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Military and Security Developments Involving the People's Republic of China 2012

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Annual Report to Congress:

Military and Security Developments Involving the People's Republic of China 2012

A Report to Congress Pursuant to the National Defense Authorization Act for Fiscal Year 2000

SECTION 1238, "ANNUAL REPORT ON MILITARY AND SECURITY DEVELOPMENTS INVOLVING THE PEOPLE'S REPUBLIC OF CHINA," of the National Defense Authorization Act for Fiscal Year 2012, which amends the National Defense Authorization Act for Fiscal Years 2010 (Section 1246) and 2000 (Section 1202), provides that the Secretary of Defense shall submit a report "in both classified and unclassified form, on military and security developments involving the People's Republic of China. The report shall address the current and probable future course of military-technological development of the People's Liberation Army and the tenets and probable development of Chinese security strategy and military strategy, and of the military organizations and operational concepts supporting such development over the next 20 years. The report shall also address United States-China engagement and cooperation on security matters during the period covered by the report, including through United States-China military-to-military contacts, and the United States strategy for such engagement and cooperation in the future."

Executive Summary

THE PEOPLE'S REPUBLIC OF CHINA (PRC) is pursuing a long-term, comprehensive military modernization program designed to improve the capacity of China's armed forces to fight and win "local wars under conditions of informatization," or high-intensity, information-centric regional military operations of short duration. China's leaders view modernization of the Chinese People's Liberation Army (PLA) as an essential component of their strategy to take advantage of what they perceive to be a "window of strategic opportunity" to advance China's national development during the first two decades of the 21st century. During this period, China's leaders are placing a priority on fostering a positive external environment to provide the PRC with the strategic space to focus on economic growth and development. At the same time, Chinese leaders seek to maintain peace and stability along their country's periphery, expand their diplomatic influence to facilitate access to markets, capital, and resources, and avoid direct confrontation with the United States and other countries. This strategy has led to an expansion of China's presence in regions all over the world, creating new and expanding economic and diplomatic interests.

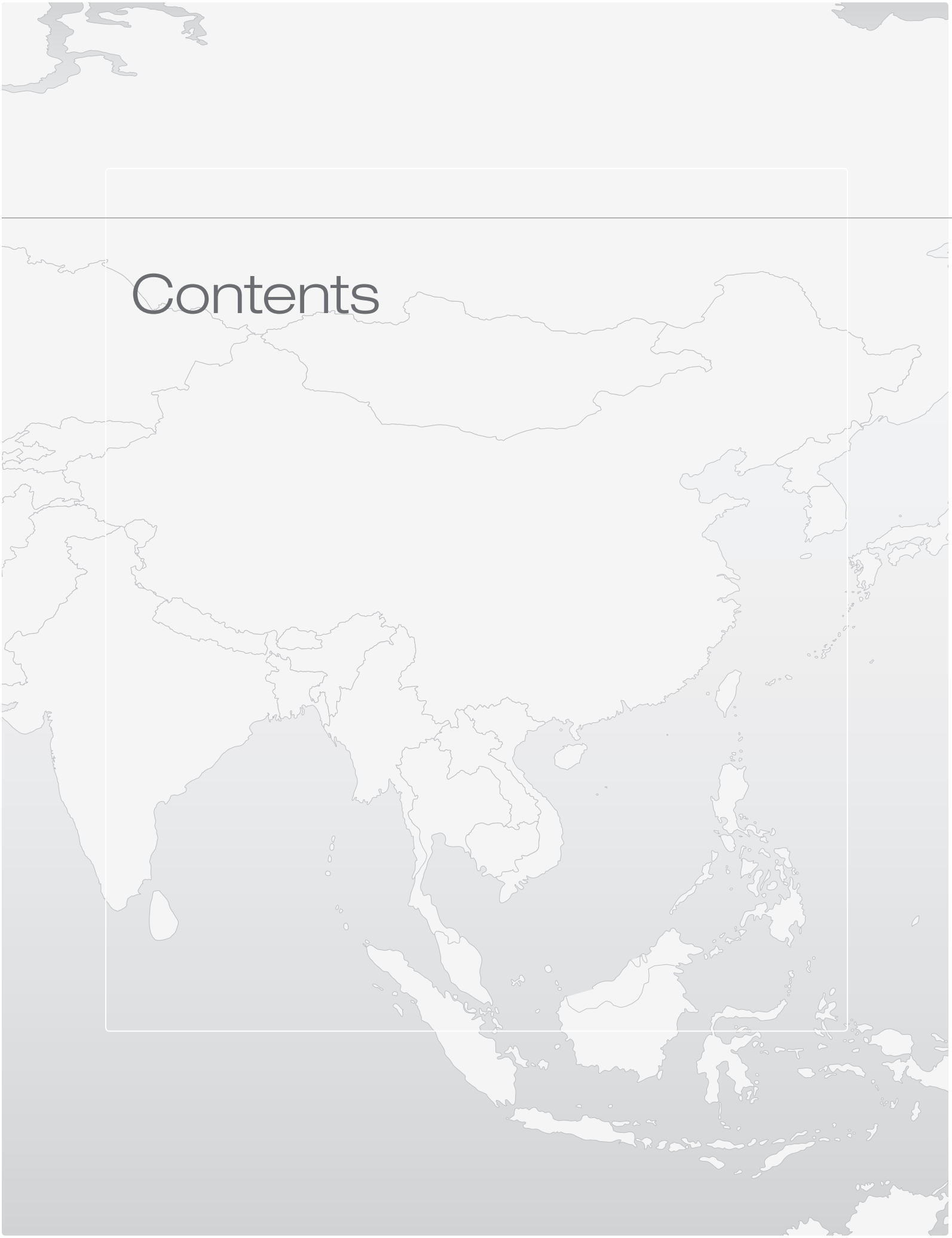
As these interests have grown, and as China has assumed new roles and responsibilities in the international community, China's military modernization is, to an increasing extent, focusing on investments in military capabilities that would enable China's armed forces to conduct a wide range of missions, including those farther from China. Even as the PLA is contending with this growing array of missions, preparing for contingencies in the Taiwan Strait remains the principal focus and driver of much of China's military investment. In this context, over the past year, the PLA continued to build the capabilities and develop the doctrine it considers necessary to deter Taiwan from declaring independence; to deter, delay, and deny effective U.S. intervention in a potential cross-Strait conflict; and to defeat Taiwan forces in the event of hostilities.

To support the PLA's expanding set of roles and missions, China's leaders in 2011 sustained investment in advanced cruise missiles, short and medium range conventional ballistic missiles, anti-ship ballistic missiles, counterpace weapons, and military cyberspace capabilities which appear designed to enable anti-access/area-denial (A2/AD) missions, or what PLA strategists refer to as "counter intervention operations." The PLA also continued to demonstrate improved capabilities in advanced fighter aircraft, as evidenced by the inaugural flight testing of the J-20 stealth fighter; limited power projection, with the launch of China's first aircraft carrier for sea trials; integrated air defenses; undersea warfare; nuclear deterrence and strategic strike; improved command and control; and more sophisticated training and exercises across China's air, naval, and land forces.

Underscoring the extent to which China's leaders are increasingly looking to the PLA to perform missions that go beyond China's immediate territorial concerns, over the past year the PLA deployed assets to support non-combatant evacuation operations from Libya, extended its presence in the Gulf of Aden for a third year of counterpiracy operations, took on leadership roles in United Nations peace operations, and conducted medical exchanges and a service mission to Latin America and the Caribbean using the PLA Navy's hospital ship.

During their January 2011 summit, President Barack Obama and China's President Hu Jintao committed to work together to build a cooperative partnership based on mutual respect and mutual benefit. Within that framework, the U.S. Department of Defense seeks to build a military-to-military relationship with China that is healthy, stable, reliable, and continuous. Strengthening the U.S.-China military-to-military relationship is a part of shaping China's choices by encouraging it to cooperate with the United States and its allies and partners in the delivery of international public goods, including in such endeavors as counterpiracy, international peacekeeping, and humanitarian assistance and disaster relief operations. As the United States builds a stronger foundation for a military-to-military relationship with China, it also will continue to monitor China's evolving military strategy, doctrine, and force development. In concert with Allies and partners, the United States will continue adapting its forces, posture, and operational concepts to maintain a stable and secure Asia-Pacific security environment.

Contents



Executive Summary ii

Chapter 1: Chinese Military Strategy And Doctrine 1-4

Chapter 2: Force Modernization Goals And Trends 5-10

Chapter 3: Military-To-Military Contacts 11-14

Chapter 4: The PRC's Taiwan Strategy 15-20

Appendix 1: Size, Location And Capabilities Of Chinese Military Forces 21-26

Appendix 2: China And Taiwan Forces Data 27-32

Appendix 3: Military-To-Military Exchanges 33-36

Appendix 4: Other Maps And Charts 37-44

1

Chinese Military Strategy And Doctrine

Overview

China's leaders view the first two decades of the 21st century as a "period of strategic opportunity" for China's growth and development. They assess that this period will include a generally favorable external environment, characterized by interdependence, cooperation, and a low threat of major power war. They believe this provides China a unique opportunity to focus on internal development while avoiding direct confrontation with the United States and other great powers. China's leaders do not expect this period to be free of tension or competition (as evidenced by periodic flare-ups with neighbors over territorial disputes in the South China Sea) or to last indefinitely.

China's foreign and security policies remain aimed largely at taking advantage of and prolonging this window of opportunity. To do this, Beijing seeks to emphasize positive relations with neighbors and constructive engagement in international affairs, key components of what Beijing calls its "peaceful development path." In a December 2010 essay on China's foreign policy strategy, PRC State Councilor Dai Bingguo characterized peaceful development as China's "basic state policy and strategic choice" and claimed that China's "biggest strategic intention" is to improve the lives of its people.

China's Strategic Objectives

Within this context, China pursues a set of overriding strategic objectives that have remained fairly consistent over the past decade. These objectives include preserving Communist Party rule, sustaining economic growth and development, defending national sovereignty and territorial integrity, achieving national unification, maintaining internal stability, and securing China's status as a great power.

With its growing power and international status, China periodically acts more assertively in pursuit of its strategic priorities, while also seeking to take advantage of a favorable external environment to pursue economic and military modernization goals.

Beijing is finding it increasingly difficult to balance these interests, particularly when the pursuit of one conflicts with the pursuit of another. For example, although defending territorial claims allows China to display firmness on sovereignty-related issues, Beijing must balance such behavior against the need to avoid a backlash among neighboring countries that could undermine the stable external environment on which Beijing depends for domestic development.

China's Military Strategy

To advance its broader strategic objectives and self-proclaimed "core interests," China is pursuing a robust and systematic military modernization program. In 2011, Taiwan remained the PLA's most critical potential mission, and the PLA continued to build the capabilities and develop the doctrine necessary to deter

the island from asserting its sovereignty; deter, disrupt, or deny effective third-party (including U.S.) intervention in a potential cross-Strait conflict; and defeat Taiwan forces in the event of hostilities.

The PLA's modernization efforts focus primarily on building a force capable of fighting and winning "local wars under conditions of informatization" — conditions in which modern military forces use advanced computer systems, information technology, and communication networks to gain operational advantage over an opponent. The character used for "local war" can also be translated as "regional war." There is a debate over which translation is more accurate. In the course of developing, refining, and assimilating these technologies, the basic tenets of China's military strategy and warfighting doctrine have displayed strong continuity. The PLA in turn has ensured that its information technologies have been developed, refined, and integrated to ensure continuity with China's military strategy.

China's "Military Strategic Guidelines for the New Period," completed in 1993 and revised as recently as 2004, contains the overarching strategic and operational guidance that directs the training, development, and employment of China's armed forces. The key operational component of these guidelines is known as "active defense," which serves as the highest-level operational guidance to all PLA services on how to fight and win wars. The warfighting principles embedded in active defense emphasize using precise and well-timed offensive operations, gaining and retaining the initiative, attacking only under favorable conditions, and exploiting an opponent's most vulnerable weaknesses.

Territorial Disuptes

China's actions in 2011 with respect to ongoing land and maritime territorial disputes with neighbors reflected a mix of contentment with the status quo, renewed efforts to reassure wary neighbors, and continued willingness (particularly through the use of paramilitary maritime law enforcement assets) to assert Chinese claims. China notably took steps to ease relations with Japan and dampen suspicion among rival South China Sea claimants after China's assertive posture in 2010 increased regional tensions. These steps included high-level engagement with Tokyo and confidence-building measures with the Association of Southeast Asian Nations (ASEAN), even as Chinese maritime law enforcement assets continued to defend Chinese claims in disputed areas (Appendix IV, Figure 1).

The New Historic Missions

The PLA is expanding its participation in military operations other than war, consistent with President and Central Military Commission Chairman Hu Jintao's Christmas Eve 2004 statement to the armed forces, where he outlined a set of "new historic missions" for the PLA. This mission statement calls on the PLA to protect

China's expanding national interests and adopt a larger role in promoting international peace and security. The "non-war" operations associated with these missions include counter-piracy and counter-terrorism operations, humanitarian assistance and disaster relief (HA/DR), UN peacekeeping, sea lanes protection, and securing space-based assets.

In 2011, the PLA participated in various non-war operations. Among them, in February-March 2011, China evacuated approximately 36,000 Chinese nationals from Libya during the uprisings against Muammar Gaddafi. Though the majority of evacuees were moved via commercial aircraft, ships, and buses, the guided missile frigate *Xuzhou* and four IL-76 transport aircraft were also involved.

In April 2011, the first PLA officer (a major general) to be appointed as military leader of a UN Peacekeeping Force completed a three-and-one-half-year assignment with the UN Mission for the Referendum in Western Sahara. In February 2011, the second PLA officer to assume such a position commanded the UN Peacekeeping Force in Cyprus. As of December 2011, China had more than 1,850 military personnel and observers deployed to 10 of the UN's 15 peacekeeping missions.

From late October through November 2011, the PLA Navy's ANWEI-class *Peace Ark* hospital ship conducted a medical exchange and service mission, including stops in Cuba, Jamaica, Trinidad and Tobago, and Costa Rica.

In November 2011, China's Ministry of National Defense co-chaired (with Vietnam) the first ASEAN Defense Ministers Meeting-Plus (ADMM+) Experts Working Group meeting on HA/DR - one of five topics selected for enhanced regional collaboration by defense ministers at the (ADMM+) in October 2010.

In December 2011, the PLA Navy deployed its tenth task force to the Gulf of Aden in support of ongoing international counter-piracy efforts.

2

Force Modernization Goals And Trends

Overview

Since the early 1980s, China's leaders have sustained an ambitious and broad-based military modernization program intended to transform the PLA into a modern force. Throughout this modernization drive, Taiwan contingency planning has dominated the agenda. Even though cross-Strait tensions have subsided since 2008, Taiwan remains a critical mission, and the PLA continues building capabilities aimed at Taiwan and at deterring, delaying, or denying possible third party intervention in a cross-Strait conflict. At the same time, the mandate of the new historic missions has provided the justification for new capabilities to accomplish diverse missions farther from China. Chinese military investments reflect these requirements and have led to the fielding of equipment and capabilities that support the PLA's traditional set of core missions (such as defending China's security, sovereignty and territorial integrity), and an expanding array of new missions at home and abroad.

Military Expenditure Trends

On March 4, 2012, Beijing announced an 11.2 percent increase in its annual military budget to roughly $106 billion. This increase continues more than two decades of sustained annual increases in China's announced military budget. Analysis of 2000-2011 data indicates China's officially disclosed military budget grew at an average of 11.8 percent per year in inflation-adjusted terms over the period.

Estimating actual PLA military expenditures is difficult because of poor accounting transparency and China's still incomplete transition from a command economy. Moreover, China's published military budget does not include several major categories of expenditure, such as foreign procurement. Using 2011 prices and exchange rates, DoD estimates China's total military-related spending for 2011 ranges between $120 billion and $180 billion.

Emerging Capabilities and Limitations

This increased military spending has fueled improved training and the acquisition of new equipment and capabilities across China's military forces.

Air and Air Defense Forces. Once oriented solely on territorial defense, the PLA Air Force is transforming into a force capable of off-shore offensive and defensive operations. Mission areas include strike, air/missile defense, strategic mobility, and early warning/reconnaissance. China is also investing in stealth technology, as evidenced by the flight testing of its first stealth aircraft prototype, beginning in January 2011. In response to the new historic missions' requirements to protect China's global interests, the PLA Air Force is attempting to increase its long-range transportation and logistics capabilities, to achieve greater strategic projection. However, it is likely the PLA Air Force's primary focus for the coming decade will remain building the capabilities required for Taiwan contingencies.

The PLA Air Force is currently in the beginning stages of developing ballistic missile defenses and the air-space integration needed for early warning. China continued to modernize its ground-based air defense forces with the introduction of a new medium-range surface-to-air missile (SAM) system in 2011. Current and future air defense systems development emphasizes multi-target engagement capability, net-centric operations, survivability, and robust electronic protection.

Naval Forces. The PLA Navy primarily focuses on improving anti-air and anti-surface warfare capabilities, as well as developing a credible at-sea nuclear deterrent. The additional attack submarines, multi-mission surface combatants, and fourth-generation naval aircraft entering the force are designed to achieve sea superiority within the first island chain and counter any potential third party intervention in a Taiwan conflict. China is also developing a near-continuous at-sea strategic deterrent with the JIN-class SSBN program. The JIN-class SSBN was built as a follow-on to China's first generation XIA-class SSBN. The PLA Navy is also acquiring ships capable of supporting conventional military operations and HA/DR missions, including several amphibious transport docks and the ANWEI-class *(Peace Ark)* hospital ship. The PLA Navy will likely commission the KUZNETSOV-class (formerly the *Varyag*) aircraft carrier, currently undergoing sea trials, in 2012. The carrier will initially serve as a training platform for fixed-wing aircraft and as an additional asset for helicopter-borne HA/DR operations, until its full fixed-wing air regiment achieves operational capability in several years.

Missiles—Second Artillery Corps. The PLA Second Artillery Corps is modernizing its short-range ballistic missile force by fielding advanced variants with improved ranges and payloads. It is also acquiring and fielding greater numbers of conventional medium-range ballistic missiles (MRBMs) to increase the range at which it can conduct precision strikes against land targets and naval ships, including aircraft carriers, operating far from China's shores beyond the first island chain. Similarly, China continues to produce large numbers of advanced ground-launched cruise missiles capable of standoff, precision strikes. By 2015, China will also field additional road-mobile DF-31A (CSS-10 Mod 2) intercontinental ballistic missiles (ICBMs) and enhanced, silo-based DF-5 (CSS-4) ICBMs. The PLA Second Artillery Corps faces several challenges in its force structure, including integrating both new and planned systems.

Ground Forces. Along with other branches of the PLA, China's large ground force is undergoing significant modernization, and has steadily improved capabilities in most areas. In mid-2011, the PLA began to transform its ground forces into a modular combined arms brigade-focused force structure. The

PLA fielded new rotary wing aviation assets in 2011, with the initial fielding of a new, domestically-produced attack helicopter, the Z-10, as well as major growth in the number of multi-purpose helicopters in army aviation units across the force. As 2011 ended, numerous indicators pointed to the start of an expansion of the majority of army special forces units. An improved amphibious assault vehicle has also entered service in key PLA units.

Throughout the PLA, growing numbers of modern heavy-armor, long-range strike artillery, and increased-range air defense weapons have entered service in selected units. Concurrent with this modernization, the ground force has emphasized combined arms operations and long-range mobility. China's ground forces remain challenged by a lack of combat experience and self-identified limitations in the leadership abilities of its command staff, particularly at operational levels. These problems have long been exacerbated by a lack of realism in training. However, the PLA began executing plans in 2011 designed to help overcome these issues by 2020, including increased force-on-force training against dedicated opposing force units, adopting simulator use for training, developing automated command tools to aid command decisions, and increasing the education levels and science and technology training of PLA commanders and staff officers.

C4ISR Capabilities. Acquiring comprehensive command, control, communication, computers, intelligence, surveillance, and reconnaissance (C4ISR) systems is a key component of China's military modernization and is essential for executing integrated joint operations. The PLA is focused on developing C4ISR systems that will allow the military to share information and intelligence data, enhance battlefield awareness, and integrate and command military forces across the strategic, campaign, and tactical levels. A fully integrated C4ISR system, as envisioned by PLA leaders, would enable the PLA to respond to complex battlefield conditions with a high level of agility and synchronization. To accomplish that vision, the PLA will need to overcome deficiencies in system integration and interservice coordination. Nevertheless, improvements in these systems will continue to enhance PLA battlefield awareness and lead to greater integration among the separate PLA services.

Space and Counterspace Capabilities. In the space domain, China is expanding its space-based surveillance, reconnaissance, navigation, meteorological, and communications satellite constellations. China continues to build the Bei-Dou *(Compass)* navigation satellite constellation with the goal of establishing a regional network by the end of 2012 and a global network by 2020. China launched the Tiangong space station module in September 2011 and a second communications relay satellite (the Tianlian

1B), which will enable near real-time transfer of data to ground stations from manned space capsules or orbiting satellites. China continues to develop the Long March V rocket, which will more than double the size of the low Earth and geosynchronous orbit payloads that China will be capable of placing into orbit. In parallel, the PRC is developing a multidimensional program to limit or deny the use of space-based assets by adversaries during times of crisis or conflict. In addition to the direct-ascent anti-satellite weapon tested in 2007, these counterspace capabilities also include jamming, laser, microwave, and cyber weapons. Over the past two years, China has also conducted increasingly complex close proximity operations between satellites while offering little in the way of transparency or explanation.

China's space and counterspace programs are facing some challenges in systems reliability. Communications satellites using China's standard satellite launch platform, the DFH-4, have experienced failures leading to reduced lifespan or loss of the satellite. The recent surge in the number of China's space launches also may be taking its toll. In August 2011, in the third satellite launch in seven days for China, a Long March 2C rocket (carrying an experimental Shijian 11 satellite), malfunctioned after liftoff and failed to deliver the satellite into orbit.

Cyber Espionage and Cyberwarfare Capabilities. In 2011, computer networks and systems around the world continued to be targets of intrusions and data theft, many of which originated within China. Although some of the targeted systems were U.S. government-owned, others were commercial networks owned by private companies whose stolen data represents valuable intellectual property. In the hands of overseas competitors, this information could diminish commercial and technological advantages earned through years of hard work and investment. Intrusions in 2011 occurred in key sectors, including companies that directly support U.S. defense programs.

Authoritative writings and China's persistent cyber intrusions indicates the likelihood that Beijing is using cyber network operations (CNOs) as a tool to collect strategic intelligence.

In parallel with its military preparations, China has increased diplomatic engagement and advocacy in multilateral and international forums where cyber issues are discussed and debated. Beijing's agenda is frequently in line with Russia's efforts to promote cyber norms under a UN framework. In September 2011, China and Russia were the primary sponsors of an Information Security Code of Conduct that would have governments exercise sovereign authority over the flow of information in cyberspace. China has not yet accepted that existing mechanisms (such as the Law of Armed Conflict), apply in cyberspace. However, China's thinking in this

area may evolve as its own exposure increases through greater investment in global networks.

Technology Transfer, Strategic Trade Policy, and Military Modernization. The PRC continues to modernize its military by incorporating Western (mostly U.S.) dual-use technologies, which have also assisted its overall indigenous industrial, military industrial, and high-technology sector development.

One of the PRC's stated national security objectives is to leverage legally and illegally acquired dual-use and military-related technologies to its advantage. China has a long history of cooperation between its civilian and military sectors and openly espouses the need to exploit civilian technologies for use in its military modernization.

In this context, the cumulative effect of U.S. dual-use technology transfers to China could also make a substantial material contribution to its military capabilities. For example, interactions with Western aviation manufacturing firms may also inadvertently provide benefit to China's defense aviation industry.

Through its advisory role within the U.S. export control process, DoD will continue to identify and mitigate risk, and seek to prevent critical advanced technologies exports to China that could be diverted to unauthorized end-use or to third-country end-users of concern, or contribute to overall modernization of China's military and defense industrial base.

Espionage. Chinese actors are the world's most active and persistent perpetrators of economic espionage. Chinese attempts to collect U.S. technological and economic information will continue at a high level and will represent a growing and persistent threat to U.S. economic security. The nature of the cyber threat will evolve with continuing technological advances in the global information environment.

Sensitive U.S. economic information and technology are targeted by intelligence services, private sector companies, academic/research institutions, and citizens of dozens of countries. China is likely to remain an aggressive and capable collector of sensitive U.S. economic information and technologies, particularly in cyberspace.

Civil-Military Integration. China's defense industry has benefited from China's rapidly expanding civilian economy, particularly its science and technology sector. Access to foreign advanced dual-use technology assists China's civilian economic integration into the global production and research and development (R&D) chain. For example, with increasing globalization and integration of information technologies, companies such as Huawei, Datang, and Zhongxing, with their ties to the PRC government and PLA entities, pose potential challenges in the blurring lines between commercial and government/military-associated entities.

3

Military-To-Military Contacts

Overview

A key component of DoD's overall approach to the Asia-Pacific region is engagement with China, a course that reflects the value to the global community of a productive U.S.-China relationship.

Vice President Biden stated during his visit to China in August 2011 that "a rising China will fuel economic growth and prosperity and it will bring to the fore a new partner with whom we can meet global challenges together." In January 2011, U.S. President Barack Obama and PRC President Hu Jintao reaffirmed their commitment to building a positive, cooperative, and comprehensive relationship.

A strong U.S.-China bilateral relationship includes a healthy, stable, reliable, and continuous military-to-military relationship. Strong military-to-military ties consist of clear lines of communication for senior military and defense leaders and allow for substantive exchanges on a range of defense and security issues, particularly during times of turbulence and friction. These ties increase the safety of U.S. and Chinese military personnel, provide mechanisms for crisis prevention and management, contribute to greater transparency on both sides, and encourage and influence the PLA and China to engage as a responsible power.

This type of engagement enables both militaries to build habits of cooperation and work toward greater mutual understanding. The United States remains committed to building a stronger military-to-military relationship with China. However, placing the military-to-military component of relationship on a firm foundation remains a challenge.

In the first half of 2011, several high-level visits were executed as part of the bilateral military-to-military relationship, including visits to China by the U.S. Secretary of Defense and Chairman of the Joint Chiefs of Staff and visits to the United States by the PRC Chief of the General Staff and the Jinan Military Region Commander. The PRC elevated its military participation in the Strategic and Economic Dialogue (S&ED) in May 2011, with the PRC Deputy Chief of the General Staff representing the PLA. The annual Defense Policy Coordination Talks (DPCTs), a Disaster Management Exchange, and a working-level meeting pursuant to the Military Maritime Consultative Agreement (MMCA) were also held. The Strategic Security Dialogue (SSD), held for the first time on the margins of the S&ED in May 2011, complements military-to-military exchanges by providing a key mechanism for senior civilian and military leaders from both countries to discuss critical issues of strategic significance in order to build mutual trust, increase communication, and decrease the chance that an inadvertent incident would lead to a larger crisis.

Following the September 2011 notification to Congress of the U.S. intent to sell arms to

Taiwan, which included a retrofit package for Taiwan's F-16 fighter aircraft, the PRC postponed several events scheduled for the remainder of the year. Working-level contacts and high-level dialogue were maintained, and in December 2011, the Under Secretary of Defense for Policy traveled to Beijing to participate in the annual U.S.-China Defense Consultative Talks. Despite U.S. intent for a healthy, stable, reliable, and continuous military-to-military relationship, this aspect continues to lag behind other aspects of the broader bilateral relationship.

U.S. Strategy For Military Engagement

DoD engagement with China focuses on three lines of effort:

- Improving cooperative capacity in areas of mutual interest, such as peacekeeping, HA/DR missions, and counter-piracy operations;
- Fostering greater institutional understanding through contacts between armed forces, including military academic institutions and mid-and junior-grade officers; and
- Building common assessments of the regional security environment and related security challenges.

Over the long term, this strategy seeks to invest the PLA in a sustained military relationship, by showing its leadership sees logic and value in such an approach.

Other U.S.-China Engagement And Security Cooperation

Although areas of concern persist, in 2011, the United States and China worked together to improve the regional maritime and energy security environment. As President Obama has said, "the [U.S.-China] relationship has not been without disagreement and difficulty. But the notion that we must be adversaries is not pre-destined." DoD will encourage China to improve transparency and openness in its military affairs, develop an approach that is commensurate with its regional and global status, and act in ways that support and strengthen the international political, economic, and security environment.

Consistent with its interests in, and dependence on, open Sea Lines of Communication (SLOCs), China has sent warships to patrol the Gulf of Aden (GOA) in coordination with international counter-piracy task forces on station there. China agreed to conduct a combined exercise with the United States in the GOA in the fourth quarter of 2011 to increase cooperative capacity to counter piracy, but the PLA postponed the exchange in response to the September 2011 announcement of U.S. arms sales to Taiwan.

Following on a commitment by President Hu at the 2010 Nuclear Security Summit, the United States and China also signed a Memorandum of Understanding (MOU) to expand existing

bilateral cooperation through establishment of a Center of Excellence on Nuclear Security. The U.S. Departments of Energy and Defense are now collaborating with the China Atomic Energy Authority to design the center and determine requirements.

In January 2011, the United States also signed an MOU with China to promote cooperation in the clean energy and energy security fields

4

The PRC's Taiwan Strategy

Overview

Since the election of Taiwan President Ma Ying-jeou in March 2008 (Ma was re-elected in January 2012), the PRC and Taiwan have significantly improved cross-Strait relations. The two sides have strengthened trade relations and initiated direct links for shipping, passenger flights, and mail delivery across the Taiwan Strait. These links have reduced tension and built momentum for a positive cross-Strait atmosphere. The PRC has made clear that it intends cross-Strait economic and cultural ties to promote progress toward eventual unification. Simultaneously, the PRC is developing military capabilities to give it the ability to settle the dispute on Beijing's terms. However, Beijing still lacks these capabilities and recognizes the costs and risks associated with a decision to escalate the dispute to the point of conflict.

Beijing and Taipei have taken little action to develop political and security confidence-building measures. Although Beijing wants to further develop these ties, it takes into account political sensitivities in Taiwan. Beijing appears to be comfortable with current initiatives and hopeful that, over the long term, economic, social, and cultural integration will dilute pro-independence sentiment in Taiwan and will make the prospect of peaceful unification a more attractive proposition.

The PRC's 2010 Defense White Paper – released in March 2011 – is indicative of Beijing's increased confidence in the trajectory of cross-Strait developments. It states, in part:

> *"Significant and positive progress has been achieved in cross-Strait relations…[The] two sides have enhanced political mutual trust, conducted consultations and dialogues, and reached a series of agreements for realizing [cross-Strait] exchanges … as well as promoting economic and financial cooperation. [This] accords with the interests and aspirations of compatriots on both sides of the [Taiwan] Strait."*

Notwithstanding four years of measured improvement in cross-Strait relations, Taiwan public opinion toward cross-Strait ties remains mixed. In a 2011 poll conducted by Taiwan's Mainland Affairs Council, more than 60 percent of respondents expressed a positive view of the pace of cross-Strait exchanges, characterizing it as either "just right" or "too slow." At the same time, more than 50 percent of respondents characterized Beijing's attitude vis-à-vis Taiwan as "unfriendly." This suggests that any near-term attempts by the two sides to address more sensitive political and military issues will be difficult.

China's Approach To Taiwan

Beijing employs a mix of incentives and threats that increases the benefits that accrue to Taiwan as the latter deepens ties to China, while also seeking to deter Taiwan from pursuing policies

that Beijing views as provocative. Beijing strives to integrate the two economies, advance social and cultural ties, strengthen outreach to Taiwan's ruling Kuomintang Party, isolate Taiwan political actors that take pro-independence positions, and emphasize its preference for achieving peaceful unification – all while maintaining a fundamental opposition to Taiwan independence or any initiative that would undermine its "one China" principle.

Since President Ma's election in Taiwan, the two sides have largely maintained an unofficial "diplomatic truce" in the competition to persuade countries – usually through economic incentives – to switch diplomatic recognition from Beijing to Taipei, or vice versa. Beijing has taken small, but important steps to demonstrate its tacit consent to the truce, including dropping its long-standing opposition to Taiwan being granted observer status at the World Health Assembly and refraining from courting El Salvadoran President Mauricio Funes, who has expressed publicly a desire to switch ties from Taipei to Beijing.

Although the mainland's focus is on sustaining positive momentum in cross-Strait relations, Beijing has never renounced the use of force to compel unification. In his December 2010 essay, State Councilor Dai Bingguo captured the central leadership's policy on Taiwan:

> *"The Taiwan question is related to the reunification and territorial integrity of China. It concerns the core interests of China and touches on the national sentiment of 1.3 billion Chinese people....On the Taiwan question, we pursue the fundamental guideline of "peaceful reunification, and one country, two systems." [But] we will absolutely not allow Taiwan to be separated from China and will definitely make no promise to give up the use of force."*

Beijing has made clear (through words and military actions) that it seeks to deter Taiwan from taking any steps toward independence. The military component of Beijing's Taiwan strategy is an integral part of this. Beijing appears prepared to defer the use of force as long as it believes unification remains possible and the costs of conflict outweigh the benefits, but it almost certainly views the prospect of using force as an important point of leverage in cross-Strait relations.

Taiwan has taken a number of steps to address gaps in military capabilities, such as expanding its defense industrial base, beginning a transition to an all-volunteer force, and strengthening its noncommissioned officer corps. These improvements have only partially addressed Taiwan's eroding defense advantages and, in some cases, face significant challenges in implementation. Taiwan's domestic priorities and other considerations compete with its armed forces for resources and funding. Consequently,

the cross-Strait military balance — in terms of personnel, force structure, weapons, and developments in military doctrine — continues to trend in Beijing's favor.

Cross-Strait Military Options

A comprehensive and sustained military modernization program has increased the range and sophistication of military options Beijing could employ in a cross-Strait conflict. The PLA still faces limitations in its ability to conduct a full-scale amphibious invasion of Taiwan. However, the PLA's growing capabilities have enhanced its ability to strike economic and military targets on Taiwan, while expanding its ability to deter, delay, or deny possible intervention by third parties during cross-Strait hostilities (Appendix IV, Figures 2 and 3).

Should Beijing decide to use military force against Taiwan, it is possible the PLA would mobilize forces in a manner that optimizes preparation in favor of tactical surprise, with the goal of forcing rapid military and/or political resolution before other countries could respond. If a quick resolution is not possible, Beijing would be likely to seek to:

- Deter U.S. intervention by highlighting the potential cost to the United States and targeting the resolve of the U.S. public and leadership;
- Failing that, delay intervention and seek victory in an overpowering, limited, quick war; or,
- Fight to a standstill and pursue a political settlement after achieving a set of limited goals that could be credibly sold to the PRC public as a "victory."

Maritime Quarantine or Blockade. Although a traditional maritime quarantine or blockade would have a short-term impact on Taiwan, such an operation would significantly tax PLA Navy capabilities. PRC military writings describe alternative solutions, including air blockades, missile attacks, and mining to obstruct ports and approaches. Beijing could declare that ships en route to Taiwan must stop in mainland ports for inspection prior to transiting to Taiwan. Beijing could also attempt the equivalent of a blockade by declaring exercise or missile closure areas in approaches to ports, effectively closing port access and diverting merchant traffic. There is a risk that Beijing would underestimate the degree to which an attempt to limit maritime traffic to and from Taiwan would trigger international pressure and military escalation. Currently, the PRC probably could not enforce a full military blockade, particularly in the face of third party intervention. However, its ability to execute a blockade will improve steadily through 2020.

Limited Force or Coercive Options. Beijing might use a variety of disruptive, punitive, or lethal military actions in a limited campaign against Taiwan, likely in conjunction with overt and clandestine economic and political activities. Such a campaign could include computer network or limited kinetic attacks against Taiwan's political, military, and economic infrastructure to induce fear in Taiwan and degrade the populace's confidence in their leadership. Similarly, PLA special operations forces could infiltrate Taiwan and conduct attacks against infrastructure or leadership targets.

Air and Missile Campaign. Limited short-range ballistic missile (SRBM) attacks and precision strikes against air defense systems (air bases, radar sites, missiles, space assets, and communications facilities) could be conducted in an attempt to degrade Taiwan's defenses, neutralize Taiwan's leadership, or break the public's will to fight.

Amphibious Invasion. PRC literature describes different operational concepts for amphibious invasion. The most prominent of these, the Joint Island Landing Campaign, envisions a complex operation relying on coordinated, interlocking campaigns for logistics, air and naval support, and electronic warfare. The objective would be to break through or circumvent shore defenses, establish and build a beachhead, transport personnel and materiel to designated landing sites in the north and south of Taiwan's western coastline, and launch attacks to seize and occupy key targets and/or the entire island.

The PLA is capable of accomplishing various amphibious operations short of a full-scale invasion of Taiwan. With few overt military preparations beyond routine training, the PRC could launch an invasion of small, Taiwan-held islands such as Pratas Reef or Itu Aba. A PLA invasion of a medium-sized, defended, offshore island such as Mazu or Jinmen is within the mainland's capabilities. Such an invasion would demonstrate military capability and political resolve while achieving tangible territorial gain and simultaneously showing some measure of restraint. However, this type of operation involves significant operational and strategic risk. It could galvanize the Taiwan populace and catalyze a strong international reaction.

Operationally, large-scale amphibious invasion is one of the most complicated maneuvers a military can execute. An attempt to invade Taiwan would strain China's untested armed forces and invite international condemnation. These stresses, combined with the PRC's combat force attrition and the complexity of urban warfare and counterinsurgency (assuming a successful landing and breakout), make amphibious invasion of Taiwan a significant political and military risk. Taiwan's investments to harden infrastructure and strengthen defensive capabilities could also decrease Beijing's ability to achieve its objectives

Appendix 1: Size, Location, and Capabilities of Chinese Military Forces

China's long-term, comprehensive military modernization is improving the PLA's capacity to conduct high-intensity, regional military operations, including counter-intervention operations. For China, "counter-intervention" refers to a set of operationally-defined tasks designed to prevent foreign (e.g., U.S.) military forces from intervening in a conflict and preventing China from accomplishing its military objectives. China employs anti-access/area-denial (A2/AD) weapons in support of this broader counter-intervention strategy – a strategy not bound by a set geographic area or domain.

Consistent with a near-term focus on Taiwan Strait contingencies, China bases many of its most advanced systems in the military regions (MRs) opposite Taiwan. Although China could employ these capabilities for a variety of regional crisis or conflict scenarios, China has made less progress on capabilities that extend global reach or power projection. Outside of peacetime counter-piracy missions, for example, the PLA Navy has little operational experience beyond regional waters. Although the PLA's new roles and missions in the international domain, like counter-piracy, reflect China's expanding set of interests, regional contingencies continue to dominate resources and planning (Appendix IV, Figure 5).

Size, Location, And Capabilities Developments

Ballistic and Cruise Missiles. China continues investments in its land-based ballistic and cruise missile programs. It is developing several variants of offensive missiles, upgrading older systems, forming additional units, and developing methods to counter ballistic missile defenses.

The PLA is acquiring large numbers of highly accurate, domestically built cruise missiles, and has previously acquired large numbers of Russian ones. These include the domestically produced, ground-launched CJ-10 land-attack cruise missile (LACM); the domestically produced ground- and ship-launched YJ-62 anti-ship cruise missile (ASCM); the Russian SS-N-22/SUNBURN supersonic ASCM, which is fitted on China's SOVREMENNY-class guided missile destroyers; and the Russian SS-N-27B/SIZZLER supersonic ASCM on China's Russian-built KILO-class diesel-powered attack submarines.

By October 2011, the PLA had deployed between 1,000 and 1,200 SRBM to units opposite Taiwan. In the past year, China has fielded new SRBM systems, added additional missile brigades in southeastern China, and upgraded the lethality of its existing SRBM force by introducing variants with improved ranges, accuracies, and payloads.

During comments to the media in 2011, China confirmed it is developing an anti-ship ballistic missile (ASBM), based on a variant of the DF-21 (CSS-5) medium-range ballistic missile (MRBM). Known as the DF-21D (CSS-5 Mod 5), this missile is intended to provide the PLA the capability to attack large ships, particularly aircraft carriers, in the western Pacific Ocean. The assessed range of the DF-21D exceeds 1,500 km, and the missile is armed with a maneuverable warhead.

Naval Forces. Since the 1990s, the PLA Navy has transformed from a large fleet of single-mission platforms to a leaner force equipped with more modern, multi-mission platforms. In contrast to the fleet of just a decade ago, many PLA Navy combatants are equipped with advanced area air-defense systems, modern ASCMs, and torpedoes. These capabilities not only increase the lethality of PLA Navy platforms, particularly in the area of anti-surface warfare, but also enable them to operate beyond the range of land-based air cover.

The PLA Navy possesses some 79 principal surface combatants (destroyers and frigates), 50 submarines, 51 amphibious and medium landing ships, and 86 missile-equipped patrol craft. The PLA Navy has now completed construction of a major naval base at Yalong, on the southernmost tip of Hainan Island. The base is large enough to accommodate a mix of nuclear-powered attack and ballistic-missile submarines and advanced surface combatants, including aircraft carriers. Submarine tunnel facilities at the base could also enable deployments from this facility with reduced risk of detection.

China's aircraft carrier research and development program includes renovation of the KUZNETSOV-class aircraft carrier Hull 2 (formerly the *Varyag*), which began sea trials in 2011. It will likely serve initially as a training and evaluation platform. Once China deploys aircraft capable of operating from a carrier, it should offer a limited capability for carrier-based air operations. Some components of China's first indigenously-produced carrier may already be under construction; that carrier could achieve operational capability after 2015. China likely will build multiple aircraft carriers and associated support ships over the next decade.

China currently has a land-based training program for carrier pilots; however, it will still take several additional years for China to achieve a minimal level of combat capability for its aircraft carriers.

The PLA Navy is improving its long-range surveillance capability with sky-wave and surface-wave over-the-horizon (OTH) radars. In combination with early-warning aircraft, unmanned aerial vehicles (UAVs), and other surveillance and reconnaissance equipment, the radars allow China to carry out surveillance and reconnaissance over the western Pacific. These radars can be used in conjunction with reconnaissance satellites to locate targets at great

distances from China, thereby supporting long-range precision strikes, including employment of ASBMs.

China has developed torpedo and mine systems capable of area denial in a Taiwan scenario. Estimates of China's naval mine inventory exceed 50,000 mines, with many more capable systems developed in the past 10 years.

China is producing a new class of nuclear-powered ballistic missile submarine (SSBN). The JIN-class SSBN (Type-094) will eventually carry the JL-2 submarine-launched ballistic missile with an estimated range of some 7,400km. The JIN-class SSBN and the JL-2 will give the PLA Navy its first credible sea-based nuclear capability. The JL-2 program has faced repeated delays, but may reach initial operating capability within the next two years.

China has expanded its force of nuclear-powered attack submarines (SSN). Two second-generation SHANG-class (Type-093) SSNs are already in service and as many as five third-generation SSNs will be added in the coming years. When complete, the new class of SSNs will incorporate better quieting technology, improving China's capability to conduct a range of missions from surveillance to the interdiction of surface vessels with torpedoes and ASCMs.

The current mainstay of modern diesel powered attack submarines (SS) in the PLA Navy submarine force are the 13 SONG-class (Type-039) units. Each can carry the YJ-82 ASCM. The follow-on to the SONG is the YUAN-class (a Type-039 variant), as many as four of which are already in service. The YUAN-class probably includes an air-independent power system. The SONG, YUAN, SHANG and the still-to-be-deployed new SSN-class all will eventually be capable of launching a new long-range ASCM.

China has deployed approximately 60 of its HOUBEI-class (Type-022) wave-piercing catamaran-hull guided missile patrol craft. Each boat can carry up to eight YJ-83 ASCMs. These boats have increased the PLA Navy's littoral warfare capabilities.

The PLA Navy has acquired modern, domestically-produced surface combatants. These include at least two LUYANG II-class (Type-052C) guided missile destroyers (DDG) fitted with the indigenous HHQ-9 long-range SAM, with additional hulls under construction; two LUZHOU-class (Type-051C) DDGs equipped with the Russian SA-N-20 long-range SAM; and at least nine JIANGKAI II-class (Type-054A) guided-missile frigates, fitted with the medium-range HHQ-16 vertically launched SAM. These ships improve the PLA Navy's area air defense capability significantly, which will be critical as the PLA Navy expands its operations into areas beyond the range of shore-based air defense.

Air and Air Defense Forces. China bases approximately 490 combat aircraft within unrefueled operational range of Taiwan and has the airfield capacity to expand that number by hundreds. Newer and more advanced aircraft make up a growing percentage of the inventory.

The January 2011 flight test of China's next-generation fighter prototype, the J-20, highlights China's ambition to produce a fighter aircraft that incorporates stealth attributes, advanced avionics, and supercruise-capable engines.

China is upgrading its B-6 bomber fleet (originally adapted from the Soviet Tu-16 BADGER) with a new, longer-range variant that will be armed with a new long-range cruise missile.

The PLA Air Force has continued expanding its inventory of long-range, advanced SAM systems and now possesses one of the largest such forces in the world. Over the past five years, China has acquired multiple S-300 battalions, the most advanced SAM system that Russia exports. It has also introduced the indigenously designed HQ-9.

China's aviation industry is developing several types of airborne early warning and control system (AWACS) aircraft. These include the Y-8 MOTH and the KJ-2000, based on a modified Russian IL-76 airframe.

Ground Forces. The PLA has about 1.25 million ground force personnel, roughly 400,000 of whom are based in the three MRs opposite Taiwan. China continues to gradually modernize its large ground force. Much of the observed upgrade activity has occurred in units with the potential to be involved in a Taiwan contingency. Examples of ground unit modernization include the Type-99 third-generation main battle tank, a new-generation amphibious assault vehicle, and a series of multiple rocket launch systems.

Nuclear Forces. China's nuclear arsenal currently consists of about 50-75 silo-based, liquid-fueled and road-mobile, solid-fueled ICBMs. This force is complemented by liquid-fueled, intermediate-range ballistic missiles and road-mobile, solid-fueled MRBMs for regional deterrence missions. By 2015, China's nuclear forces will include additional CSS-10 Mod 2s, enhanced CSS-4s and likely JL-2's. The first two JIN-class SSBNs are in operational service, but the associated JL-2 SLBM continues to undergo flight testing. The JIN-class/JL-2 combination may be operational within the next two years.

China continues work on technologies to counter U.S. and other countries' ballistic missile defense systems as well as development of training and operating procedures that augment technological developments. Together, they strengthen China's nuclear force and enhance its strategic strike capabilities.

The introduction of more mobile systems will create new command and control challenges for China's leadership, which now confronts a different set of variables related to deployment and release authorities. For example, the PLA Navy has only a limited capacity to communicate with submarines at sea, and the PLA Navy has no experience in managing an SSBN fleet that performs strategic patrols with live nuclear warheads mated to missiles. Land-based mobile missiles may face similar command and control challenges in wartime.

Beijing's official policy toward the role of nuclear weapons remains unchanged and focuses on maintaining a nuclear force structure able to survive an attack and respond with sufficient strength to inflict unacceptable damage on the enemy. The new generation of mobile missiles is intended to ensure the viability of China's strategic deterrent in the face of continued missile defense advances in the United States and, to a lesser extent, Russia.

Beijing's "no-first-use" (NFU) nuclear policy remains unchanged: "China will not be the first to use nuclear weapons at any time and under any circumstance, and unequivocally commits that under no circumstances will it use or threaten to use nuclear weapons against non-nuclear weapon states or nuclear weapon free zones." There has been no clarification of the ambiguity regarding the conditions under which China's NFU policy might not apply or where conditional nuclear threats might be permissible.

Beijing will continue to invest considerable resources to maintain a limited nuclear force, also referred to by some Chinese writers as "sufficient and effective," to ensure that the PLA can deliver a damaging retaliatory nuclear strike response (Appendix IV, Figure 7).

Appendix 2. China and Taiwan Forces Data

Taiwan Strait Military Balance, Ground Forces			
	China		Taiwan
	Total	Taiwan Strait Area *(Including Nanjing, Guangzhou, and Jinan MRs)*	Total
Personnel (Active)	1.25 million	400,000	130,000
Group Armies	18	8	3
Motorized Infantry Divisions (including the 3rd Guard Division, Beijing MR)	18	5	0
Motorized Infantry Brigades	22	11	8
Mechanized Infantry Divisions (Including two amphibious mechanized divisions)	8	4	0
Mechanized Infantry Brigades	6	1	3
Armor Divisions	9	4	0
Armor Brigades	9	4	4
Artillery Divisions	2	2	0
Artillery Brigades	17	6	5
Airborne Divisions (PLAAF)	3	3	0
Marine Brigades (PLA Navy)	2	2	2
Tanks	7,000	3,100	1,100
Artillery Pieces	8,000	3,400	1,600

Note: PLA ground forces are organized into group armies. Most infantry, armor, and artillery units are organized into a combination of divisions and brigades deployed throughout the PLA's seven MRs. A significant portion of these assets are deployed in the Taiwan Strait area, specifically the Nanjing, Guangzhou, and Jinan MRs. Taiwan has seven defense commands, three of which have field armies. Each Army contains an artillery command roughly equivalent to a brigade plus.

Taiwan Strait Military Balance, Naval Forces			
	China		Taiwan
	Total	East and South Sea Fleets	Total
Destroyers	26	16	4
Frigates	53	44	22
Tank Landing Ships/ Amphibious Transport Dock	28	26	12
Medium Landing Ships	23	18	4
Diesel Attack Submarines	48	30	4
Nuclear Attack Submarines	5	2	0
Coastal Patrol (Missile)	86	67	61

Note: The PLA Navy has the largest force of principal combatants, submarines, and amphibious warfare ships in Asia. After years of neglect, the force of missile-armed patrol craft is also growing. In the event of a major Taiwan conflict, the East and South Sea Fleets would be expected to participate in direct action against the Taiwan Navy. The North Sea Fleet would be responsible primarily for protecting Beijing and the northern coast, but could provide mission-critical assets to support other fleets.

Taiwan Strait Military Balance, Air Forces			
	China		Taiwan
Aircraft	**Total**	**Deployed Within Range of Taiwan**	**Total**
Fighters	1,570	310	388
Bombers/Attack	550	180	22
Transport	300	40	21

Note: The PLAAF and the PLA Navy have about 2,120 operational combat aircraft. These consist of air defense and multi-role fighters, ground attack aircraft, fighter-bombers, and bombers. An additional 1,450 older fighters, bombers and trainers are employed for training and R&D. The two air arms also possess roughly 300 transports and over 100 surveillance and reconnaissance aircraft with intelligence, surface search, and airborne early warning capabilities. The majority of PLAAF and PLA Navy aircraft are based in the eastern half of the country. Currently, 490 aircraft could conduct combat operations against Taiwan without refueling. However, this number could be significantly increased through any combination of aircraft forward deployment, decreased ordnance loads, or altered mission profiles.

China's Missile Force			
System	**Missiles**	**Launchers**	**Estimated Range**
ICBM	50-75	50-75	5,500+ km
IRBM	5-20	5-20	3,000-5,500 km
MRBM	75-100	75-100	1,000-3,000 km
SRBM	1,000-1,200	200-250	< 1,000 km
GLCM	200-500	40-55	1,500+ km

Group Armies (GA) Primary Missions

Shenyang MR
16 GA – Defensive, Offensive CT
39 GA – RRU, Offensive MF
40 GA – Defensive, Offensive CT

Beijing MR
65 GA – Defensive
38 GA – RRU, Offensive MF
27 GA – Defensive

Jinan MR
26 GA – Offensive CT, Defensive
20 GA – Offensive CT, Defensive
54 GA – Offensive MF, Amphibious

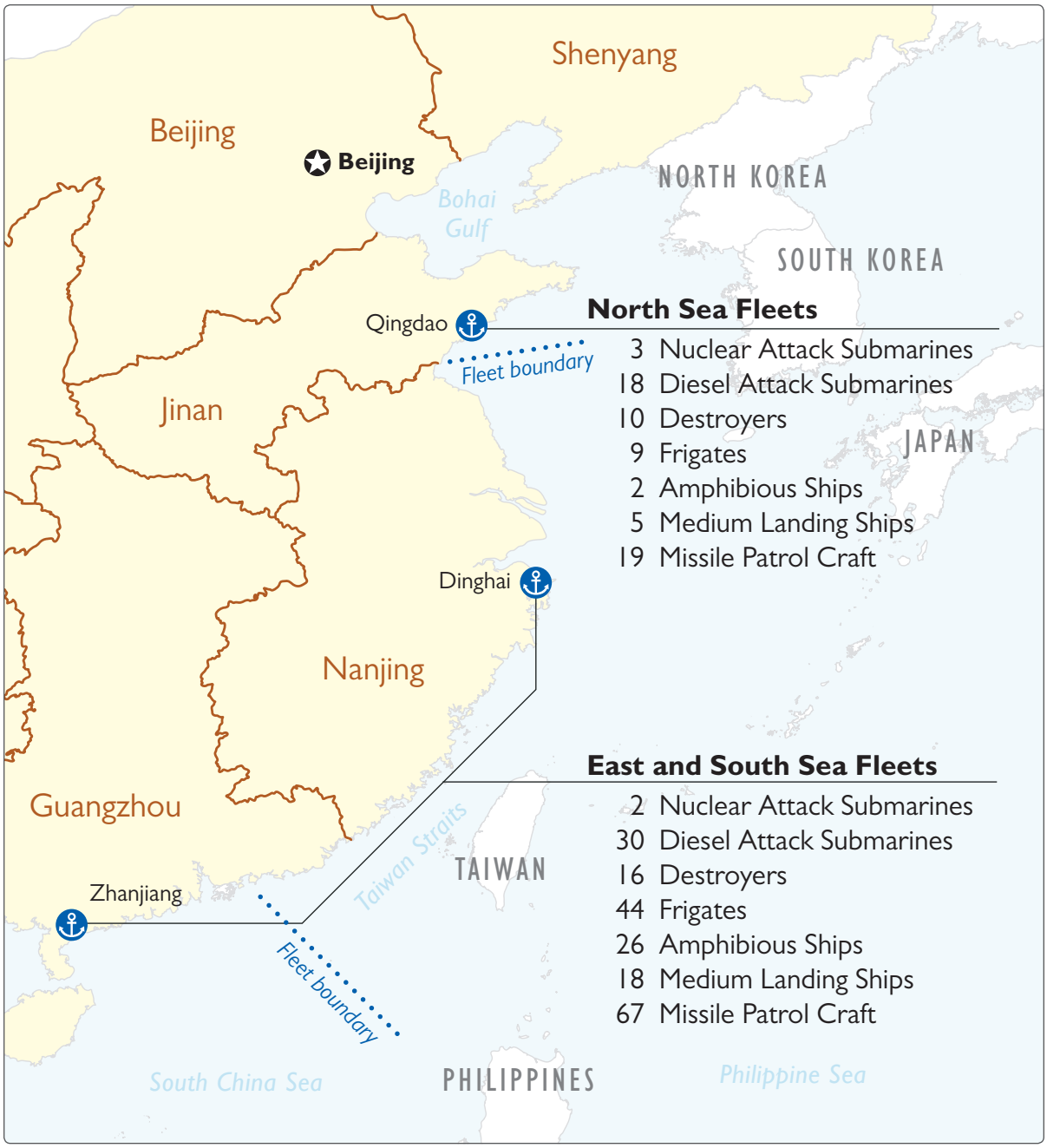
Nanjing MR
1 GA – Amphibious, Offensive CT
12 GA – Amphibious, Offensive CT
31 GA – Amphibious, Offensive CT

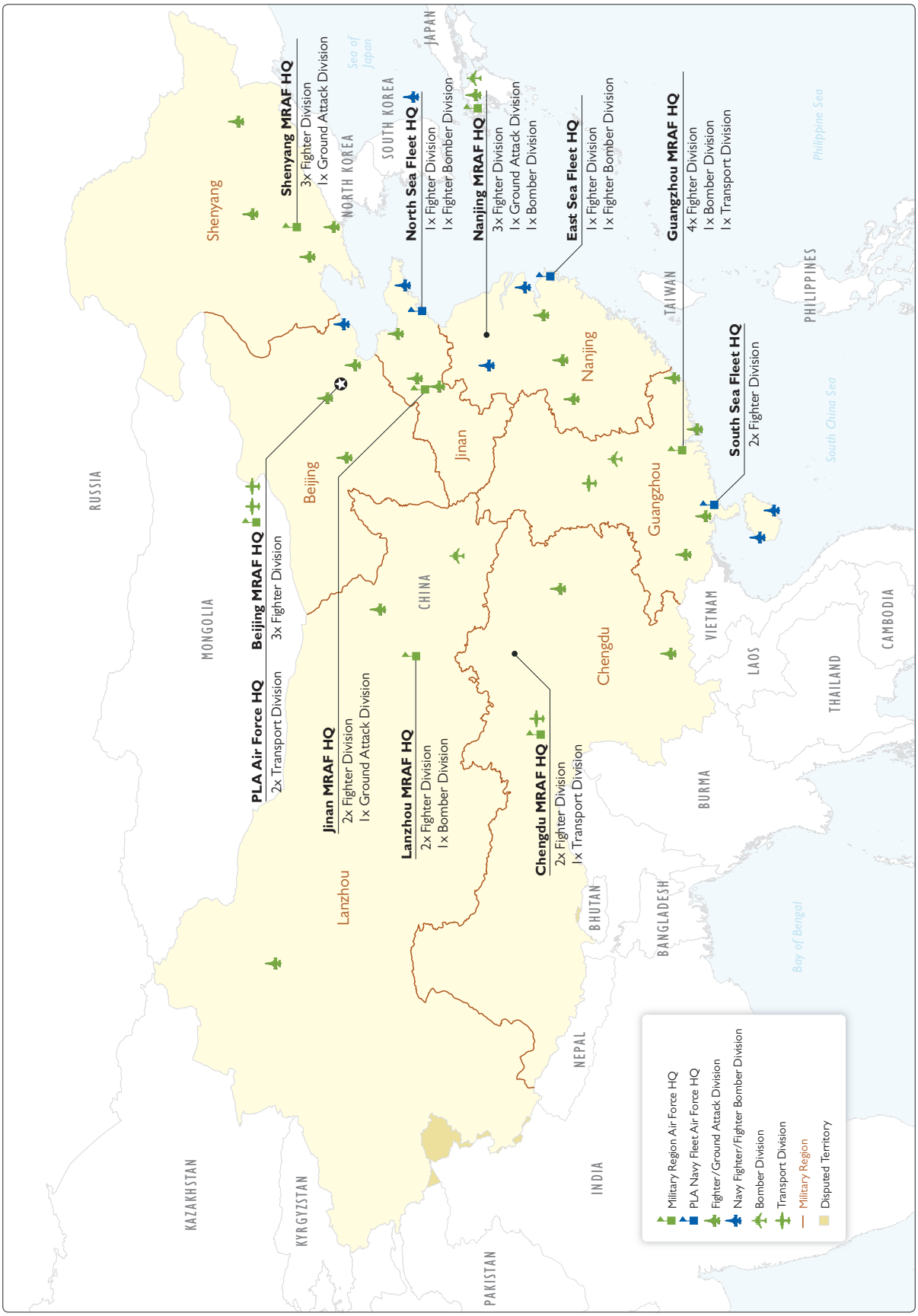
Guangzhou MR
15 Airborne – RRU, Offensive MF
41 GA – Amphibious, Offensive CT
42 GA – Amphibious

Chengdu MR
13 GA – Defensive, Offensive CT
14 GA – Defensive, Offensive CT

Lanzhou MR
47 GA – Defensive, Offensive CT
21 GA – Offensive MF, Defensive

Key:
MR – Military Region
MF – Mobile Force
RRU – Rapid Reaction Unit
CT – Complex Terrain
(Mountain, urban, jungle, etc.)


Shenyang
Beijing
Beijing
Bohai Gulf
NORTH KOREA
SOUTH KOREA
Qingdao
Fleet boundary
Jinan
JAPAN
Dinghai
Nanjing
Guangzhou
Taiwan Straits
TAIWAN
Zhanjiang
Fleet boundary
South China Sea
PHILIPPINES
Philippine Sea
North Sea Fleets
3 Nuclear Attack Submarines
18 Diesel Attack Submarines
10 Destroyers
9 Frigates
2 Amphibious Ships
5 Medium Landing Ships
19 Missile Patrol Craft
East and South Sea Fleets
2 Nuclear Attack Submarines
30 Diesel Attack Submarines
16 Destroyers
44 Frigates
26 Amphibious Ships
18 Medium Landing Ships
67 Missile Patrol Craft


RUSSIA
MONGOLIA
KAZAKHSTAN
KYRGYZSTAN
PAKISTAN
INDIA
NEPAL
BHUTAN
BANGLADESH
BURMA
CHINA
NORTH KOREA
SOUTH KOREA
JAPAN
Sea of Japan
VIETNAM
LAOS
THAILAND
CAMBODIA
TAIWAN
PHILIPPINES
Philippine Sea
South China Sea
Bay of Bengal
Shenyang
Beijing
Jinan
Lanzhou
Nanjing
Chengdu
Guangzhou
Shenyang MRAF HQ
3x Fighter Division
1x Ground Attack Division
Beijing MRAF HQ
3x Fighter Division
PLA Air Force HQ
2x Transport Division
Jinan MRAF HQ
2x Fighter Division
1x Ground Attack Division
Lanzhou MRAF HQ
2x Fighter Division
1x Bomber Division
Chengdu MRAF HQ
2x Fighter Division
1x Transport Division
North Sea Fleet HQ
1x Fighter Division
1x Fighter Bomber Division
Nanjing MRAF HQ
3x Fighter Division
1x Ground Attack Division
1x Bomber Division
East Sea Fleet HQ
1x Fighter Division
1x Fighter Bomber Division
Guangzhou MRAF HQ
4x Fighter Division
1x Bomber Division
1x Transport Division
South Sea Fleet HQ
2x Fighter Division
Military Region Air Force HQ
PLA Navy Fleet Air Force HQ
Fighter/Ground Attack Division
Navy Fighter/Fighter Bomber Division
Bomber Division
Transport Division
Military Region
Disputed Territory

Appendix 3. Military-To-Military Exchanges

Chinese participation in bilateral and multilateral military exercises since 2006.

Year	Exercise Name	Type of Exercise	Participants
2011	Khan Quest	Peacekeeping	Mongolia, Vietnam, U.S., Japan, South Korea
	Brisk Eagle	Counter-terrorism	Belarus
	Sharp Blade	Special Forces	Indonesia
	Unnamed	Counter-piracy	Pakistan
	Unnamed	Counter-terrorism	Tanzania
	Unnamed	UN Military Observer	Hosted by China, United Nations (14 countries participated)
	Peace 11	Counter-terrorism	Pakistan, Italy, France, Indonesia, and Malaysia
	Shaheen-1	Air	Pakistan
	Cooperation Spirit	HA/DR	Australia
	ASEAN Regional Forum	HA/DR	ASEAN
	Youyi-IV	Counter-terrorism	Pakistan
2010	Blue Strike/Blue Assault 2010	Counter-terrorism	Thailand
	Cooperation 2010	Counter-terrorism	Singapore
	Friendship 2010	Counter-terrorism	Pakistan
	Friendship Action 2010	Ground (Mountain Warfare)	Romania
	Peace Angel 2010	Medical	Peru
	Peace Mission 2010	Counter-terrorism	Russia, Kazakhstan, Kyrgyzstan, Tajikistan
	Strike 2010	Counter-terrorism	Thailand
	Unnamed	Search and Rescue	Australia
	Unnamed	Maritime	New Zealand
	Unnamed	Counter-piracy	South Korea
	Unnamed	Search and Rescue	Taiwan
	Unnamed	Air	Turkey
	Unnamed	Ground	Turkey
	Unnamed	Search and Rescue	Vietnam

2009	Aman (Peace) 2009	Maritime	Hosted by Pakistan (38 countries participated)
	Cooperation 2009	Counter-terrorism	Singapore
	Country-Gate Sharp Sword 2009	Counter-terrorism	Russia
	Peace Angel 2009	Medical	Gabon
	Peacekeeping Mission 2009	Peacekeeping Operations	Mongolia
	Peace Mission 2009	Counter-terrorism	Russia
	Peace Shield 2009	Counter-piracy	Russia
	Unnamed	Maritime	Singapore
2008	Hand-in-Hand 2008	Counter-terrorism	India
	Strike 2008	Counter-terrorism	Thailand
2007	Aman (Peace) 2007	Search and Rescue	Pakistan
	China-France Friendship 2007	Maritime	France
	China-Spain Friendship 2007	Maritime	Spain
	Cooperation 2007	Counter-terrorism	Russia
	Hand-in-Hand 2007	Counter-terrorism	India
	Peace Mission 2007	Counter-terrorism	Russia, Kazakhstan, Kyrgyzstan, Tajikistan, Uzbekistan
	Strike 2007	Counter-terrorism	Thailand
	Western Pacific Naval Symposium	Search and Rescue	United States, France, Japan, Australia, New Zealand, India, Pakistan, ROK, Singapore
	Unnamed	Maritime	India
	Unnamed	Search and Rescue	Australia, New Zealand
2006	Cooperation 2006	Counter-terrorism	Tajikistan
	Friendship 2006	Counter-terrorism	Pakistan
	Unnamed	Search and Rescue	United States

Countries Visited by Senior Chinese Military Leaders, 2006-2011

2011	2010	2009	2008	2007	2006
Australia	Angola	Australia	Bahrain	Argentina	Australia
Bolivia	Australia	Bulgaria	Belarus	Chile	Belarus
Bulgaria	Brazil	Burma	Brazil	Cuba	Burma
Chile	Colombia	Finland	Brunei	Greece	Cambodia
Colombia	Congo-Kinshasa	Germany	Chile	Japan	Denmark
Croatia	Egypt	Japan	Germany	Kuwait	France
Cuba	Germany	New Zealand	Hungary	Kyrgyzstan	Hungary
France	Indonesia	North Korea	India	Mongolia	India
Germany	Kazakhstan	Pakistan	Indonesia	Philippines	Laos
Ghana	Kenya	Papua New Guinea	Italy	Russia	Malaysia
Indonesia	Macedonia	Russia	Japan	South Korea	New Zealand
Israel	Mexico	Serbia-Montenegro	Nepal	Thailand	North Korea
Italy	Mongolia	Singapore	Norway	United States	Norway
Japan	Namibia	Slovakia	Oman	Uzbekistan	Pakistan
Kazakhstan	New Zealand	South Korea	Qatar	Vietnam	Romania
Lebanon	North Korea	Thailand	Saudi Arabia		Russia
Nepal	Pakistan	Turkey	Serbia-Montenegro		Singapore
New Zealand	Romania	United States	Singapore		South Korea
Pakistan	Russia	Vietnam	South Korea		Tajikistan
Peru	Serbia		Tajikistan		Thailand
Philippines	Singapore		Thailand		United States
Russia	Tanzania		United Arab Emirates		Vietnam
Serbia	Turkmenistan		Venezuela		
Seychelles	United Kingdom				
Singapore	Vietnam				
Sweden					
Turkey					
Uganda					
Ukraine					
United Kingdom					
United States					
Uruguay					
Uzbekistan					
Vietnam					
Zimbabwe					

Senior Foreign Military Officials Visiting China in 2011

Algeria	Greece	Peru	Thailand
Bangladesh	Indonesia	Romania	United Kingdom
Belarus	Israel	Russia	United States
Burma	Italy	Serbia	Vietnam
Cambodia	Kazakhstan	Slovenia	Zambia
Cameroon	Laos	South Korea	
Djibouti	Montenegro	Switzerland	
European Union*	New Zealand	Tajikistan	
Gabon	Pakistan	Tanzania	

This list includes visits by senior defense officials and chiefs of the armed services. It excludes visits associated with multilateral military exercises.

*The EU's High Representative for Foreign Affairs and Security Policy, Catherine Ashton, in October 2011 met in Beijing with Chinese Defense Minister Liang Guanglie.

Appendix 4. Maps And Charts

Figure 1: ***Sovereignty Claims in the South China Sea.***

Figure 2: ***Disposition of PLA Forces in the Nanjing Military Region.***

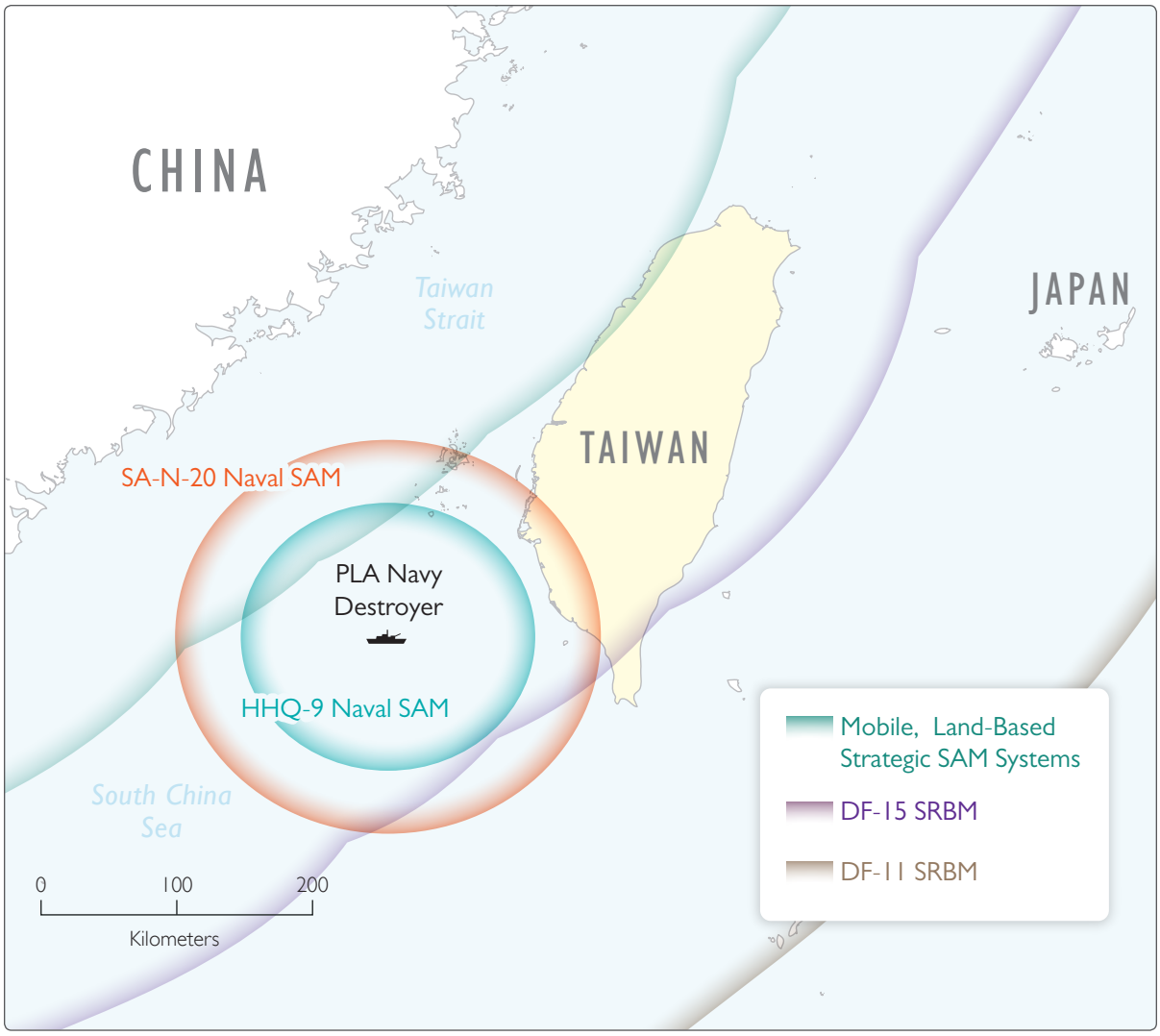


Figure 3: ***Taiwan Strait SAM and SRBM Coverage.*** *This map depicts notional coverage based on the range of land and sea-based missile systems, including advanced SAMs that China would likely employ in a Taiwan conflict. A single PLA Navy destroyer is used to illustrate the range of sea-based SAM coverage. Actual air defense coverage would be non-contiguous and dependent upon precise deployment sites. If deployed near the Taiwan Strait, the S-300's extended range provides the PLA's SAM force with an offensive capability against Taiwan aircraft.*

Figure 4: *The First and Second Island Chains.* *PRC military theorists refer to two "island chains" along China's maritime perimeter. The First Island Chain includes Taiwan and the Ryuku Islands, the Second Island Chain extends from Japan to Guam.*

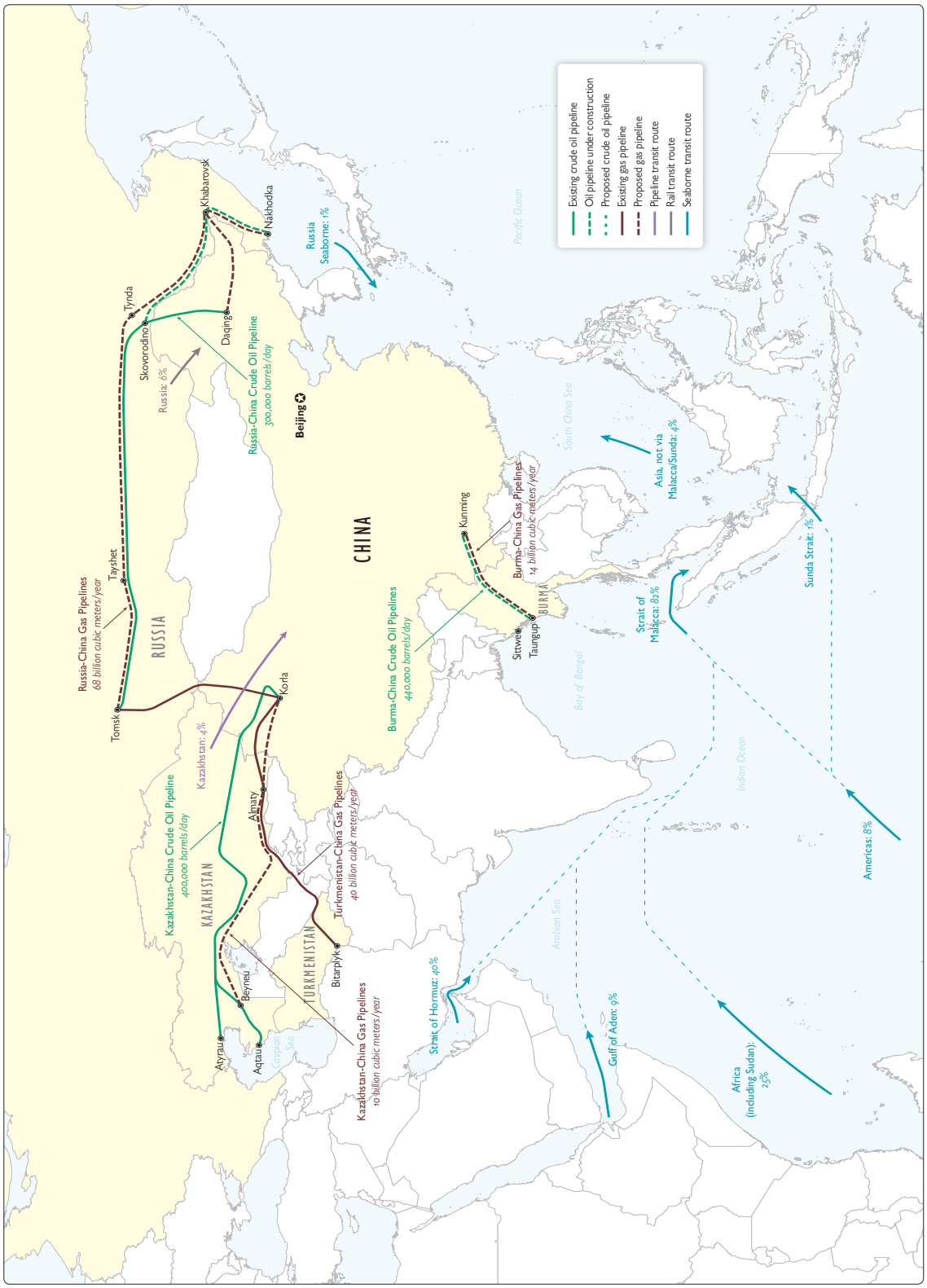


Figure 5: ***China's Import Transit Routes and Proposed Routes for Bypassing SLOCs.***

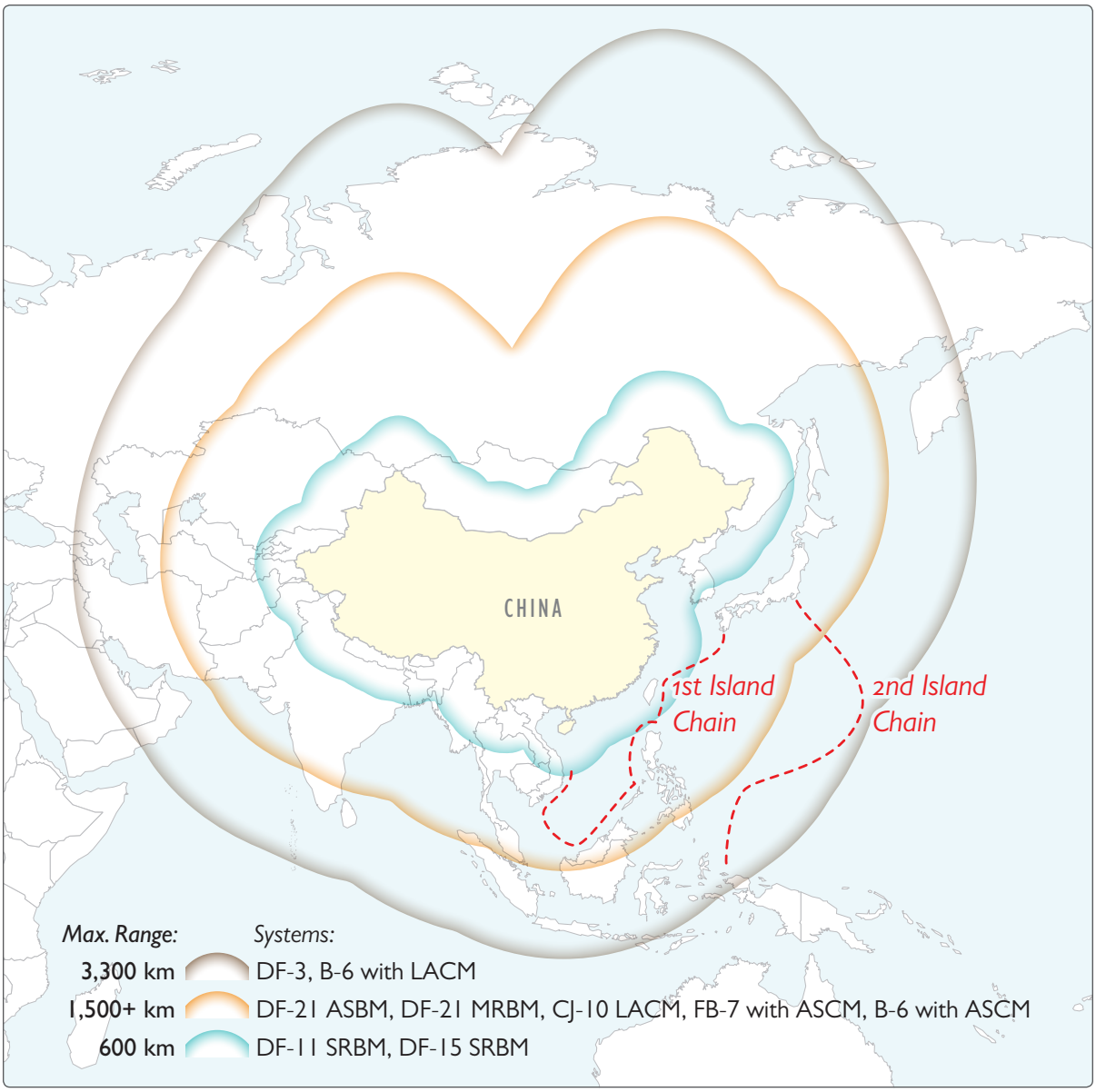


Figure 6: *Conventional Counter-intervention Capabilities.* *The PLA's conventional forces are currently capable of striking targets well beyond China's immediate periphery. Not included are ranges for naval surface- and sub-surface-based weapons, whose employment distances from China would be determined by doctrine and the scenario in which they are employed.*

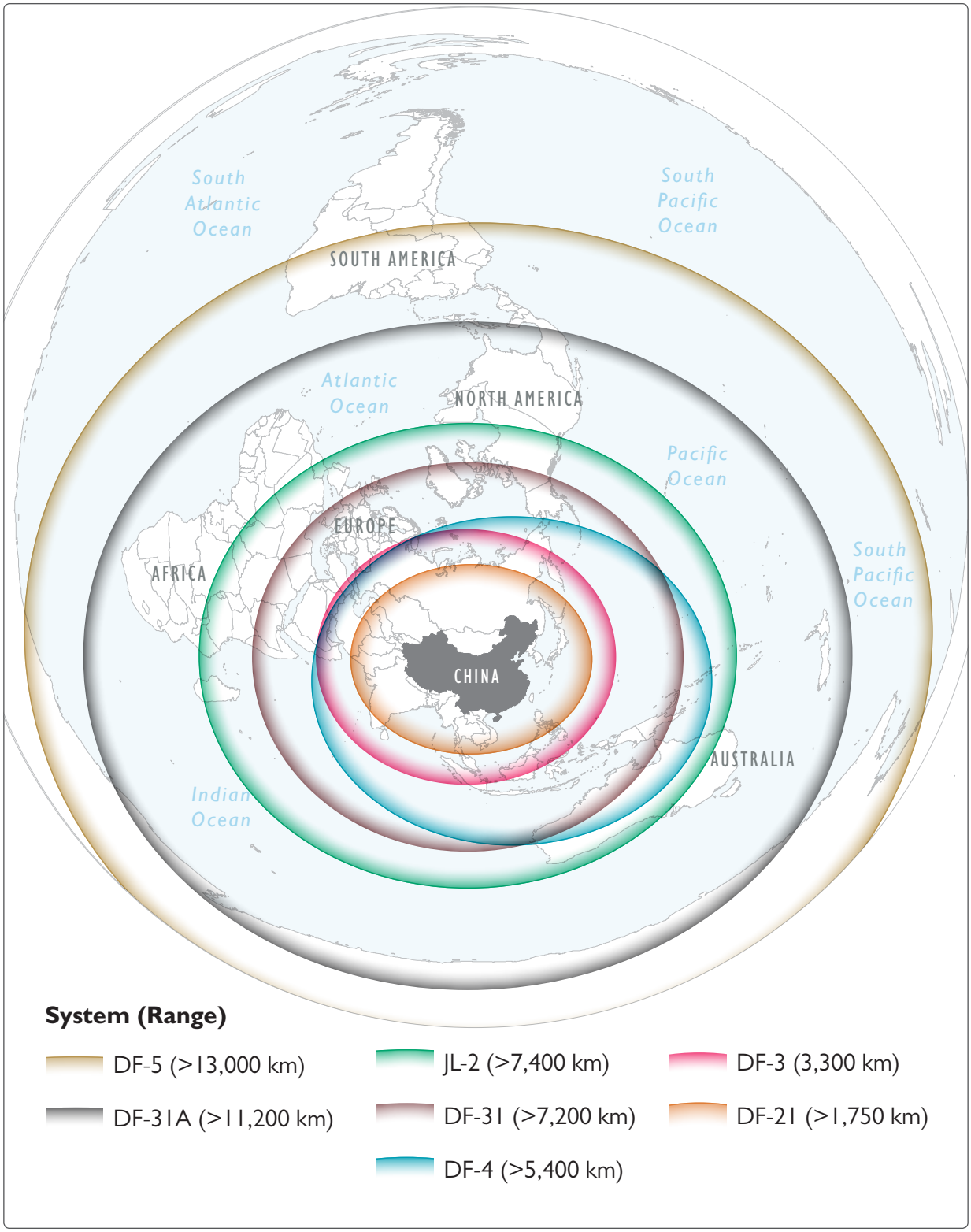


Figure 7: ***Medium and Intercontinental Range Ballistic Missiles.*** *China is capable of targeting its nuclear forces throughout the region and most of the world, including the continental United States. Newer systems, such as the DF-31, DF-31A, and JL-2, will give China a more survivable nuclear force.*

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