what, in the Reform and Opening Up era, had been the CCP's major source of legitimacy and political power. As substitutes, Xi relies on repression, propaganda and Chinese nationalism. But he is doing so out of ideological conviction, not because it makes sense as political strategy. In the new era, Xi is bent on achieving results, for the glory of China and for his own glory as China's history-making leader.

If those results don't materialize in the economic arena, Xi will look elsewhere. That includes foreign policy, where the greatest risk is a war over self-governed Taiwan, which Beijing claims as its territory. Nor is slowing economic growth likely to constrain China's military buildup. China's central government has plenty of fiscal discretion, yet no priority other than internal security is likely to come before military spending.

It is not a shrinking window of economic opportunity that is making China more dangerous abroad. Xi is largely the author of that narrowing. The same goals and methods that drive Xi to weaken China's growth make him far more dangerous on the foreign policy front. □

An aerial photograph of the ocean with white-capped waves. A large, semi-transparent dark blue circle is centered over the image. The text "MARITIME DOMAIN AWARENESS" is written in white, bold, sans-serif capital letters across the center of the circle.

MARITIME DOMAIN AWARENESS

A UNITED NATIONS PROGRAM PROVIDES TECHNOLOGY, TRAINING TO BETTER SECURE INDO-PACIFIC WATERWAYS

FORUM STAFF | PHOTOS BY UNITED NATIONS OFFICE ON DRUGS AND CRIME

Securing maritime borders requires more than merely having the technology to detect anomalies; it must also include a workforce trained to analyze the data. People with skills to know what they're seeing and how to explain and report it are a key component to deterrence. And the United Nations Office on Drugs and Crime's (UNODC) Global Maritime Crime Programme (GMCP) is expanding its cooperation with maritime law enforcement agencies across the Indo-Pacific to ensure they have both the technology and the talent.

"Given that maritime security challenges cannot be addressed by a single state alone, and given the proximity of states' maritime zones, strengthening interagency and interstate collaboration is key to effectively responding to maritime threats in the region," according to the GMCP's Pacific Ocean Team.

The U.N. Security Council established the GMCP in 2010 to address piracy off the Horn of Africa. At its inception, the program was known as the Counter Piracy Programme. It evolved as it expanded its engagement and geographic reach and began operating in six areas globally.

In the Pacific, the GMCP has improved maritime domain awareness (MDA) by installing coastal automatic identification systems (AIS) and other technology and infrastructure, upgrading marine police surveillance centers, and providing training to maritime law enforcement and local fishermen, according to Shanaka Jayasekara, the program's coordinator for Southeast Asia and the Pacific.

Jayasekara shared details of the GMCP's current and planned engagements with Pacific Island Countries during the 2022 Maritime Security Working Group. The weeklong series of presentations and discussions, held at the Shangri-La hotel in Singapore in May 2022, provided a forum for military, government and interagency personnel to highlight their efforts in the Pacific and brainstorm ways to enhance collaboration.

In that spirit, the Pacific Ocean Team already has an established series of maritime law enforcement dialogues that serve as a platform for cooperation among nations, including Indonesia, Malaysia, the Philippines, Thailand and Vietnam. During these dialogues, maritime law enforcement personnel and legal advisors share maritime trends and identify areas of concern. UNODC also established the Contact Group on Maritime Crime in the Sulu and Celebes Seas to help coastal states and international partners better understand and develop responses to maritime crime.



Bangladesh Coast Guard personnel participate in a UNODC course on effective and safe boat operation.

"With half the surface of the world made up of international waters beyond the jurisdiction of any single state, maritime law enforcement is legally complex and operationally challenging," Miwa Kato, UNODC's operations director, said in the forward to a GMCP annual report. "At the same time, with many of the world's major trade routes relying on safe maritime passage, ensuring the rule of law on water is key to promoting economic development and security

and [those] are indispensable ingredients for the U.N.'s 2030 Agenda for Sustainable Development. This is true especially in regions with rapidly growing connectivity and trade, such as the Indo-Pacific region.”

Such bustling activity in a growing space comes with challenges. Existing frameworks, such as the U.N. Convention on the Law of the Sea (UNCLOS), are designed to limit those obstacles, suggesting avenues for deconfliction and providing guidance where matters of sovereignty are concerned. UNCLOS outlines a comprehensive list establishing rules for governing all uses of oceans and their resources. “It enshrines the notion that all problems of ocean space are closely interrelated and need to be addressed as a whole,” according to the U.N. Division for Ocean Affairs and the Law of the Sea.

A key feature of UNCLOS confirms that “coastal states exercise sovereignty over their territorial sea which they have the right to establish its breadth up to a limit not to exceed 12 nautical miles,” allowing foreign vessels “innocent passage” through those waters.

The convention’s full text includes 320 articles and nine annexes that deal with governing all facets of the ocean, including delimitation, environmental control, marine scientific research, economic and commercial activities, technology transfer, and the settlement of disputes relating to ocean matters.

“All countries, coastal and landlocked, rely on the security of the world’s oceans,” said Ghada Waly, head of the UNODC, according to an agency report. “Freedom of navigation, confirmed by the U.N. Convention on the Law of the Sea, is recognized as a fundamental principle of international law. This time-honored freedom has come increasingly under threat.”

UNODC’s Global Maritime Crime Programme and the Indonesian Coast Guard open a maritime training facility in Batam, Indonesia, in 2022.

PACIFIC PRIORITIES

The Pacific Ocean Team has five priorities for the region:

- Promote white hull diplomacy, using coast guard-type forces rather than regular navy forces to constitute a stabilizing presence by building skills to de-escalate situations at sea and enhance regional cooperation through maritime law enforcement dialogues.
- Establish a trilateral coast guard regional commanders’ network, among Indonesia, the Philippines and Malaysia, to build understanding of developments in the Sulu and Celebes seas and to disseminate maritime crime information under the Sulu and Celebes Seas Contact Group.
- Expand stakeholders in a multi-agency approach to countering drug trafficking in the Andaman Sea and Gulf of Thailand.
- Enhance MDA capability and analysis through equipment support and strengthening analytical capacity.
- Enhance prosecutorial capacity by harmonizing international standards through assessments of maritime law and simulated trials in littoral states.

According to UNODC data, only 30% of border officials say they have received training and that it’s not always adequate.

“In terms of technology-based MDA, we have to look at human intelligence gathering,” Jayasekara said during the working group in Singapore.

It’s not enough to simply equip coastal communities with AIS and radio frequency detection devices. If maritime officials don’t know how to read the data and identify trends, then having the equipment is for naught.

In Fiji and elsewhere in the Pacific, the GMCP is working with village chiefs to collect information from coastal communities and fishermen, training them to





Indonesian personnel practice visit, board, search and seizure procedures during training facilitated by the Global Maritime Crime Programme.

take note of unusual patterns of life at sea and to report those findings to maritime authorities via a social media app. Jayasekara said the human input complements the work of technical sources.

On the technology front, the GMCP in recent months provided X-band coastal radar to maritime surveillance centers to upgrade capabilities in the Cook Islands, Fiji, Kiribati, Nauru, Tonga and Tuvalu.

BETTER TRAINING DETERS TERRORISM

Terrorist groups take note of maritime security vulnerabilities they can use to their advantage, according to “Violence at Sea: How Terrorists, Insurgents, and Other Extremists Exploit the Maritime Domain,” a 2020 report published by Stable Seas, a transnational research initiative to counter threats to peace at sea.

“Increasingly, they strategically leverage sea blindness and weak maritime capabilities to smuggle fighters and weapons, orchestrate attacks on maritime targets and even finance their operations through illicit trafficking and taxation schemes,” the Stable Seas report said. “While the challenges of securing the maritime domain are well understood in both academic and policy circles, developing robust and effective capabilities to quell maritime threats remains an intricate challenge.”

Terrorists make no distinction when targeting

ships at sea, taking aim at military and civilian vessels underway and in port, a GMCP brief noted. They “also make use of the sea as a means of transporting fighters and their weapons to the scene of their attacks,” the agency said. “The ability of states to closely monitor vessels at sea is instrumental to the increasing success of sanctions regimes imposed on terrorism.”

To better combat terrorism, the GMCP works with coast guards, prosecutors, courts and port authorities to improve maritime and port security, deliver a range of surveillance support with the latest satellite technology and facilitate simulated trials of maritime terrorism. “GMCP recognizes that maritime terrorism is often linked to other forms of maritime crime, so many of the capabilities that we provide to maritime law enforcement officers are also relevant to tackling maritime terrorism,” the agency said.

Additional resources include MDA courses to strengthen comprehension of visit, board, search and seizure procedures, safe navigation, piracy, terrorism, and smuggling contraband and people.

“Supporting member states in countering maritime crime threats and criminality at large will contribute directly to improve lives for people around the world,” Kato said in the GMCP annual report. “Reducing impunity and strengthening the rule of law on the world’s oceans is therefore a crucial step in promoting sustainable development, as well as wider peace and security.” □

An illustration featuring a large, stylized hawk silhouette in shades of orange and green, set against a teal background with wavy lines. The hawk's wings are spread, and its tail is visible. Several satellite components, including solar panels and antennas, are depicted in a stylized, cut-out manner, appearing to be part of the hawk's body or flying around it. The overall theme is maritime domain awareness and surveillance.

Maritime TRANSPARENCY

HawkEye 360 Improves Domain Awareness

JAMES MCADEN/HAWKEYE 360

FORUM ILLUSTRATION

Radio frequency (RF) space-based technologies aid in maritime domain awareness (MDA) and in the detection of dark vessels or dark ships. At sea, such vessels have disabled their automatic identification system (AIS) responders to avoid the tracking of their location, identity, course and speed, potentially to carry out nefarious activities. MDA poses a challenge, particularly given nations' limited resources and the vast geography of the seas. It remains critical, however, to protecting maritime resources and national interests in the exclusive economic zones (EEZ) of sovereign nations.

Dark ship activity is documented in illegal, unreported and unregulated (IUU) fishing, as well as other unlawful maritime activities, and remains a global concern. The practice has costly implications, including environmental resource depletion, lost revenue for legal fishing enterprises, food scarcity in coastal areas, illegal shipping of drugs and other illicit goods, and clandestine encroachment in a country's EEZ for underwater resource exploration.

Many Indo-Pacific nations rely on AIS for their MDA, which can create a significant vulnerability. While AIS is helpful, it requires the voluntary transmission of a vessel's identification and location, which ships can easily switch off or alter to avoid detection. With RF detection and geolocation, nations do not have to rely solely on voluntary AIS to monitor their EEZs and maritime areas of interest. RF detection and geolocation from space provide an innovative and cost-effective tool to address these challenges.

During SEACAT 2022, a 10-day multilateral United States Navy-led exercise based at the Information Fusion Centre in Singapore, RF data and analytics from HawkEye 360, a Virginia-based company,

were integrated into SeaVision to support exercise objectives. HawkEye 360 specializes in the detection and geolocation of RF emissions from its constellation of low-Earth orbit satellites, and provides data and analytics to the U.S. and international partner nations for a more secure world.

SeaVision is a web-based maritime situational awareness tool that lets users share information to improve maritime operations, increase maritime security and build partnerships within the maritime community.

More than 20 regional maritime partners participated in or observed SEACAT and saw firsthand how RF data can reveal potential dark vessels within their areas. The demonstrations also highlighted how this data could inform mission planning for other assets such as maritime surveillance aircraft or surface patrols.

HawkEye 360 and Detecting Chinese Vessel Activity

In recent years, the People's Republic of China (PRC) has repeatedly made aggressive moves in the South China Sea — a hotly contested region rich in resources and trade routes — and illegal incursions in the waters around Japan's Senkaku Islands in the East China Sea. By creating, occupying and militarizing artificial features such as reefs, islands and atolls in the South China Sea, in particular, the PRC seeks to assert dominance and diminish other countries' sovereignty claims.

Greater transparency is required to counter such moves as AIS transmissions alone are insufficient. HawkEye 360's RF data can provide a more complete picture of activity in the South China Sea and in other regions such as the Senkaku Islands, allowing nations to respond accordingly to protect their waters.

Maritime partner nations work together during SEACAT 2022.

DAVID LAU/U.S. NAVY



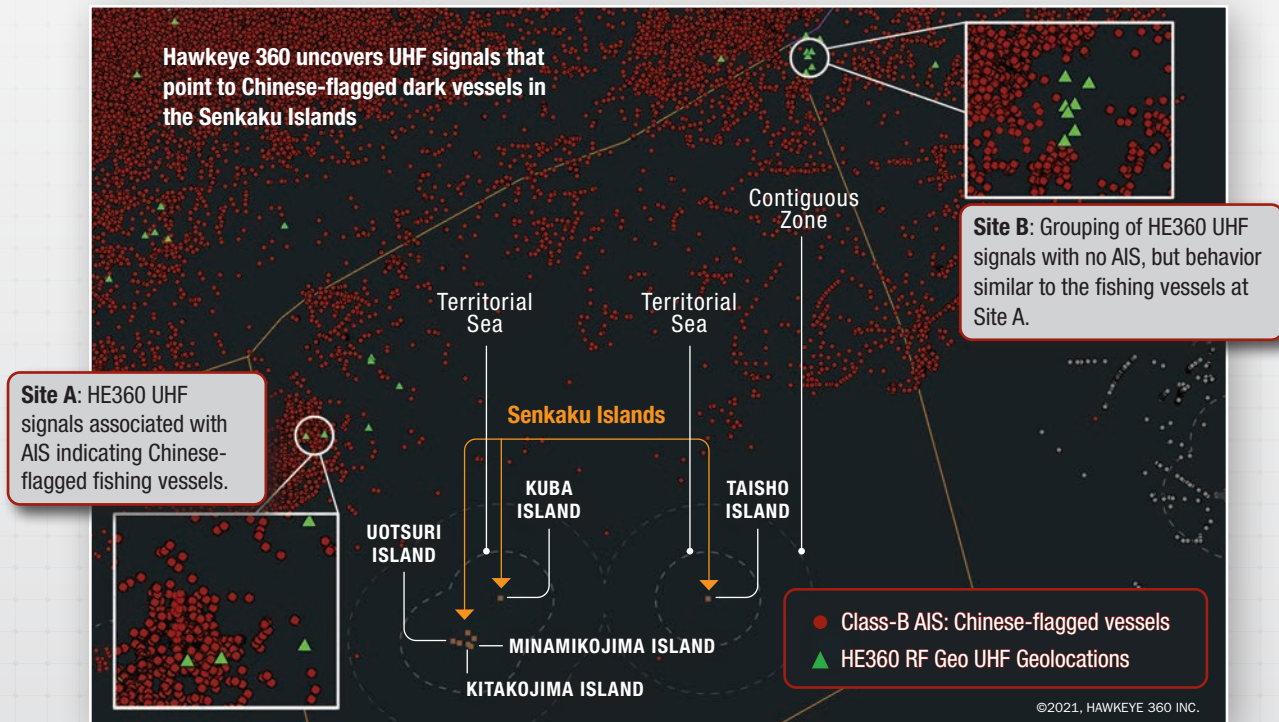
Senkaku Islands

Chinese-flagged vessels have made unlawful intrusions around the Senkaku Islands, prompting objections from Tokyo and eliciting protective measures by the Japan Coast Guard. The Senkakus, which the PRC claims and calls Diaoyu, are home to diverse plant and animal habitats, and desirable fishing grounds. The islands' oil and natural gas reserves and proximity to prominent shipping routes also make them economically attractive and strategically important.

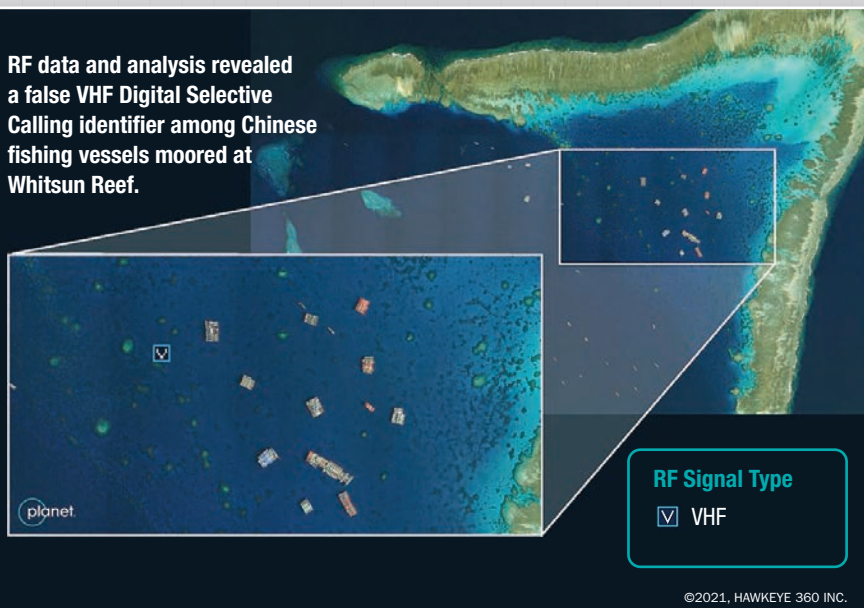
Some of the most egregious IUU fishing takes place in the South and East China seas when vessels attempt to hide their activity by disabling AIS. However, HawkEye 360's RF geolocations can find these

dark vessels by deciphering a range of signals.

During the high fishing season, HawkEye 360 examined activity around the Senkakus. AIS records showed many Chinese-flagged fishing vessels within the disputed region. Even more interestingly, HawkEye 360's RF geosignal data pointed to sites of ultra high frequency (UHF) activity originating in multiple locations where there were no AIS signals. Such signals are fairly unusual among maritime vessels, suggesting Chinese fishing vessels were coordinating activity via UHF push-to-talk radios instead of standard very high frequency (VHF) maritime radios.



RF data and analysis revealed a false VHF Digital Selective Calling identifier among Chinese fishing vessels moored at Whitsun Reef.



Whitsun Reef

In February 2021, 220 Chinese vessels moored near a shallow coral outcropping known as Whitsun Reef, which is also part of the Spratly Islands. The PRC claimed the fleet was made up of fishing vessels seeking protection from bad weather, but the Philippines went on high alert, sending aerial patrols as well as Navy and Coast Guard ships to monitor. The Philippines, the PRC and Vietnam all claim sovereignty over the reef.

Analysis of a communications signal that HawkEye 360 detected at Whitsun Reef indicated a VHF Digital Selective Calling identifier not associated with any known vessel. This could indicate that vessels were using false identifiers to communicate with each other to evade detection.

Scarborough Shoal

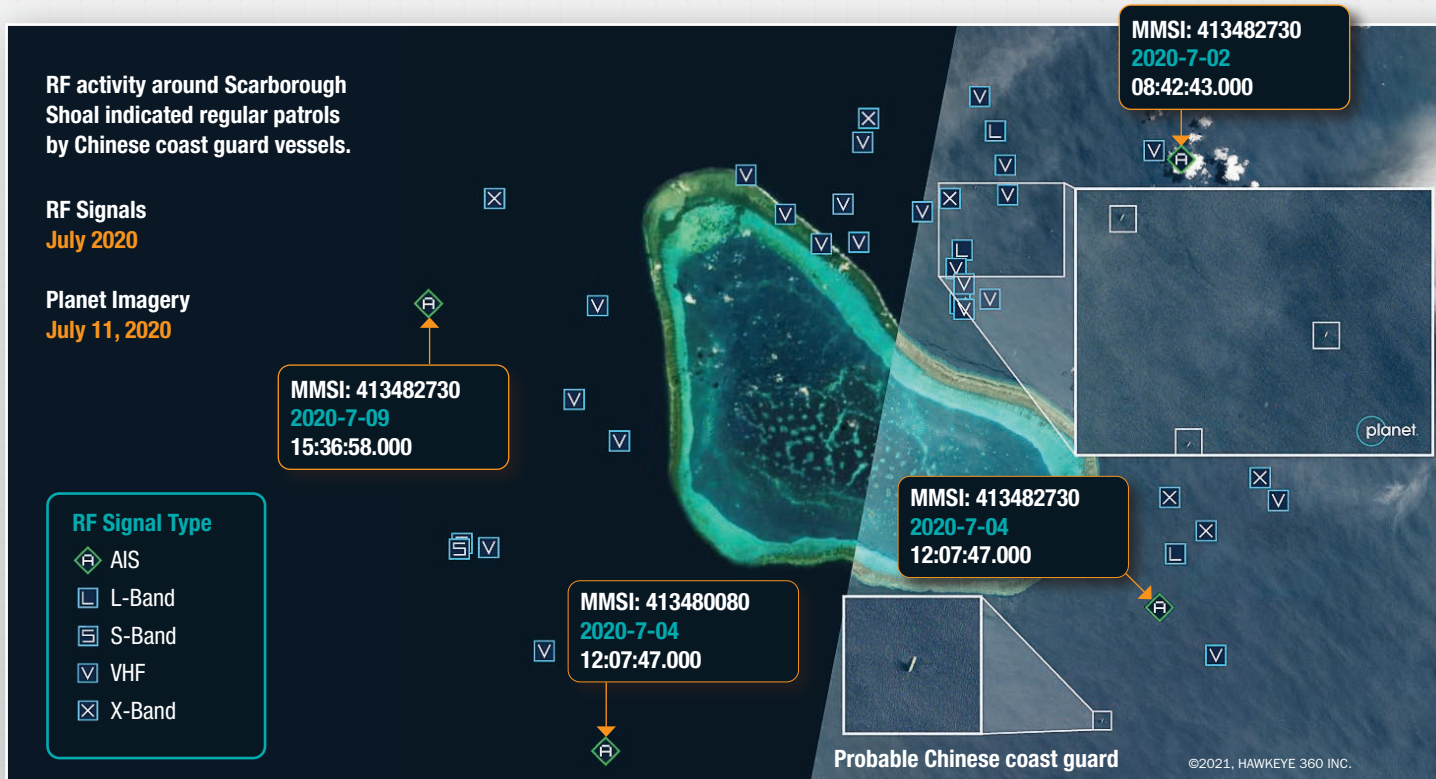
An isolated atoll primarily composed of rocks and coral reefs in the northeastern South China Sea, Scarborough Shoal is claimed by the Philippines and the PRC. Since a tense 2012 standoff between the nations, Beijing has restricted Manila's access to the area.

Though there appeared to be no land masses or structures on the shoal as of July 2020, concerns remain that a military buildup similar to that on Mischief Reef could lead to increased Chinese administrative control of the South China Sea and position Chinese air and naval assets within striking distance of the Philippines.

HawkEye 360 monitored Scarborough Shoal in July 2020 and detected consistent RF activity. In particular, it identified

concentrated RF activity northwest of the shoal, which appears to be a regular meeting spot for vessels.

To corroborate this activity, HawkEye 360 analyzed AIS signals and associated them with two Chinese coast guard vessels during the same period: Zhong Guo Hai Jing 3502 (MMSI 413482730) and China coast guard 3302 (MMSI 413480080). HawkEye 360 then analyzed satellite imagery from Planet Labs, a San Francisco-based imaging company, which revealed a vessel of nearly the same physical dimensions as one of the identified Chinese coast guard vessels, indicating routine patrols of the area.



The Takeaway

The 3.4 million-square-kilometer South China Sea borders Brunei, Indonesia, Malaysia, the Philippines, the PRC, Taiwan and Vietnam. Tensions between the PRC and other claimants over the strategic waterway have run high for years, with Beijing's arbitrary and expansive claims being dismissed by an international tribunal as legally invalid.

The Chinese Communist Party's People's Liberation Army has constructed military outposts on reefs and islands, and its coast guard and navy patrol the waters. The PRC has shown itself willing to push the limits of international regulations and laws to establish dominance in the sea to the detriment of neighboring nations.

The PRC was able to occupy strategic territory in the South China Sea, in part, because of difficulty monitoring vast expanses of water. However, HawkEye 360's RF data can provide a more comprehensive picture of the region, allowing nations to deploy patrols more efficiently to combat the PRC's illegal fishing activity and attempts to establish dominance over disputed islands.

Greater insight into the activities of the Chinese navy, coast guard, maritime militia and fishing fleet would give neighboring nations and the international community a stronger foundation to evaluate and counter such trespasses. Without enhanced monitoring, neighboring nations will be ill-equipped to police and secure their own waters from illegal fishing and other illicit activity. □

INTEGRATING EXCELLENCE

INDO-PACIFIC CRISIS RESPONSE CENTER ADAPTS TO EVOLVING CIVIL-MILITARY ENVIRONMENT

AIYANA PASCHAL/CENTER FOR EXCELLENCE IN DISASTER MANAGEMENT AND HUMANITARIAN ASSISTANCE

Since its inception in 1994, the Center for Excellence in Disaster Management and Humanitarian Assistance (CFE-DM) has built crisis response capacity, enhanced coordination and collaboration, and strengthened relationships to improve the performance of United States and partner militaries during disasters. In addition to these core areas, CFE-DM has undertaken initiatives to meet emerging guidance from the U.S. Department of Defense (DOD) and U.S. Indo-Pacific Command (USINDOPACOM). Examples include facilitating a major peacekeeping operations seminar program for international senior leaders; initiating an HIV/AIDS education program for international forces and pandemic-influenza capacity-building training for Indo-Pacific security forces; assisting a U.S. Agency for International Development program focused on USINDOPACOM and U.S. Africa Command; and supporting counterterrorism fellowship programs.

CFE-DM continues to hone its focus in a dynamic geopolitical and environmental context, and a major part of its mission is training and engaging with civilian and military partners. This has typically been conducted with a natural disaster focus through support to regional organization

and USINDOPACOM exercises, and the center's Humanitarian Assistance Response Training (HART) course. However, conflict is increasingly occurring in heavily populated urban areas. In cases such as Russia's unprovoked invasion of Ukraine in February 2022, authoritarian regimes are targeting civilians to attain political or nationalist objectives by any means. Consequently, CFE-DM is focusing more on conflict scenarios in its training, research and planning.

For the past 25 years, CFE-DM has collaborated with the International Committee of the Red Cross (ICRC) and the University of Hawaii at Manoa to facilitate an annual Health Emergencies in Large Populations (HELP) course. The ICRC developed the HELP framework for humanitarian responders during conflicts and supports its facilitation by partner organizations worldwide. The CFE-DM course, held over two weeks in Hawaii, includes civilian and military participants, a balance of backgrounds that ensures a quality educational experience and a valuable networking opportunity among professionals whose paths may cross again during a humanitarian emergency. The center's HELP course now has more than 600 graduates.



FORUM ILLUSTRATION



Republic of Korea and U.S. Marines clear mud and debris outside a market in Pohang, South Korea, after Typhoon Hinnamnor in September 2022. 1ST LT. DAKOTA A. FORTUNA-CHUN/U.S. MARINE CORPS



Japanese and U.S. forces participate in a humanitarian assistance and disaster relief exercise as part of the multinational Rim of the Pacific (RIMPAC) 2022.

AIYANA PASCHAL/U.S. DEFENSE DEPARTMENT

Civilian and military personnel from 15 nations participate in the Health Emergencies in Large Populations course hosted by the CFE-DM in partnership with the International Committee of the Red Cross and the University of Hawaii in August 2022.

AIYANA PASCHAL/U.S. DEFENSE DEPARTMENT



The center also has a new HART in Conflict (HART-C) course that introduces U.S. joint forces and partners to the complexities of conducting humanitarian assistance in a conflict zone. Topics include the humanitarian notification system, civil-military coordination mechanisms, preparation for large-scale civilian displacement, humanitarian conflict analysis, access and security, and the consequences of armed conflict and war.

The center's other responsibilities include integrating disaster management planning into USINDOPACOM functions and contributing to Office of the Secretary of Defense policies and guidelines. CFE-DM also conducts research and creates informational products such as disaster management reference handbooks, fact sheets and best practices pamphlets, all of which are publicly available online at cfe-dmha.org/publications. Also, CFE-DM promotes initiatives to ease the flow of critical information among civil-military partners during relief efforts. The center's researchers collaborate with academic institutions and partner

organizations on projects and proposals to ensure their findings are available to practitioners and experts in the field and to provide comprehensive analysis of civil-military coordination in disaster environments.

'A MORAL IMPERATIVE'

CFE-DM continues adapting to the changing landscape of natural and manmade disasters, including conflict. Recent initiatives include the Protection of Civilians (POC) and Climate Change Impacts (CCI) programs. The POC program seeks to mitigate and respond to harm suffered by civilians during military operations. There are three main avenues for the effort: supporting USINDOPACOM in adopting and implementing new DOD policies and practices for protecting civilians; identifying and promoting best practices; and fostering dialogue on key challenges and



Villagers forced from their homes after a February 2021 military coup in Myanmar gather along the Moei River on the Thai border. Worldwide, more than 89 million people were forcibly displaced that year because of conflict, persecution or violence. THE ASSOCIATED PRESS

effective practices among regional partners. To define best practices, CFE-DM works with humanitarian agencies and maintains a close dialogue with the ICRC, which, like CFE-DM, recently released a handbook on best practices for civilian harm mitigation.

These efforts coincide with DOD's new Civilian Harm Mitigation and Response Action Plan, released in late August 2022 at the direction of U.S. Defense Secretary Lloyd Austin. Among the plan's measures:

- Establish a civilian protection center of excellence to facilitate departmentwide analysis, learning and training.
- Develop standardized civilian harm operational reporting and data management processes.
- Provide more information to help commanders and operators better understand the civilian environment, including incorporating guidance for addressing civilian harm into military doctrine and operational plans.

"Protecting civilians from harm in connection with military operations is not only a moral imperative, it is also critical to achieving long-term

success on the battlefield. Hard-earned tactical and operational successes may ultimately end in strategic failure if care is not taken to protect the civilian environment as much as the situation allows," a DOD news release noted.

"What had been missing is an overarching DOD approach," said Jenny McAvoy, advisor and team lead for the POC program. McAvoy, who has worked on civilian protection issues for decades, noted the need for "an investment in the types of capabilities that would enable commanders to adapt to the challenges of their specific operation."

In part, the urgency is driven by the growing number of conflicts in urban environments and their devastating impact on civilians. Humanitarian organizations and U.S. government agencies are seeking to address this harm. Beyond the casualties and destruction, the increase in conflicts in densely populated areas has caused a spike in the number of displaced people. At the end of 2021, 89.3 million individuals worldwide were forcibly displaced because of persecution, conflict, violence, human rights violations or major disturbances, according to the United Nations High Commissioner for Refugees. In Myanmar alone, about 1 million



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– Helene Skaardal

U.N. Office for the Coordination
of Humanitarian Affairs

people have been forced to flee their homes and communities amid the ongoing violence sparked by the February 2021 military coup.

As refugees cross borders to flee conflict zones, there is debate over sovereignty — a nation’s ability to control what happens within its borders. Some nations have rejected refugees, while others require them to meet certain entrance criteria. Such policies raise important ethical and practical questions on how to safely accommodate refugee populations given the international principle of non-refoulement, which prohibits forcibly returning refugees to their country of origin if they have a well-founded fear of persecution.

McAvoy highlighted the importance of CFE-DM’s engagement with regional partners in addressing these issues, given the centrality of security partnerships in the U.S.’s overall military strategy. The center also works with the U.N. Office for the Coordination of Humanitarian Affairs (UNOCHA), which focuses on synchronizing global humanitarian response and relief efforts, advocacy, policy development, provision of information management services, and mobilization of financial resources.

“Protection of civilians is the core of everything we do as humanitarian actors to alleviate suffering, reduce risks and prevent violence against crisis-affected populations, which can take many different forms in disasters and conflicts and requires a multisectoral and comprehensive response,” said Helene Skaardal, a humanitarian affairs officer with UNOCHA’s Regional Office for Asia and the Pacific.

MANDATED MILITARY ROLE

Coordination among humanitarian and military actors can vary significantly based on whether the response relates to a natural disaster, armed conflict or another complex emergency. In the Indo-Pacific, many militaries play a mandated role in responding to natural disasters, providing capabilities that often exceed resources available to civilian agencies and nongovernmental organizations (NGOs). Therefore, in a natural disaster response, “it is important that we have clearly established civil-military coordination mechanisms so that we can divide tasks, share information and jointly plan operations,” Skaardal said.

“In complex emergencies and armed conflicts, however, militaries are often a party to the conflict,” she noted. “So, as a starting point, humanitarian engagement with military actors is not based on a cooperation model but rather on coexistence and humanitarian diplomacy.” That’s because humanitarian efforts must always remain independent from political or military objectives, making it crucial for humanitarian actors to remain neutral and impartial while, at the same time, promoting and advocating for protection outcomes. “What we try to do is essentially negotiate humanitarian access to reach conflict-affected people with lifesaving humanitarian assistance and advocate for the protection of civilians and the respect for international humanitarian law,” Skaardal said.

The evolving landscape of warfare, including increasing urbanization and deliberate targeting of civilians, presents substantial challenges for humanitarian efforts to mitigate risk and offer protection. “What we often find in armed conflicts today is that restrictions on movement of humanitarian personnel is directly imposed by armed actors to reduce our access to the populations that are affected,” said Skaardal, who deployed to Ukraine to help improve humanitarian access in conflict zones after Russia’s invasion. “On the one hand, we are unable to reach conflict-affected populations with much needed humanitarian assistance and, on the other, human rights abuses and violence that may take place goes under the radar.”



Residents survey the remains of a shopping center in Kyiv, Ukraine, after shelling by invading Russian forces in March 2022. Disaster response efforts are evolving in the face of the increasing urbanization of conflict worldwide. THE ASSOCIATED PRESS

Negotiating humanitarian access is often slow because of the hierarchical nature of armed actors, which can delay delivery of lifesaving assistance and hinder localized solutions. Providing assistance without engagement with parties to the conflict, however, can place humanitarian personnel at heightened risk. These obstacles have been evident in Myanmar, where the junta in September 2022 ordered U.N. agencies and NGOs to stop providing humanitarian assistance in Rakhine State, where access to communities was blocked by clashes between military forces and ethnic armed groups, The Irrawaddy news website reported.

Despite such challenges, UNOCHA and other organizations are working to protect civilians, alongside efforts to codify the protection of civilians into military practices, such as the DOD's new Civilian Harm Mitigation and Response Action Plan. Still, Skaardal said, accountability mechanisms must be bolstered for violations of international humanitarian law. "Working in the U.N. system and working in the humanitarian sector, the centrality of protection has been there for a long time," she said. "There has been a process in humanitarian institutions for several years to strengthen the centrality of protection, but it is perhaps garnering a new momentum now because of the war in Ukraine, but also the recognition that Ukraine is only one high-profile context out of many, many examples where the civilian populations are suffering the most."

CLIMATE OF CHANGE

The destabilizing impacts of climate change threaten human security. Heatwaves and droughts reduce food production. Floods, storms and wildfires damage and destroy lives, livelihoods and infrastructure. Climate change can render vulnerable lands uninhabitable via inundation or desertification, driving human migration as people escape these threats.

"We have witnessed these impacts that will continue to happen," said Steve Frano, program manager for CFE-DM's new Climate Change Impacts program. "A clear example in the Pacific Islands is sea-level rise. It is not just going to be water moving up and just basically forcing a community out. It's going to be the slow onset example, where there has now been enough sea-level rise and enough storm surge that saltwater intrusion has impacted their ability to live and grow food. If they can't adapt to survive on their land anymore, they have to move ... so where can they go? For many of these countries, their community, their family, their history, everything ties to the land, so the idea of leaving the land is, in some cases, an untenable solution."

The CCI program supports building awareness and exchanging knowledge to emphasize climate change's impact on regional security initiatives that advance a Free and Open Indo-Pacific. A key focus is to facilitate a comprehensive regional network of climate security experts and provide a forum to exchange information and discuss cooperative plans and programs to respond to the security impacts of climate change. By engaging with regional partners, experts can share their country's approach to climate change and security and highlight priorities. "We talk with our allies and partners, we develop programs and initiatives, and we incorporate it in our own planning," Frano said.

Understanding the potential for changes to the natural environment — as well as their effect on people, communities and countries — is also vital for regional military entities such as USINDOPACOM because the issues affect the military's ability to maintain security and stability. As nations turn to others for relief in the face of more frequent and severe natural disasters, there may be worries about diminishing sovereignty. For some Pacific Island Countries, for example, rising seas already are washing away some of the very borders that define their sovereignty — an erosion that may eventually prompt large-scale human relocation and, in turn, undermine the foundations of regional security. "When we look at sovereignty and HADR [humanitarian assistance and disaster response], it's not always going to be the earthquake scenario: something happens; we go and respond to it," Frano said. "But it's these other changes that are going to push us in a direction that will stress countries' abilities to provide services for their people."

Thus, CFE-DM's programs and branches will remain engaged with partners in the region and beyond to ensure that climate change concerns and the protection of civilians are integrated into HADR planning and execution. As it nears its 30th anniversary, CFE-DM remains a rich resource for U.S. and partner militaries, civilian agencies and humanitarian organizations that seek to improve civil-military response to natural and manmade disasters — its core functional areas of training and engagement, research, information-sharing and operational planning are as relevant today as they were when the center was established. At the same time, CFE-DM continues to pivot and evolve to address emerging requirements of the DOD and USINDOPACOM, with the Protection of Civilians and Climate Change Impacts programs just two of the new initiatives to respond to a changing Indo-Pacific and global strategic landscape. □

UNPACKING CHINA'S ECONOMIC STATECRAFT





What Happened When Beijing's Belt and Road Came to Papua New Guinea?

PETER CONNOLLY

Chinese Communist Party (CCP) General Secretary Xi Jinping met eight Pacific Island leaders in Port Moresby on November 16, 2018, and elevated their relationships to “comprehensive strategic partnerships.” Xi then encouraged those who had not joined his Belt and Road Initiative (BRI) to do so. Papua New Guinea (PNG) had led the way by signing a BRI memorandum of understanding (MOU) with the People's Republic of China (PRC) in June 2018 and was hosting the Asia Pacific Economic Cooperation (APEC) forum that year. However, in 2017 most of the Papua New Guinean officials and businesspeople I interviewed did not believe their country would join the BRI because PNG had little to offer China economically. This article draws from a longer piece published in the journal *Security Challenges* in 2020, which compared interviews and observations from my doctoral fieldwork in 2017 with that of 2019 to assess what changed in PNG when it joined the BRI.

Chinese economic migrants to Pacific Island countries have arrived in waves, starting with the first wave, known as “old Chinese,” who departed Fujian and Guangdong provinces from the mid-19th century. The second wave arrived via Southeast Asia in the 1950s and 1970s. The third wave, known as “new Chinese,” began in the 1990s during the PRC's “Going Out” policy, designed to encourage its enterprises to invest overseas. I believe there is now a fourth wave, consisting of Chinese state-owned enterprise (SOE) employees and officials representing Chinese state interests, which grew with the BRI's arrival.

Beijing's One Belt, One Road (OBOR) strategy had started as Xi's vision for the PRC's economically led global engagement in 2013. Four years later, the PRC changed the name for external audiences from OBOR to BRI to avoid the perception that it was a strategy, but continued to use the original words for OBOR in Mandarin. This article uses BRI throughout to refer to OBOR in keeping with common usage in the English-speaking world.

China's Ramu NiCo nickel refinery is located in Basamuk Bay, Rai Coast District, Madang Province, Papua New Guinea. PETER CONNOLLY

Nevertheless, the BRI and OBOR are one and the same. This article contends that the BRI is a geoeconomic strategy to propagate the PRC's global influence and enhance its position as a rising power.

PNG was the first Pacific Island country to join the BRI. Then-Prime Minister Peter O'Neill made an official visit to Beijing in June 2018, seeking support to host APEC that year. Xi reassured O'Neill that Beijing would assist PNG's preparation for APEC, and that he would attend the summit. To support the event, China Harbour Engineering Co. (CHEC) would build 10 kilometers of a four-lane road and APEC Haus, the facility for the forum, in 200 days. Five months later, Xi made a state visit to Port Moresby and invited the leaders of the eight Pacific Island countries that recognized the PRC to meet him there before the APEC summit. They all signed BRI MOUs with the PRC, and two more switched their diplomatic recognition from Taiwan to Beijing the following year, joining the BRI in the process.

These events generated great anticipation of what advantage the BRI could deliver for PNG's development, accompanied by apprehension about what it might cost. However, there remained a lack of clarity about what the BRI was.

A Chinese Official's Perspective

A Chinese official in PNG explained to me in 2019 that the BRI is a "broad concept ... an image, a brushstroke — not a very fine point." The BRI is "a platform for cooperation ... a tool to promote mutually beneficial trade and investment." He emphasized a process of mutual consultation with PNG authorities to align with PNG's national strategy, echoing the BRI's 2018 recalibration after it was criticized for predatory lending. When asked, "So what is a BRI project?" the official admitted: "There is no detailed definition." But he continued, "any project which is in line with the Five Connectivities" of trade, infrastructure, policy, people to people and finance may be "broadly regarded as a BRI project." He added that "Chinese companies have a comparative advantage" because they are more affordable than Western ones.

While these guidelines probably make sense for Chinese strategic planning, they are too broad for others to discern which activities are part of the BRI. That could be by design, allowing the PRC to choose what's in and what's out to suit its global narrative. The official explained that a BRI project does not have to be paid for with Chinese money — multilaterals such as the Asian Development Bank (ADB), the World Bank, or even another country, could provide the financing. Furthermore, the project may have commenced before the BRI existed. "If it aligns with the Five Connectivities, it is a BRI project," he said.

The official's explanation suggests that a BRI project could be anything being delivered by a Chinese company as long as it fits the PRC's strategic narrative. This enables

the PRC to achieve geopolitical objectives in a campaign for global influence by using economic tools. These are increasingly paid for by others within the framework of the BRI.

A New Chinese Perspective

According to a leading member of the Papua New Guinean Chinese business community in Port Moresby, there was an influx of Chinese construction companies to PNG in preparation for the 2015 Pacific Games. Most of them were Chinese SOEs that finished their projects but stayed in the country, driving prices down and raising competition. They had a competitive edge because they brought in workers from China and paid them lower wages, allowing them to undercut local companies' bids by up to 50%.

The businessperson explained that O'Neill had favored Chinese companies, but when he was unexpectedly replaced by Prime Minister James Marape in 2019, the new Chinese became concerned. Marape had pledged to "take back PNG," and this was interpreted by many as a rejection of foreign dominance in some sectors of the PNG economy, including Chinese influence. The Chinese businessperson added the confusion generated by this new policy meant that: "When the government doesn't know, the ADB makes the decision."

The interviewee confirmed that the BRI aims to extend the PRC's political and economic influence in the Pacific. Once the MOU was signed, PNG was considered "on the BRI map" and "open for business" from a Chinese perspective. The number of Chinese SOEs in PNG had slowly grown since the China Overseas Engineering Co. arrived in 1995, but almost doubled in the year after PNG joined the BRI. Between June 2018 and July 2019, the number of Chinese SOEs in PNG increased from 21 to 39. Papua New Guinean, old Chinese and Western companies couldn't compete with this market saturation. Again, most new companies entered the country to do a specific task, then stayed and won contracts by fiercely undercutting competitors. This market domination is amplified by most Chinese companies offering additional tender submissions from subsidiary companies to discourage competition.

This surge in SOE numbers is corroborated by comparing the 2018 and 2020 lists of major Chinese companies in the PRC's Ministry of Commerce (MOFCOM) foreign investment guides for PNG. The PNG Investment Promotion Authority website in late 2019 also indicated more than 79 Chinese companies and 12 associations had been registered in PNG since 1995. This demonstrated the presence of many subsidiaries and smaller companies beyond the major ones listed by MOFCOM.

A Chinese State-Owned Enterprise Perspective

An executive from a Chinese construction SOE viewed the BRI as merely a label for what had already happened



Source: CartoGIS Services, Australian National University

over two decades through the “Going Out” policy. He lamented that the BRI was bad for business because it scared Western governments, describing it as a “loud announcement of China’s rise [that] has made no difference” in PNG as it brought no additional Chinese funding. “We are here for business and want to avoid political trouble,” he said, but clarified: “We are businessmen, but we are state-owned businessmen — an SOE can be ordered to support what the state requires.” The major SOEs work closely with the MOFCOM’s economic and commercial counselor, who appears to coordinate BRI projects in PNG. The Chinese executive said SOEs accept that such direction may serve a strategic or political purpose, even if it lacks economic logic or expediency.

SOEs are the principal means of China’s economic statecraft and appear to be the ideal geoeconomic instrument. David Baldwin in 1985 established economic statecraft techniques had been used throughout history to exercise noneconomic power in attempts to influence the policies of other states. Edward Luttwak in 1990 proposed “geo-economics” as geopolitical competition short of war, and Robert Blackwill and Jennifer Harris in 2016 described this as the pursuit of geopolitical goals

with economic tools. Such intent can cause economic tools to operate at odds with economic assumptions. For example, Ching Kwan Lee in 2017 demonstrated that Chinese SOEs in Zambia were differently motivated to their Western counterparts because they sought “state capital” instead of pure economic profit. An example of this philosophy in PNG was the Ramu NiCo nickel and cobalt mine and refinery in Madang province, operated by the SOE China Metallurgical Group Corp. (MCC). From 2007, the Ramu NiCo mine operated at a loss for more than a decade to achieve the long-term accumulation of these strategic resources.

However, the Solomon Islands’ diplomatic switch from Taipei to Beijing in 2019 provided an even more direct example of a Chinese SOE being employed for economic statecraft to achieve geopolitical outcomes. The general manager of the South Pacific for China Civil Engineering Construction Corp. (CCECC), based in Vanuatu, offered U.S. \$500 million worth of grants and loans to the Solomon Islands to encourage Prime Minister Manasseh Sogavare to make the switch. CCECC has since committed to building the infrastructure in Honiara for the 2023 Pacific Games, satisfying a significant interest for the Sogavare government.

The SOE executive explained that he would happily use foreign funds and declared an absolute preference for ADB money over Chinese policy banks or commercial banks. He said SOEs specifically prefer ADB financing because the bank conducts professional investigations and facility studies, while Chinese banks require the host nation to conduct these processes, which can cause inconsistency and delays, particularly in payment. There is no pressure from the Chinese state to use Chinese financing as part of the BRI, he added. The PRC seems happy to spend others' money and take the credit for it.

Funding the BRI

Attraction to ADB financing was common among Chinese SOEs in PNG between 2014 and 2019. CHEC and CCECC, which appear to have become the two leading Chinese SOEs for advancing the BRI in the Southwest Pacific, were particularly focused on multilateral funding. About 90% of CHEC projects in PNG were funded by the ADB and 75% of CCECC projects in Vanuatu were funded by the World Bank, according to senior executives in 2019. At the ADB's office in Port Moresby, an infrastructure specialist estimated Chinese SOEs held contracts for more than 80% of ADB infrastructure projects in PNG in 2019. He explained the ADB's rigorous processes and provided data for three decadelong infrastructure programs to expand and improve road networks in the highlands and to improve provincial airfields. These projects are clearly important for PNG's economy and people.

The specialist believed the Chinese companies preferred the ADB because it pays contractors directly and reliably. He said Chinese SOEs always produce the lowest bids, while the ADB receives good value from this competition and ensures quality through its processes.

Four of the ADB's biggest contributors, Japan, the United States, India and Australia, don't support or participate in the BRI. These countries are committed to assisting PNG's development but would not classify their contributions through the ADB as part of the BRI. At the same time, projects funded by their money but delivered by Chinese SOEs for the ADB are often claimed by the PRC as BRI projects. While the PRC makes a significant contribution to the ADB's funds, in 2018 it was also the ADB's largest borrower. This has attracted surprisingly little attention, despite having significant implications for the PRC's competitors.

Dinny McMahon, an author and former Wall Street Journal newspaper financial correspondent in China, analyzed the foreign currency holdings of China Development Bank (CDB) — the larger of the two Chinese policy banks. He discovered that CDB increased its foreign currency steadily until 2014 but slowed to an incremental rise from 2014 to 2016, just as Xi began to espouse the OBOR. In 2017, as the rebranded BRI gained momentum with the first Belt and Road Forum,

CDB's foreign currency holdings started to decline. "It struck me as genuinely strange because here was CDB, supposed to be the tip of the spear when it comes to China's BRI, and yet its foreign currency was declining," McMahon said. He attributed this to the reduction of China's foreign exchange reserves by nearly 25% in 2016, from U.S. \$4.2 trillion to U.S. \$3.2 trillion. The People's Bank of China, its central bank, tried to defend the renminbi by using the two policy banks as a front to help prop up China's currency.

This affected the application of the BRI to PNG. Xi promised a U.S. \$300 million loan from CDB to O'Neill at the APEC 2018 forum, but it appears the CDB was reluctant to honor it. After a year of fruitless negotiations, Australia provided the loan as direct budget assistance to meet PNG's debt. Could it be that Chinese ministries such as MOFCOM, and policy banks such as the CDB, see the BRI as more of a risk than an opportunity, particularly in places perceived to be more peripheral and less secure? The smaller ExIm Bank has traditionally had a greater presence in Pacific Islands lending, but it appears to have experienced similar pressure.

This suggests that the international banking system may end up paying for a significant share of the projects promised by the PRC under the BRI. While that may not be in keeping with China's strategic messaging, it aligns with every Chinese perspective reviewed in this case study. The Chinese SOEs in PNG clearly prefer ADB financing and have created an environment of intense competition for multilateral financing, in which most others can't compete with their low costs. China's aid, policy banks and central agencies may have achieved their mission by establishing dominance of the PNG market, leaving the PRC satisfied to grow its reputation through a BRI increasingly funded by others. This environment allows Chinese economic statecraft to pursue geopolitical and geostrategic objectives.

Papua New Guinean Perspectives

Having observed the arrival of the BRI in PNG from Chinese perspectives, the most important question is: What does it mean to Papua New Guineans? Most people in PNG see the need for infrastructure and finance to develop the economy, nationally and locally. This led to high expectations for the BRI. However, these hopes have been mixed with balanced and pragmatic views of the intent behind the BRI, how it's delivered and its potential consequences. Such thinking is the basis for PNG's agency in pursuit of its national interests.

In 2017, before his nation joined the BRI, a PNG entrepreneur described what he hoped to see from an economic partnership with the PRC. He noted "China is changing the landscape of this country with roads, ports and optic fibre" and "Fujian grass roots opportunism" but believed PNG had only been "getting the scraps from China." He believed "the period of 'wild



Chinese workers from the Ramu NiCo refinery buy produce from Papua New Guinea women near Basamuk. SHAUN GESSLER



west mercantilism’ is at an end,” as the PNG market had learned to demand due diligence and higher standards, while China’s leadership now required SOEs to lift their standards of compliance globally. “In the next 10 years, China will either make or break this region,” he said. In relation to China’s influence, he concluded that the choice of “coexistence over cohabitation depends on the discipline of the state.” This discipline has been tested since 2018.

Two years later, a Papua New Guinean analyst described how O’Neill was perceived to have been heavily influenced by the Chinese while he was in office, and that his removal was related to this perception. When O’Neill was desperate for finance in preparation for APEC, “China saw opportunity to strengthen its hand with PNG,” the analyst said. Then-PNG Deputy Prime Minister Charles Abel was concerned about debt and wanted to use ADB or World Bank financing instead of ExIm Bank. According to several officials, the perception of elite capture in

China’s relationship with PNG grew between the signing of the BRI MOU in June 2018 and APEC five months later.

A senior official from the PNG Department of Foreign Affairs noted that the PRC is an important development partner, delivering cheap infrastructure that PNG desperately needs. But he added, “While we need to develop, we also need to remain mindful of our own regulations ... It’s a good thing, but we need to exercise some integrity on both sides.” He observed PNG was at a crossroads and needed to develop a “filtering mechanism” to preserve its national interests in its relationship with China.

A senior Papua New Guinean security official observed that the China-PNG political relationship in 2018 was unprecedented and matured at APEC through conversations between O’Neill and Xi. Other politicians were concerned they were left out of these discussions. The security official believed this contributed to O’Neill’s downfall, noting that “the



A cruise ship docks in Rabaul in Papua New Guinea's East New Britain province in August 2017. PETER CONNOLLY

political courtship was disturbing.” He acknowledged the potential for the Chinese presence to affect security and stability in PNG. Another senior PNG official observed that “the Chinese are feeding into division through their unwillingness to assimilate into communities.” China’s growing presence risks unintended consequences that could lead to insecurity or map onto existing grievances. I have referred to this as “accidental friction.”

Interviews with senior PNG government officials in 2017 and 2019 indicated a shared understanding of their national interests. This included an awareness of the need to balance risks and opportunities as their nation’s relationship with the PRC developed. After APEC 2018, most were concerned about PNG’s increasing debt to China. This appears to have been

well-founded according to a 2021 report by AidData, a research lab at The College of William & Mary in the U.S. PNG’s debt exposure to China as a percentage of gross domestic product was 17.2%, comprising 11% hidden debt (from SOE to SOE) and 5.2% sovereign debt (from government to government). The report also found that the PRC’s financial commitments to PNG had declined after it joined the BRI, in keeping with McMahon’s analysis.

These findings are perplexing but also indicate choices for PNG. Notwithstanding the issue of debt, if the BRI in PNG is largely being paid for by non-Chinese financial sources such as the ADB, this in theory gives PNG greater freedom to secure needed development at a lower cost without being beholden to the PRC. There is growing evidence this is the case, as part of broader trends identified by George Carter and Stewart Firth as a “new Melanesian assertiveness,” and by Greg Fry and Sandra Tarte as the “New Pacific Diplomacy.”

Noneconomic Costs

The PNG government has increasingly pursued its national interests within its relationship with the PRC over the past three years. In 2020, Marape refused to renew the lease on the Porgera gold mine in Enga province, which was 47.5% owned by China’s Zijin Mining Group. Later that year, the PNG Pandemic Controller David Manning sent 180 Chinese workers from the PRC’s leading SOEs in PNG back to China after determining they were part of a secret Chinese vaccine trial. In 2022, an interagency PNG task force raided the Chinese-owned MCC Ramu Nico mining operation, finding the work permits and visas of 260 staff were not compliant. Most importantly, China’s 10 Pacific Island partners rejected the PRC’s “Common Development Vision” at their second Foreign Ministers’ Meeting in May 2022. There have also been reactions to the Chinese presence by tribal power structures and local governments acting to protect their interests.

From a Papua New Guinean perspective, the BRI has brought mixed results. It has created the opportunity for cheap, rapidly produced infrastructure, along with trade and business opportunities. However, PNG officials were wary that these opportunities came with risk, frustration and noneconomic costs, as the PRC’s intent became clearer. As PNG negotiates its relationship with China, its government increasingly sees the BRI for what it is: a geoeconomic strategy that uses economic statecraft to deliver China’s grand strategy. The BRI’s perceived economic advantage, therefore, incurs noneconomic costs. It is not win-win, even if sold as such. This knowledge is fundamental to evaluating options in pursuit of PNG’s national interests. □

This article was adapted from “The Belt and Road comes to Papua New Guinea: Chinese Geoeconomics with Melanesian characteristics?” published in “Security Challenges,” Vol. 16, No. 4, Geo-Economics in the Indo-Pacific (2020), pages 41-64. It has been edited to fit FORUM’s format. To view the full article, visit <https://www.jstor.org/stable/10.2307/26976257>.



In Thailand's Deep South, Artists Strive To Alter Its 'Violent Image'

STORY AND PHOTOS BY BENAR NEWS

The beaches in Pattani province, in the heart of Thailand's Deep South, are pristine but mostly deserted. Outsiders hardly venture here because the mainly Muslim and Malay-speaking border region is synonymous with an armed separatist insurgency that has simmered for decades with no end in sight.

But artists and residents of Pattani town, the provincial capital and hub of the longtime salt trade in the far south, are working to change that negative image by showcasing the region's rich artistic and cultural heritage, which is distinct from anywhere else in Thailand.

"We want to tell a different story," said Hadee Hamidong, an organizer of Pattani Decoded, a creative and design art show that started in 2019 but had to be shelved for two years because of the COVID-19 pandemic. "We want to change the violent image and show another layer. There is so much more here than just those incidents. There are people and different aspects to life. There is

Artist and sculptor Piraporn Pean demonstrates her craft during Pattani Decoded, which had a theme of "Deep Salt" in 2022.

centuries-old history and heritage."

"Deep Salt" was the theme of the 2022 art show. Held in early September, the exhibit drew an estimated 30,000 people at venues in Pattani town and other sites, including a salt farm, Hadee said. Another group, Patani Artspace, which brings together 10 galleries, was staging a parallel arts festival through November 2022 in towns in Pattani and other provinces in the Deep South.

The coastal town of Pattani, which faces the Gulf of Thailand, has long been a center for harvesting salt from the sea and a trading hub for salt exports to China and other foreign markets. The variety found here is nicknamed "sweet salt" because of its mellow taste. However, salt farming has declined dramatically in recent years due to climate change

and unpredictable weather patterns. “It is hard work and requires soil, water and sunlight,” said Abdul Ka-bu, a local salt farmer who attended the “Deep Salt” exhibit. “We cannot depend on them anymore as we could in the past.”

In one video shown at the exhibit, a longtime salt farmer lamented that he sold only 10 sacks in 2021, compared with the 500 to 600 sacks he used to sell a few years ago. The Deep South is among the country’s poorest regions. In Pattani province, the poverty rate is 34.2%, compared to 6% nationally, the World Bank reported in 2019.

The exhibit organized by Hadee also featured handicrafts and calligraphy, musical performances, boat painting, batik-fabric painting, and culinary demonstrations, among other activities. “We wanted to promote local identity, local culture, local heritage, local costume and local knowledge,” said Hadee, who belongs to Melayu Living, an artists’ cooperative based in Pattani.

One of the show’s pieces, “Field Work” by architect-artist Savinee Buranasilapin, featured 600 small circular mirrors, each mounted on steel rods planted in the middle of salt flats at Na Kluea Laem Nok, just outside the city. The concept was to reflect Pattani’s salt trade past when merchant ships docked near the city’s glittering lights.

Nattapon Pichairat, 40, an artist and fabric designer, drew plants found around salt fields on paper and later printed them digitally on fabric. “I chose plants because they are these beautiful little objects that bring such immense joy and feeling of peace ... I want to tell others about the beauty and nature of Pattani and nearby areas,” he said, adding that he wanted to “reimagine the city as a cultural hub.”

In “Le Sel de La Vie [The Salt of Life],” Emsophian Benjametha showcased handcrafted ceramic items inspired by Pattani’s “sweet salt” from the production process to the destination. “Without salt, there is no life. Without life, there is no art. Without art, there is no civilization,” said the 43-year-old designer and artist trained in France. “Everyone is welcome in Pattani, a small city with a big heart and a very long and rich history. It’s not bombs and danger. There are many good things here: craft, design, food, the old houses.”

The region that now makes up the Deep South was once the heart of a Muslim principality that included several neighboring provinces. The British gave the region to Thailand, which annexed it in 1909. Secessionist groups have been waging a rebellion since the 1960s.

Rueanglada Punyalikhit, a lecturer at Silpakorn University, said events such as “Deep Salt” help the region shed its violent image. As part of that effort, she helps local entrepreneurs develop innovative natural products, including herbs, food, drinks, textiles and crafts, made from locally available raw materials. “It is not justified that only violence defines your identity,” Rueanglada said. “From the outside, the situation does not look good due to the news about violence. But when you come here, you can see that life is normal, and it’s not dangerous as others think.”



“Without salt, there is no life,” said artist Emsophian Benjametha, whose handcrafted ceramic items were inspired by Pattani’s salt trade.



“Field Work,” an installation at the Pattani Decoded art show in Thailand in September 2022, featured 600 small circular mirrors mounted on steel rods planted in the middle of salt flats to reflect the region’s trading history.



Pattani Decoded also featured culinary demonstrations, musical performances, boat painting and other activities promoting local culture and heritage.



Meet Japan's Cyborg Cockroach, Crawling to a Disaster Near You

STORY AND PHOTO BY REUTERS

If an earthquake strikes in the not-too-distant future, trapping survivors under tons of rubble, the first responders to find them could be swarms of cyborg cockroaches. That's a potential application of a recent breakthrough by Japanese researchers who demonstrated the ability to mount "backpacks" of solar cells and electronics on the bugs to remotely control their motion.

Kenjiro Fukuda and his team at the Thin-Film Device Laboratory at Japanese research giant Riken developed a flexible solar cell film that's 4 microns thick — about 1/25th the width of a human hair — and can fit on the insect's abdomen. The film allows the roach to move freely while the solar cell generates enough power to process and send directional signals into sensory organs on the bug's hindquarters.

The work builds upon insect-control experiments at Nanyang Technological University in Singapore and could result in cyborg insects that can enter hazardous areas much more efficiently than robots. "The batteries inside small robots run out quickly, so the time for exploration becomes shorter," Fukuda said. A key benefit of a cyborg insect "is that when it comes to an insect's movements, the insect is causing itself to move, so the electricity required is nowhere near as much."

Fukuda and his team chose Madagascar hissing

cockroaches for the experiments because they are big enough to carry the equipment and have no wings that would get in the way. Even when the backpack and film are glued to their backs, the bugs can traverse small obstacles or right themselves when flipped over.

The research still has a long way to go. In a recent demonstration, Riken researcher Yujiro Kakei used a specialized computer and Bluetooth signal to direct the cyborg roach to turn left, causing it to scramble in that general direction. But when given the "right" signal, the bug turned in circles. The next challenge is to miniaturize the components so the insects can move more easily and sensors and even cameras can be mounted. Kakei said he built the backpack with U.S. \$35 worth of parts bought in Tokyo's famed Akihabara electronics district.

The backpack and film can be removed, allowing the roaches to go back to life in the lab's terrarium. The insects mature in four months and have been known to live up to five years in captivity.

Beyond disaster rescue bugs, Fukuda sees broad applications for the solar cell film, composed of microscopic layers of plastic, silver and gold. It could be built into clothing or skin patches to monitor vital signs. On a sunny day, a parasol covered with the material could generate enough electricity to charge a mobile phone.

TAKING AIM

VICTORIA GRANADO/ALASKA NATIONAL GUARD

B. Munkherdene helps a young archer draw a bow as part of a traditional Naadam festival — which includes wrestling, horse racing and archery — held during the multilateral Gobi Wolf exercise in Bayankhongor, Mongolia, in September 2022. Military service members and first responders from Mongolia and United States Army Pacific, as well as delegates from Bangladesh, Nepal, Sri Lanka, Thailand, the United Kingdom and Vietnam, participated in disaster relief and humanitarian assistance training.

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