



The Heritage Foundation

Backgroundunder

Executive Summary

No. 1163

March 11, 1998

CHINA'S ARMS REQUIRE BETTER U.S. MILITARY TIES WITH TAIWAN

RICHARD D. FISHER, JR.

The traditional objective of the United States in the Taiwan Strait has been to prevent conflict until the People's Republic of China (PRC) and the Republic of China on Taiwan (ROC) settle their differences peacefully. To this end, under the provisions of the 1979 Taiwan Relations Act, the United States has sold defensive weapons to Taiwan to deter Chinese attack.

The willingness of the United States to come to Taiwan's aid in the event of an attack was made clear in March 1996 when China undertook threatening military exercises on the eve of Taiwan's presidential election. The United States responded with its most powerful show of military force toward China since the Taiwan Strait crises of the 1950s, deploying 2 aircraft carriers and 36 ships and submarines in support.

Recently, however, the Clinton Administration has expanded the scope and depth of political and military contacts with China's armed forces while refusing to upgrade military contacts with Taiwan. This may undermine deterrence by causing Beijing to perceive that it can isolate Taipei further from Washington and eventually be able to use military force to coerce or subdue Taiwan.

DANGERS TO DETERRENCE

Several factors contribute to endangering deterrence in the Taiwan Strait:

- **China is pursuing a broad military modernization program, assisted by access to foreign military technology.** China is seeking advanced information systems like radar satellites, highly accurate ballistic and cruise missiles, supersonic anti-ship missiles, and modern submarines. These weapons could give China a significant advantage over Taiwan's military forces.
- **The United States has expanded military-to-military contacts with China's People's Liberation Army (PLA).** Scores of U.S. brigadier generals and rear admirals visit China annually as part of the National Defense University's Capstone program, and a number

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of top PLA officers have come to the United States. Pentagon strategists hope that many high-level officer exchanges will help open the secretive PLA so they can learn more about its doctrine, nuclear forces, and modernization plans. PLA visitors are briefed on broad U.S. doctrine and modernization plans. PLA officers also have been allowed to inspect modern U.S. weapon systems. But the PLA has yet to grant the U.S. military equal access to its advanced hardware, doctrine, or modernization plans.

- **The Clinton Administration is reluctant to upgrade military-to-military contacts with Taiwan.** The Administration strictly limits U.S. officers visiting Taiwan to the rank of colonel or below and permits only visits connected with arms sales. When the Capstone program sends U.S. generals and admirals to Beijing, they are not allowed to visit Taipei, too. Senior ROC military officers may visit Washington, but only to discuss equipment purchases. ROC officers train in the United States to use specific weapons, but they generally do not learn about current U.S. doctrine or operational methods.

Limiting the military dialogue between the United States and Taiwan hurts both sides. Both the ROC military and the U.S. Pacific Command lose by knowing less and less about one another's doctrine, operational methods, and readiness. This will handicap the United States and Taiwan in a future confrontation over the Strait, especially if the United States decides to intervene to support Taiwan. An inability to understand ROC military actions or to be able to communicate securely with ROC commanders may result in "friendly fire" incidents between U.S. and ROC forces during future crises. For its part, the United States

loses opportunities to bolster deterrence on the Taiwan Strait by being unable to assess effectively the state of Taiwan's military preparedness.

STRENGTHENING TAIWAN

Over the next decade, Taiwan will require new military technologies to be able to sustain deterrence, and the United States must consider how to meet these needs now. The United States should consider selling Taiwan:

- **Advanced targeting and missile defense systems,**
- **Digital data links,**
- **High-altitude unmanned reconnaissance aircraft,**
- **Vertical take-off fighters and support aircraft, and**
- **Modern conventional submarines.**

The United States also should interpret the Taiwan Relations Act's definition of "arms of a defensive character" to account for the expanded threat posed by China's ongoing military modernization.

Although the Taiwan Strait is calm now, tensions there could embroil the United States again in the next decade. China is building its armed forces to add strength to its diplomacy and to give its leaders military options to "solve" its Taiwan problem. As the 20th anniversary of the Taiwan Relations Act approaches, the United States must help Taiwan counteract China's threatening military buildup so that Beijing and Taipei eventually can settle their differences peacefully.

—Richard D. Fisher, Jr., is Senior Policy Analyst in the Asian Studies Center at The Heritage Foundation.



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Backgrounder

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The traditional objective of the United States in the Taiwan Strait has been to prevent conflict until the People's Republic of China (PRC) and the Republic of China (ROC) on Taiwan settle their differences peacefully. To this end, under the provisions of the 1979 Taiwan Relations Act (TRA), the United States has sold defensive weapons to Taiwan to deter an attack by China. Clinton Administration policies to expand the scope and depth of political and military contacts with China's armed forces while refusing to upgrade military contacts with Taiwan, however, may cause Beijing to perceive that it can isolate Taipei from Washington further and eventually be able to use military force to coerce or subdue Taiwan.

Although the Taiwan Strait is calm now, tensions there could embroil the United States again within the next decade.¹ After all, China refuses to disavow the use of force in settling its conflicts with Taiwan, which it regards as an "unrecovered" territory. Taipei remains committed to eventual unification with a China that evolves into a democracy—perhaps a distant prospect. Although both sides may yet reach an acceptable political solution, China also is building its armed

forces to add strength to its diplomacy and to give its leaders military options to "solve" its Taiwan problem.

The TRA implies that the United States will come to Taiwan's aid in the event of an attack. Washington's willingness to do so was made clear in March 1996 when China undertook threatening military exercises on the eve of Taiwan's presidential election. The United States responded with its most powerful show of military force toward China since the Taiwan Strait crises of the 1950s. The U.S. Navy deployed 2 aircraft carriers and 36 ships and submarines in support.

Since this crisis, an imbalance in U.S. political-military relations with China and Taiwan may

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1. This warning is also made by Larry Nicksch of the Congressional Research Service in "Throw Out Script on Taiwan," *Defense News*, January 26–February 1, 1998, p. 19.



undermine deterrence on the Strait. The Clinton Administration has given China's People's Liberation Army (PLA) wide access to U.S. plans and modern weaponry. Taiwan's military officers, on the other hand, snubbed by the Administration, have declining familiarity with current U.S. war-fighting doctrine and operations. The lack of secure emergency communication links, moreover, enormously complicates the task of coordinating a defense of Taiwan.

To deter conflict on the Strait, the United States must upgrade its military dialogue with Taiwan to enable communications during crises and to build better familiarity. The United States also must consider a range of new arms sales to Taiwan to counter the PLA's threatening military buildup.

UNEVEN DIPLOMACY: SMILES FOR BEIJING, SNUBS FOR TAIPEI

The U.S. Department of Defense had broad relations with the PLA in the 1980s, including modest sales of weapons and military technology, to encourage China's anti-Soviet stance. But these ties were severed in response to the massacre of Chinese workers and students in Tiananmen Square in June 1989. Following the visit of then Secretary of Defense William Perry to China in October 1994, Pentagon contacts have grown steadily. Scores of U.S. brigadier generals and rear admirals visit China annually as part of the National Defense University's Capstone program. The then-chairman of the Joint Chiefs of Staff, General John Shalikashvili, visited China in May 1997. In return, top PLA officers have come to the United

States: Minister of Defense Chi Haotian in October 1996; PLA Chief of the General Staff Fu Quanyou in October 1997; and Deputy Chief of the General Staff Lieutenant General Xiong Guangkai in December 1997. In 1998, General Zhang Wannian, vice chairman of the Central Military Commission of the Chinese Communist Party Politburo and the highest ranking PLA officer, will visit the United States.

During the visit of China's President, Jiang Zemin, to Washington in November 1997, the United States and China agreed to expand military-to-military contacts toward a yet-to-be defined "strategic partnership." In late January 1998, U.S. Secretary of Defense William Cohen, while in China, signed a Military Maritime Consultative Agreement, which calls for an annual meeting and allows for "working groups" to discuss issues of mutual concern.² The United States also has proposed to China that the armed forces of both countries exchange visits of strategic missile force personnel and undertake small "table-top" military exercises that could lead to full-scale military-humanitarian exercises. So far, the PLA refuses to cooperate in these areas.³

Pentagon strategists hope that such exchanges will help open the secretive PLA so they can learn more about its doctrine, nuclear forces, and modernization plans. To prompt PLA reciprocation, the Pentagon briefs PLA visitors on broad U.S. doctrine and modernization plans.⁴ PLA officers also have been allowed to inspect such modern U.S. weapon systems as nuclear-powered attack submarines, the F-117 Stealth attack aircraft, and

2. Article II, Agreement Between The Department Of Defense Of The United States Of America And The Ministry Of National Defense Of The People's Republic Of China On Establishing A Consultation Mechanism To Strengthen Military Maritime Safety, 19 January 1998.
3. John Pomfret, "Even Up Close, China's Vision of U.S. Is Out of Focus, Defense Officials Indicate," *The Washington Post*, February 15, 1998, p. A11.
4. In a speech on May 20, 1997, to the PLA National Defense University, General John Shalikashvili noted that he gave the university copies of the Department of Defense's *Joint Vision 2010*, which explains future U.S. military doctrine and operational concepts. Much of what the PLA knows about U.S. plans and intentions can be gathered from congressional testimony, publicly available publications, and numerous pages on the World Wide Web hosted by Pentagon offices.



advanced *Aegis*-class radar cruisers.⁵ But the PLA has yet to grant the U.S. military equal access to its advanced hardware, doctrine, or modernization plans.⁶ During his recent visit to Beijing, Secretary Cohen was not permitted to visit requested military facilities.⁷ Instead, he was shown a regional air defense command center in Beijing, but this is far from commensurate with the access PLA visitors have been given to U.S. command centers.⁸

The PLA's unwillingness to reciprocate U.S. openness fully suggests a possible PLA desire to conceal its future capabilities and intentions because it may have to confront U.S. forces in a future conflict over Taiwan. Even U.S.-educated PLA officers demonstrate a continued hostility toward the United States.⁹ Nevertheless, U.S. advocates of continuing the uneven exchanges believe the PLA will be deterred if its leadership has a deeper knowledge of U.S. military capabilities.

As the United States upgrades military dialogue with the PLA, the Clinton Administration's reluctance to upgrade military-to-military contacts with Taipei could undermine deterrence on the Taiwan Strait. Since President Jimmy Carter's decision in 1979 to end formal diplomatic relations and terminate a Mutual Defense Treaty, U.S. military contacts with Taiwan have been determined by internal policy guidelines set by the Department of State but approved by other agencies. Under these guidelines, U.S. military officers, except for a small

military assistance group stationed in Taipei, were not permitted to visit Taiwan. The need to send U.S. officers to support the sale of F-16 fighters forced the Clinton Administration to relax the ban slightly in 1994. The Administration strictly limits visiting U.S. officers to the rank of colonel or below, however, and permits only visits connected with arms sales. When the Capstone program sends U.S. generals and admirals to Beijing, they are not allowed also to visit Taipei.

Senior ROC military officers may visit Washington but only to discuss equipment purchases. ROC officers train in the United States to use specific weapons, but they generally do not learn about current U.S. doctrine or operations. Taiwan's military has extensive relations with defense companies in the United States, but such commercial relationships cannot replace the knowledge and confidence derived from military-to-military ties.

Limiting the military dialogue between the United States and Taiwan hurts both sides. Both Taiwan's armed forces and the U.S. Pacific Command lose by knowing less and less about one another's doctrine, operational methods, and readiness. This shortcoming will handicap the United States and Taiwan in a future confrontation over the Strait, especially if the United States decides to intervene in support of Taiwan. An inability to understand ROC military actions or to be able to communicate securely with ROC commanders may result in "friendly fire" incidents

5. On at least two occasions PLA officers have toured *Aegis*-class cruisers. The most recent opportunity was during the March 1997 visit of PLA navy ships to Pearl Harbor, Hawaii. According to John Pomfret (*op. cit.*), PLA officers also have visited a U.S. nuclear-powered attack submarine.
6. A notable exception to this trend was the access given to Pentagon researcher Michael Pillsbury to PLA literature on future warfare. See Michael Pillsbury, ed., *Chinese Views of Future Warfare* (Washington, D.C.: National Defense University Press, 1997). These articles do not describe future doctrine or modernization plans, but do offer insights regarding the possible directions to be taken by the PLA.
7. Pomfret, "Even Up Close, China's Vision of U.S. Is Out of Focus, Defense Officials Indicate."
8. According to John Pomfret (in "Even Up Close, China's Vision of U.S. Is Out of Focus, Defense Officials Indicate."), General Fu Quanyou toured the USS *Blue Ridge*, which can coordinate air, land, and sea operations during wartime and contains some of the most sophisticated U.S. communications equipment. PLA visitors also regularly visit the National Military Command Center inside the Pentagon. By comparison, the air defense command visited by Secretary Cohen was only a region-level command center and contained a mix of old and newer communications technology. Some sources think this facility may have been nothing more than an air traffic control center.
9. Pomfret, "Even Up Close, China's Vision of U.S. Is Out of Focus, Defense Officials Indicate."



between U.S. and ROC forces during future crises. A congressional source familiar with this problem during the 1996 U.S. naval deployments near Taiwan told Heritage Foundation analysts, “We would not have been able to coordinate anything.”¹⁰

For its part, the United States loses opportunities to bolster deterrence on the Taiwan Strait through its inability to assess effectively the state of Taiwan’s military preparedness. Government sources in Taiwan and the United States have told Heritage Foundation analysts that Taiwan’s armed forces lag in their ability to conduct effective joint-service operations.¹¹ For example, ROC airborne early warning radar aircraft do not have data links that can pass their information to army and naval forces. There also are concerns that fixed radar sites, airfields, and command centers on Taiwan are not protected adequately from surprise strikes. U.S. military officers would be able to address these concerns more effectively if there were greater military-to-military contact with their ROC counterparts. U.S. advice on how to handle these problems could increase Taiwan’s military capabilities and strengthen deterrence without the sale of new weapons.

As the Clinton Administration embarks on a broader and deeper military-political relationship with the PLA, the lack of a corresponding improvement in military contacts with Taiwan risks creating the impression in Beijing that it can isolate Taipei further from Washington. Were this to occur, chances for miscalculation in Beijing that it could use military pressure against Taipei would increase.

A POTENTIAL MILITARY IMBALANCE

Although the military-political relationship between the United States and Taiwan has suffered since 1979, the United States has been careful to sell Taiwan new weapon systems that allow it to sustain a technical edge over PLA forces.¹² Taiwan’s advantage in this area could erode significantly over the next decade, however, as the PLA pursues a broad military modernization program, assisted by access to foreign military technology, to create more capable information gathering as well as missile, air, and naval forces.¹³ In short, the PLA is seeking to exploit technologies associated with the Revolution in Military Affairs (RMA). The RMA posits that the next generation of weapons will emphasize control of outer space, advanced information technologies, and long-range strike systems like accurate non-nuclear missiles to dominate future battlefields.

New PLA Information Systems

Chinese military strategists realize the vital importance of information dominance for future warfare, and are acquiring space, air, and ground systems to fulfill this need. Liang Zhenxing, a PLA expert on future warfare with the Commission on Science, Technology, Industry and National Defense (COSTIND),¹⁴ notes,

information will be the primary tool for waging war.... Controlling space and seizing air and space superiority will be important contributing factors in seizing the war initiative.”¹⁵

To make better use of space for military purposes,

10. Author’s interview at The Heritage Foundation, January 30, 1998.

11. Author interviews in Taipei, November 1996 and August 1997; author interviews with various U.S. government officials.

12. This trend began in the late 1950s. During air combat over the Taiwan Strait between ROC and PLA aircraft, the United States provided Taiwan with early versions of the Sidewinder air-to-air missile, which gave ROC forces an edge in combat.

13. For more on foreign sources of PLA modernization see, Richard D. Fisher, Jr., “How America’s Friends Are Helping to Build China’s Military Power,” Heritage Foundation *Background* No. 1146, November 5, 1997.

14. COSTIND is subordinate to the State Council and the Central Military Commission. It is responsible for oversight of much of China’s military research and development, defense conversion, nuclear weapons testing, and commercial satellite launching.

15. From *China Electronics News*, cited in the *Far Eastern Economic Review*, February 12, 1998, p. 28.

Chart 1

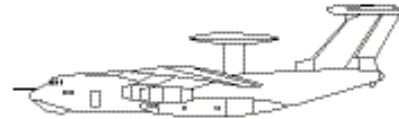
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Six New Weapon Systems China Is Seeking That Will Challenge the Balance in the Taiwan Strait



Radar Satellites

China may be seeking European and Russian technology to build its own high-resolution radar satellites, which can find targets in Taiwan in all weather conditions. They also can locate ROC or U.S. naval forces at sea and provide targeting data. Taiwan has no plans for such satellites.



A-50/Phalcon AWACS

Russia and Israel teamed up in 1997 to build a new radar aircraft for China based on the Russian A-50 aircraft and the Israeli Phalcon phased-array radar. China may purchase up to eight over the next decade. These aircraft will give the PLA a needed level of awareness to manage offensive and defensive air and naval operations around Taiwan.



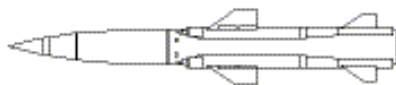
DF-15 (M-9) Missiles

This 360-mile range ballistic missile already may be very difficult to shoot down due to a second stage that can change its trajectory. Global Positioning Satellite-based guidance systems, now under development, may make the DF-15 accurate enough to hit aircraft hangers and buildings. China could build enough DF-15s to overwhelm ROC defenses.



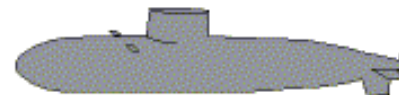
New Land-Attack Cruise Missiles

Israeli and Russian technology may be helping China to field a new Tomahawk-class long-range land-attack cruise missile by the next decade. These also may be very accurate and be employed from land, naval and air launchers. They also would be difficult to shoot down and could be built in large enough numbers to overwhelm ROC defenses.



Supersonic Anti-Ship Missiles

China has purchased two Russian *Sovremennyi* destroyers that it may equip with either the *Moskit* (SS-N-22) or the *Yakhont* supersonic anti-ship missile. Both can fly faster than twice the speed of sound, making them difficult to shoot down. The *Yakhont* is smaller, and can be put on a larger number of Chinese ships and submarines. Taiwan lacks a defense against these missiles.



Better Conventional and Nuclear Submarines

China is buying 4 Russian *Kilo*-class conventional subs, two of which are very quiet and hard to detect. China may be using Russian technology to build better nuclear-powered and conventional submarines. The U.S. Office of Naval Intelligence says China may have 15 new submarines by 2010, which may allow China to pose a much more serious threat of naval blockade of Taiwan.



China is seeking Western and possibly Russian technology to build advanced radar satellites that can find fixed and moving targets under all weather conditions.¹⁶ China also is developing better imaging satellites to provide targeting data to its forces. There also are indications that China has realized it must be able to deny the use of space to enemies and may be developing anti-satellite and antimissile systems.

China is seeking information dominance by investing in airborne warning and control system (AWACS) aircraft and signals intelligence (SIGINT) systems. Russia and Israel have teamed up to sell China an AWACS system based on a Russian aircraft with a 230-mile-range Israeli radar. China also is buying a smaller British airborne radar that could be placed on transport aircraft to form a mini-AWACS capable of offensive and defensive missions. China's SIGINT capability is judged to be the largest of any Asian state, based on Soviet/Russian and perhaps some Israeli technology.¹⁷ Signals intelligence also can be used to improve detection and targeting. The challenge for China is to be able to meld its various information technologies to provide field commanders with real-time targeting data.

Taiwan relies on 20 to 30 fixed radar sites for early warning, has purchased radar warning aircraft, and has invested heavily in SIGINT capabilities.¹⁸ Taiwan has access to commercial satellite imaging, but this could be denied during times of tension. Taiwan does not have its own military imaging or intelligence satellite network. Should

the PLA succeed in melding disparate space, airborne, and ground-based information gathering systems to assist military operations, it would obtain a significant advantage over Taiwan in yet another area.

More PLA Missiles

Perhaps the most serious potential threat to Taiwan's security is China's development of a reconnaissance and missile-strike complex that could be used to overwhelm key military and economic centers on Taiwan. During the March 1996 crisis, the PLA fired four ballistic missiles to locations just outside Taiwan's two largest ports. Official sources in Washington and Taipei told this author that China was prepared to fire over 20 missiles but the weather most likely prevented such action.¹⁹

In early 1997, the U.S. Defense Department estimated that China had the capacity to produce up to 1,000 new missiles over the next decade.²⁰ China is incorporating Global Positioning Satellite (GPS) guidance technology into its 360-mile-range DF-15 ballistic missile.²¹ Such technology could allow this missile to hit targets within a 300-foot circle—good enough to hit large buildings, fixed radar sites, and energy and communication centers. The Department of Defense also expects China to develop a new class of long-range land-attack cruise missiles.²² Similar to the U.S. Tomahawk, such new Chinese cruise missiles could be launched from aircraft and submarines and be very accurate. In addition, China may be

16. Fisher, "How America's Friends Are Helping to Build China's Military Power," p. 12.

17. Desmond Ball, "Signals Intelligence in China," *Jane's Intelligence Review*, August, 1995, p. 365; Pamela Pohling-Brown, "Checkered Chums," *International Defense Review*, February 1995, p. 38.

18. Desmond Ball, "Signals Intelligence in Taiwan," *Jane's Intelligence Review*, November 1995, p. 510.

19. Richard D. Fisher, Jr., "China's Missile Threat," *The Wall Street Journal*, December 30, 1996, p. 12. For an analysis of China's use of missiles near Taiwan, see Richard D. Fisher, Jr., "Missiles Across the Taiwan Strait, a Political and Military Analysis," in James A. Lilley and Chuck Downs, eds., *Crisis in the Taiwan Strait* (Washington, D.C.: National Defense University, 1997), pp. 167–216.

20. U.S. Department of Defense, *Selected Military Capabilities of the People's Republic of China*, Report to Congress Pursuant to Section 1305 of the FY 1997 National Defense Authorization Act, p. 4.

21. Fisher, "China's Missile Threat."

22. U.S. Department of Defense, *Selected Military Capabilities*.



developing a very accurate radar-guided warhead for its 1,100-mile-range DF-21 ballistic missile. These new ballistic and cruise missiles also can be expected to be armed with a range of non-nuclear warheads to include cluster munitions, deep-penetrating warheads, and electromagnetic pulse (EMP) warheads that disable electronic equipment and power grids.

Taiwan has no long-range ballistic missiles, but it has obtained a limited defense against missile strikes through its purchase of U.S.-made Patriot surface-to-air missiles. Taiwan's Patriots, however, lack a long-range cueing (or targeting) capability—such as that provided by U.S. early warning satellites—that would give a better chance of interception. The Patriot may be able to intercept DF-15 missiles, but it cannot defeat the much faster DF-21. In addition, the considerable expense of the Patriot, or that of follow-on anti-tactical ballistic missile systems like the U.S. Theater High Altitude Air Defense (THAAD) system, means that Taiwan may not be able to afford defensive missiles in sufficient number to protect itself from the PLA's growing arsenal of offensive missiles. According to a recent report, this dilemma is causing some ROC officers to favor Taiwan's development of long-range ballistic missiles to deter China.

Better PLA Air Forces

In the past decade, Taiwan has made an enormous investment in advanced combat aircraft to form its front line of defense. In 1992, for example, it purchased 150 Lockheed F-16A and 60 French Dassault Mirage-2000-5 jet fighters that currently are entering service in Taiwan's air

force.²³ These modern fighters are capable of managing multiple simultaneous missile engagements—a critical factor, considering the numerical superiority of China's air force. But only the Mirage has the possibility to exploit this capability because it is likely equipped with the self-guiding, 30-mile-range Matra MICA air-to-air missile.²⁴ Taiwan's F-16s cannot do so because the United States so far refuses to sell Taiwan its 30-mile-range AIM-120 air-to-air missile, which also is self-guiding. Taiwan is completing production of 130 domestically developed Ching-Quo fighters that incorporate modern radar and cockpit systems, but also may have a domestically developed self-guiding medium-range air-to-air missile.²⁵ Over 200 F-5E fighters form the current backbone of Taiwan's air force. These lack long-range air-to-air missiles and the ability to fight in all weather conditions, and are not as maneuverable as China's newer fighters. Taiwan's air defense is greatly enhanced by four E-2T airborne radar and control aircraft, which can follow 2,000 targets out to about 300 miles.²⁶

If Taiwan does not provide a continued investment in air defenses, it could lose its margin of technical superiority to China over the next decade. Today, the vast majority of China's combat aircraft are obsolete compared with those of Taiwan. But access to Russian and Israeli technology is enabling China to upgrade its combat aircraft to fourth-generation standards. China has acquired 50 Sukhoi Su-27 fighters from Russia and is preparing to co-produce up to 200 more. This long-range fighter is slightly more maneuverable than the F-16 and can carry ten missiles; the F-16 can carry only six to eight. In addition,

23. Aircraft breakdown: F-16A: 150 F-16A-2 single-seat fighters and 30 F-16B-20 two-seat fighters. Delivery began in July 1996. Mirage: 48 Mirage-2000-5Ei single-seat fighters and 12 Mirage-2000-5Di two-seat fighters. Approximately 30 had been delivered by the end of 1997.

24. For more on the Mirage-2000-5 see, Paul Jackson, "Ds and Dashes," *Air International*, February 1995, p. 76.

25. Taiwan was forced to develop this fighter after the refusal by the United States in the 1980s to sell F-16s. Its expense and difficulties in development, and later the availability of the F-16, forced a production cutback from 256 to 130. Doubt over its multi-engagement capability rests in a lack of knowledge concerning whether its 27-mile-range Sky Sword-2 air-to-air missile is self-guiding or requires continuous guidance from the aircraft radar. For more information, see Jon Lake, "Taiwan's Indigenous Defensive Fighter," *Air International*, June 1996, pp. 347-356.

26. For more on the E-2's capabilities see Jon Lake, "Eye of the Fleet," *Air International*, November 1997, pp. 285-293.



China is negotiating with Russia to purchase 50 Su-30 attack aircraft, a model that is capable of delivering a range of precision-guided missiles and bombs under all weather conditions. China has purchased Israeli technology, too, to help develop its J-10 fighter, which could be more capable than the F-16.²⁷ By 2011, the U.S. Office of Naval Intelligence estimates that China may possess over twice as many modern combat aircraft than Taiwan.²⁸

Just as important, China is acquiring advanced missiles and support aircraft. Russian sources note that China's next batch of Sukhoi fighters may carry a radar that can direct multiple engagements with the 56-mile-range Russian AA-12 self-guiding air-to-air missile. China is expected to acquire this missile with its more capable Su-27s. According to one report, Malaysian fighters exercising with the AA-12 were able to defeat Australian fighters armed with the U.S.-made AIM-7 air-to-air missile, which has about the same range as the AIM-120.²⁹ China's Su-27s already have the 18-mile-range AA-11 helmet-sighted air-to-air missile, which confers a decided advantage over Taiwan's U.S.-made, 5.5-mile range AIM-9 Sidewinder missiles that are not helmet-sighted. There are reports that China is considering the purchase of the Israeli-made Rafael Python-4, a very fast air-to-air missile that uses an advanced helmet display that can incorporate radar and infrared imaging data to assist targeting in poor visibility.³⁰ China also is reported to have entered into an agreement to co-produce the Russian-made AS-17P antiradar missile. This 93- to 125-mile-range missile has a high Mach-3 speed, making it difficult to counteract and presenting a

potential threat to Taiwan's fixed radar sites. At the Zhuhai Air Show in November 1996, Russia marketed an aerial refueling tanker to China. If purchased, this tanker could be used to extend the range of PLA combat aircraft.

If China can afford all these air combat systems and succeed in using them in an integrated manner, it may be able to undertake long-range air superiority and attack missions that approach the capability demonstrated by U.S. forces in the Persian Gulf War. Although China may not achieve this capability until late in the next decade, it will place pressure on Taiwan to acquire air defense technology to sustain its technological edge.

New PLA Naval Systems

Over the next decade, perhaps the most serious threat to Taiwan posed by PLA naval forces will be in the areas of advanced submarines and supersonic cruise missiles. Taiwan's vulnerability at sea will increase if PLA missile forces and air forces are able to disable Taiwan's command infrastructure and air defenses sufficiently. China is acquiring four *Kilo*-class attack submarines from Russia. Two of these will be an advanced version that is nearly as quiet as early U.S. *Los Angeles*-class nuclear attack subs and thus very difficult to detect. In November 1997, ROC naval forces reportedly could not locate a less-advanced model of the *Kilo* transiting the Taiwan Strait from Russia on its way to a naval show.³¹ China also is interested in Russia's new *Amur*-class submarine, which is smaller than the *Kilo* but will incorporate advanced propulsion and noise-reduction systems and missile weapons.

27. The J-10 is said to have experienced difficulties in development, but the Office of Naval Intelligence estimates it could enter service in 2005. Russia and Israel are competing to provide advanced radar, missiles, and defensive electronic systems for the J-10. If development is successful, some reports suggest China may buy up to 300 J-10s.

28. U.S. Office of Naval Intelligence, *Worldwide Challenges To Naval Strike Warfare, 1997*, p. 18.

29. Bill Sweetman, "Russia Sets the Pace in the Race for Air-to-Air Missiles," *Jane's International Defense Review*, November, 1997, p. 70.

30. The R-73's helmet sight is limited to the pilot's visual range. See Douglas Barrie, "Russia and Israel Prepare for Dogfight Over Chinese Missile," *Flight International*, September 24-30, 1997, p. 18.

31. "Sub-Par Performance," *Far Eastern Economic Review*, December 18, 1997, p. 12.



China currently is building the indigenously designed *Song*-class conventional submarine that may incorporate Russian and European weapons and equipment. Russia also is reported to be helping China design a new class of nuclear-powered attack submarine called the Type 093. The Office of Naval Intelligence estimates that China could have more than 15 new conventional and nuclear attack subs by the year 2010.³²

The PLA navy also is in the process of acquiring the Russian-made Raduga SS-N-22 antiship missile, which has a range of 93 miles and speed of Mach 2.3. At this speed, Taiwan's existing naval missile defense system, the U.S.-made Phalanx, is rendered ineffective. The SS-N-22 may equip two *Sovremennyi*-class missile destroyers that China is buying from Russia. There are reports, however, that China also may purchase the NPO Mashinostroyeniya Yakhont supersonic antiship missile from Russia.³³ The Yakhont is more compact than the SS-N-22, which allows it to be fitted on a wider range of existing PLA ships or be backfitted to China's *Kilo*-class submarines.

The only naval defense system that may be able to defeat supersonic antiship missiles is the U.S. Aegis radar and missile combination. Taiwan does not have Aegis. To modernize its antisubmarine forces, Taiwan has built or purchased 22 U.S.- and French-made antisubmarine frigates and has modernized seven older U.S.-made destroyers. The growing number of new and difficult-to-detect Chinese submarines, however, will put greater pressure on Taiwan's antisubmarine forces. Naval officers often say that the best antisubmarine weapon is another submarine, but Taiwan's navy has just two modern conventionally powered submarines purchased in the early 1980s from the Netherlands. Taiwan has an acute requirement for additional submarines to counter the PLA's growing strength in this area.

SUSTAINING DETERRENCE ON THE TAIWAN STRAIT

As China modernizes its military forces, with the possibility that it is preparing for a war with Taiwan, preventing a conflict on the Taiwan Strait will become a greater challenge for U.S. leadership in Asia. Preventing such a conflict was the clear intent of the TRA. The only U.S. law that sets the framework for U.S. relations with a sovereign government, the TRA continues to help guide the U.S. ability to prevent conflict on the Strait by stipulating three major requirements for U.S. policy:

1. **Relations with China are premised on the expectation that China will settle its differences with Taiwan peacefully.** Section 2, Part 3 of the TRA states that the "United States decision to establish diplomatic relations with the People's Republic of China rests upon the expectation that the future of Taiwan will be determined by peaceful means."
2. **The United States will continue to sell defensive arms to Taiwan.** Section 2, Part 5 calls on the United States to "provide Taiwan with arms of a defensive character."
3. **The United States will maintain the military capability to defend Taiwan.** Section 2, Part 6 requires maintaining the "capacity of the United States to resist any resort to force or other forms of coercion that would jeopardize the security, or the social or economic system, of the people on Taiwan."

Taiwan's Importance to the United States

Ensuring the continued survival of Taiwan until such a day that it can settle its differences with China peacefully also serves other U.S. interests in promoting democracy in China. Today, Taiwan is a vibrant democracy that is proving to the people of China that political freedoms and economic freedoms can grow together. Taiwan's example

32. U.S. Office of Naval Intelligence, *Worldwide Submarine Challenges*, 1997, p. 23.

33. Anatoliy Yurkin, "Destroyers for China Might Carry 'Yakhont' Missiles," *ITAR-TASS*, November 24, 1997, in *FBIS-UMA-97-328*.



must be sustained if the mainland ever is to democratize.

Taiwan's safety has been undermined when the United States has wavered in its commitments. China's fears that President Lee Teng Hui was pursuing a "covert independence" strategy helped to justify its provocative missile tests north of Taiwan in July 1995. China regularly has said that a declaration of "independence" would be a cause for war. After these 1995 tests, some Clinton Administration officials noted that the United States might not defend Taiwan if it was attacked.³⁴ In the face of such U.S. temporizing, China only increased its military pressure, with even more dangerous missile tests near Taiwan in March 1996. This demonstration prompted the Clinton Administration to dispatch two aircraft carrier groups, a correct move but perhaps one that could have been avoided.

Needed: A New Calculation for Deterrence on the Strait

To prevent future challenges to Taiwan's security, the United States should consider the ways in which it can strengthen deterrence on the Taiwan Strait. The United States is justified in doing so because China's aggressive military modernization is upsetting the cross-strait military balance. Continued arms sales to Taiwan serves two goals of U.S. foreign policy.

1. **They help reduce the chance that China will use force against Taiwan.** Military pressure from China may serve only to increase popular sentiment on Taiwan for independence, causing hardliners in Beijing to clamor for military action. A strong Taiwan would be the principal factor in determining whether China puts a priority on diplomacy over military action over the next decade.
2. **A strong Taiwan lowers the likelihood that the United States will have to send forces to oppose China.** The expectation of assuming the main responsibility for defending

Taiwan would force the United States to reconsider its defense expenditures because additional aircraft carriers, combat aircraft, and missile defense forces would be needed permanently in the Pacific theater.

Thus, to sustain deterrence on the Taiwan Strait, the United States will have to consider sharing weapon systems being designed for the next century with Taiwan. The United States should consider selling Taiwan new advanced targeting and missile defense systems, digital data links, high-altitude unmanned reconnaissance aircraft, vertical take-off fighters and support aircraft, and modern conventional submarines. The United States also should interpret the definition of "arms of a defensive character" to account for the expanded threat posed by China's military modernization. For example, Taiwan may require accurate aircraft munitions to target PLA missile sites. Some weapons that Taiwan will require, such as inexpensive defense against supersonic antiship missiles, are not yet in the U.S. inventory or have yet to be developed. As part of a broad program to strengthen deterrence on the Taiwan Strait into the next decade, the United States should:

- **Reaffirm the 1979 Taiwan Relations Act.** The TRA is reaching its 20th anniversary. The Clinton Administration and the U.S. Congress should consider high-profile activities to reaffirm this important act in 1999. Such activities could include a speech by the U.S. Secretary of State on the importance of the TRA and a joint congressional resolution that reaffirms the TRA. In its future dialogue with the PLA, the U.S. Department of Defense should remind PLA leaders of the importance of this law. For example, in his May 14, 1997, speech to the PLA National Defense University, General Shalikashvili mentioned the TRA as an important part of U.S. policy toward China. Secretary of Defense Cohen lost a public opportunity to affirm the TRA when he did not mention it in his January 19, 1998, speech before the Academy of Military Sciences.

34. Susan V. Lawrence and Tim Zimmerman, "A Political Test When Guns Matter," *U.S. News and World Report*, October 30, 1995, p. 48.



- **Upgrade military dialogue with Taiwan.** As the Clinton Administration embarks on an expanded military dialogue with China, Administration guidelines that limit the rank and scope of U.S. military contact with Taiwan serve to undermine deterrence in the Strait and create future danger for the United States in Asia. According to sources on Taiwan, the United States is not any more prepared to communicate with ROC forces than it was in March 1996. U.S. and ROC forces must have the means for secure voice and data communication. The United States should consider selling Taiwan digital communications equipment like the Link 16 digital data system to facilitate communication.³⁵ In addition, the Department of Defense requires regular personal contact between U.S. military personnel and their ROC counterparts to be able to exchange information on doctrine, operations, and readiness.
- **Urge Taiwan to improve military deficiencies.** As part of an expanded dialogue with Taiwan, the U.S. Department of Defense needs to assess the military readiness of Taiwan and recommend that it undertake steps to improve its capabilities in ways that do not require new weapons. Because the United States is improving its capabilities for combined air, land, and sea operations, it can share much-needed advice on how Taiwan can improve multiservice cooperation. The United States also can advise on building radar, airfield, and command facilities that can withstand surprise attack. The U.S. Department of Defense also should assess Taiwan's training and logistic programs and its ability to defend key military and economic centers from surprise attack.
- **Consider new weapon sales to Taiwan.** Over the next decade Taiwan will require new military technologies to be able to sustain deterrence, and the United States must

consider how to meet these needs now. Helping Taiwan defend against a developing PLA reconnaissance-missile strike complex perhaps will become the highest priority.

Taiwan will need much better reconnaissance systems, whether in the form of its own satellites or of very high-altitude unmanned aircraft that can detect and help target attacking PLA missiles and aircraft. Taiwan also will require effective but inexpensive antimissile systems. Perhaps the most cost-effective will be laser-based systems that can fire an almost unlimited number of "rounds," compared with a fixed inventory of antimissile missiles. For example, Taiwan's requirements may be satisfied by a more powerful version of the Tactical High Energy Laser (THEL) battlefield system being developed in conjunction with Israel. The first version of this weapon is designed to counteract smaller and slower artillery rockets; a more powerful version will be needed to defend against DF-15 and DF-21 ballistic missiles. If such systems are not possible to develop, then the United States should consider selling Taiwan accurate, self-guiding missiles that would allow Taiwan to use its F-16s to attack the PLA missile sites that threaten it.

Taiwan also will require an air defense system that can survive missile-saturation attacks on airfields, aircraft shelters, radar, and command facilities. It may need technical assistance in designing better shelters for aircraft and command centers that are able to survive deep-penetrating warheads. It also may require vertical or short take-off (V/STOL) fighters and antisubmarine and electronic support aircraft that are not dependent on long runways and can be dispatched quickly during crises.

The United States should consider selling Taiwan the V/STOL version of the future Joint Strike Fighter, which will combine a performance similar to that of the F-16 with a

35. This system previously had been denied to non-allied countries. It only recently was approved for sale to Singapore, however, with which the United States does not share an alliance. See "Singapore Is First Non-NATO State to Be Cleared for US Datalink," *Flight International*, February 25–March 3, 1998, p. 6.



vertical take-off and landing capability and improved stealth.³⁶

The United States also should consider selling Taiwan antisubmarine and electronic warfare versions of the Boeing V-22 tilt-rotor transport, which can take off like a helicopter but fly like a fixed-wing airplane—faster than a helicopter and carry a heavier load.³⁷ For the near term, Taiwan's air force needs much better air-to-air missiles to counter China's acquisition of the Russian AA-12 and helmet-sighted, short-range air-to-air missiles. The U.S. Air Force also needs the funds to develop more rapidly longer-range versions of the AIM-120 and to counteract the AA-12 and expected longer-range versions of that missile. The longer-range version of the AIM-120 should be sold to Taiwan as well.

Finally, the United States rapidly must develop an inexpensive and effective defense against supersonic antiship missiles that it also can sell to Taiwan. The U.S.-made Aegis radar system is large and expensive, so the United States and allied navies need a compact system like the Phalanx that is either gun, missile, or laser-based and can detect and target incoming supersonic missiles. If the United States cannot develop such a system, then it should revise its long-standing opposition to selling submarines to Taiwan. The United States should consider allowing U.S. shipyards to build and sell a European-designed conventional submarine to Taiwan. With six to eight additional small conventional submarines Taiwan's navy can deter PLA ships and subs that would carry these new supersonic missiles.

- **Urge China to reduce military tensions with Taiwan.** The United States should use

the opportunity of expanded military dialogue with the PLA to impress upon it the importance of reducing military tension on the Taiwan Strait. Although strictly avoiding any suggestion that the United States would help facilitate cross-strait negotiations, the Department of Defense can shape the PLA's attitude by stressing the costs that conflict will impose on China's relations in Asia and with the United States.

CONCLUSION

Promoting a peaceful resolution of political differences between the People's Republic of China and the Republic of China on Taiwan remains one of the most important challenges to U.S. political and military diplomacy in Asia. Even though the Taiwan Strait currently is calm, China is undertaking a sustained arms buildup using a new generation of military technologies. If China becomes impatient with diplomacy, it hopes to have military forces that could be used to overwhelm Taiwan's defenses.

Unfortunately, Clinton Administration policies are contributing to a dangerous imbalance across the Taiwan Strait. Despite the requirements of the 1979 Taiwan Relations Act that the United States help Taiwan maintain its defensive deterrent, ROC military officers are provided little opportunity to learn about current U.S. warfighting doctrine and operations. In addition, they lack the means to establish secure communication links with U.S. forces during military emergencies. Senior Chinese military officials can come to the United States to receive Pentagon briefings and inspect modern weapon systems. This may deter China. But, in a crisis, this knowledge might be used not only against Taiwan but also against U.S. forces assisting in the defense of Taiwan.

36. Two prototypes for the Joint Strike Fighter are being built by Boeing (X-32) and Lockheed-Martin (X-35), with one to be selected early in the next decade and to enter service by 2008. It is designed primarily for long-range ground-attack missions with a secondary counter-air capability. For a primary air-defense mission, Taiwan's air force would require modifications for more internally carried air-to-air missiles; current plans call for only two air-to-air missiles. Internal missile carriage allows the Joint Strike Fighter to exploit improvements in stealth technology.

37. Currently planned troop transport versions of the Boeing V-22 can carry a payload up to 20,000 pounds, which is enough to carry an effective suite of anti-submarine, airborne radar, or electronic warfare equipment.



The United States needs to upgrade its military dialogue with Taiwan to help sustain deterrence on the Taiwan Strait. Just as important, the United States must help Taiwan to defend against developing threats from the mainland by continuing

sales of advanced weapon systems to Taiwan.

— *Richard D. Fisher, Jr.*, is Senior Policy Analyst in the Asian Studies Center at The Heritage Foundation.