The Evolving Military Balance in the Korean Peninsula and Northeast Asia

VOLUME II
Conventional Balance, Asymmetric Forces, and US Forces

AUTHORS
Anthony H. Cordesman and Ashley Hess

A Report of the CSIS Burke Chair in Strategy
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Executive Summary

The tensions between the Koreas – and the potential involvement of the People’s Republic of China (China or PRC), Japan, Russia, and the United States of America (US) at both the political and military levels – create a nearly open-ended spectrum of possible conflicts. These range from posturing and threats – “wars of intimidation” – to major conventional conflict on the Korean Peninsula to intervention by outside power like the US and China to the extreme of nuclear conflict.

There are powerful deterrents to such conflicts. The Republic of Korea (ROK or South Korea) has emerged as major economic power, and one that is important to the economies of the US, Japan, and China – as well as to the world. The Democratic People’s Republic of Korea (DPRK or North Korea) is one of the world’s most heavily militarized states, but is still a relatively small military power by US and Chinese standards. It remains vulnerable to US aid, missile power, and precision strike capability, and runs a serious risk of being isolated if it provokes or escalates a conflict without Chinese support.

The fact remains, however, that no one can dismiss the risk of a serious clash or war. This is particularly true if one considers the number of times that war has resulted from unpredictable incidents and patterns of escalation. The historical reality is that the likelihood of less-probable forms of war actually occurring has been consistently higher than what seemed in peacetime to be the most probable contingencies and the patterns of escalation that seemed most likely from the viewpoint of a “rational bargainer.”

This report is part of a three volume series that assesses the balance of forces that shape the stability and security of the Korean Peninsula in the full range of conflicts that could occur in the region. It focuses on the forces of the ROK and DPRK, but looks at outside powers as well. It also addresses the complex and constantly shifting mix of conventional, asymmetric, and CBRN (chemical, biological, radiological, and nuclear) capabilities that shape the balance.

Such an assessment is critical to shaping a strategy that can deter and defend against North Korea as well as for negotiations and planning responses to a variety of potential situations on the Peninsula. At the same time, the assessment shows there is no one way of assessing the Korean military balance that can be used for policy planning, strategic assessments, or arms control negotiations. The unclassified information available is often too uncertain, national perceptions differ too much, and different combinations of forces may be relevant in different situations.

The “Conventional” Warfare Balance

There is no one conventional balance that is the most likely to shape any conflict between the Koreas. Much depends on the scenario used in making the count, and the term “conventional” does not apply to many credible scenarios. Asymmetric and nuclear forces are likely to play at least some role in the way any conflict develops.

For decades, the DPRK has shaped the military balance in the Koreas through periods of deliberate confrontation and military threats, threatening military movements and exercises, a
steady military build-up, and sporadic acts of low-level violence ranging from assassination to artillery attacks and ship sinkings. It has focused on ROK targets but also consistently threatened the US.

Major uncertainties affect even the most basic counts of the regular military forces on each side. The Korean balance involves complex mixes of conventional, irregular, missile and WMD forces. As the analysis shows, the DPRK and ROK have very different force structures, deployments, and geography. In broad terms, however, the ROK has the advantage in “conventional force” quality and the DPRK has the advantage in force quantity. James R. Clapper, the US Director of National Intelligence (DNI), summarized the Korean conventional balance as follows on February 10, 2011:

North Korea’s conventional military capabilities have eroded significantly over the past 10-15 years due to persistent food shortages, poor economic conditions, inability to replace aging weapons inventories, reduced training, and increased diversion of the military to infrastructure support. Therefore, Pyongyang increasingly relies on its nuclear program to deter external attacks on the state and to its regime. Although there are other reasons for the North to pursue its nuclear program, redressing conventional weaknesses is a major factor and one that Kim and his likely successors will not easily dismiss.

Nevertheless, the [Korean People’s Army (“KPA”) remains a large and formidable force capable of defending the North. Also, as demonstrated by DPRK attacks on the South Korean ship Cheonan in March 2010 and Yeongpyong Island in November, North Korea is capable of conducting military operations that could potentially threaten regional stability. These operations provide Pyongyang with what the regime may see as a means to attain political goals through coercion.

The DPRK also has long emphasized irregular warfare, low level attacks and covert operations, and large Special Forces. It is ground and missile “heavy” compared to the ROK, and puts far more emphasis on force quantity or mass, while the ROK has emphasized land and air technology and force quality. The DPRK has long built up large stocks of chemical weapons, may have biological weapons and is an emerging nuclear power that may add nuclear warheads to a large force forcer of long range missiles. The ROK is just beginning to develop longer-range missile forces, and has not pursued nuclear weapons. It is, however, acquiring missile defenses.

It is important to note, however, that the DPRK may well face serous limits on its conventional capabilities that Clapper does not address, and this could seriously affect its ability to exploit its apparent conventional strength. Some experts feel that the DPRK’s recurrent economic crises have affected its ability to upgrade its major weapons and modernize its combat and service support forces as well as seriously limited its logistic stocks and capabilities.

This may affect the quality and quantity of basic military stocks like artillery ammunition, and there are reports that the DPRK even lacks the national fuel stocks to carry out a major conventional offensive. Other reports question its level of and realism in training, in addition to the readiness and size of its capability to sustain offensive operations. These reports cannot be confirmed at the unclassified level, but they also cannot be ignored. They present further

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reasons why the DPRK might choose scenarios or attack models that do not seem predictable. Such limits could encourage it to rely on asymmetric or nuclear options, depending on the scenario and cause of any fighting. They might also force it seek a sudden, surprise conventional victory in any all-out conventional attack.

Much would depend on the conditions that led to a confrontation or actual fighting. Total forces and orders of battle may or may not be relevant measures in a given crisis or conflict. Pyongyang might conduct a major conventional buildup to pressure the ROK, Japan, and/or the US. It might do so to deal with internal unrest by trying to focus the nation on a foreign enemy. It might launch a limited war for the same reasons, or engage in limited provocations – like those in 2010 – to which it expects to receive a limited ROK response and little punishment or censure from the international community.

It is doubtful that the ROK would initiate such a conflict. The ROK cannot be sure what level of escalation would follow any response to a limited incident or DPRK action of the kind Pyongyang initiated by sinking the ROK ship Cheonan on March 26, 2010 and by firing artillery on the populated ROK island of Yeonpyeong on November 23, 2010, killing four people. The ROK might also be confronted with a DPRK succession crisis or massive suppression of the population – creating a strong incentive for some form of decisive ROK military action.

As Sun Tzu pointed out centuries ago, wars do not have to involve conflict if military force can be used politically in the equivalent of “wars of intimidation.” The DPRK has found that one way to both mobilize support for the regime and put pressure on its neighbors and the US is to militarily pressure them, especially in the context of some self-generated crisis. It has learned that one rational tactic for a power with limited resources but large military forces is to appear “irrational” and then compromise. Within limits it has been able to count on the ROK and the US showing restraint, the Chinese being forced to largely stand aside or support its “buffer” state,” Japan and other Asian state pressing for some form of compromise that the DPRK can exploit, and Russia largely standing aside.

No one, however, can be certain that the DPRK is not going to escalate its future threats and actions in ways which lead to serious conventional conflicts. The DPRK can threaten the ROK’s capital, raid across the DMZ in strength, provoke large-scale maritime clashes, provoke major artillery strikes, or raise the political ante with a new set of attacks on the ROK’s leaders. This can lead to escalation at a level neither side wants and serious miscalculations that raise the level of conflict. It can provoke a cycle of challenge and response neither side can easily end. The DPRK’s manipulation of a large artificial threat of ROK and US invasion can be manipulated to win popular support, and some experts fear that any internal power struggle in the DPRK might lead its leadership to provoke a war to retain power.

If the DPRK and ROK do go to war with “conventional” forces, the perceptions of risk and capability may be so different on each side – and involve such different mixes of the use and threatened use of asymmetric, conventional, nuclear, and long-range missile forces – that each side might make a major miscalculation, and a conflict might escalate in unpredictable ways that neither side could control.
There are also major uncertainties to the outcome of any such conflict. A battle near the DMZ, directed at a target like Seoul, could rapidly escalate to the point that it threatened the ROK’s entire economy – even if no major invasion took place. DPRK missile, rocket, and artillery fire would be met in kind, but also by precision air strikes with an uncertain ability to suppress DPRK forces; the losses the ROK air forces would take are also uncertain. The ROK might well respond with strikes deep into the DPRK, attacking countervalue targets like key economic and infrastructure facilities, but again, the exchange rates in terms of casualties and tactical outcomes would not be predictable before such a war occurred.

Similar problems drive any assessment of the outcome of a major DPRK invasion of the ROK even if one only focuses on DPRK-ROK forces. The DPRK has far larger ground forces, but the outcome of what would today be an air-land battle driven heavily by the overall mobility of DPRK land forces and their ability to concentrate along given lines of advance relative to the attrition technically superior ROK land and air forces could inflict is impossible to calculate with any confidence, as is the actual mix of forces both sides could deploy in a given area in a given scenario. It may be possible to simulate with advanced war gaming models and classified data, but it is unclear what level of confidence would result.

More broadly, the DPRK and ROK exist in a security environment in which the US and China share a common interest in avoiding any serious conflict, and both the US and China have a reason to cooperate in deterring any use of force by the DPRK as well as the escalation of any conflict that does occur. This common interest tends to limit the scope of any potential conventional war.

Nevertheless, the balance of DPRK and ROK “conventional” forces cannot be separated from the role US forces would play in a conflict, from Japan’s willingness to support US basing and staging into Korea, and from the role China would play in trying to limit any threat to the DPRK as a buffer state. It seems likely that US airpower, seapower, cruise missiles, stealth, precision strike capability missile defenses, and ISR assets would be used to support the ROK immediately after any serious DPRK attack.

Moreover, the DPRK’s ideological hostility to the US could lead Pyongyang to escalate in ways that are unpredictable and make a “rational bargainer” approach to scenario planning and escalation prediction highly uncertain, because the perceptions of both sides can differ so much in any given scenario.

The same applies to external actors. For example, a US and Japanese role in support of the ROK – coupled with any ROK success that threatened the existence of the DPRK – would confront China with the risk of losing a key buffer state. China might or might not choose to intervene at any stage in such a conflict – either to limit or deter any action against the DPRK or to ensure that ROK and US forces did not “occupy” part of the DPRK.

Either side might try to use strategic air and/or missile power in support of its tactical forces, particularly if it appeared to be losing a more conventional conflict or came under serious military pressure from the opposing side. It is possible that a conflict could escalate to conventional fighting affecting Chinese bases as well as US bases and carrier task forces, including those as far away as Guam and the “outer island chain,” which the US may use to
base long-range bombers and stealth aircraft. Moreover, China might put pressure on Taiwan as a means of indirectly pressuring the US.

The naval dimension of a new Korean War is also unpredictable. Pyongyang could use its submarines, smart mines, and longer-range anti-ship missiles in a wide variety of ways, including covert or asymmetric attacks on shipping, possibly even outside Korean waters. It might perceive a naval war, including some kind of attack or seizure of a US ship, as a safer way of exerting pressure. China might or might not become involved, and Japan would have to decide on its naval posture.

Finally, the DPRK’s unique ideological extremism and reliance on the cult of the leader may interact with the fact it has not had any serious military experience since the cease-fire in the Korean War. Its complex mix of regular and internal security forces and massive bureaucracy may interact with ideology and reliance on the leader in ways that make its military operations both inefficient and unpredictable and help lead to unexpected levels of escalation or tactical and strategic behavior.

Furthermore, the DPRK’s economic weaknesses may impose problems in terms of readiness and sustainability that may lead to military actions that are more desperate, or at least different, from what might be expected based on the size of its order of battle and the deployment of its forces. This further highlights the risk of relying on “rational bargainer” behavior and scenarios in a conventional – or any other form of – conflict.

The Asymmetric or Irregular Warfare Balance

As has already been noted, the distinction between conventional and asymmetric warfare is inherently artificial. Virtually all wars involve a mix of regular military forces and political, civilian, and insurgent or “resistance” elements. They involve new technologies, tactics, force mixes, and civil-military structure – often bringing in covert operations.

The DPRK and ROK have long competed in creating effective special and paramilitary forces. Pyongyang has also developed major capabilities for unconventional warfare in the border/DMZ area to attack deep into the ROK. The DPRK has mixed attacks by covert and Special Forces with limited naval and artillery strikes, while using missile and nuclear tests to obtain asymmetric leverage.

According to the South Korean Ministry of National Defense:2

The North has been strengthening its special warfare capabilities by deploying light infantry divisions to the frontline corps and adding an infantry regiment to the frontline. The number of special force troops is estimated to reach approximately 200,000. It is assumed that these troops have been trained to conduct composite operations, such as major target strikes, assassination of important figures, and disruption of rear areas, after infiltrating the rear areas of the South through either underground tunnels or AN-2 planes.

The DPRK has been increasingly belligerent throughout 2012 and early 2013, significantly escalating tensions on the Peninsula. In 2012, in addition to two missile tests, the DPRK also jammed aircraft and naval GPS functionality using 50-100km range Soviet vehicle-mounted

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The DPRK continued denial of service cyber attacks on ROK institutions, including government agencies and the military.

The DPRK also has the world’s third-largest chemical weapons arsenal, the world’s largest Special Forces, a fleet of mini-submarines, and a significant artillery capability arrayed against Seoul and other key ROK locations.³

The ROK has responded by creating its own Special Forces, paramilitary elements, and “conventional forces” tailored to dealing the DPRK’s asymmetric warfare capabilities. US Special Forces and other elements of US forces have done the same, and China could potentially add new asymmetric capabilities if it chose to intervene.

As a result, the sheer size and variety of each side’s capabilities to conduct irregular or asymmetric warfare, and the DPRK’s aggressiveness in threats and limited attacks, can be destabilizing and lead to miscalculation and escalation. Such forces also present a problem for any potential arms control agreement, since they give the DPRK a potential advantage in threatening and attacking the ROK that would be enhanced by any general reductions in conventional forces.

Changes in civil technology are also altering the mix of asymmetric capabilities. Cyber warfare is becoming steadily more critical and affects civilian operations as well as war fighting. It is important to note that the ROK is probably more dependent on the Internet than any other nation in the world.

The DPRK has repeatedly challenged the ROK using low-level covert operations and asymmetric attacks, using these incidents to put pressure on both the ROK and the US. The DPRK has also deployed large amounts of its force structure for the same purpose, keeping the ROK under constant pressure. It has created a special balance in the border area by creating tunnel systems and deploying large amounts of artillery in caves and sheltered positions within range of Seoul.

The historical record shows that there was nothing new about the DPRK’s use of such attacks in 2010 and that the DPRK’s actions do not always follow the same kind of strategic calculations made by other states. Pyongyang’s willingness – and inventiveness – in using the threat and reality of such attacks was so consistent between 1950 and 2007 that it led the Congressional Research Service to prepare a 36-page chronology that covered 164 examples of armed invasion; border violations; infiltration of armed saboteurs and spies; hijacking; kidnapping; terrorism (including assassination and bombing); threats/intimidation against political leaders, media personnel, and institutions; incitement aimed at the overthrow of the ROK government; actions undertaken to impede progress in major negotiations; and tests of ballistic missiles and nuclear weapons.⁴

As the report from the US Congressional Research Service (CRS) notes,⁵

³ IISS, Military Modernization 2013, p. 270.
⁵ Ibid.
The most intense phase of the provocations was in the latter half of the 1960s, when North Korea (Democratic People’s Republic of Korea, or DPRK) staged a series of limited armed actions against South Korean and US security interests. Infiltration of armed agents into South Korea was the most frequently mentioned type of provocation, followed by kidnapping and terrorism (actual and threatened).

From 1954 to 1992, North Korea is reported to have infiltrated a total of 3,693 armed agents into ROK, with 1967 and 1968 accounting for 20% of the total. Instances of terrorism were far fewer in number, but they seemed to have had a continuing negative impact on relations between the two Koreas. Not counting the DPRK’s invasion of South Korea that triggered the Korean War (1950–1953), the DPRK’s major terrorist involvement includes attempted assassinations of President Park Chung Hee in 1968 and 1974; a 1983 attempt on President Chun Doo Hwan’s life in a bombing incident in Rangoon, Burma (Myanmar); and a mid-air sabotage bombing of a South Korean Boeing 707 passenger plane in 1987.

Reported provocations have continued intermittently in recent years, in the form of armed incursions, kidnappings, and occasional threats to turn the South Korean capital of Seoul into “a sea of fire” and to silence or tame South Korean critics of North Korea.

The DPRK may well have its own list of charges and complaints, but its public statements are largely political in character. An open source analysis of such material does not seem to be available.

Asymmetric warfare, however, is also a key area in US and Chinese force developments, and is expanding to include new areas of conflict like cyberwarfare. US Special Forces would be involved in any conflict in the Koreas, and US space warfare and ISR capabilities would act as a form of asymmetric warfare in providing capabilities that both the DPRK and ROK lack. At the same time, the changing balance of US and Chinese space and counter-space warfare capabilities could add yet another dimension of “asymmetric forces” if China became deeply involved in a conflict in the Koreas.

**US Forces in the ROK and Pacific**

US forces serve a variety of roles in aiding the ROK. The US plays a critical role in a wide range of scenarios ranging from limited DPRK probes to all-out war. In peacetime, they act as a tripwire in case of DPRK aggression. The ROK military also relies heavily on US capabilities in several areas, such as military intelligence – in particular, signals and imagery intelligence and analysis. US presence allows the ROK to counterbalance pressure and deter potential military intervention from nearby major powers, such as China or Japan, in the event of DPRK collapse and/or Korean reunification. Finally, US forces have also contributed to ROK economic development by reassuring foreign countries and investors that the ROK is a stable country. The US can also offer the ROK extended deterrence in the face of DPRK nuclear and missile threat.

US forces can also play a critical role in wide range of scenarios ranging from limited DPRK probes to all-out war. The US can also offer the ROK extended deterrence in the face of DPRK nuclear and missile threat. The US Forces Korea (USFK) described their mission as follows in a 2010 report,\(^6\)

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Our mission remains to deter North Korean provocations and aggression and, if deterrence fails, to fight and win. We accomplish our mission with forward-stationed, agile, well-trained forces on the Korean peninsula, ready to fight tonight and defeat aggression side by side with our Korean allies…. Should our deterrence options fail, we are prepared to defeat any aggression against the ROK.

The major US force elements now stationed in Korea include the Eighth US Army, US Air Forces Korea (Seventh Air Force), and US Naval Forces Korea. At one point the US occupied some 85 active installations in the ROK, but it has cut its total military manning by over a third from about 44,200 personnel in 1990 and 36,300 personnel in 2000 to the current agreed force level of 28,500. The only combat formation remaining in the ROK is the 2nd Infantry Division, with one infantry Brigade Combat Team and an aviation brigade.7

More broadly, a USPACOM estimate as of February 2013 summarized the overall force strength in the Pacific as follows:8

U.S. military and civilian personnel assigned to USPACOM number approximately 325,000, or about one-fifth of total U.S. military strength. U.S. Pacific Fleet includes six aircraft carrier strike groups, approximately 180 ships, 1,500 aircraft and 100,000 personnel. Marine Corps Forces, Pacific possesses about two-thirds of U.S. Marine Corps combat strength, includes two Marine Expeditionary Forces and about 85,000 personnel assigned. U.S. Pacific Air Forces is comprised of approximately 40,000 airmen and more than 300 aircraft, with about 100 additional aircraft deployed to Guam. U.S. Army Pacific has more than 60,000 personnel assigned, including five Stryker brigades. Of note, component command personnel numbers include more than 1,200 Special Operations personnel. Department of Defense Civilians and Contractors in the Pacific Command AOR number about 40,000. Additionally, the U.S. Coast Guard, which frequently supports U.S. military forces in the region, has approximately 27,000 personnel in its Pacific Area.

As has been noted earlier, these forces are being restructured as part of a major US effort to “rebalance” its overall force posture to provide more capabilities in Asia and better support its partnerships with its Asian allies. US statements and forces plans that support this rebalancing will significantly improve US air and sea capabilities in the Pacific and US ability to reinforce the ROK in a wide range of scenarios.

Moreover, these restructuring and modernization efforts will be closely linked to US ability and willingness to fund the Department of Defense’s plans and to the ongoing adjustments the US will make in response to the DPRK’s nuclear and missile programs and the changes in China’s strategy, forces, and military capabilities. Current US forces and plans are certain to evolve even over the next five years. The questions are how much and in what ways?

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IV. The “Conventional” Military Balance in the Koreas and Northeast Asia

There is no one conventional balance that is the most likely to shape any conflict between the Koreas. As Figures IV.1 and IV.2 show, it is possible to make radically different counts of the same balance – depending on the analyst’s perspective. The Republic of Korea (ROK or South Korea) count in Figure IV.1 is far more favorable to the Democratic People’s Republic of Korea (DPRK or North Korea) than the Japanese count in Figure IV.2.

Much depends on the scenario used in making the count. The ROK count is a total force inventory. The Japanese count focuses on the modern conventional forces likely to dominate a major conventional conflict. Both methods have value, but both can tell only part of the story – even for conventional forces – and tacitly assume very different levels of each side’s forces that would be committed to a conflict.

Moreover the term “conventional” does not apply to many credible scenarios. Asymmetric and nuclear forces are likely to play at least some role in the way any conflict develops. For decades, the DPRK has shaped the military balance in the Koreas through periods of deliberate confrontation and military threats, threatening military movements and exercises, a steady military build-up, and sporadic acts of low-level violence ranging from assassination to artillery attacks and ship sinkings. It has focused on ROK targets but also consistently threatened the US.

Deterrence, Restraint, and Levels of Conflict

For all of the reasons outlined in Chapter II, there are powerful political and economic deterrents to a major conflict. The ROK has emerged as major economic power, and one that is important to the economies of the US, Japan, Russia and China (People’s Republic of China or PRC) – as well as to the world. The DPRK is one of the world’s most heavily militarized states, but is still a relatively small military power by US and Chinese standards. It remains vulnerable to US aid, missile power, and precision strike capability, and runs a serious risk of being isolated if it provokes or escalates a conflict without Chinese support.

Much does depend, however, on China’s position and the extent to which it seeks to prevent, contain, and de-escalate any conflict on the Korean Peninsula, as well as on US and ROK efforts to avoid any repetition of the mistakes made during the Korean War – and that appeared to place US forces near the border of China – or to confront China with the loss of the DPRK as a buffer state in ways China felt would become a threat.

As the analysis of Chinese conventional and nuclear missile forces in Chapter 9 makes clear, China already can bring important A2AD assets to bear in a “worst case” conflict in the Koreas, and while the Chinese modernization efforts described in Chapter 3 may today be focused on Taiwan and the Pacific, they directly affect its future capabilities to intervene in the Koreas and Northeast Asia as well as increasingly challenge US power projection.
Every aspect of the broader balance of US and Chinese military capabilities and modernization efforts in Asia and the Pacific – and the extent to which they cooperate or confront each other in any present or future Korean crisis or conflict – affects the more narrow balance of forces now in the Koreas and Northeast Asia.

**A Clash or Conflict between the DPRK and ROK**

The fact remains, however, that no one can dismiss the risk of a serious clash or war. This is particularly true if one considers the number of times that war has been the result of unpredictable incidents and patterns of escalation. The historical reality is that the likelihood of less-probable forms of war actually occurring has been consistently higher than what seemed in peacetime to be the most probable contingencies and the patterns of escalation that seem most likely from the viewpoint of a “rational bargainer.”

Moreover, the DPRK has long emphasized irregular warfare, low-level attacks, covert operations, and large Special Forces. It is ground and missile “heavy” compared to the ROK, and puts far more emphasis on force quantity or mass, while the ROK has emphasized land and air technology and force quality. The DPRK has long built up large stocks of chemical weapons, may have biological weapons, and is an emerging nuclear power that may add nuclear warheads to a large force of long-range missiles. The ROK is just beginning to develop longer-range missile forces and has not seriously pursued nuclear weapons. It is, however, acquiring missile defenses.

Much would also depend on the conditions and levels of preparation and warning that led to a confrontation or actual fighting. Total forces and orders of battle may or may not be relevant measures in a given crisis or conflict. Pyongyang might conduct a major conventional buildup to pressure the ROK, Japan, and/or the US. It might do so to deal with internal unrest, trying to focus the nation on a foreign enemy. It might launch a limited war for the same reasons, or engage in limited provocations – like those in 2010 – to which it expects to receive a limited ROK response and little punishment or censure from the international community.

It is doubtful that the ROK would initiate such a conflict. South Korea cannot be sure what level of escalation would follow any response to a limited incident or DPRK action of the kind Pyongyang initiated by sinking the ROK ship Cheonan and firing on Yeonpyeong. The ROK might also be confronted with a DPRK succession crisis or massive suppression of the population – creating a strong incentive for some form of decisive ROK military action.

If the DPRK and ROK did go to war with “conventional” forces, the resulting level of restraint and escalation ladder would be far less clear. The perceptions of risk and capability could be so different on each side – and involve such different mixes of the use and threatened use of asymmetric, conventional, nuclear, and long-range missile forces – that each side might make a major miscalculation, and a conflict might escalate in unpredictable ways that neither side could control.

There also are major uncertainties to the outcome of any such conflict. A battle near the DMZ, directed at a target like Seoul, could rapidly escalate to the point at which it threatened the ROK’s entire economy, even if no major invasion took place. DPRK missile, rocket, and
artillery fire would be met in kind, as well as by precision air strikes, though the ability of such strikes to suppress DPRK forces is uncertain, as are the potential losses to the ROK air forces. The ROK might well respond with strikes deep into the DPRK, attacking countervalue targets like key economic and infrastructure facilities, but again, the exchange rates in terms of casualties and tactical outcomes would not be predictable before such a war occurred.

Similar problems drive any assessment of the outcome of a major DPRK invasion of the ROK, even if one only focuses on DPRK-ROK forces. The DPRK has far larger ground forces, but the outcome of what would today be an air-land battle driven heavily by the overall mobility of DPRK land forces and their ability to concentrate along given lines of advance relative to the attrition technically superior ROK land and air forces could inflict is impossible to calculate with any confidence, as is the actual mix of forces both sides could deploy in a given area in a given scenario. It may be possible to simulate with advanced war gaming models and classified data, but it is unclear what level of confidence would result.

**The Impact of External Actors**

As noted earlier, the DPRK and ROK exist in a security environment in which the US and China share a common interest in avoiding any serious conflict, and both the US and China have a reason to cooperate in deterring any use of force by the DPRK and the escalation of any conflict that does occur. This common interest would likely limit the scope of any potential conventional war.

Nevertheless, Figure IV.2 illustrates the fact that the balance of DPRK and ROK “conventional” forces cannot be separated from the role US forces would play in a conflict, from Japan’s willingness to support US basing and staging into Korea, and from the role China would play in trying to limit any threat to the DPRK as a buffer state. It seems likely that US airpower, seapower, cruise missiles, stealth, precision strike capability missile defenses, and ISR assets would be used to support the ROK immediately after any serious DPRK attack.

Moreover, the DPRK’s ideological hostility to the US could lead Pyongyang to escalate in ways that are unpredictable and make a “rational bargainer” approach to scenario planning and escalation prediction highly uncertain, because the perceptions of both sides can differ so much in any given scenario.

The perceptions of external actors are also uncertain. US support of the ROK – coupled with any ROK military success that threatened the existence of the DPRK – would confront China with the risk of losing a key buffer state. China might or might not choose to intervene at any stage in such a conflict – either to limit or deter any action against the DPRK or to ensure that ROK and US forces did not “occupy” part of the DPRK.

Either side might try to use strategic air and/or missile power in support of its tactical forces, particularly if it appeared to be losing a more conventional conflict or came under serious military pressure from the opposing side. It is possible that a conflict could escalate to conventional fighting affecting Chinese bases as well as US bases and carrier task forces, including those as far away as Guam and the “outer island chain,” which the US may use to
base long-range bombers and stealth aircraft. Moreover, China might put pressure on Taiwan as a means of indirectly pressuring the US.

The naval dimension of any new Korean War is also unpredictable. Pyongyang could use its submarines, smart mines, and longer-range anti-ship missiles in a wide variety of ways, including covert or asymmetric attacks on shipping, possibly even outside Korean waters. It might perceive a naval war, including some kind of attack or seizure of a US ship – such as the USS Pueblo in 1968 – as a safer way of exerting pressure. China might or might not become involved, and Japan would have to decide on its naval posture.

Finally, the DPRK’s unique ideological extremism and reliance on the cult of the leader may interact with the fact it has not had any serious military experience since the 1953 cease-fire in the Korean War. Its complex mix of regular and internal security forces and massive bureaucracy may interact with ideology and reliance on the leader in ways that make its military operations both inefficient and unpredictable and lead to unexpected levels of escalation or tactical and strategic behavior.

Furthermore, the DPRK’s economic weaknesses may impose problems in terms of readiness and sustainability that may lead to military actions that are more desperate, or at least different, from what might be expected based on the size of its order of battle and the deployment of its forces. This further highlights the risk of relying on “rational bargainer” behavior and scenarios in a conventional – or any other form of – conflict.

Japan and Russia are also significant nearby military powers. Though both have histories of involvement with the Peninsula, they are not likely to become directly involved in a Korean conflict; but their policies will have a major impact and their forces might become involved if a conflict escalated beyond control. Moreover, the build-up of North Korean and Chinese forces, and disputes over islands and maritime rights in the region, may push Japan towards a more active role in shaping the Asian balance in spite of the constitutional restrictions that have kept its role largely defensive in the past.
Figure IV.1: ROK Summary of the DPRK-ROK
Conventional Military Balance in 2012

<table>
<thead>
<tr>
<th>ROK</th>
<th>DPRK</th>
</tr>
</thead>
<tbody>
<tr>
<td>Troop Numbers</td>
<td></td>
</tr>
<tr>
<td>506,000</td>
<td>1,020,000</td>
</tr>
<tr>
<td>68,000*</td>
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<td>110,000</td>
</tr>
<tr>
<td>639,000</td>
<td>1,190,000</td>
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* Includes 28,000 Marines

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Army</td>
<td></td>
</tr>
<tr>
<td>12 (Includes Special Forces)</td>
<td>15</td>
</tr>
<tr>
<td>46 (Includes the Marines)</td>
<td>88</td>
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<tr>
<td>14 (Includes the Marines)</td>
<td>72</td>
</tr>
<tr>
<td>2,400 (Includes the Marines)</td>
<td>4,200</td>
</tr>
<tr>
<td>2,700 (Includes the Marines)</td>
<td>2,200</td>
</tr>
<tr>
<td>5,300 (Includes the Marines)</td>
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</tr>
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<td>200</td>
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<table>
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</thead>
<tbody>
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<tr>
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<table>
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</tr>
</thead>
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<td>50*</td>
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<td>190</td>
<td>170</td>
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<tr>
<td>600</td>
<td>300</td>
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<table>
<thead>
<tr>
<th>ROK</th>
<th>DPRK</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reserve Troops</td>
<td>7,700,000</td>
</tr>
</tbody>
</table>

Figure IV.2: Japanese Summary of the DPRK-ROK
Conventional Military Balance in 2012

Levels of “Conventional” Conflict

As Sun Tzu pointed out centuries ago, wars do not have to involve conflict if military force can be used politically in the equivalent of “wars of intimidation.” The DPRK has found that one way to both mobilize support for the regime and put pressure on its neighbors and the US is to utilize military pressure in the context of some self-generated crisis. It has learned that one rational way for a power with limited resources but large military forces to survive is to appear “irrational” and then compromise. Within limits it has been able to count on the ROK and US showing restraint, China being forced to largely stand aside or support its “buffer” state, Japan and other Asian states pressing for some form of compromise that the DPRK can exploit, and Russia largely standing aside.

No one, however, can be certain that the DPRK is not going to escalate its future threats and actions in ways that lead to serious conventional conflicts. The DPRK can threaten the ROK’s capital, raid across the DMZ, provoke large-scale maritime clashes, provoke a major artillery strike, or raise the political ante with a new set of attacks on the ROK’s leaders. This can lead to escalation at a level neither side wants and serious miscalculations that increase the level of conflict. It can provoke a cycle of challenge and response neither side can easily end. The DPRK’s manipulation of a large artificial threat of ROK and US invasion can be manipulated to win popular support and some experts fear that any internal power struggle in the DPRK might result in its leadership provoking a war to retain power.

Open-Ended Scenarios and Escalation Ladders

The Demilitarized Zone (DMZ) presents special problems for the ROK. It is four kilometers long and about 250 kilometers wide, and allows North Korean forces to deploy much closer to the capital of South Korea than ROK forces can deploy near the capital of North Korea - Pyongyang, the capital of the DPRK, is approximately 125 kilometers north, while the ROK’s capital, Seoul, is about 40 kilometers south. There are some 20,000 artillery pieces and armored vehicles, as well as over one million troops, in the surrounding areas.

The DPRK has deployed many of its forces near the DMZ and has massive Special and naval forces designed to support raids and use smaller systems like mine layers and submersibles. It emphasizes artillery, rocket, and missile forces. The ROK emphasizes defense, conventional military forces, air power, and air and missile defenses. It can count on limited support from US ground forces and a far larger US presence in terms of air precision strike, stealth, cruise missile, and naval forces.

The threat of a large land war for control of the entire peninsula cannot be dismissed, but a repetition of a Korean War-type conflict seems increasingly unlikely. The Korean Peninsula is 250 kilometers wide at the narrowest point and approximately 1,000 kilometers long. Most of the Peninsula is mountainous, so heavily armored forces are generally either forced to use predictable routes or are unable to move quickly. According to the International Institute of Strategic Studies (IISS), there are three main avenues of approach for a land offensive that are shaped by Korea’s topography; these are also shown in Figure IV.3:

Two are in the relatively flat western part of the Peninsula, known as the Chorwon and Kaesong Munsan corridors, and provide the most direct approaches to Seoul and Pyongyang, although much of the flat terrain is marsh land and rice fields. The third route runs along the east coast through the Taedong Mountains and is the most amenable to vehicle passage. In some places, these corridors are about 15km wide and interconnected with other possible routes, which would utilise existing road networks and suitable terrain in the central and eastern parts of the Peninsula.

It is important to note, however, that such terrain considerations also affect the use of modern ISR assets and precision air power. Joint warfare today can count on 24-hour surveillance and targeting of land movements almost regardless of weather. As the wars against Iraq in 1991 and 2003 demonstrated, smart submunitions and stand-off precision strike weapons vastly increase the lethality of the modern strike aircraft and bombers in US and ROK forces. Stealth adds another dimension, as does the ability to use cruise missiles, deep strikes, and weapons like earth penetrators to attack DPRK C4I/BM assets and critical infrastructure.

The end result is an air-land battle rather than a battle dominated by land forces. In fact, stealth, precision-guided air-to-surface weapons, and cruise missiles are becoming the equivalent of “weapons of mass effectiveness,” and if the ROK must fear massive artillery and rocket strikes on a key target like Seoul, the DPRK must increasingly fear an ROK-US response that can strike deep into the DPRK. This changes the definition of “conventional” in terms of war fighting effects, but the DPRK can respond with its own rockets, missiles, and weapons of mass effectiveness.

As is described in detail in a later chapter, the DPRK has large stocks of chemical weapons, a small nuclear arsenal, and possible possession of biological weapons, all of which add another wild card to the problem of assessing the balance. The DPRK could escalate to the use of such weapons to try to deter counteroffensives and hold any gains, limit ROK and US air and missile strikes, limit other forms of ROK and US escalation, try to force a favorable settlement, or to ensure regime survival if the DPRK’s other forces faced a major defeat and ROK attacks across the DMZ.

The risk of some type of DPRK use of CBRN weapons – if only in terms of threat and intimidation – will grow if the DPRK can develop a serious stockpile of nuclear weapons and arm longer-range ballistic missiles. The DPRK’s nuclear efforts are also creating a growing risk that China and the US will compete to provide some form of extended deterrence for each side with their own missile forces, that the ROK will go nuclear, and that Japan will develop its own counterstrike capabilities against the DPRK.

There is also a slowly increasing risk that a conflict will escalate beyond the Korean Peninsula – a threat compounded by the many tensions between Asian states over the emergence of China as a power capable of regional power projection and a major nuclear and missile power in its own right, and by the many tensions over control of islands and offshore waters in Northeast Asia and the rest of the Pacific.
Figure IV.3: Avenues of Approach from the DPRK to the ROK


Comparing Total “Conventional” Orders of Battle with Possible Combat Scenarios

The force counts that follow provide more detailed estimates of the conventional forces on each side and offer a break out of equipment types that gives some indication of force quality.

In broad terms, the ROK has the advantage in “conventional force” quality, while the DPRK has the advantage in force quantity. James R. Clapper, the US Director of National
Intelligence (DNI), summarized the Korean conventional balance as follows on February 10, 2011:  

North Korea’s conventional military capabilities have eroded significantly over the past 10-15 years due to persistent food shortages, poor economic conditions, inability to replace aging weapons inventories, reduced training, and increased diversion of the military to infrastructure support. Therefore, Pyongyang increasingly relies on its nuclear program to deter external attacks on the state and to its regime. Although there are other reasons for the North to pursue its nuclear program, redressing conventional weaknesses is a major factor and one that Kim and his likely successors will not easily dismiss.

Nevertheless, the [Korean People’s Army (“KPA”) remains a large and formidable force capable of defending the North. Also, as demonstrated by DPRK attacks on the South Korean ship Cheonan in March 2010 and Yeongpyong Island in November, North Korea is capable of conducting military operations that could potentially threaten regional stability. These operations provide Pyongyang with what the regime may see as a means to attain political goals through coercion.

It is important to note, however, that the DPRK may well face serious limits on its conventional capabilities that Clapper does not address, and that could seriously affect its ability to exploit its apparent conventional strength. Some experts feel that the DPRK’s recurrent economic crises have severely affected its ability to upgrade major weapons, modernize combat and service support forces, and logistic stocks and capabilities.

This may affect the quality and quantity of basic military stocks like artillery ammunition, and there are reports that the DPRK lacks the national fuel stocks to even carry out a major conventional offensive. Other reports question its levels and realism in training as well as the readiness and size of its capability to sustain offensive operations. These reports cannot be confirmed at the unclassified level, but they also cannot be ignored. They present further reasons why the DPRK might choose scenarios or attack models that do not seem predictable. Such limits could encourage it to rely on asymmetric or nuclear options, depending on the scenario and cause of any fighting. They might also force it to seek a sudden, surprise conventional victory in any all-out conventional attack.

It is also unlikely that either the DPRK or ROK will ever go to war with their entire orders of battle, and the term “conventional” does not fit a DPRK force structure that includes so many Special Forces, covert elements, and unconventional capabilities, with so much experience in political warfare, and that are so different in deployment, terrain, and vulnerability.

Nevertheless, comparisons of total forces have broad value in measuring the contingency capabilities of a given side, even if they are not direct measures of the forces that would be involved in any given case of actual warfare. They also help illustrate the different ways forces can be counted and the range of differences that exist in the data provided by given sources.

The official sources quoted in this analysis provide only limited summary data on the balance of forces now in Korea, and only the ROK provides summary break outs of the data on key aspects of the DPRK-ROK balance. As for other sources, comparisons based on the

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unclassified data issued by the IISS seem to provide the most reliable non-governmental source of data on the forces of each country, although an examination of other NGO and commercial data from sources such as Jane’s reveals significant differences.

All of these comparisons are affected by the fact it is difficult to determine what number of US and Chinese forces could or should be counted, so most of the following comparisons count total US and Chinese forces.

China could deploy many of its forces into the Korean theater relatively quickly. The US can project air and sea power relatively quickly but has a lesser forward-deployed capability base and support available for such forces, and faces more serious problems in land force power projection. As a result, much might depend on the US forces now in Korea.

The size and nature of US forces that are in the ROK or might deploy in wartime is discussed in more detail in Chapter 6. Key US official sources like the US Pacific Command (PACOM) do not provide a detailed unclassified breakout of the US forces in the ROK or of those forces could be deployed in a given contingency. The IISS does, however, provide an estimate of US forces in South Korea and Asia and these data are discussed in more depth in the section on US forces.

To summarize, the IISS reports that the US now permanently deploys some 28,500 troops in the ROK. This includes some 19,200 US Army forces including the 8th Army headquarters, the US 2nd Infantry division at Tongduchon, as well as one artillery, one combat aviation, and one air defense brigade. These are equipped with modern tanks, AFVs, artillery, Patriot surface-to-air missiles, and AH-64 attack helicopters. There are also 8,800 USAF personnel, the 7th Air Force Headquarters, two fighter squadrons with 20 F-16C/Ds, a squadron with 24 A-10C-IIs, an ISR squadron with U-2s, and a Special Forces unit. There are also roughly 250 US Navy and 250 US Marine Corps personnel stationed in the ROK.

These numbers are limited, but scarcely define the US presence that would affect any serious conflict. US naval and air forces would surge into the Korean theater from outside the area in any conflict or crisis, and the current total of US forces in Japan and the ROK is only a symbol of such a potential surge. US land forces would be slower to surge, but would also build-up from outside Japan and the ROK. Much would also depend on Japan’s willingness to serve as a staging point and how much pressure China did or did not put on other areas of the Pacific, such as the Taiwan Straits.

**Total Manpower**

The ROK provides DPRK and ROK manpower comparisons and total Northeast Asian manpower comparisons for 2010, shown in Figures IV.4 and IV.5. Unlike the ROK’s equipment counts, these manpower counts are almost identical to the IISS breakouts of manpower data for active and reserve forces and for regular and paramilitary forces for 2013 – if one allows for the passage of time.

**Figure IV.6** shows the IISS estimate of total manpower on each side, while **Figure IV.7** shows the number of reserves available for each country. It is clear that the DPRK and China have much larger manpower totals than the ROK and US. The DPRK also has roughly twice the active military manpower of the ROK.
In practice, however, manpower quality and training – and associated weapons, sustainability, battle management, ISR, and C4 capabilities – are likely to be as important as total active and reserve manpower. Sheer numbers are still important, but total manpower is no longer a key measure of force strength. The qualitative aspects of the manpower totals in Figures IV.4 and IV.5 are discussed in more detail in the country sections that follow.
Figure IV.4: ROK Estimate of Korean Manpower Balance in 2010

<table>
<thead>
<tr>
<th></th>
<th>Army Personnel</th>
<th>Navy Personnel</th>
<th>Air Force Personnel</th>
<th>Special Forces</th>
</tr>
</thead>
<tbody>
<tr>
<td>DPRK</td>
<td>1020000</td>
<td>60000</td>
<td>110000</td>
<td>200000</td>
</tr>
<tr>
<td>ROK</td>
<td>520000</td>
<td>68000</td>
<td>65000</td>
<td>20000</td>
</tr>
</tbody>
</table>

Source: Based primarily on material provided from Republic of Korea, Ministry of Defense, 2010 Defense White Paper. Some equipment figures are estimates. All equipment figures represent equipment in active service.
Figure IV.5: ROK Estimate of Northeast Asian Force Manpower Balance in 2010

Source: Based primarily on material provided from Republic of Korea, Ministry of Defense, 2010 Defense White Paper. Some equipment figures are estimates. All equipment figures represent equipment in active service.

<table>
<thead>
<tr>
<th></th>
<th>DPRK</th>
<th>ROK</th>
<th>China</th>
<th>Japan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Air Force Personnel</td>
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<td>330000</td>
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</tr>
<tr>
<td>Navy Personnel</td>
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<td>1600000</td>
<td>140251</td>
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</tbody>
</table>
Figure IV.6: IISS Estimate of Total Active Military Manpower Affecting the Northeast Asian Balance in 2013 (in thousands)\textsuperscript{11}


\textsuperscript{11} Chinese Air Force estimated between 300,000-330,000 troops; Chinese Paramilitary represents PLA Strategic Missile Forces; Russian Paramilitary represents Strategic Deterrent Forces (80,000 troops) and Command and Support (200,000 troops); US Paramilitary represents Marine Corps (199,500 troops)
Figure IV.7: IISS Estimate of Total Military Reserve Manpower, Affecting the Northeast Asian Balance in 2013 (in thousands)

<table>
<thead>
<tr>
<th>Country</th>
<th>Additional Paramilitary Reserves</th>
<th>Civilian</th>
<th>Reserves</th>
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</thead>
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<td>5700</td>
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<tr>
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<td>4500</td>
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<tr>
<td>US</td>
<td>0</td>
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</tbody>
</table>

Army and Land Forces

The ROK white paper estimate of the land forces balance for 2010 in Figures IV.8 and IV.9 shows a much larger DPRK superiority in tanks and other armored vehicles that the IISS shows for 2013, and the ROK uses a different – but undefined – way of counting artillery. The ROK also presents a different count of helicopters, and flags a DPRK advantage in river crossing assets ignored in other estimates of the balance. Other differences occur when the comparison is expanded to cover China and Japan and are further complicated by the fact that the ROK changes definitions from one type of comparison of the same forces to another.

There are no consistent patterns in the differences in the estimates for China and Japan, but it should be noted that official US estimates often count the same forces very differently in given commands, services, and branches of the US intelligence community. Much depends on the reason a given comparison is developed and the definitions used – definitions that often are not explicitly explained in a given source.

The IISS estimates for 2013 report that the DPRK Army is an 11 corps force with two mechanized corps and nine infantry corps. Its armored forces include one armored division, 15 armored brigades, and four mechanized divisions. The bulk of its forces are still infantry – 27 divisions and 14 brigades – with much more limited speed of maneuver and combined armored warfare capability. There are another 40 reserve infantry divisions and 18 reserve infantry brigades. The DPRK does, however, have a large Special Forces Command with some 88,000 men; a mix of land, sea, and air units that include nine light infantry bridges; ten sniper brigades; and 3 airborne brigades.

The ROK has eight corps with a total of four armored brigades, six mechanized infantry divisions, 16 infantry divisions and two infantry brigades, an air assault brigade, and three counter-infiltration brigades. It has a much smaller Special Forces command with seven brigades. Both countries have large numbers of combat and service support units as well as independent artillery and air defense elements.

Comparisons of numbers of combat units have little operational meaning since units with the same title can differ so much in actual strength between and within given countries. It is clear from their different force structures, however, that the DPRK has designed its land forces to engage in combined conventional and asymmetric warfare, including a major ability to infiltrate the ROK and deploy Special Forces – and that the ROK has tailored its forces to respond. What is not clear is the readiness, training, and real-world effectiveness of each force structure and the degree to which the DPRK can actually use much of its active and reserve infantry effectively in any kind of modern offensive warfare.

Figure IV.10 shows the IISS estimate of relative balance of army manpower and land force equipment strength. Here, too, the DPRK and China have a major lead in force strength. Given the economic disparity between the Koreas, this figure demonstrates that the DPRK is one of the most militarized countries in the world.

The detailed equipment breakouts in Figure IV.10 show that the DPRK has roughly 1.5 times the main battle tanks (MBTs) of the ROK – though the ROK has superior overall armored mobility and armored engineering capability. The DPRK also has nearly twice the
artillery strength of the ROK as well as a massive lead in multiple rocket launchers (MRLs). The ROK has a lead in self-propelled artillery and combined arms mobility and maneuver capability.

The counts of anti-tank weapons are not detailed enough to assess with any accuracy, but other data indicates that the ROK has a qualitative advantage in anti-tank guided weapons types. There are also problems in counting each nation’s air defense weapons, but the DPRK seems to have extraordinarily large holdings of unguided anti-aircraft guns while the ROK has a limited lead in Manpads.

The ROK has a lead in Army helicopters and in attack and multirole helicopters, but such counts are misleading as the DPRK places its helicopter forces in its Air Force. The force includes at least one regiment of M-24 Hind attack helicopters and significant numbers of transport and multirole helicopters, but no detailed current count is provided.

As noted earlier, there is no way to determine the land forces the US and China could (or would) deploy to the DRPK or ROK in a sustained crisis or major war. China would, however, have a major advantage in moving its forces, and the US would find it difficult to rapidly reinforce by more than one additional division.

Figure IV.11 to Figure IV.13 summarize Northeast Asian armored fighting vehicles (the number of number of MBTs, AIFVs, AAVs, APCs, RECCE in active service). Figure IV.11 helps show that the DPRK has a lead in MBTs, but most are older Russian and Chinese models which predate the T-72s that were unable to compete effectively against the US M-1A1s during the first Gulf War. The DPRK’s numerical advantage is partially offset by the major ROK lead in tank quality provided by its K1 and K1A1 tanks.

Figures IV.12 and IV.13 show that the DPRK is less mechanized than the ROK and more limited in total armored maneuver strength, and that the ROK Army at least has parity in rotary wing attack and transport capability because of superior aircraft capability. The ROK Army has rough parity in the number of other armored vehicles (OAFVs) and superior overall quality. The ROK also has a larger inventory of OAFVs if the holdings of other forces are included.

It should be noted that the actual operations of the land forces on each side would be sharply affected by the air-land and surface-to-surface missile battles – areas where the quality of ISR capability and smart air munitions would have a major impact on the balance.

Figure IV.14 looks at Northeast Asian artillery strength. Both countries have massive numbers of artillery weapons. The ROK has an advantage in self-propelled artillery mobility and quality, but the DPRK has a major advantage in numbers and in the ability to deploy area fire from weapons like multiple rocket launchers. It also has numerous sheltered and buried artillery units deployed near the DMZ and ROK border. This allows the DPRK to immediately threaten the ROK’s capital and to carry out harassing fire as a means of intimidating the population and disrupting the ROK economy.

What is not clear is the extent to which the ROK has an advantage in targeting fire management and being able to sustain force during movement. It seems to have an advantage over most DPRK units, which rely heavily on massed fire because of a lack of advanced
targeting, fire management, or artillery radar systems, but the scale of that advantage is unclear.
**Figure IV.8: ROK Estimate of Korean Force Balance in 2010**

*(Army)*

<table>
<thead>
<tr>
<th></th>
<th>Tanks</th>
<th>Armored Vehicles</th>
<th>Artillery/MRLS</th>
<th>Guided Weapons</th>
<th>River Crossing Equipment</th>
<th>Helicopters</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>DPRK</strong></td>
<td>4,100</td>
<td>2,100</td>
<td>13,600</td>
<td>0</td>
<td>3,000</td>
<td>0</td>
</tr>
<tr>
<td><strong>ROK</strong></td>
<td>2,300</td>
<td>2,500</td>
<td>5,200</td>
<td>30</td>
<td>0</td>
<td>600</td>
</tr>
</tbody>
</table>

Source: Based primarily on material provided from Republic of Korea, Ministry of Defense, *2010 Defense White Paper*. Some equipment figures are estimates. All equipment figures represent equipment in active service.
Figure IV.9: ROK Estimate of Northeast Asian Force Land Balance in 2010

Source: Based primarily on material provided from Republic of Korea, Ministry of Defense, 2010 Defense White Paper. Some equipment figures are estimates. All equipment figures represent equipment in active service.
Figure IV.10: IISS Estimate of Army Manpower and Equipment in Northeast Asia

Army and Army Reserve Manpower (in thousands, including conscripts)

<table>
<thead>
<tr>
<th></th>
<th>China</th>
<th>Japan</th>
<th>DPRK</th>
<th>ROK</th>
<th>Russia</th>
<th>US</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active</td>
<td>1600</td>
<td>151.35</td>
<td>1020</td>
<td>522</td>
<td>285</td>
<td>600.4512</td>
</tr>
<tr>
<td>Reserve</td>
<td>some</td>
<td>54.513</td>
<td>some</td>
<td>some</td>
<td>some</td>
<td>514.85</td>
</tr>
</tbody>
</table>

Army Equipment (not including reserves)

<table>
<thead>
<tr>
<th></th>
<th>China</th>
<th>Japan</th>
<th>DPRK</th>
<th>ROK</th>
<th>Russia</th>
<th>US</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Tank</strong></td>
<td>8,230</td>
<td>777</td>
<td>4,060</td>
<td>2,414</td>
<td>2,800</td>
<td>2,338</td>
</tr>
<tr>
<td>Tank, light</td>
<td>800</td>
<td></td>
<td>560+</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tank, main battle</td>
<td>7430+</td>
<td>777</td>
<td>3500+</td>
<td>2414</td>
<td>2800+</td>
<td>2338</td>
</tr>
<tr>
<td><strong>Personnel Carrier</strong></td>
<td>5,050</td>
<td>885</td>
<td>2,500</td>
<td>3,030</td>
<td>17,060</td>
<td>29,065</td>
</tr>
<tr>
<td>Armored infantry fighting vehicle</td>
<td>2150</td>
<td>68</td>
<td>240</td>
<td>7360+</td>
<td>4559</td>
<td></td>
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<tr>
<td>Armored personnel carrier</td>
<td>2000</td>
<td>286</td>
<td>some</td>
<td>2560</td>
<td>5700+</td>
<td>3901</td>
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<tr>
<td>Armored personnel carrier</td>
<td>900</td>
<td>531</td>
<td>2500</td>
<td>220</td>
<td>4000+</td>
<td>2548</td>
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<tr>
<td>Armored personnel carrier</td>
<td></td>
<td></td>
<td>10</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Armored personnel carrier</td>
<td></td>
<td></td>
<td>18,057</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Armored reconnaissance/ recovery vehicle</td>
<td>some</td>
<td>71</td>
<td>238</td>
<td>some</td>
<td>1108+</td>
<td></td>
</tr>
<tr>
<td>Armored engineer vehicle</td>
<td>0</td>
<td>some</td>
<td>0</td>
<td>207</td>
<td>some</td>
<td>250</td>
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<tr>
<td>Reconnaissance</td>
<td>0</td>
<td>102</td>
<td>0</td>
<td>0</td>
<td>1,200</td>
<td>1,940</td>
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<tr>
<td><strong>Artillery</strong></td>
<td>12,367+</td>
<td>1,776</td>
<td>21,000+</td>
<td>11,038+</td>
<td>5,436+</td>
<td>6,477</td>
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<tr>
<td>Multiple rocket launcher</td>
<td>1770</td>
<td>99</td>
<td>5100</td>
<td>185</td>
<td>1106+</td>
<td>1189</td>
</tr>
<tr>
<td>Self-propelled</td>
<td>1821</td>
<td>193</td>
<td>1353+</td>
<td>1820</td>
<td>969</td>
<td></td>
</tr>
<tr>
<td>Towed</td>
<td>6140</td>
<td>422</td>
<td>3500+</td>
<td>550</td>
<td>1836</td>
<td></td>
</tr>
<tr>
<td>Unclassified (self-propelled/towed)</td>
<td></td>
<td>8500</td>
<td></td>
<td>970+ (SP: 870+, T: 100)</td>
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<td></td>
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<tr>
<td><strong>Gun/mortar</strong></td>
<td>50+</td>
<td></td>
<td>some</td>
<td></td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Mortar (self-propelled)</td>
<td>24</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mortar (towed)</td>
<td>1038</td>
<td></td>
<td></td>
<td></td>
<td>970+</td>
<td></td>
</tr>
<tr>
<td>Mortar (not classified)</td>
<td>2586</td>
<td>7500</td>
<td>6000</td>
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<tr>
<td><strong>Anti-Tank</strong></td>
<td>6,130</td>
<td>4,552</td>
<td>1,700</td>
<td>58</td>
<td>562</td>
<td>2,119</td>
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</tbody>
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12 This includes 32,400 Army Special Operations Forces.
13 Includes 46,000 General Reserve Army and 8,500 Ready Reserve Army forces.
<table>
<thead>
<tr>
<th>Category</th>
<th>Quantity</th>
<th>Classifications</th>
<th>Subclassifications</th>
<th>Notes</th>
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</thead>
<tbody>
<tr>
<td>Missile (self-propelled)</td>
<td>276</td>
<td>30</td>
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<td></td>
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<td>Missile (manpats)</td>
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<td>1610</td>
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<td></td>
</tr>
<tr>
<td>Ramped craft logistic</td>
<td>3966</td>
<td>2712</td>
<td>1700</td>
<td></td>
</tr>
<tr>
<td>Guns (self-propelled)</td>
<td>50</td>
<td>36+</td>
<td>some</td>
<td></td>
</tr>
<tr>
<td>Guns (towed)</td>
<td>8</td>
<td>526</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>Guns (not classified)</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rocket launcher</td>
<td>200</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Guns (self-propelled)</td>
<td>52</td>
<td>170</td>
<td>some</td>
<td></td>
</tr>
<tr>
<td>Guns (towed)</td>
<td>11000</td>
<td>160</td>
<td>some</td>
<td></td>
</tr>
<tr>
<td>Guns (not classified)</td>
<td>7700</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Surface-to-air missile (self-propelled)</td>
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<td>180</td>
<td>some</td>
<td>1320+</td>
</tr>
<tr>
<td>Surface-to-air missile (towed)</td>
<td>160</td>
<td>306</td>
<td>480</td>
<td></td>
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<tr>
<td>Surface-to-air missile (manpad)</td>
<td>some</td>
<td>360</td>
<td>some</td>
<td>780+</td>
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<tr>
<td>Surface-to-air missile (static)</td>
<td>200</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aircraft</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Aircraft</td>
<td>8</td>
<td>12</td>
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<td>254</td>
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<tr>
<td>Transport</td>
<td>8</td>
<td>12</td>
<td></td>
<td>196</td>
</tr>
<tr>
<td>ISR</td>
<td></td>
<td></td>
<td></td>
<td>49</td>
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<tr>
<td>ELINT</td>
<td></td>
<td></td>
<td></td>
<td>9</td>
</tr>
<tr>
<td>UAV</td>
<td>some</td>
<td>some</td>
<td>some</td>
<td>304</td>
</tr>
<tr>
<td>Amphibious Landing Craft</td>
<td></td>
<td></td>
<td></td>
<td>79</td>
</tr>
<tr>
<td>Utility Landing Craft</td>
<td></td>
<td></td>
<td></td>
<td>45</td>
</tr>
<tr>
<td>Helicopter</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attack</td>
<td>42</td>
<td>110</td>
<td>60</td>
<td>697</td>
</tr>
<tr>
<td>Multirole</td>
<td>401</td>
<td>175</td>
<td>376</td>
<td></td>
</tr>
<tr>
<td>ISR</td>
<td>80</td>
<td></td>
<td>120</td>
<td></td>
</tr>
<tr>
<td>Transport</td>
<td>234</td>
<td>238</td>
<td>222</td>
<td>3026</td>
</tr>
<tr>
<td>Search and rescue</td>
<td></td>
<td></td>
<td></td>
<td>26</td>
</tr>
<tr>
<td>Training</td>
<td></td>
<td></td>
<td></td>
<td>154</td>
</tr>
<tr>
<td>Missile</td>
<td>some</td>
<td>90</td>
<td>64+</td>
<td>30</td>
</tr>
<tr>
<td>Bridge Systems</td>
<td>some</td>
<td>some</td>
<td>56</td>
<td>60</td>
</tr>
<tr>
<td>Mine-Clearing Vehicles</td>
<td>some</td>
<td>some</td>
<td>some</td>
<td></td>
</tr>
<tr>
<td>Radar, Land-based</td>
<td></td>
<td></td>
<td></td>
<td>308</td>
</tr>
</tbody>
</table>


The Evolving Military Balance in the Korean Peninsula and Northeast Asia
Figure IV.11: IISS Estimate of Northeast Asian Modern Main Battle Tanks versus Total Holdings in 2013

<table>
<thead>
<tr>
<th></th>
<th>Not Modern</th>
<th>Modern</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td>5130</td>
<td>2330</td>
</tr>
<tr>
<td>Japan</td>
<td>436</td>
<td>341</td>
</tr>
<tr>
<td>DPRK</td>
<td>3500</td>
<td>1534</td>
</tr>
<tr>
<td>ROK</td>
<td>980</td>
<td>1340</td>
</tr>
<tr>
<td>Russia</td>
<td>1620</td>
<td>2785</td>
</tr>
<tr>
<td>US</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Based primarily on material in IISS, *The Military Balance 2013*. Data include both Army and Marine inventories. Figures do not include equipment used for training purposes. Some equipment figures are estimates. All equipment figures represent equipment in active service.
Figure IV.12: IISS Estimate of Total Northeast Asian Armored Fighting Vehicles (Army) in 2013

<table>
<thead>
<tr>
<th></th>
<th>China</th>
<th>Japan</th>
<th>DPRK</th>
<th>ROK</th>
<th>Russia</th>
<th>US</th>
</tr>
</thead>
<tbody>
<tr>
<td>Armored Amphibious Vehicle</td>
<td>124</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tank, Main Battle</td>
<td>7430</td>
<td>777</td>
<td>3500</td>
<td>2414</td>
<td>2800</td>
<td>2338</td>
</tr>
<tr>
<td>Tank, Light</td>
<td>800</td>
<td>560</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reconnaissance</td>
<td>102</td>
<td></td>
<td></td>
<td></td>
<td>1200</td>
<td>1940</td>
</tr>
<tr>
<td>Armored Personnel Carrier</td>
<td>2900</td>
<td>817</td>
<td>2500</td>
<td>2790</td>
<td>9700</td>
<td>24506</td>
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<tr>
<td>Armored Infantry Fighting Vehicle</td>
<td>2150</td>
<td>68</td>
<td>240</td>
<td>7360</td>
<td>4559</td>
<td></td>
</tr>
<tr>
<td>Armored Recovery Vehicle</td>
<td>71</td>
<td>238</td>
<td></td>
<td></td>
<td></td>
<td>1108</td>
</tr>
</tbody>
</table>

Source: Based primarily on material in IISS, *The Military Balance 2013*. Data include both Army and Marine inventories. Figures do not include equipment used for training purposes. Some equipment figures are estimates. All equipment figures represent equipment in active service.
Figure IV.13: IISS Estimate of Total Northeast Asian Modern\textsuperscript{14} versus Not Modern Armored Vehicles in 2013\textsuperscript{15}

Source: Based primarily on material in IISS, *The Military Balance 2013*. Data include both Army and Marine inventories. Figures do not include equipment used for training purposes. Some equipment figures are estimates. All equipment figures represent equipment in active service.

\textsuperscript{14} Modern equipment includes (China: MBT – Type-96/96A, Type-98A/99/99A2; AIFV – Type-86/87A (WZ-501), Type-92/92A, Type-03 (ZBD-03); APC – Type-09 (ZBL-09), Type-92B, WZ523; Japan: MBT – Type-90; RECCE – Type-87; AIFV – Type-89; APC – Type-82, Type-96; ROK: MBT – K1, K1A1; AIFV – K21; APC – KIFV; AAV – AAV-7A1; Russia: MBT – T-80BV/U, T-90/A; RECCE – Dozor, Tigr; BRDM-2; AIFV – BMD-2, BMD-3, BMD-4, BMP-3, BTR-80A/82A; APC – BMO-T, BTR-D; US: MBT – M1A1/A2 Abrams; RECCE – M7A3 BFIST, M1127 Stryker RV, M1128 Stryker MGS, M1131 Stryker FSV, M1135 Stryker NBCRV, M1200 Armored Knight, Tpz-1 Fuchs, LAV-25 Coyote; AIFV – M2A2/A3, M1126 Stryker ICV, M1130 Stryker CV, M1132 Stryker ESV, M1133 Stryker MEV, MRAP (PPV), M-ATV (PPV), AAV – AAV-7A1).

\textsuperscript{15} Not Modern equipment includes (China: MBT – Type-59/59D/59-II, Type-79, Type-88A/B; AIFV – Type-03 (ZBD-03), Type-04 (ZBD-04), Type-05 AAAV (ZBD-05), Type-08 (ZBD-08); APC – Type-63/63C, Type-89; Japan: MBT – Type-10, Type-74; APC – Type-73; DPRK: MBT – T-34, T-54, T-55, T-62, Type-59, Chonma, Pokpoong; APC – Type-531 (Type-63), VTT-323, BTR-340, BTR-50, BTR-60, BTR-80A, BTR-152, BTR look-a-like; ROK: MBT – M48, M48A5, T-80U; AIFV – BMP-3; APC – Bv 206, M113, M577, BTR-80, KM-900/901 (Fiat 6614), MaxxPro (PPV); Russia: MBT – T-72B/BA; RECCE – BRDM-2/2A; AIFV – BMD-1, BMP-1, BMP-2, BRM-1K; APC – MT-LB, BTR-60, BTR-70, BTR-80).
Figure IV.14: IISS Estimate of Total Northeast Asian Artillery Strength in 2013

Source: Based primarily on material in IISS, The Military Balance 2013. Data include both Army and Marine inventories. Figures do not include equipment used for training purposes. Some equipment figures are estimates. All equipment figures represent equipment in active service.
Naval and Marine Forces

In the past two decades, there have been significant changes in the naval military equipment and weaponry of Northeast Asian states, including Russia. In particular, there has been a trend towards more technologically advanced guided missiles and submarine-launched torpedoes. At the same time, the US has sharply improved its naval aircraft and their avionics and weaponry, cruise missile capabilities, and missile defense – including new theater missile defense capabilities. It has also steadily improved its submarine warfare capabilities. Its weaknesses lie in areas like mine warfare, and the ability to deal with “swarms” or “clusters” of smaller missile-armed ships.

The ROK data on the naval balance in 2010 in Figure IV.15 not only show very different numbers for force strength, they make no distinction between the size and capability of naval surface vessels – a count that sharply understates the quality of the ROK fleet.

Once again, the IISS has different estimates for 2013. Figure IV.16 shows relative balance of naval manpower and equipment strength. Figure IV.17 provides a comparison of Northeast Asian naval combat ships, Figure IV.18 looks at combat ships by category, and Figure IV.19 gives a comparison of regional submarines by capability.

The DPRK again has a lead over the ROK in manning, though the DPRK is inferior in major naval surface vessel fleet strength and capability.

The DPRK does, however, have a major lead in patrol boats and costal combatants, amphibious vessels, potential mine layers, and smaller surface vessels of the kind that can be used in asymmetric warfare, allowing it to operate close to shore and outside the normal operating area of major US naval surface vessels. Only 16 of the DPRK’s 383 patrol boats and costal combatants, however, are armed with anti-ship missiles, and the ROK does have a relatively large naval coastguard, with 114 small patrol and coastal combatants.

The DPRK also has a major lead in conventional submarines and small submersibles (72:12), as does China over Japan. The DPRK uses small submarines to infiltrate its Special Forces. Many of the submarines, however, are aging, and ROK and US forces have a qualitative advantage in the air and sea aspects of anti-submarine warfare.

More broadly, operations by the naval forces on each side would be sharply affected by the air-sea, smart mine, and anti-ship missile battles – areas where the quality of ships and aircraft, their weaponry, air/missile defenses, ISR capability, and smart munitions would again have a major impact.

The “balance” would also be determined by joint operations rather than sea power alone. A combination of ROK and US naval and air forces would probably have a decisive advantage over the DPRK. Chinese air intervention could affect the balance and China is gradually developing a far more effective Navy; the ROK and US would also need time to defeat a deployed DPRK submarine force and would likely face problems in dealing with mines and coastal anti-ship missiles.

At the same time, any analysis of the naval balance presents the same problems as the analyses of land and air forces. Naval forces are only part of overall interactions involved in
The interaction will be scenario-specific, shaped by new and unpredictable mixes of forces and tactics, the impact of intangibles like training and readiness, the role of relative ISR capabilities, and a host of other factors.
Figure IV.15: ROK Estimate of Korean Naval Balance in 2010

Source: Based primarily on material provided from Republic of Korea, Ministry of Defense, 2010 Defense White Paper. Some equipment figures are estimates. All equipment figures represent equipment in active service.
Figure IV.16. IISS Estimate of Total Navy Manpower and Equipment in Northeast Asia in 2013

Navy and Navy Reserve Manpower (in thousands, including conscripts; figures include Naval Aviation and Marines)

<table>
<thead>
<tr>
<th></th>
<th>China</th>
<th>Japan</th>
<th>DPRK</th>
<th>ROK</th>
<th>Russia</th>
<th>US16</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active</td>
<td>255</td>
<td>45.5</td>
<td>60</td>
<td>68</td>
<td>130</td>
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Naval Equipment

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16 Force numbers exclude the US Coast Guard.
17 Includes 199,550 Marines; also including 9,500 Navy Special Operations Forces and 3,000 Marines Special Operations Forces.
18 Includes 37,350 Marine reserves.
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<td>454</td>
<td>62</td>
<td>50</td>
</tr>
<tr>
<td>SAM (self-propelled)</td>
<td>120</td>
<td>62</td>
<td>50</td>
</tr>
<tr>
<td>SAM (manpad)</td>
<td>250</td>
<td>62</td>
<td>50</td>
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<tr>
<td>Guns (self-propelled)</td>
<td>60</td>
<td>62</td>
<td>50</td>
</tr>
<tr>
<td>Coastal defense missile system</td>
<td>24</td>
<td>62</td>
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<tr>
<td>Other defense missile systems</td>
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<td>62</td>
<td>50</td>
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<tr>
<td>Tank (Marines)</td>
<td>447</td>
<td>62</td>
<td>50</td>
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<tr>
<td>Tank, light</td>
<td>124</td>
<td>62</td>
<td>50</td>
</tr>
<tr>
<td>Tank, main battle</td>
<td>100</td>
<td>62</td>
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<td>Personnel Carrier (Marines)</td>
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<td>vehicle</td>
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</tr>
<tr>
<td><strong>Reconnaissance</strong></td>
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<tr>
<td>Towed</td>
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<td></td>
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<tr>
<td>Multiple rocket launcher</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Mortar</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td><strong>Anti-Tank</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Missile/Manpats</td>
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<td></td>
</tr>
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<td>Ramped craft logistic</td>
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<tr>
<td>Guns</td>
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<td><strong>Glider</strong></td>
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<tr>
<td>Armored Reconnaissance/Recovery Vehicle</td>
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<td>Armored Engineer Vehicle</td>
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</tr>
<tr>
<td>Radar, Land</td>
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</tbody>
</table>

Figure IV.17: IISS Estimate of Total Northeast Asian Naval Combat Ships in 2013

Source: Based primarily on material in IISS, The Military Balance 2013. Figures do not include equipment used for training purposes. Some equipment figures are estimates. All equipment figures represent equipment in active service.
Figure IV.18: IISS Estimate of Total Northeast Asian Naval Combat Ships by Category in 2013

Source: Based primarily on material in IISS, The Military Balance 2013. Some equipment figures are estimates. All equipment figures represent equipment in active service.
Figure IV.19: IISS Estimate of Total Northeast Asian Submarines by Type in 2013

<table>
<thead>
<tr>
<th>Country</th>
<th>Nuclear-powered, Attack</th>
<th>Nuclear-powered, Attack, with Cruise Missile</th>
<th>Diesel, with Ballistic Missile</th>
<th>Diesel, Patrol, ASW Capability</th>
<th>Nuclear-powered, Auxiliary</th>
<th>Diesel, Coastal</th>
<th>Diesel, Auxiliary</th>
<th>Midget</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td>5</td>
<td></td>
<td>1</td>
<td>55</td>
<td>7</td>
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<td>1</td>
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<td>Japan</td>
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<td></td>
<td></td>
<td>18</td>
<td></td>
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</tr>
<tr>
<td>DPRK</td>
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<td></td>
<td></td>
<td>22</td>
<td>12</td>
<td>11</td>
<td></td>
<td></td>
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<tr>
<td>ROK</td>
<td></td>
<td></td>
<td></td>
<td>12</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Russia</td>
<td></td>
<td></td>
<td></td>
<td>17</td>
<td>14</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>US</td>
<td></td>
<td></td>
<td></td>
<td>60</td>
<td>5</td>
<td>11</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Based primarily on material in IISS, The Military Balance 2013. Figures do not include equipment used for training purposes. Some equipment figures are estimates. All equipment figures represent equipment in active service.
**Air and Air Defense Forces, and DPRK Artillery, MRLs, Rockets, and Missiles**

The air and conventional missile balance is the aspect of the overall balance where outside power projection force can deploy most rapidly and probably be most effective in limiting a conflict. US forces can surge quickly out of Japan and even from bases as far away as Guam. US air units can deploy across the Pacific in a matter of days, and the US Navy deploys significant cruise missile assets that could carry out precision strikes deep into the DPRK on short notice.

As before, the ROK data on the air balance in 2010 shown in Figure IV.20 are radically less favorable than the IISS data for ROK. The IISS shows a ratio of total DPRK vs. ROK air force combat aircraft of 620 to 467 (1.3 times greater). The ROK white paper for 2010 shows a ratio of total DPRK vs. ROK air force combat aircraft of 820 to 460 (1.8 times greater). As before, the ROK does not provide an explanation the differences.

**Fixed Wing Aircraft**

Figure IV.21 shows the IISS estimate of the balance in 2013 in terms of air manpower and equipment numbers in each country. If one looks only at the DPRK and ROK, the DPRK again has leads over the ROK in manning (112,000 versus 65,000) and in total aircraft (603 versus 569). The DPRK, however, is far inferior in terms of aircraft quality at every level, while the ROK has a larger and more capable mix of total air, army, and naval attack and combat helicopters.

The DPRK’s only aircraft approaching a modern type in a force of 620 combat aircraft are 35 MiG-29A/S fighters. The ROK is completing a buildup of 59 F-15K advanced modern fighters and has 164 modern F-16C/Ds. The ROK’s 60 AH1F/J attack helicopters are superior in individual capability to the DPRK’s 20 Mi-24s. While the data involved are uncertain, the ROK also seems have superior radar and battle management and is interoperable with US AWACs and ISR systems.

Figure IV.22 depicts Northeast Asian fixed wing combat aircraft by country and military force. It shows that both China and the US could radically alter the air balance in a matter of days.

Figure IV.23 shows the air balance by country and mission type. It indicates that the DPRK’s Air Force does not have the support of the kind of intelligence, AWACS-type, and ISR enablers that the ROK possesses and is in many ways a “1970s” air force, compared to those of the ROK, US, China, and Russia.

**Rotary Wing Aircraft**

Figure IV.24 shows the total rotary wing or helicopter balance by country and service. This is an area where the ROK has a major lead over the DPRK.

Figure IV.25 looks at rotary wing aircraft by country and mission type. The ROK again leads in terms of modern type, diversification, and the ability to support a wider range of missions. At the same time, this figure highlights an aspect of US capability that often tends
to be overlooked. The US has a large fleet of rapidly deployable modern attack helicopters, many with advanced anti-armor weaponry. The balance of armored weapons in the Koreas could be altered significantly by the deployment of US attack helicopters.

Figures IV.26 and IV.27 add another dimension to the air balance. They show that the DPRK has large surface-to-air missiles forces, but most were first deployed in the Vietnam era or early 1970s, and have only had limited upgrades. The ROK IHAWK systems are relatively modern, and the ROK has significant numbers of Patriots, which are fully modern air defense systems with a point defense capability against missiles. The DPRK, however, has much larger short-range air defenses, although most have limited effectiveness and many are anti-aircraft unguided guns.

**Surface-to-Air Missiles and Anti-Aircraft Guns**

Figure IV.27 shows relative balance of surface-to-air missile (SAM) and ballistic missile strength, while Figure IV.28 shows overall missile and bomb capacities – to the extent they are available in open source literature. The trends in missile defense are discussed later in Chapter 7. The DPRK has large, but mostly obsolete surface-to-air missile defenses.

North Korea does have one of the densest air defense networks in the world, but its equipment is primarily Soviet-designed missiles and radars – either made in the USSR or licensed and produced in the DPRK – developed in the 1950s-1970s. The US has been working for decades to develop ways to defeat such weapons, using radar jamming, anti-radar missiles, and stealth technology; the B-2 and F-22 were designed specifically to evade this type of defense, and B-52s could take out the DPRK’s air defense system by firing AGM-86 cruise missiles from beyond the range of DPRK defenses. The DPRK’s inventory includes the SA-2 *Guideline*, SA-6 *Gainful*, SA-3 *Goa*, SA-13 *Gopher*, SA-16 *Gimlet*, SA-4 *Ganef*, SA-5 *Gammon*, and the SA-17 *Gadfly*.19

The DPRK also has massive numbers of short-range manportable air defense systems (Manpads) and anti-aircraft guns. The IISS estimates that the DPRK has some 3,000 Manpads and 11,000 guns. The ROK has smaller holdings of SAMs, but has far more modern and more capable Hawk and Patriot systems, compared to the DPRK’s aging SA-2, SA-3, and SA-5 systems.

The ROK’s qualitative advantage in SAMs would more than offset the DPRK’s advantage in numbers. It is unclear how much the DPRK’s advantage in anti-aircraft guns and MANPADS really matters. Most are aging and have limited range and capability. US and ROK strike aircraft have effective countermeasures against most Manpads and can use air-to-surface missiles from standoff ranges.

**Conventional Artillery and Surface-to-Surface Rockets and Missiles as a Counterbalance to Limits in Airpower**

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More broadly, these data and the data on US forces shown in this section can only hint at the qualitative advantages that the ROK/US side could have when the total associated weapons, sustainability, battle management, ISR, and C4/BM capabilities of US and ROK forces are considered, and that this would be particularly true if China stood aside from the conflict. The role of external players is critical in any engagement scenario, and relative force quality could easily be far more decisive than force numbers.

As has been discussed earlier, the potential DPRK counterbalance to ROK and US advantages in airpower would be the use of longer-range artillery, rockets, and shorter-range ballistic missiles as a substitute for air power.

The DPRK’s longer-range tube artillery includes 130mm M-1975/M-1981/M-1991 (27+ kilometers), 152mm M-1974/M-1977 (12.5 kilometers), 170mm M-1978/M-1989 self-propelled weapons (60 kilometers with a rocket assisted projectile), and 122mm D-30/D-74/M-1931/37 (15.4 kilometers), 130mm M-46 (27+ kilometers), and 152mm M-1937/M-1938/M-1943 towed weapons (12.5 kilometers).

The IISS also estimated that the DPRK had 5,100 107mm, 122mm and 240mm multiple rocket launchers in 2013. Its 107mm multiple rocket launchers had a maximum range of 11 kilometers, its 122mm multiple rocket launchers had a maximum range of 20 kilometers, and its 240mm multiple rocket launchers had a maximum range of 35 kilometers.

Global Security reports that,

South Korean security analyst suggested that DPRK artillery pieces of calibers 170mm and 240mm “could fire 10,000 rounds per minute to Seoul and its environs…North Korea has about 5,000 long-range artillery tubes within range of Seoul, and the total rate of fire of these artillery pieces would be between 2,000 and 4,000 rounds per minute. The DPRK’s two hundred 240mm MRLs fire either 12 or 22 rounds, providing a maximum single salvo of no more than 4,400 rounds… These launchers can fire a first strike of many thousands of missiles and return in a few minutes to protected caves or to alternate firing positions. The MRLs move out from underground facilities (UGFs), fire from preplanned firing positions, and return to the UGFs. Examination of the available data on the UGF sites suggests that a number of possible “exit and return” methods for the MRLs may be possible. In this case, the launchers move directly from the firing points to the UGFs. This procedure makes it difficult to target the launchers, because once they fire it only takes 75 seconds to return to their UGFs...

The IISS estimated that the DPRK had 24 fire units for longer-range rockets and missiles. These forces included units with FROG-3/FROG-5/FROG-7; 30+ Scud-B/Scud-C (200+ missiles), and 10 Nodong (90+ missiles). Some of its some Musudan IRBMs may be nearing operational status, and it has KN-08s in development.

It is not clear that these systems have a precision strike capability, but they may well have cluster or submunition warheads as well as chemical and possibly biological warheads. Nuclear warheads are almost certainly under development. The FROG has a nominal maximum range of 70-90 kilometers with 390-500 kilogram warheads and a CEP of 500-700 meters.

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The Scud B has a nominal maximum range of 270 kilometers with 985 kilogram conventional warheads and a CEP of 500-700 meters. The Scud-C has a nominal maximum range of 900 kilometers with 600 kilogram conventional warheads and a CEP of 500-1,100 meters. No Scud-Ds – which have early terminal guidance systems – were reported in the DPRK inventory.

The Nodong has a nominal maximum range of 900 kilometers with a nominal 1,000 kilogram conventional warhead and a CEP worse than 1,500 meters. The Musudan IRBM has a nominal maximum range of 2,500-4,000 kilometers with a 1,000-1,250 kilogram warhead and a CEP of 1,300-2,300 meters. The status of the KN-08 and Taepodong-2 ICBMs is uncertain and no clear date exists for a KN-08 operational status. The Nodong, Musudan, and KN-08 are long-range systems that are likely to be equipped solely with nuclear warheads.

It is possible that the DPRK might escalate to using chemical warheads, believing that the ROK and US response would be limited by a lack of chemical weapons and reluctance to escalate to even low-yield tactical nuclear warheads.

These missile and CBRN forces will be discussed in more detail later in this report.
Figure IV.20: ROK Estimate of Korean Air Force Balance in 2010

<table>
<thead>
<tr>
<th></th>
<th>Combat Aircraft</th>
<th>C2-ISR Aircraft</th>
<th>Air Mobility Aircraft</th>
<th>Training Aircraft</th>
<th>Helicopters</th>
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</thead>
<tbody>
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<td><strong>DPRK</strong></td>
<td>820</td>
<td>30</td>
<td>330</td>
<td>170</td>
<td>300</td>
</tr>
<tr>
<td><strong>ROK</strong></td>
<td>460</td>
<td>40</td>
<td>40</td>
<td>180</td>
<td>40</td>
</tr>
</tbody>
</table>

Source: Based primarily on material provided from Republic of Korea, Ministry of Defense, *2010 Defense White Paper*. Some equipment figures are estimates. All equipment figures represent equipment in active service.
Figure IV.21: IISS Estimate of Total Air Force Manpower and Equipment in Northeast Asia in 2013

Air Force and Air Force Reserve Manpower (in thousands, including conscripts)

<table>
<thead>
<tr>
<th></th>
<th>China</th>
<th>Japan</th>
<th>DPRK</th>
<th>ROK</th>
<th>Russia</th>
<th>US</th>
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</thead>
<tbody>
<tr>
<td>Active</td>
<td>300-350</td>
<td>41.7</td>
<td>110</td>
<td>65</td>
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<td>346.1^21</td>
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<tr>
<td>Reserve</td>
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<td>0.8</td>
<td>some</td>
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<td>some</td>
<td>154.9</td>
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</table>

Air Force Equipment

<table>
<thead>
<tr>
<th>Aircraft (combat capable)</th>
<th>China (1,903)</th>
<th>Japan (552)</th>
<th>DPRK (603)</th>
<th>ROK (569)</th>
<th>Russia (1,462)</th>
<th>US (1,430)</th>
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</thead>
<tbody>
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<td>80</td>
<td>441+</td>
<td>174</td>
<td>630</td>
<td>279</td>
</tr>
<tr>
<td>Fighter</td>
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<td>201</td>
<td>543+</td>
<td>48</td>
<td>294</td>
<td>323</td>
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<td>Fighter, ground attack</td>
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<td>4</td>
<td>41</td>
<td>28</td>
<td>114+</td>
<td>76</td>
</tr>
<tr>
<td>Command &amp; control</td>
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<td>4</td>
<td>4</td>
<td>22</td>
<td>22</td>
<td></td>
</tr>
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<td>22</td>
<td>4</td>
<td>4</td>
<td>4</td>
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<tr>
<td>Search and rescue</td>
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<td>28</td>
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<td>28</td>
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<td>Airborne early warning</td>
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<td>and control</td>
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<td>Combat Search and Rescue</td>
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<td>Tanker</td>
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<td>20</td>
<td>170</td>
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<td>Tanker/transport</td>
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<td>59</td>
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<tr>
<td>Training</td>
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<tr>
<td>Transport</td>
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<td>Helicopter</td>
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<td>8</td>
<td>78+</td>
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<tr>
<td>Multirole/EW</td>
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<td>3</td>
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<tr>
<td>Transport</td>
<td>28+</td>
<td>15</td>
<td>202</td>
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</tr>
<tr>
<td>Combat search and</td>
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<td>143</td>
<td>143</td>
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</table>

^21 This includes 15,300 Air Force Special Forces troops.
<table>
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<tr>
<th>category</th>
<th>quantity</th>
<th>quality</th>
<th>total</th>
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</thead>
<tbody>
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<td>Search and rescue</td>
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<td>16</td>
<td>81+</td>
</tr>
<tr>
<td>Training</td>
<td></td>
<td>20+</td>
<td></td>
</tr>
<tr>
<td>Tiltorotor</td>
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<tr>
<td>Air Defense</td>
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<td>3,400</td>
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<tr>
<td>Guns (towed)</td>
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<tr>
<td>Surface-to-air missile (manpad)</td>
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<tr>
<td>Surface-to-air missile (static/shelter)</td>
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<td>38</td>
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<tr>
<td>Surface-to-air missile (self-propelled)</td>
<td>300+</td>
<td>some</td>
<td>1900+</td>
</tr>
<tr>
<td>Surface-to-air missile (towed)</td>
<td>300+</td>
<td>120</td>
<td>312+</td>
</tr>
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<td>Armored Infantry Fighting Vehicle</td>
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<tr>
<td>Artillery</td>
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</tr>
<tr>
<td>Towed</td>
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<td>Multiple rocket launcher (towed)</td>
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<td></td>
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<tr>
<td>Mortar</td>
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<td>Radar</td>
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<td>Air-to-Air Missile</td>
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<td>Bombs, laser/TV/INS/GPS-Guided</td>
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<td>some</td>
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<td>Missile, Tactical</td>
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<td>some</td>
<td>some</td>
</tr>
<tr>
<td>Anti-tank, Self-Propelled</td>
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<tr>
<td>UAV</td>
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<td>some</td>
<td>103+</td>
</tr>
</tbody>
</table>

Figure IV.22: IISS Estimate of Total Northeast Asian Fixed Wing Combat Aircraft by Branch in 2013

Source: Based primarily on material in IISS, *The Military Balance 2013*. Figures do not include equipment used for training purposes. Some equipment figures are estimates. All equipment figures represent equipment in active service.
Figure IV.23: IISS Estimate of Total Northeast Asian Fixed Wing Aircraft by Type in 2013

Source: Based primarily on material in IISS, The Military Balance 2013. Data for each aircraft type represent the sum of all active service aircraft in Army, Navy, and Air Force inventories. Figures do not include equipment used for training purposes. Some equipment figures are estimates. All equipment figures represent equipment in active service.
Figure IV.24: IISS Estimate of Total Northeast Asian Rotary Wing Combat Aircraft by Force in 2013

Source: Based primarily on material in IISS, *The Military Balance 2013*. Figures do not include equipment used for training purposes. Some equipment figures are estimates. All equipment figures represent equipment in active service. “Combat” defined as platforms designed for the purpose of offensive combat operations; included are Army (attack and multirole), Navy (anti-submarine warfare, attack, and multirole), and Air Force (multirole, attack and tiltrotor).
Source: Based primarily on material in IISS, *The Military Balance* 2013. Data for each aircraft type represent the sum of all active service aircraft in Army, Navy, and Air Force inventories. Figures do not include equipment used for training purposes. Some equipment figures are estimates. All equipment figures represent equipment in active service.
### Figure IV.26: IISS Estimate of Total Northeast Asian Air/Missile Defenses in 2013

<table>
<thead>
<tr>
<th>Country</th>
<th>Major SAMs (SP/T/Static)</th>
<th>Light SAMs (Manpad)</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td>200 HQ-7A 60 SA-15 Gauntlet (9K331 Tor M1) 30 HQ-6D Red Leader 12 HQ-16 24 HD-6D 60+ HQ-7 32 HQ-9 24 HQ-12 (KS-1A) 32 S-300PMU (SA-10B Grumble)* 64 S-300PMU-1 (SA-20 Gargoyle) 64 S-300PMU-2 (SA-20 Gargoyle) 300+ HQ-2/HQ-2A/HQ-2B(A) (SA-2) Guideline</td>
<td>HN-5A/HN-5B Hong Nu FN-6/QW-1/QW-2</td>
</tr>
<tr>
<td>Japan</td>
<td>50+ Type-81 Tan-SAM 160 MTM-23B I-HAWK 20 Type-03 Chu-Sam 110 Type-93 Kin SAM 120+ MIM-104 Patriot</td>
<td>360+ Type-91 Kin-SAM/Kei SAM</td>
</tr>
</tbody>
</table>
| US | 703 FIM-92A *Avenger*  
|    | 95 M6 *Linebacker*  
|    | 480 MIM-104 *Patriot/PAC-2/PAC-3*  
|    | 274 AN/TPQ-36 *Firefinder* (radar/arty)  
|    | 56 AN/TPQ-37 *Firefinder* (radar/arty)  
|    | 60 AN/TRQ-32 *Teammate*  
|    | (radar/COMINT)  
|    | 32 AN/TSQ-138 *Trailblazer*  
|    | (radar/COMINT)  
|    | 5 AN/TSQ-138A *Trailblazer* (radar)  
| FIM-92/92A *Stinger* |

Source: Based primarily on material in IISS, *The Military Balance 2013*. Figures represent equipment in use across service branches. All equipment figures represent equipment in active service.
Figure IV.27: IISS Estimate of Total Korean and Northeast Asian Air/Missile Defenses in 2013

Source: Based primarily on material in IISS, *The Military Balance 2013*. Data include Army, Air Force, and Navy (and Marine) inventories. It should be noted that the exact number of these equipment types is not available for most countries; real numbers are likely much higher and broader.
### Figure IV.28: Northeast Asian Missile and Bomb Capabilities

<table>
<thead>
<tr>
<th>Country</th>
<th>Missiles</th>
<th>Bombs</th>
</tr>
</thead>
</table>
| DPRK    | 24 FROG-3/FROG-5/FROG-7<br>KN-08 (in development)<br>
*Musudan*<br>
~10 Nodong<br>30+ Scud-B/Scud-C<br>
HY-1 (CSS-N-2)<br>
KN-01<br>
Kh-23 (AS-7 *Kerry*)<br>
Kh-25 (AS-10 *Karen*)<br>
R-3 (AA-2 *Atoll*)<br>
R-60 (AA-8 *Aphid*)<br>
R-73 (AA-11 *Archer*)<br>
PL-5<br>
PL-7<br>
R-23/24 (AA-7 *Apex*)<br>
R-27R/ER (AA-10 A/C *Alamo*) |       |
| ROK     | 30 NHK-I/-II *Hyunmu*<br>
RGM-84A *Harpoon*<br>
AGM-84A *Harpoon*<br>
AGM-139<br>
AGM-142 *Popeye*<br>
AGM-88 *HARM*<br>
AGM-65A *Maverick*<br>
AGM-84-H SLAM-ER<br>
AIM-9/9X *Sidewinder* |       |
| China   | HY-1 (CSS-N-2) *Silkworm*<br>
HY-2 (CSS-C-3) *Seersucker*<br>
HY-4 (CSS-C-7) *Sadsack*<br>
YJ-61<br>
YJ-8K<br>
YJ-83K<br>
72 YJ-62<br>
YJ-91 (Kh-31P variant)<br>
KD-10<br>
Kh-31A/P (AS-17B *Krypton*)<br>
KD-88<br>
Kh-29 (AS-14 *Kedge*)<br>
Kh-59 (AS-18 *Kazoo*)<br>
YJ(KD)-63<br>
PL-2B<br>
PL-5<br>
PL-5B/C | Type-200-4/Type-200A<br>
LS-500J<br>
KAB-500KR<br>
KAB-1500KR |
<table>
<thead>
<tr>
<th></th>
<th>PL-8</th>
<th>PL-9</th>
<th>R-73 (AA011 <em>Archer</em>)</th>
<th>PL-11</th>
<th>R-77 (AA-12 <em>Adder</em>)</th>
<th>PL-12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Japan</td>
<td>90 Type-88</td>
<td>ASM-1 (Type-80)</td>
<td>ASM-2 (Type-93)</td>
<td>AAM-3 (Type-90)</td>
<td>AIM-9 <em>Sidewinder</em></td>
<td>AAM-5 (Type-04)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ASM-2 (Type-93)</td>
<td>AAM-3 (Type-90)</td>
<td>AIM-9 <em>Sidewinder</em></td>
<td>AAM-5 (Type-04)</td>
<td>AAM-4 (Type-99)</td>
</tr>
</tbody>
</table>

| Russia | 200 Tochka (SS-21 *Scarab*) | 12 3K60 Bal (SSC-6 *Sennight*) | 12 K-300P Bastion (SSC-5 *Stooge*) | R-27T/ET (AA-10B/D *Alamo*) | R-60/R-60T (AA-8 *Aphid*) | R-73 (AA-11 *Archer*) |

**Notes:**
- *Archer*, *Adder*, *Sidewinder*, and *Krypton* are variants of missiles or anti-aircraft missiles.
- KAB-500, KAB-1500L, KAB-500K, KAB-1500KR, KAB-5000D, and UPAB 1500 are types of weapons or missles.
<table>
<thead>
<tr>
<th>US</th>
<th>AIM-9 Sidewinder</th>
<th>BLU-109/Mk 84</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>AIM-9X Sidewinder II</td>
<td>BLU-110/Mk 83</td>
</tr>
<tr>
<td></td>
<td>AIM-7 Sparrow</td>
<td>BLU-111/Mk 82</td>
</tr>
<tr>
<td></td>
<td>AIM-120/120B/C AMRAAM</td>
<td>BLU-117/Mk 84</td>
</tr>
<tr>
<td></td>
<td>AGM-65A/B/D/E/F/G Maverick</td>
<td>Mk 46</td>
</tr>
<tr>
<td></td>
<td>AGM-114B/K/M Hellfire</td>
<td>Mk 50</td>
</tr>
<tr>
<td></td>
<td>AGM-84E SLAM/SLAM-ER LACM</td>
<td>Mk 54</td>
</tr>
<tr>
<td></td>
<td>AGM-154A JSOW</td>
<td>CBU-59</td>
</tr>
<tr>
<td></td>
<td>AGM-175 Griffin</td>
<td>CBU-99</td>
</tr>
<tr>
<td></td>
<td>AGM-86B/C/D LACM</td>
<td>Paveway II</td>
</tr>
<tr>
<td></td>
<td>AG-130AAGM-158 JASSM</td>
<td>Paveway III</td>
</tr>
<tr>
<td></td>
<td>AGM-84/84D Harpoon</td>
<td>GBU 10/12/16 Paveway II</td>
</tr>
<tr>
<td></td>
<td>AGM-119A Penguin 3</td>
<td>JDAM (GBU-31/32/38)</td>
</tr>
<tr>
<td></td>
<td>AGM-88/88A/B HARM</td>
<td>GBU-15</td>
</tr>
<tr>
<td></td>
<td>MALD/MALD-J</td>
<td>GBU-39B</td>
</tr>
<tr>
<td></td>
<td></td>
<td>GBU-43B</td>
</tr>
<tr>
<td></td>
<td></td>
<td>GBU-57A/B</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Enhanced Paveway II</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Enhanced Paveway III</td>
</tr>
</tbody>
</table>

Source: Based primarily on material in IISS, *The Military Balance 2013*. Figures represent equipment in use across service branches. All equipment figures represent equipment in active service.

**Paramilitary Forces**

Figure IV.29 portrays the balance of paramilitary strength. The US does not have a paramilitary force, so the US is not included. China and Russia have far larger paramilitary forces than the Koreas – unsurprising given their significantly larger demographic and geographic sizes. It is unlikely, however, that either country would use such forces in any conflict in the Koreas.

The DPRK has massive paramilitary forces compared to the ROK, but these forces are primarily instruments of regime control over the North’s population, and this aspect of the balance is unlikely to affect any DPRK attack on the ROK. The DPRK already has larger ground forces than it can support in any offensive. However, the situation could be different in the case of any ROK or ROK/US counteroffensive into the DPRK. Depending on the loyalty of such forces, they could put up significant local resistance both during a counteroffensive and in the rear of any ROK or ROK/US advance.
**Figure IV.29: IISS Estimate of Total Paramilitary Manpower and Equipment in Northeast Asia in 2013**

Paramilitary Manpower (in thousands, including conscripts)

<table>
<thead>
<tr>
<th></th>
<th>China</th>
<th>Japan</th>
<th>DPRK</th>
<th>ROK</th>
<th>Russia</th>
</tr>
</thead>
<tbody>
<tr>
<td>600+</td>
<td></td>
<td>12.65</td>
<td>189</td>
<td>4.5</td>
<td>519</td>
</tr>
</tbody>
</table>

**Paramilitary Equipment**

<table>
<thead>
<tr>
<th></th>
<th>China</th>
<th>Japan</th>
<th>DPRK</th>
<th>ROK</th>
<th>Russia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Armored infantry fighting vehicle / personnel carrier</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2,650</td>
</tr>
<tr>
<td>Artillery</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>125</td>
</tr>
<tr>
<td>Self-propelled</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>90</td>
</tr>
<tr>
<td>Towed</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>20</td>
</tr>
<tr>
<td>Mortars</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>15</td>
</tr>
<tr>
<td>Tanks, major battle</td>
<td></td>
<td></td>
<td>9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Frigates</td>
<td></td>
<td></td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corvettes</td>
<td></td>
<td></td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Patrol and Coastal Combatants</strong></td>
<td>582</td>
<td>403</td>
<td>50</td>
<td>211</td>
<td></td>
</tr>
<tr>
<td>Patrol vessel, offshore</td>
<td>20</td>
<td>28</td>
<td>5</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Patrol craft, offshore</td>
<td>58</td>
<td>44</td>
<td>16</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>Patrol boat (fast)</td>
<td>504+</td>
<td>297</td>
<td>19</td>
<td>130</td>
<td></td>
</tr>
<tr>
<td>Patrol craft, coastal</td>
<td>21</td>
<td>10</td>
<td>13</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Patrol vessel, offshore with hanger</td>
<td>13</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Small gunnery ship / counter-terror</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>46</td>
</tr>
<tr>
<td>Patrol hydrofoil with torpedo</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td><strong>Logistics and Support</strong></td>
<td>41</td>
<td>29</td>
<td>41</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sea-going buoy tender</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Survey ship</td>
<td>12</td>
<td></td>
<td></td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Destroyer</td>
<td>9</td>
<td></td>
<td></td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Miscellaneous auxiliary service craft</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Torpedo recovery vessel</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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22 The US does not have a paramilitary.
<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Fireboat</td>
<td>9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Salvage and rescue ship</td>
<td>29</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Icebreaker</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cargo ship</td>
<td>8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oiler</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tug, fleet, ocean-going</td>
<td>18</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Amphibious</strong> (LC/LCAC - patrol)</td>
<td></td>
<td></td>
<td>7</td>
</tr>
<tr>
<td>Aircraft</td>
<td>25</td>
<td>6</td>
<td>109</td>
</tr>
<tr>
<td>Jet</td>
<td>2</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>ISR</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transport</td>
<td>21</td>
<td>1</td>
<td>109</td>
</tr>
<tr>
<td><strong>Helicopters</strong></td>
<td>46</td>
<td>16</td>
<td>270</td>
</tr>
<tr>
<td>Multirole</td>
<td>7</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>Transport</td>
<td>39</td>
<td>8</td>
<td>70</td>
</tr>
<tr>
<td>Non-categorized</td>
<td></td>
<td>200</td>
<td></td>
</tr>
</tbody>
</table>


23 This includes anti-submarine warfare, attack, and transport helicopters.
DPRK

The DPRK’s erratic government and constant emphasis on military forces, threats, low level attacks, and growing missile and nuclear capabilities drive the shape of Korean balance and have done so for decades. The DPRK not only is a militarized state, it has also made military confrontation its primary reason for existence.

While it is possible that the DPRK’s leader could reform the state and focus on the economy and the needs of his people, he could only do so by depriving the regime of its rationale for authoritarian control and the use of so much of its economy to maintain its military forces. The DPRK would then emerge as a fifth-class economy and state little able to compete in a Northeast Asia where economic development has long been the key test of success for North Korea’s neighbors – all of which have vastly outpaced the DPRK.

Leadership and Command and Control

North Korea is a hereditary and hierarchical dictatorship dominated by a supreme leader and those he personally depends upon for political power, regardless of the formal command structure. This makes it difficult to assess the effectiveness and structure of its C4I/BM and ISR systems, but some aspects of its formal command structure are relatively clear.

South Korean analysis indicates that the primary DPRK military organs include the National Defense Commission (NDC), the Central Military Commission (CMC), the Ministry of People’s Armed Forces (MPAF), the General Staff Department (GSD), and the General Political Bureau (GPB).24 This structure is shown in Figure IV.30. The following is a more in-depth description of these organizations’ development and roles:25

Among them, the NDC was established along with the adoption of the socialist constitution in 1972. In 1992, it became the supreme guiding organ of the armed forces when the constitution was revised to build institutional support for Kim Jong-il’s military control. To reinforce NDC functions, further amendments followed which authorized the management of overall national defense (1998) and promoted its status as the supreme guiding organ of national defense (2009).

The Chairman of the NDC takes command of all activities of North Korea’s armed forces and national defense projects. While the GPB oversees the WPK’s organization and other political and ideological projects, the GSD commands military operations, and the MPAF represents the military at home and abroad. The MPAF came into being when the regime was established in 1948 to take charge of military-related foreign affairs, industry, finance and other administrative works, but the constitutional revision in 1998 relocated the MPAF under the direct guidance and command of the NDC. At present, Kim Jong-un is known to have assumed the positions of Supreme Commander of the KPA, Chairman of the CMC, First Chairman of the NDC. This empowers the young ruler to command and oversee all military forces in North Korea, in addition to exercising administrative and power over them.

In December 1962, the 5th session of the 4th Central Committee adopted the Four-point Military Guideline proposed by Kim Il-sung. To implement the guideline, a military commission was newly established under the Central Committee, which was renamed the Central Military Commission (CMC) in November 1982. The CMC oversees the discussions and decisions of military policies and

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their implementation, reinforces the armed forces including the KPA, conducts the organization and supervision of projects promoting the munitions industry, and exercises military command. In the meantime, the GPB takes charge of political tasks of the WPK within the KPA with similar authority as other organs under the Central Committee, and this in effect enables the WPK to tighten its grip over the military. Party officials are also assigned to each and every military unit, so that they may guide and direct all works of the armed forces to comply with WPK lines and policies.

As was discussed in Chapter 1, Kim Jong-un is the General Secretary of the Korean Workers Party (KWP) and the CMC, First Chairman of the NDC, and Supreme Commander of the KPA. The main channel for command and control of the KPA starts at the NDC and goes to the GSD, from which command and control extend to each military branch and 25 known bureaus that have various amounts of control over the operational units. The Ministry of People’s Armed Forces has the authority to administer military affairs – which includes representing the military externally and undertaking internal work like military logistics, finance, and diplomacy. 

There are two additional paths of command and control to make sure that the KPA remains under tight political control – one through the KWP’s Central Committee (to the NDC’s General Political Bureau, which supervises indoctrination programs and the Workers’ Party organizations that are part of the KPA, then down through the KPA to the lower levels), and the second through the NDC (to the Ministry of State Security as well as the Security Command, which also has representatives throughout the KPA structure). 

The US DoD report on the DPRK’s military forces issued in May 2013 notes that,

The DPRK National Defense Commission (NDC) is the symbolic nominal authority over the North’s military and security services. The Ministry of Peoples Armed Forces (MPAF) is the administrative superior of the KPA, while operational command and control is exercised by its subordinate General Staff Department. The 1992 constitution shifted control from the president to the NDC and Kim Jong Il directly exercised control of the military as chairman of the NDC, and Supreme Commander of the KPA.

Kim Jong Un was made the supreme commander of the KPA shortly after his father’s death and named to the newly created position of “first chairman” of the NDC in April 2012, when Kim Jong Il was made “eternal chairman” of the NDC. In the same month, Kim Jong Un was named first secretary of the Korean Worker’s Party, after his father was made “eternal general secretary” of the KWP. At the same time, Kim Jong Un also became the chairman of the Central Military Commission of the KWP, having previously been one of two vice chairmen.

...North Korea’s nationwide fiber optic network is available to every sector of society, and North Korea has invested in a modern nationwide cellular network. Telecommunication services and access are strictly controlled, and all networks are available for military use, if necessary.

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Figure IV.30: ROK Diagram of DPRK Force Organization

The surviving military balance in the Korean Peninsula and Northeast Asia 61


**Force Size and Structure**

The US DoD issued its first unclassified report on the DPRK’s military forces in May 2013. This report described the DPRK’s ground forces are follows:29

The Korean People’s Army (KPA) is a large ground-centric military, supported by a large ballistic missile arsenal, extensive special operations forces and limited air and naval forces. With approximately 70 percent of its ground forces and 50 percent of its air and naval forces deployed within 100 km of the demilitarized zone, which has served as the de facto shared border since 1953, the KPA poses a continuous threat to the ROK and deployed U.S. forces. However, after decades under a failed economy and the resulting food shortages, the KPA is a weakened force that suffers from logistical shortages, aging equipment, and poor training.

... The KPA’s ground forces are dominated by conventional and light infantry units, supported by armor and mechanized units and heavy concentrations of artillery. These forces are forward deployed, are fortified in several thousand underground facilities, and include long-range cannon and rocket artillery able to fire deep into the ROK from their garrisons.

The ground forces possess light and medium tanks armored personnel carriers, and multiple rocket launchers (MRLs). This large artillery force includes long-range 170-mm guns and 240-mm MRLs, many of which are deployed along the DMZ and pose a constant threat to northern parts of the ROK, including its capital city of Seoul.

... the ground forces comprise the vast majority of North Korea's military. Most of the conventional weapons systems were developed based on 1960s and 1970s era technology. However, they have

attempted to overcome this technological disadvantage by relying on massive numbers of artillery systems while simultaneously increasing its light infantry forces. The DoD map of the deployment of DPRK ground forces is shown in Figure IV.31. Unclassified estimates of the DPRK forces differ in detail. The DoD estimates DPRK ground forces as having a total strength of approximately 950,000 personnel, 4,100 tanks, 2,100 other armored vehicles, 8,500 artillery weapons, and 5,100 multiple rocket launchers (MRLs). The IISS Military Balance for 2013 estimates DPRK ground forces as having a total strength of approximately 1,190,000 personnel, 3,500 main battle tanks, 3,060+ armored vehicles, 8,500+ artillery weapons, and 5,100 multiple rocket launchers (MRLs). The differences are probably as much a matter of counting rules and real differences in underlying estimates, but illustrate the problems in making direct numerical comparisons of the balance.

The IISS estimates for 2013 report that the DPRK army is an 11-corps force with two mechanized corps and nine infantry corps. Its armored forces include one armored division, 15 armored brigades, and four mechanized divisions. The bulk of its forces are still infantry – 27 divisions and 14 brigades. Jane’s provides a somewhat different estimate of the structure of DPRK ground forces as follows; there are more striking differences in the IISS and Jane’s estimates of DPRK Special Forces, which are discussed in more detail in Chapter 5.

15 Corps-level formations
  o 9 regular corps
  o 2 mechanized corps
  o Pyongyang Defence Command
  o Border Guard Command
  o 11th Storm Corps (previously the Light Infantry Training Guidance Bureau)
  o Strategic Rocket Forces Command
  o 173 combat divisions and brigades

A number of specialized units that are under the General Staff Department bureaus, as well as special operations personnel (part of the internal security and intelligence agencies), are also part of the ground forces.

33 Ibid.
Starting in 2000, the KPA has initiated many organizational changes in the ground forces to increase offensive capabilities as well as to adapt to changing economic conditions (such as the lack of fuel). Examples of these changes include reorganizing some mechanized brigades and light infantry brigades, expanding some light infantry battalions along the DMZ to regiment size, enlarging light infantry regiments to brigades, and equipping some light infantry with bicycles to increase mountain-terrain mobility.34

A Jane’s analysis of these changes – which seems to differ from the limited data on unit structure provide by the IISS – indicates that,35

Beginning in 2000 but more significantly from 2003 to the present, the KPA has undertaken a number of significant organisational changes within its ground forces units. Among the more significant changes was the expansion of existing division level light infantry battalions within the DMZ corps to regiments and the reorganisation of seven infantry or mechanised infantry divisions (each divisions consists of approximately 7,000 troops for a total of approximately 50,000 troops) into light infantry divisions. These later organisational developments were apparently achieved by stripping these divisions of the majority of their combat and combat support units (for example artillery, armour, air defence and so on). Accompanying these organisational developments was the expansion of urban, nighttime and mountaineering training for all special operations units. Some of the light infantry units deployed along the DMZ are equipped with bicycles to increase mobility within the mountains.

It is believed that the KPA undertook these changes to organisation and training following a strategic review of a future conflict on the Korean Peninsula, combined with lessons learned from the recent conflicts in the Balkans, Iraq and Afghanistan, which convinced the KPA of the need for a greater number of “light” units. This is possibly one of the most interesting developments in KPA conventional forces in the past 20 years. Additionally, some light infantry battalions within divisions deployed along the DMZ were expanded to regiment size.

The DoD map of the deployment of DPRK air forces is also shown in Figure IV.32. The DoD estimates the DPRK Air Force as having a total strength of approximately 92,000 personnel, 730 combat aircraft, 300 helicopters, and 290 transport aircraft.36 The IISS Military Balance for 2013 estimates DPRK air forces as having a total strength of approximately 110,000 personnel, 603 combat aircraft, 441 helicopters, and 217 transport aircraft.37

The DoD described the DPRK’s air forces as follows:38

The Air Force is primarily responsible for defending North Korean air space. Its other missions include special operations forces insertion, transportation and logistics support, reconnaissance, and bombing

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34 Ibid.
35 Ibid.
and tactical air support for KPA ground forces. However, due to the technological inferiority of most of its aircraft fleet and rigid air defense command and control structure, much of North Korea's air defense is provided by surface-to-air missiles (SAMs) and anti-aircraft artillery (AAA).

The NKAF’s most capable combat aircraft are its MiG-29 and MiG-23 fighters and its SU-25 ground-attack aircraft. However, the majority of aircraft are less capable MiG-15s, -17s, -19s (F-6), and -21s. The NKAF operates a large fleet of AN-2 COLT aircraft, 1940s vintage single-engine, 10-passenger, bi-planes, which are likely tasked with inserting SOF into the ROK. The air force is rounded out with several hundred helicopters, predominantly Mi-2/HOPLITE and U.S.-made MD-500 helicopters (obtained by circumventing U.S. export controls in 1985). The rotary-wing fleet is used both for troop transport and ground attack.

North Korea possesses a dense, overlapping air defense system of SA-2/3/5 SAM sites, mobile and fixed AAA, and numerous man-portable air-defense systems (MANPADS), like the SA-7.

The DoD map of the deployment of DPRK naval forces is shown in Figure IV.33. It described the DPRK’s naval forces are follows:39

The North Korean Navy (NKN), the smallest of the KPA’s three main services. This coastal force is composed primarily of aging, though numerous, small patrol craft that employ a variety of anti-ship cruise missiles, torpedoes, and guns. The NKN maintains one of the world’s largest submarine forces, with around 70 attack-, coastal, and midget-type submarines. In addition, the NKN operates a large fleet of air-cushioned (hovercraft) and conventional landing craft to support amphibious operations and SOF insertion.

Unclassified estimates of the DPRK forces again differ in detail. The DoD estimates the DPRK Navy as having a total strength of 60,000 personnel, 72 submarines, 383 patrol combatants, 267 amphibious ships and landing craft, 30 mine warfare vessels, and 30 support/auxiliary vessels. 40 The IISS estimates the DPRK Navy as having a total strength of 60,000 personnel, 70 submarines, 420 patrol combatants, 260 amphibious landing craft, 24 mine warfare vessels, and 23 support/auxiliary vessels. 41

Figure IV.31: Deployment of DPRK Ground Forces in 2013

Figure IV.32: Deployment of DPRK Air Forces in 2013

Figure IV.33: Deployment of DPRK Naval Forces in 2013

**Potential Invasion Scenarios and Capacities**

There is surprisingly little data on the full scope of DPRK military exercise and plans, in particular how well the DPRK trains and plans to use its large Special Forces and other “asymmetric” force elements either independently or in concert with its more “conventional” armored, mechanized, and infantry forces. There is also surprisingly little unclassified transparency in the official white papers and command statements of the US, ROK or Japan on either the readiness and capability of DPRK forces in given scenarios or in net assessment terms relative to the ROK and US.

As noted earlier, both the US Department of Defense and the IISS indicates that the actual capabilities of DPRK forces do not match its numbers. 42 Approximately one-half of the DPRK’s major weapons were designed in the 1960s, with the other half even older. The issues of fuel, maintenance, and lack of spare parts would decrease equipment capabilities even further. Compared to Soviet-era systems (i.e., the type deployed by the DPRK), modern weapons are usually two- to four-times as effective. 43

The DPRK also uses a Soviet-style military doctrine that discourages initiative and flexibility, focusing on high-level decision-making and scripted plans. It is therefore unlikely that mid-level officers are very capable. While the DPRK has tried to improve training in the past decade, the faltering economy and shortages have limited the actual implementation of these plans. The years of indoctrination and party control have likely resulted in highly loyal troops and officers, while the physical deprivation undergone by many in the DPRK has also likely led to the resilience and physical toughness of the military. Therefore, while it is doubtful that the DPRK military would collapse or revolt, years of maltreatment and malnutrition may have affected morale to some extent. 44

A 2013 IISS study, *The Conventional Military Balance on the Korean Peninsula*, assessed the potential DPRK threat to the ROK/USFK in an invasion scenario that illustrates many of the key issues involved. As has been raised several times earlier in the analysis, the IISS study found that the terrain of the Korean Peninsula – and the DMZ – makes any large invasion, especially of heavy armor, difficult to undertake. Manmade barriers (i.e., mines and bridge demolitions) as well as natural obstacles (i.e., marshes and rivers), when combined with air counterattacks, would be able to significantly reduce DPRK invasion force strength in a short time.45

Even if an attack occurred in winter, when the rice fields are frozen and thus can be used as roads, the IISS noted that several rivers would need to be crossed in order to reach Seoul, all

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44 Ibid.
45 Ibid.
in the face of US-ROK air, antitank, and artillery counterattacks.\textsuperscript{46} Anyone who has experience with Korean winters also understands how cold and challenging they can be in some areas and the problems they can present in supplying and sustaining maneuver forces.

For reasons that have been discussed earlier, the IISS study found that US and ROK tanks are better and more protected than DPRK tanks and should prevail in any altercation. They also have all-weather and day-night capabilities that provide further advantages. Ground radars and infrared detection systems, along with reconnaissance satellites and aircraft, can allow the US and ROK to detect any groupings of armored vehicles in order to counterattack more quickly and effectively.\textsuperscript{47}

The IISS and many other analysts have also argued that any DPRK surprise attack on the ROK could succeed in capturing Seoul. In a potential conflict, the DPRK could initially heavily bombard Seoul, using artillery in fortified positions near the DMZ. The artillery could open corridors while limiting ROK-US defensive reactions, and DPRK armored forces could push through to Seoul before any strong US-ROK counteraction could be mounted.

While the DPRK could inflict significant damage and casualties, the DPRK’s capabilities would be reduced by US-ROK air strikes and counter-battery fire. Some analysts also assume the DPRK Air Force could also undertake substantial surprise attacks against civilian and military targets. If Seoul was lost, US military planners assessed that four to five carrier battle groups, 10 air force wings, and six ground combat divisions (including army and marine units) would be necessary to recapture the city.\textsuperscript{48}

The IISS study notes that Naval and Special Forces could have an impact in a military provocation. Although the DPRK’s obsolete submarines are only modestly proficient, they could be effective in delivering Special Forces or mining the coast. Special Forces would have a limited ability to disrupt ROK-US defenses, though they could use chemical and biological weapons in cities and military areas to significant effect. Along with the DPRK’s missile and torpedo vessels – which are also obsolete – the US and ROK would need to neutralize these assets before US ships could use ports for the delivery of reinforcements.\textsuperscript{49}

Many US and ROK experts broadly echo the IISS’s analysis of the limits to the DPRK’s forces, and share its focus on the most challenging scenarios for a DPRK attack in the DMZ area and Seoul, and the risk of a deeper invasion.

The IISS analysis, does, however, present a ground-force oriented perspective that describes real-world possibilities. At the same time, by focusing on ground forces, it may sharply underestimate the ROK’s ability to detect and respond to any DPRK preparation for an attack to seize Seoul or invade deeply into the ROK, that modern ROK and US strike fighters might be far more effective against DPRK armor, and that the coercive power of US and ROK strikes deep into the DPRK that attacked its already fragile critical infrastructure and economy would equal or surpass DPRK capability to coerce the ROK.

\textsuperscript{46} Ibid.
\textsuperscript{47} Ibid.
\textsuperscript{48} Ibid.
\textsuperscript{49} Ibid.
Many current analyses conclude US-ROK air superiority would soon be established and airpower could be far more effective against armor than in the past, along with systems like the MLRS and “smart” anti-armor cluster munitions. The IISS study estimated that US and ROK could be able to “destroy several hundred North Korean armored vehicles per day,” and a fight for Seoul that involved modern precision weapons, ISR systems, and urban warfare tactics might make it hard for the DPRK to seize the city – as distinguished from making it a major battleground.\(^50\)

A combination of US cruise missiles and stealth aircraft could also strike critical infrastructure and leadership targets deep in the DPRK. However, the DPRK’s large chemical – and potentially biological – weapons stores, discussed further in Chapter 8, would be a significant threat with or without such strikes, and could be delivered through aerial bombs, short-range missiles, or artillery shells.\(^51\)

US military plans are shifting away from a major deployment of US ground forces – both because of the limits to such a buildup in terms of time and the current size of US ground forces – towards support of the ROK with air- and sea-based strike assets. While the US could build up from one forward-deployed to two light to medium divisions relatively quickly, it can build up sea- and land-based air and cruise missile power far more quickly, along with stealth bombers, F-22 fighters, and perhaps soon, a large inventory of F-35 stealth strike fighters.

Moreover, as the previous force structure comparisons have shown, the ROK Army is no longer dependent on US ground power. The ROK would face major problems if the DPRK achieved strategic surprise or if the ROK’s leaders failed to react to the warning signals that the DPRK was actually acting upon its rhetoric by properly mobilizing and deploying ROK ground and air forces, but the ROK military today is a very different force from the largely hollow force that existed at the time of the Korean War.

Accordingly, there is a clear need for more open ROK and US official, realistic discussions of the “conventional” balance, a justification of military plans based on a net assessment of deterrent and warfighting capabilities, and a clear discussion of the changes taking place in US strategy and how they relate to ROK military plans and developments. At present, the DPRK is being treated by some based on what may be an exaggerated assessment of its capabilities and by others in terms of public silence.

**Military Personnel**

As has been raised at the start of this chapter, total manpower numbers have never been a key measure of military capability. Quality, equipment, leadership, C4I/BM/ISR, and sustainability have always been more critical in anything but the most static war of attrition. A heavily-militarized DPRK dictatorship that does not have to pay either its people or its military forces anything like a market wage does, however, have a major advantage in terms of sheer numbers.

\(^{50}\) Ibid.

\(^{51}\) Ibid.
The IISS estimates that the DPRK is able to maintain a total active force of around 1,190,100 men, including 1,020,000 Army, 60,000 Navy, 110,000 Air Force, and some 189,000 additional paramilitary forces – plus some 600,000 reservists and a very large Special Forces command with a nominal strength of 88,000. Given the economic poverty of the country, it is unclear just how “special” many elements of such a force really are. DPRK active-service military personnel represent nearly 5% of the country’s overall population, with roughly two-thirds deployed close to the DMZ. Most of the DPRK army is deployed on smaller bases throughout the DPRK, and all urban centers – including large agriculture and industrial developments – have garrisoned soldiers.

On paper, DPRK paramilitary and reserve forces comprise approximately 7.7 million personnel, or 30% of the 15-60 year old population. The force has been reorganized during the past 10 years and is comprised of four primary parts: the Worker-Peasant Red Guard (5.72 million people), the Red Youth Guard (0.94 million), the Reserve Military Training Unit (aka Instruction Guidance; 0.62 million), and other miscellaneous paramilitary forces like the Speed Battle Youth Shock Troops and the Guard Command (0.42 million).

In contrast, the IISS estimates that the ROK has a total active force of around 655,000, including 522,000 Army, 68,000 Navy, 65,000 Air Force, and some 4,500 additional paramilitary forces. The ROK also has approximately 4,500,000 reserves that have a reserve training obligation of three days per year. The reserves are organized into the First Combat Forces (Mobilization Reserve Forces) or Regional Combat Forces (Homeland Defence Forces) and serve until age 33. Despite the prior military service of all reservists, it is unclear how many are really combat capable, though enough seem to have unit assignments to make major increases in ROK Army manning on relative short notice. The ROK also still has a nominal paramilitary force of some 3,000,000 but it is unclear whether this serves any real military purpose; the IISS indicates that it is “being reorganized.”

Practically speaking, the DPRK’s active manpower base is far larger than its pool of equipment seems to justify, and much of the active force seems to be primarily an instrument of regime control over its population, rather than a competent fighting force. The cost-benefit of such large a force for so small a country, and one with some many economic problems, is questionable at best, even for a militarized state. The opportunity cost of the added manpower comes at the expense of equipment sufficiency, modernization, and overall battle readiness.

52 IISS, Military Balance, 2013, p. 313.
57 Ibid., p. 312.
58 Ibid., p. 312-3.
The army is reported to have placed more emphasis on regular and paramilitary reserve unit cooperation over the past five years. Once again, however, these forces seem far better suited to regime control of the population than real-world war fighting. They might add mass and popular resistance in the face of an ROK invasion – unlikely as this seems to be without the prior collapse of the DPRK regime – but the numbers are either so great as to represent a totally hollow force or one where many elements are likely to cost more in resources than its military benefits are worth.

**Recruitment and Training**

The DPRK conscription process begins at age 14, when young North Koreans register as enlistment candidates and have a basic physical exam, with a second physical at age 16. Draft notices are distributed through high schools, and the average conscript is a high school graduate aged 17-25. There are a variety of exemptions and disqualifications for scholastic, physical, or political reasons.

Due to the slowly declining general health of the DPRK’s general population and the related decreasing physical stature and well-being of the average DPRK military recruit, the country has been forced to lower minimum entry requirements several times. Since the mid-2000s, the number of females in the KPA has also slowly increased, from an already significant percentage, indicating a shortage of able-bodied men.

One ROK government report discusses the North Korean military service requirement, the longest in the world – it can last longer than 10 years for men and six years for women, during which a typical soldier sees his/her family only once or twice. Typically, Army service lasts 5-12 years, Air Force service 3-4 years, and Navy service 5-10 years. After military service, all are required to serve in the military part-time until the age of 40, after which they must serve until age 60 in the Worker/Peasant Red Guard.

**Figure IV.34** depicts the training for military officers, while **Figure IV.35** shows the usual activities of the DPRK military throughout the year. An ROK governmental analysis indicates that,

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61 Ibid.
62 Ibid.
Excluded from military service are those who fail physical exams, who have families from the hostile class, and other delinquents who do not fit in the songbun system (families within the second parental cousin or first maternal cousin range of those who partook in anti-communist activities or defected to South Korea, families of defectors from South Korea or political prisoners, ex-convicts, etc.). Meanwhile, exempt from military service are those who engage in particular lines of work or beneficiaries of political consideration (i.e. security officers, scientists, industrial engineers, artists, instructors, administrative officers, college students who pass military science exams, students of special or elite schools, only sons of aged parents, etc).

North Korea presented the terms of military service in 1958 issued as Cabinet Decision No. 148 and mandated army service for three and a half years, navy service for four years. In actuality, however, this was often extended to a period of five to eight years, and in April 1993, North Korea adjusted mandatory service to ten years upon Kim Jong-il’s instructions. The 6th session of the 10th Supreme People’s Assembly also passed a military service law in March 2003, which specifies ten years of obligatory service for all male candidates, whereas the terms were curtailed for female volunteers to seven years. Yet, this does not include Special Forces (e.g. light infantry units, sniper units, etc.), who are required to serve for more than thirteen years, since indefinite period of service is requisite for soldiers under special instructions or with special skills.

Meanwhile, the percentage of female soldiers in units varies from ten to thirty percent. They are often assigned to transport and administration, or become medics, signalers and sentries (at bridges or tunnels). Coastal artilleries, anti-aircraft guns, and small air defense batteries are also often managed by women soldiers.

Regardless of rank, those who break military discipline face various disadvantages at the workplace after discharge. During their time in the barracks, all soldiers must follow a ten-point guideline, which Kim Jong-il himself took part and gave orders to devise.

In North Korea, the General Political Bureau promotes various competitive campaigns to enhance internal control and unity in the military. The most representative campaigns include winning the following titles: the Three Revolution Red Flag (at company level), the O Jung-hup 7th Regiment (at regiment level), and the Gold Star Elite Guard (at division and brigade level). Those who perform well are awarded WPK membership, field trips, prizes, vacations, and preferential treatment in resource supplies.

….. [O]ne-third to half of military service in North Korea on average is dedicated to non-military activities such as public construction and farming…. Military authorities… have allowed a considerable number of army units to engage in foreign trade, commercial activities, labor mobilization, and various other profit-making projects. This being the case, soldiers prefer posts that enable extra income, such as border guards under the Guard Command. Shortages in supply and daily necessities within the military are generating aberrations and other offenses that damage civil-military relations.

Military ranks in North Korea are called ‘military titles’ and there are fifteen different levels for officers and six for those enlisted. The officers are grouped into four categories: ① marshal grade (Grand Marshal, Marshal, Vice Marshal); ② general grade (General, Colonel General, Lieutenant General, and Major General) ③ field grade (Brigadier, Colonel, Lieutenant Colonel, and Major) ④ company grade (Captain, Senior Lieutenant, Lieutenant, and Junior Lieutenant).

The enlisted ranks are categorized in two different categories: ① non-commissioned officers (Warrant Officer, Sergeant First Class, Staff Sergeant, and Sergeant) and those who choose to remain in service after their mandatory period (Sergeant First Class, Staff Sergeant, and Sergeant-in-Initial Service). ② enlisted personnel (Corporal and Private), which are divided into four sub-categories (Lane Sergeant, Corporal, Lance Corporal, and Private) in order to boost morale and enforce discipline between ranks….. At present, around 20 percent of ordinary soldiers are estimated to be WPK members, while about 40 percent in Special Forces are considered to have party status.
North Korea’s ground forces consist of fifteen army corps or equivalent units, including nine front and rear corps, two mechanized corps, the Pyongyang Defense Command, Border Guard Command, Missile Guidance Bureau, and 11th Corps (formerly known as the Light Infantry Training and Guidance Bureau).

While all recruits go through a special ideological indoctrination program, actual physical training is very limited. For example, according to the IISS, DPRK pilots average 20 hours of flying time per year, whereas US pilots receive between 189 (for fighter pilots) and 343 (for airlift pilots). DPRK special operations troops receive more physical training than the average military recruit, with harsher discipline and more intensive political and ideological indoctrination. Despite their lack of many resources, the results of the system are

… tough, intensively-trained fighters who can travel farther and faster with more equipment and less food than most of their counterparts in other armies. They are mentally and physically hardened and disciplined, ready to obey orders and to suffer privations that would cause mutinies in other armies. They are, however, woefully undertrained for a modern war based upon rapidly changing tactical and operational situations, high mobility and advanced technology.

In the early 1990s, due to the country-wide, multi-year famine, the KPA shifted from large-scale field exercises to increased command post exercises, political training, and ideological indoctrination in an attempt to conserve resources. This led to a decline in combat capabilities. While in the late 1990s the army increased field exercises, again from 2000-2006, soldiers spent the majority of their time engaged in agricultural work and KPA enterprises that can earn foreign currency, instead of engaging in military training. There are often significant shortages of fuel, military supplies, warm clothes, and food for KPA troops. Since 2006, training has increased, including large combined arms field training exercises, but this has resulted in an uneven level of operational readiness in the DPRK military. Jane’s assesses the DPRK Army as,

… capable of defending the territory of the DPRK, conducting special operations against the ROK and Japan, and maintaining internal security. It currently maintains the capability to initiate an extremely destructive war of reunification against the ROK with little warning; however, it has a reduced capability to prosecute such a war for an extended period of time.

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66 Ibid.
67 Ibid.
Figure IV.34: DPRK Training Program for Military Officers

<table>
<thead>
<tr>
<th>Rank</th>
<th>Training Program</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Draftees</strong></td>
<td>Transferred to the military mobilization agency (first to Special Forces unit, then in the order of the Navy, Air Force, and Army)</td>
<td>Special Forces units and special branch of service first</td>
</tr>
<tr>
<td><strong>Recruits</strong></td>
<td>Recruit training center at each unit (3 months for general troops and 9 months for Special Forces)</td>
<td>Due to economic difficulties, the period of training for new recruits is curtailed</td>
</tr>
<tr>
<td><strong>Privates</strong></td>
<td>Private → Lance Corporal → Corporal → Lance Sergeant</td>
<td>Takes 5-7 years</td>
</tr>
<tr>
<td><strong>Non-commissioned Officers</strong></td>
<td>Non-commissioned Officers Academy (3 months) → Sergeant→ Staff Sergeant → Sergeant First Class → Warrant Officer (Chief Sergeant) * After serving 3-5 years, light infantrymen and snipers can be promoted to the rank of sergeant within 5 years when recommended on their merits</td>
<td>In general, men are discharged from the army as Staff Sergeant after 10 years of military service</td>
</tr>
<tr>
<td><strong>Second Lieutenants</strong></td>
<td>2 years at the Military Officers Academy (Commanders Class: Top graduates in the class are commissioned as the Lieutenants) 4 years college class for Lieutenants</td>
<td>The ratio between political and military education in the Military Officers Academy is 5:5, while it is 3:6 in the Military College</td>
</tr>
<tr>
<td><strong>Lieutenants</strong></td>
<td>Promoted after 2-3 years</td>
<td></td>
</tr>
<tr>
<td><strong>Company Commanders</strong></td>
<td>Promoted to Commander after 4-6 years</td>
<td></td>
</tr>
<tr>
<td><strong>Battalion Commanders</strong></td>
<td>Graduated from Kim Il-sung National War College (3 years) after 3-7 years</td>
<td></td>
</tr>
<tr>
<td><strong>Regiment Commanders</strong></td>
<td>Completed the tactics study class at Kim Il-sung National War College</td>
<td>Generals are promoted at the supreme leader’s order</td>
</tr>
</tbody>
</table>

## Figure IV.35: DPRK Military Exercises and Activities

<table>
<thead>
<tr>
<th>Months</th>
<th>Type of Training and Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>January-February</td>
<td>Preparation for field tactical training, field maneuvers exercise by each branch, engineer reconnaissance, deployment exercises</td>
</tr>
<tr>
<td>March</td>
<td>General shooting exercises with live ammunition at each battalion and division</td>
</tr>
<tr>
<td>May</td>
<td>Repairing of barracks and roads, planting seedlings in the fields for side dishes (food)</td>
</tr>
<tr>
<td>Mid-June</td>
<td>Summer exercise begins</td>
</tr>
<tr>
<td></td>
<td>Collective Training: political education, lining drill, physical training</td>
</tr>
<tr>
<td></td>
<td>Field training: by each branch, in semi-underground tunnel lodging</td>
</tr>
<tr>
<td>Mid-July</td>
<td>River-crossing during the rainy season, combat swimming, march, offense and defense exercise, shooting exercises with live ammunition</td>
</tr>
<tr>
<td>October</td>
<td>Preparation for the winter: harvest, storage of vegetables, collection of firewood, barracks repair</td>
</tr>
<tr>
<td>November</td>
<td>Preparation for winter exercises: checking of combat gear</td>
</tr>
<tr>
<td>December</td>
<td>In the morning: focused on indoor exercises including shooting practice</td>
</tr>
<tr>
<td></td>
<td>In the afternoon: long march with full combat gear, physical training, lining drill, field shooting exercise</td>
</tr>
</tbody>
</table>


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### Weapons Systems and Equipment Deficiencies and Capabilities

The most significant deficiencies in weapons systems and equipment are “computers, information management; electronic warfare assets; modern Command, Control, and Communications (C3), fire direction and target acquisition assets; armoured fighting vehicles; anti-tank guided weapons (ATGWs); and support vehicles.”

Conversely, the North has in particular continued to improve its ability to stage simultaneous strikes on the ROK’s front and rear flanks, initiate preemptive surprise attacks, and make swift attacks deep into the ROK. According to an ROK government analysis, the DPRK aims to build the capability to:

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\text{[S]tage a quick and decisive war by proceeding to create panic in enemy camps, take the initiative in the war from the start, while at the same time deploying its mechanized corps equipped with tanks, armored vehicles and self-propelled artillery deep into South Korea’s rear in order to overtake the entire peninsula before U.S. reinforcements arrive.}
\]

The North’s strategy of preemptive surprise attacks based on its four-point military guideline involves a wide range of warfare, from large-scale preemptive attacks by regular armed forces to detour surprise attacks by irregular troops such as special operation forces… At present, the North Korean military has positioned some 70 percent of its ground forces in the forward area south of the Pyongyang-Wonsan line, and the considerable number of these forces in underground tunnels poses a significant threat to South Korea.

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68 Ibid.
The North has deployed and fortified a large number of long-range artilleries that could pose direct threats to South Korea’s capital and other metropolitan areas near the front line; including 170mm self-propelled guns with a range of over 50km and 240mm multiple rocket launchers with a range of over 60km. It has also dispersed a few dozen air bases across the Northern part of the Korean peninsula.

... This kind of military strategy can be theoretically applied on the Korean peninsula, but in reality, there are numerous limitations. North Korea may have the military capacity to make provocations or to trigger conflicts, but attaining its ultimate objective would be a difficult task, given that North Korean forces lack the capability to sustain warfare. Political indoctrination and topography are not the only factors that decide the outcome of war; other elements come into play, including the overall environment of battlefields, educational level of troops, quality of arms, uncertainties, unpredictable conflicts, contingencies, and so forth.

**Key Assets**

The DPRK is estimated to have strategic war reserves of two to three months of food, ammunition, and petroleum, oil, and lubricants; most of these supplies are stored in specially-built and -guarded underground facilities. Also, the DPRK maintains a munitions industry of about 300 factories, along with many civilian factories that can quickly be used as munitions factories in the event of a war. The better-prepared, elite troops of the 7.7 paramilitary and reserve forces include the special operations forces, ballistic missile units, Security Command, and the Guard command.\(^{70}\)

Approximately 70% of active duty KPA ground forces are stationed along the DMZ, and there were reports in 2011 and 2012 that the DPRK military was reinforcing coastal defense artillery units along the Northern Limit Line (NLL). It has been estimated that if the DPRK decided to initiate hostilities, the US and ROK would have a maximum of 24-36 hours warning, or as little as 12.\(^{71}\)

Key DPRK military capabilities include 240mm multiple launch rockets and 170mm self-propelled guns that can target Seoul. 60 midget submarines and 130 air-cushioned landing crafts are believed to be available for infiltration or transportation of special operations forces. Among its aging fleet of combat aircraft are fourth-generation MIG-29 fighters and SU-25 attack aircraft. A large number of outdated An-2s are also believed to be used to transport SOF personnel.\(^{72}\)

Also, the DPRK maintains an extensive system of fortified bunkers and hardened artillery sites (HARTS), which include gun emplacements, personnel shelters, ammunition, a center for directing fire, self-defense trenches, cover locations, communication, and in the event of war, mixed minefields and protective wire. These HARTS are a very important aspect of DPRK defense; forward HART sites are located near enough to the DMZ so that 2/3 of the DPRK’s artillery can reach the ROK.\(^{73}\)

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\(^{71}\) Ibid.


North Korea also has an integrated coastal defense system and “maintains two coastal defence missile regiments, a large number of coastal surveillance radar companies, and co-ordinates coastal defence operations with the KPA’s numerous coastal defense artillery units, standard artillery units, and the Coastal Security Bureau.” There are 1,000 artillery pieces stationed on the DPRK’s western coast alone. The DPRK also has an extensive system of underground facilities and tunnels, which will be discussed further in the chapter on asymmetric forces.74

**Quality vs. Quantity**

However, the quality of the DPRK’s equipment should be kept in mind. In particular, much of the DPRK’s weapons are vastly inferior in technology and capabilities than the ROK’s or the US’s. For instance, the MiG-21 is the most common fighter jet in the DPRK; however, it was already becoming outdated in the 1960s and is no match for the F-15K’s used by the ROK.75

The DPRK’s most recent aircraft procurement was in 1999, when it bought MiGs from Kazakhstan, and it uses 1940s single engine bi-planes to transport its Special Forces. Most of the DPRK’s conventional weapons have not been upgraded or updated since the 1970s.76

Furthermore, while the DPRK has more main battle tanks, this is more than compensated for by the much more modern tanks of the US and ROK, as well as the fact that many of the DPRK’s tanks would be taken out by US-ROK air power before the tanks even made it to the DMZ to engage in tank battles (similar to in Iraq).77 Furthermore, resources constraints can also have a significant effect on military readiness; according to one Japanese analyst, “the North does not have the capability to wage war at the moment as they only have around 400,000 tons of oil for their military, meaning they can’t fight.”78

74 Ibid.
The Evolving Military Balance in the Korean Peninsula and Northeast Asia

ROK

As is the case with all of the forces affecting the Koreas and Northeast Asia, the ROK’s current capabilities will be sharply affected by the changes in US and Chinese forces already underway, by Japanese willingness to support the US in defending the ROK, and by whether China chooses to intervene in any conflict in the Koreas. At present, however, the combination of ROK and US capabilities both offers a strong deterrent to the DPRK and the ability to contain and defeat the North.

The command structure of each ROK service is summarized in Figure IV.36. The Army is organized into the Army Headquarters (HQ), two Field Army HQs, one Operations Command, the Capital Defense Command, the Special Warfare Command, the Army Aviation Operations Command, the Army Missile Command, and other support units.

The Defense Mission of the First and Third Field Armies covers the area ranging from the Military Demarcation Line (MDL) to the frontline area of responsibility (AOR). The Second Operations Command maintains stability in the rear areas. The Capital Defense Command is responsible for protecting the capital, which includes maintaining the functions of Seoul and protecting major facilities in the area. The other units’ missions are to carry out special warfare, aviation operations, logistical support, training and education, etc.

The ROK Army will replace the First and Third Field Armies with the Ground Operations Command in 2015. In 2005, two out of ten corps were disbanded. Currently, there are eight corps, including seven regional corps and one mobile corps.

The Navy is organized into the Navy HQ, the Naval Operations Command, the Marine Corps HQ, and other support units. The ROK Navy will shift toward a mobile force structure by reducing the number of surface ships and dispatching its middle- and heavy-class ships to counter various threats, including the threat of the North. The capacity for submarine and air warfare will also be reinforced. The Marine Corps will be reorganized into an air-to-land mobile force structure that is applicable to a range of mission types.

A Jane’s study highlights the fact that these forces have several advantages over the DPRK, along with several limitations:79

… in terms of modern weapons, widespread mechanisation and net-centric C3I, thereby permitting non-linear manoeuvre warfare as an alternative to the historical, bloody war of attrition in the mountains along the demilitarised zone (DMZ). However, modern manoeuvre and net-centric warfare requires highly trained, capable and motivated soldiers, which the ROKA is unlikely to adequately achieve with traditional conscription. The alternative - drastically reducing numbers of conscripts and building a leaner, more professional and more lethal ROKA would be culturally painful for the army and society at large and no decision to take that route is likely anytime soon. Meanwhile, two paramount issues loom over the immediate future of the country and the armed forces that require greater clarity - the state of the economy and the course of unfolding events in the DPRK.

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Figure IV.36: Command Structure of ROK Forces

ROK Army Organization

ROK Navy Organization

ROK Air Force Organization

Responsibilities and Doctrine

The ROK Army has the primary responsibility for defending the ROK, and the deployment of the ROK armed forces is almost entirely directed to defending against a DPRK invasion. Combat readiness and capability to respond quickly in a crisis are emphasized as deterrents to both large-scale DPRK attacks and smaller-scale military incursions. If this fails, the ROK military’s primary goals are to defend the Seoul metropolitan area, destroy the main forces of the DPRK, and weaken the DPRK’s will to continue combat operations.\footnote{IHS Jane’s: Defence & Security Intelligence Analysis, “Jane’s World Armies: South Korea,” \textit{IHS Jane’s}, November 27, 2012. http://www.janes.com.}

In terms of operational art and tactical doctrines, \textit{Jane’s} observes that,\footnote{Ibid.}

ROKA doctrine traditionally reflects that of the US Army, though with an increasing Korean spin as military thinking adapts to new capabilities emerging from the acquisition of modern weapons, new C3I systems and greater mobility under armour. Until recently, the ROKA’s concept of defeating a North Korean invasion across the DMZ had changed very little from the closing days of the Korean War in 1953 - hundreds of thousands of massed infantry on a peninsula-wide front fighting a war of attrition from prepared positions, generally occupying the tops of steep mountain chains and ridgelines, supported by lavish amounts of direct and indirect firepower, including recoilless rifles, mortars, artillery and prodigious quantities of tactical air support, much of it American.

The ROKA is now striving to develop and implement modern doctrine that will certainly reflect American developments and combat experience, such as the 2003 invasion of Iraq, incorporating mobile, net-centric, combined arms task forces and precision long range fires linked to co-operative tactical targeting. The ROKA must also be studying the post-invasion experience in Iraq, with a view to addressing the complex tasks associated with a North Korean collapse, particularly the civil-military challenges of occupation while combating a capable, well-armed insurgency.

Although the ROK Army has an active reserve force of 600,000, the ROK can control a multi-million-strong reserve force component if fully mobilized, which is the equivalent of another Army HQ and 23 infantry divisions. In 2010, the total reserve pool of the ROK military was almost seven million strong, though it is not clear in English-language sources how this is broken down into the various services. During peacetime, reserves receive yearly training; during wartime, these reserves are able to create supplementary units to reinforce existing units and serve as individual replacements for those lost in combat.\footnote{Ibid.}

Indigenous Equipment Development

The ROK has developed and produced many types of military equipment. In 2010, the country ranked 11\textsuperscript{th} in the world in defense science technology. In 2007, the ROK finished its first domestically built Aegis-class destroyer, making it the fifth country to use an Aegis destroyer. The country also indigenously developed the T-50, an Advanced Jet Trainer, making it the 12\textsuperscript{th} country in the world to build its own supersonic training aircraft.\footnote{The Republic of Korea Armed Forces, “Innovation Makes Us Powerful,” ROK Ministry of National Defense, 2010, p. 12-13.}

As of 2010, the ROK also domestically developed and/or produced the Korean Military Satellite Communications System (K-MILSATCOM), The Blue Shark lightweight torpedo,
K9 Thunder self-propelled howitzer, K2 Main Battle Tank, the KT-1 Basic Trainer, the Chiron man-portable SAM, the K21 infantry fighting armed vehicle/tank, the HaeSeong anti-ship missile, the K11 dual-barrel air-burst weapon, and the Red Shark anti-submarine missile. A stealth fighter plane, the KF-X, is also under development. The ROK also exports many of these systems abroad. 84

**Uncertain Patterns of Conflict and Escalation**

Relations between the two Koreas have scarcely grown more stable. Prior to its late-2011 leadership transition, the DPRK engaged in two major military provocations in 2010 – the sinking of the ROK *Cheonan* and the shelling of a South Korean island that is located near the Northern Limit Line (NLL). A quick overview of the two events is given in **Figure IV.37**.

**Cheonan**

On March 26, 2010, an ROK Navy corvette named the *Cheonan* sank after being torn in half by an underwater explosion. Of the 104 sailors on board, 46 were killed in the attack. Some analysts believe the attack was an effort to bolster Kim Jong-il’s leadership strength in confronting the South, as well as his authority to select Kim Jong-un as his successor. 85 An independent assessment was performed by an international team of experts 86 that examined the pieces of the ship’s hull and the weapon brought back from the wreckage site. Taking into account the physical evidence, personnel statements, medical examinations of the deceased sailors, analysis of seismic and infrasound waves, simulations of underwater explosions, and ocean current analysis, the report concluded, 87

> Based on all such relevant facts and classified analysis, we have reached the clear conclusion that ROKS “Cheonan” was sunk as the result of an external underwater explosion caused by a torpedo made in North Korea. The evidence points overwhelmingly to the conclusion that the torpedo was fired by a North Korean submarine. There is no other plausible explanation.

However, China and the DPRK continue to deny DPRK involvement; one primary reason given by China is that they were not invited to participate in the expert assessment, though the ROK argued that this was due to the sensitivity of the military system pieces under examination. China referred rhetorically to the incident as a “tragedy” – not an attack – and waited five weeks to give official condolences. Kim Jong-il was also welcomed to China with pomp and circumstance in May 2010, just days after ROK President Lee Myung-bak had been in China lobbying Hu Jintao to take a stronger stance towards the DPRK. These Chinese actions and reactions deeply offended the South Korean public.

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84 Ibid., p. 36-37.
86 According to the report, were 50 Korean and 24 international experts from the US, Australia, the UK, and Sweden.
After the sinking of the *Cheonan*, the US increased unilateral economic pressure on the DPRK. Individuals and entities linked to DPRK illicit activities and proliferation were added to the US government’s black list, and Japan further restricted the remittances allowed to the DPRK. The ROK cut off almost all bilateral assistance and trade, while also closing sea lanes to DPRK ships.  

Figure IV.37: The Cheonan Sinking and Shelling of Yeonpyeong Island (2010)

<table>
<thead>
<tr>
<th>Type of Attack</th>
<th>Sinking of the Cheonan</th>
<th>Shelling of Yeonpyeong Island</th>
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<tbody>
<tr>
<td>Torpedo attack from a mini submarine</td>
<td>170 shots by multiple rocket launchers and coastal artillery guys</td>
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<th>Development of Situation</th>
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<tr>
<td>March 31, 2010 – A civilian-military Joint Investigation Group (JIG) was established with 59 active service members, 17 government officials, and 6 civilians</td>
<td>14:47-15:15 – ROK Marine Yeonpyeong unit responded to the attack by firing 50 rounds of K-9 self-propelled artillery</td>
<td></td>
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<tr>
<td>April 12 – The JIG was reorganized to include 49 Korean and 24 foreign experts</td>
<td>15:12-15:29 – The DPRK launched the second attack with 20 rounds of MRLs and coastal artillery</td>
<td></td>
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<tr>
<td>May 20 – The JIG made an official announcement that the Cheonan had been sunk by a DPRK torpedo attack, which generated a shockwave and bubble effect that split and sunk the Cheonan</td>
<td>15:25-15:41 – The ROK Marine unit responded to the second attack with 30 rounds of K-9 artillery</td>
<td></td>
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<th>Damages Caused</th>
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<tbody>
<tr>
<td>48 of 104 crew members killed</td>
<td>2 ROK Marines were killed and 18 were wounded</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2 ROK civilians were killed and many were wounded</td>
<td></td>
</tr>
<tr>
<td></td>
<td>A total of 133 buildings and power communications were damaged (33 completely destroyed, 9 half-destroyed, 91 partially-destroyed); wildfires broke out at 10 different sites</td>
<td></td>
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<tr>
<th>DPRK’s Position</th>
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<tbody>
<tr>
<td>The DPRK denied its involvement and insisted the whole incident had been fabricated by the ROK</td>
<td>The DPRK insisted that it was acting in legitimate self-defense against an ROK provocation</td>
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<tr>
<th>Measures Taken Against the DPRK</th>
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<tbody>
<tr>
<td>The ROK government announced the May 24 measures, which completely suspended trade and exchange between the two Koreas, and prohibited navigation of DPRK vessels in ROK waters</td>
<td>The ROK government strongly demanded that the DPRK take responsible measures. The ROK National Assembly defined it as an act of armed provocation and strongly condemned it</td>
<td></td>
</tr>
<tr>
<td>On June 17, 2010, the European Parliament adopted a resolution condemning the DPRK</td>
<td>The US, UK, Japan, German, and other countries around the world were outraged by the DPRK’s provocation and condemned it</td>
<td></td>
</tr>
<tr>
<td>The G8 Summit Meeting also adopted a joint statement condemning the DPRK</td>
<td>On July 9, the UN Security Council condemned the sinking of the Cheonan in a presidential statement</td>
<td></td>
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</tbody>
</table>

Yeonpyeong

On November 23, 2010, a DPRK artillery battalion attacked a small ROK island located near the NLL shown in Figure IV.38. According to Jane’s, an unprovoked surprise “time-on-target” artillery attack on Yeonpyeong began at 14:34, coming from the DPRK peninsula of Kangnyong, where a KPA 122 mm MRL battalion is located. The barrage lasted for 12 minutes, consisting of approximately 150 rounds. Of these, approximately 90 fell into the water around the ROK island, while about 60 landed on ROK marine positions – including three helipads – and two small villages on the island.

At 14:47 the ROK Marines’ 155 mm K-9 battery initiated counter-battery fire, continuing for approximately 8 minutes. However, of the six K-9s, only four were combat ready, while the AN/TPQ-37 Fire Finder counter-battery radar experienced operational issues – meaning that the remaining K-9s had to fire based on a pre-planned design that called for counter-battery fire against barracks and command posts on the DPRK island of Mu. The AN/TP1-37 radar was repaired after about 50 rounds had been fired, and it identified the 122 mm MRL battery south of Kuan-gol as being responsible for the initial volleys. About 30 rounds were then directed against this position. After a 15-minute pause, a second DPRK barrage started, lasting from approximately 15:10-15:41, and consisting of approximately 20 additional rounds.

Overall, two Marines and two civilians were killed in the attack, with 15 Marines and three civilians wounded. Damage to the DPRK remains unknown, but a spokesman for the ROK Joint Chiefs of Staff reported that satellite images “show our shells landed on a cluster of barracks in North Korea, so we presume there have been many casualties and considerable property damage.”

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90 Ibid.
Figure IV.38: The Northern Limit Line and Yeonpyeong Island

The Disputed Maritime Border between the ROK and DPRK in the West Sea

Note: The blue “A” line is the UN-created Northern Limit Line (1953); the red “B” line is the DPRK-declared “Inter-Korean MDL” (1999). Island “1” is Yeonpyeong.

Map and Graphic Representation of the Bombardment of Yeonpyeong Island

Political Fallout

In the weeks following the Yeonpyeong attack, coming just eight months after the Cheonan attack, there were civil defense drills throughout Seoul. Public outcry over the lackluster and uncoordinated South Korean response led to the ROK military’s new strategy of (pro)active deterrence, which has been discussed previously in this report. In particular, a public opinion survey conducted on November 27, 2010 – directly after the Yeonpyeong artillery attack – assessed the ROK public’s feelings about the attack, their government, the DPRK, and China:

- 66% were dissatisfied with the government’s response
- 80% thought that there should have been a stronger military response
- 41%, in the case of further DPRK provocations, favored a military response while avoiding escalation to war
- 65% said that there should be no escalation to war under any circumstances, while 33% said they were willing to risk a war in order to deliver a strong military response
- 58% thought that that aid to the DPRK and cooperation-promoting projects should be suspended until the DPRK apologized and provided compensation
- 43% thought that the Kim Dae-jung and Roh Moo-hyun Administrations were responsible for the DPRK’S nuclear weapons development; 35% said that the Lee Administration’s hard line policy was responsible for the DPRK’s nuclear development.
- 76% thought that the November 2010 ROK-US joint naval exercise should take place
- 92% were dissatisfied with the Chinese Response to the DPRK’s attack; 58% thought it was necessary to send a strong protest message to China, even if it jeopardized damaging ROK-Chinese economic ties

The ROK Defense Minister quit two days after the incident in the face of widespread public criticism of the way he handled the attack. Furthermore, the ROK’s countermeasures included “an increase in military expenditure and deployments, exercises and surveillance; the creation of a new command to defend the ROK’s north-western islands; and the expansion of military cooperation with the U.S. Seoul also explored ways to cooperate militarily with Japan.”

Initial Chinese news reports did not place blame, featuring DPRK claims that the ROK had fired first or that ROK exercises had provoked the DPRK – and thus, the ROK was to blame for the incident. Overall, China refused to censure the DPRK for either the Cheonan or Yeonpyeong provocations, instead calling for restraint and a return to the Six Party process

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92 Kim Tae-young.
while watering down the UN Security Council statement in the wake of the Cheonan sinking and blocking Security Council action after the Yeonpyeong Island attack.\textsuperscript{94}

Despite this lack of public criticism, the two visits of DPRK leader Kim Jong-il to China in 2010 were strained due to the DPRK’s lack of economic reform and nuclear development. The Chinese leadership and press did not use the customary terms of friendship, instead using terminology that suggested a decrease in alliance ties and dissatisfaction.\textsuperscript{95}

Furthermore, while initially criticizing US military deployment and exercises in the region, the increase in inter-Korean tensions after the shelling altered Chinese official opinion and led to a reduction in criticism of the US. During President Hu Jintao’s January 2011 visit to the US, the two countries agreed to a joint statement emphasizing concern regarding the DPRK’s uranium enrichment program and the importance of DPRK-ROK dialogue.\textsuperscript{96}

Russia, though initially slow to respond publically, ultimately censured the DPRK for the shelling and ongoing nuclear development. Russia also called for an emergency UN Security Council meeting in December 2010, and was not unopposed to a statement condemning the DPRK (though Chinese opposition resulted in a shelving of the statement). Russia also noted “deep concern” after news of the DPRK’s uranium enrichment capacity was released.\textsuperscript{97}

It is important to note that the US provided the ROK with immediate support after the sinking of the Cheonan, and did the same after Yeonpyeong. The US also held joint exercises with the ROK in May, July, and late November 2010 to show its support for the ROK in spite of pressure from China.

\textit{Additional Issues and Scenarios}

In addition to the sinking of the Cheonan and shelling of Yeonpyeong Island, North Korea has apparently developed a more hawkish stance with regards to the South over the past several years. According to the ROK 2010 Defense White Paper,\textsuperscript{98}

Since early 2008, North Korea has taken extreme measures: the North unilaterally deported the South Koreans in charge of the Office of Inter-Korean Economic Cooperation in the Kaesong Industrial Complex (March 27, 2008), cut off the Panmunjom hot line (November 12, 2008), and blocked crossing of the Military Demarcation Line (MDL) (December 1, 2008). . . . It made various threats and declared a posture of all-out confrontation (January 17, 2009). It also announced the cancellation of the military and political agreements (January 30, 2009) while stating that it would ‘turn Seoul into a sea of fire’ (June 12, 2010). . . . North Korea has taken provocative actions and hard-line measures, including a navy clash near Daecheong Island, the so-called Daecheong Naval Campaign (November 10, 2009), establishing a ‘no-sail zone’ in the NLL


\textsuperscript{97} Ibid.

While none of these events has led to an escalated conflict thus far, they have undoubtedly raised tensions on the peninsula.

Any potential conflict might escalate into a struggle for control of the Korean Peninsula, but it is far from clear that this would be the case. Pyongyang might conduct a major conventional build-up to pressure the ROK, Japan, and/or the US. It might do so to deal with internal unrest by trying to focus the nation on a foreign enemy. It might launch a limited war for the same reasons. Both the DPRK and the ROK would be under at least initial pressure to keep any conflict limited, find ways to end it, and return to the status before the conflict began.

It is possible that Pyongyang might risk an all-out attack, and some experts have postulated that it might do so if the regime either came under severe internal threat in an effort to unify the DPRK’s citizens around a foreign threat or if Pyongyang felt it was isolated politically – and that the US and/or ROK might attack.

It seems more likely, however, that the DPRK would use conventional forces to conduct a limited war for limited objectives. It might try to seize islands or part of the DMZ, or to demonstrate its capability to threaten and intimidate the ROK through a limited attack or by launching a major artillery attack across the border on Seoul or another critical ROK strategic objective. The DPRK might increase the readiness of its conventional forces and/or deploy more conventional forces forward in a battle of intimidation and not escalate beyond a minor border incident, raid, or use of asymmetric forces in a limited attack somewhere in the ROK or local waters.

It is doubtful that the ROK would initiate a new Korean conventional conflict, but Seoul cannot be sure what level of escalation would follow any response to a limited incident or attacks of the kind the DPRK made on the Cheonan and on Yeonpyeong. The ROK might also be confronted with a DPRK succession crisis or massive suppression of the population of the DPRK, creating a strong incentive for some form of decisive ROK military action.

Outside powers would initially play a major role in deterring both sides from an escalation of conventional conflict. The risk of dragging the US and China into a conventional conflict, and the dilemma this would create for Japan, would tend to limit the scope of any given conventional war. At the same time, the DPRK’s ideological hostility to the ROK and the US could lead Pyongyang to escalate in ways that are unpredictable and make a “rational bargainer” approach to scenario planning and predicting escalation highly uncertain.

Any major DPRK success on the ground or escalation of a war would almost certainly lead the US to escalate its forces and to expand its range of targets in the DPRK. It is possible that Pyongyang might ignore this risk or miscalculate, but that seems unlikely. Similarly, any ROK success that threatened the existence of the DPRK would confront China with the risk of losing a key buffer state.

China might or might not choose to intervene at any stage in such a conflict – either to limit or deter any action against the DPRK or to ensure that ROK and US forces did not “occupy”
part of the DPRK. It is at least possible that this escalation could extend to conventional fighting affecting Chinese bases as well as US bases and carrier task forces, including those as far away as Guam and the “outer island chain” that the US might use to base long-range bombers and stealth aircraft. Moreover, China might put pressure on Taiwan as a means of indirectly pressuring the US.

Either side might use strategic air and missile power as well as attacks on population centers and critical infrastructure to support tactical operations. In fact, it seems likely that such escalation would occur the moment either side perceived it was threatened with major losses or some form of defeat. The US also demonstrated during the first and second Gulf Wars (1991 and 2003), as well as in its operations in the Republic of Serbia, that strategic air and missile power can play a critical role in limiting an opponent’s tactical capability, temporarily crippling critical infrastructure targets in ways that produce little collateral damage and allow the civil economy to continue functioning. Air-land and air-sea operations are now becoming far more complex than in the past, and the dividing lines between tactical attacks and interdiction, and tactical and strategic operations are much less distinct or easy to predict.

The naval dimension of a new Korean War is also unpredictable at virtually every level. The DPRK could use its submarines, smart mines, and longer-range anti-ship missiles in a wide variety of ways, including covert or asymmetric attacks on shipping, and outside Korean waters. It might perceive a naval war, including some kind of attack or seizure of a US ship (like the USS _Pueblo_ in 1968) as a safer way of exerting pressure. China might or might not become involved. Japan would have to decide on its naval posture.

Seen from this perspective, the most important measures in terms of stability may not be arms reductions or controls on modernization and force change _per se_, but finding ways to limit the risks of confrontation and escalation. Confidence-building measures and transparency might do more to limit risk – measures such as expanding limits on deployment in the border area, decreasing risk to critical population centers, allowing neutral or mixed observers at exercises, real time transparency on force movements, and mediation of border, air, coastal, and sea control disputes.

**US**

The US forces that might be deployed to Korea are discussed more fully in Chapter Six. In broad terms, the US deploys a limited number of air and ground forces in the ROK and can rapidly deploy air and naval forces, as well as an additional US division within a limited period. A war on the Korean Peninsula would require the US to deploy half of its combat forces – approximately 500,000-600,000 troops. Currently two brigades of the US Army’s Second Infantry Division are stationed in the DPRK, totaling 18,000 troops based in 17 camps near the DMZ and on the two main potential approaches into the western ROK (where Seoul is located).99

The US has approximately 300 fixed-wing combat aircraft based on or near the Peninsula. This could be doubled within a week, and doubled again within several more weeks. US Army and Marine Corps troops stationed nearby also have 100 attack helicopters. At least six airfields would be available for use in the ROK and Japan, which could quickly be doubled. US ground forces could be tripled in 10 days, while a brigade’s worth each of Army and Marine Corps equipment could arrive on a similar time schedule.\footnote{Ibid.}

Eight SL-7 fast sealift ships carrying a heavy armored division could reach the Peninsula within 20-30 days, and additional ground forces, Marines, and large, medium-speed vessels could arrive while during the same period more, along with several aircraft carriers. All forces the US now plans to deploy to reinforce the ROK would arrive within 75 days, though likely 100 days would be required – especially if the DPRK, and potentially its allies, laid mines and deployed missile boats and submarines.\footnote{Ibid.}

The total potential US forces that could be moved to the Peninsula would ultimately terms of exceed the DPRK’s forces in capability – even when ROK forces are not included – amounting to five modern heavy ground divisions and more than 15 modern fighter wings. Yet, logistics and potential DPRK countermeasures would make this challenging.

Moreover, the military situation would change significantly in the 75-100 days necessary for such redeployment if combat was underway. If a worst case, however, the US could still theoretically use nuclear weapons. Although tactical nuclear weapons were removed from the Peninsula in 1991, nuclear-armed submarine-launched cruise missiles (SLCMs) could be deployed, especially if the DPRK initiates the use of unconventional weapons.\footnote{Ibid.}

As the Chapters 3, 6, and 9 all point out, US capabilities will all change steadily over time as a result of the US rebalancing to Asia and Chinese military modernization, in particular the creation of Chinese capabilities that can strike at targets deep into the Pacific and China’s growing A2AD capabilities.

\textbf{China}

China does not have a military presence in North Korea, but might well support the DPRK in any conflict it felt could threaten the survival of its regime, totally defeat the DPRK’s forces, and/or bring ROK and US forces near the DPRK-Chinese border. The disposition of Chinese military forces near the Koreas can be seen in \textbf{Figures IV.39 to IV.42}, and \textbf{Figure IV.43} shows the command structure of the Chinese military. It is clear that China can already deploy massive amounts of ground and air forces in a Korean conflict if it chooses to do so, but faces major qualitative limits relative to the forces the US can project into the Koreas and the overall US power projection capabilities in the Pacific.

At the same time, China has strong incentives to avoid and contain any conflict in the Koreas or Northeast Asia that would lead to such a confrontation with the US, just as the US and ROK have equally strong reasons to avoid any conflict that would lead China to intervene on
Anthony H. Cordesman and Ashley Hess

the DPRK’s behalf. Such scenarios seem both unlikely and worst case contingencies which all three powers have every reason to avoid.

At the same time, the US rebalancing of its forces in Asia and China’s expansion of its sea-air-missile forces to deal with its many disputes over territory in the Pacific and to cover the outer island chain of US bases and forces has already altered the balance. The analysis of Chinese modernization efforts in Chapter 4 and missile developments in Chapter 9 show that the balance of forces in both the Pacific and the Koreas will be altered even more significantly in the future.

China’s efforts to create a blue water navy are already underway. As Chapter 4 highlights, China plans to build two nuclear aircraft carriers by 2020 and reinforce submarine warfare capabilities. At the same time, the PLA Army and Air Force have been modernizing as well, increasing the capabilities of their aircraft and ground forces. Chapter 9 shows the PRC has been making major efforts to modernize and build up conventional missile forces with a wide range of precision strike capabilities. Moreover, China has already made major progress in converting from a defensive land power to a modern military power with major air, sea, and missile capabilities.

**The 2013 Chinese Defense White Paper**

China described its military force structure in depth for the first time in its 2013 Defense White Paper. It reported that it had a total of 850,000 officers in the Army, 235,000 officers in the Navy, and 398,000 officers in the Air Force. The Army had 18 corps in seven military commands (Beijing, Chengdu, Shenyan, Jinan, Nanjing, Guangzhou, and Lanzhou). The Air Force had the same seven military areas, while the Navy had three fleets: the Beihai, Donghai, and Nanhai.

The 2013 Defense White Paper also noted that China’s Second Artillery Force is crucial for China’s “strategic deterrence” and is at the same time “primarily responsible for deterring other countries from using nuclear weapons against China, and carrying out nuclear counterattacks and precision strikes with conventional missiles.”

Key passages do much to explain China’s emerging forces and the role they might play in deterring, containing, or escalating a Korean conflict:

China’s armed forces are composed of the People’s Liberation Army (PLA), the People’s Armed Police Force (PAPF) and the militia. They play a significant role in China’s overall strategies of security and development, and shoulder the glorious mission and sacred duty of safeguarding national sovereignty, security and development interests.

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Over the years, the PLA has been proactively and steadily pushing forward its reforms in line with the requirements of performing its missions and tasks, and building an informationized military. The PLA has intensified the strategic administration of the Central Military Commission (CMC). It established the PLA Department of Strategic Planning, reorganized the GSH (Headquarters of the General Staff) Communications Department as the GSH Informationization Department, and the GSH Training and Arms Department as the GSH Training Department.

The PLA is engaged in the building of new types of combat forces. It optimizes the size and structure of the various services and arms, reforms the organization of the troops so as to make operational forces lean, joint, multi-functional and efficient. The PLA works to improve the training mechanism for military personnel of a new type, adjust policies and rules regarding military human resources and logistics, and strengthen the development of new- and high-technology weaponry and equipment to build a modern military force structure with Chinese characteristics.

The PLA Second Artillery Force (PLASAF) is a core force for China’s strategic deterrence. It is mainly composed of nuclear and conventional missile forces and operational support units, primarily responsible for deterring other countries from using nuclear weapons against China, and carrying out nuclear counterattacks and precision strikes with conventional missiles. Following the principle of building a lean and effective force, the PLASAF is striving to push forward its informationization transform, relying on scientific and technological progress to boost independent innovations in weaponry and equipment, modernizing current equipment selectively by applying mature technology, enhancing the safety, reliability and effectiveness of its missiles, improving its force structure of having both nuclear and conventional missiles, strengthening its rapid reaction, effective penetration, precision strike, damage infliction, protection and survivability capabilities. The PLASAF capabilities of strategic deterrence, nuclear counterattack and conventional precision strike are being steadily elevated. The PLASAF has under its command missile bases, training bases, specialized support units, armies and research institutions. It has a series of “Dong Feng” ballistic missiles and “Chang Jian” cruise missiles.

The 2013 White Paper also emphasized sea control and coastal security, along with the role of the PLA Air Force:

The PLAN strengthens maritime control and management, systematically establishes patrol mechanisms, effectively enhances situational awareness in surrounding sea areas, tightly guards against various types of harassment, infiltration and sabotage activities, and copes promptly with maritime and air incidents and emergencies. It advances maritime security cooperation, and maintains maritime peace and stability, as well as free and safe navigation.

Within the framework of the Military Maritime Consultative Agreement (MMCA), the Chinese and US navies regularly exchange maritime information to avoid accidents at sea. According to the Agreement on Joint Patrols by the Navies of China and Vietnam in the Beibu Gulf, the two navies have organized joint patrols twice a year since 2006.

The border public security force is an armed law-enforcement body deployed by the state in border and coastal areas, and at ports. It assumes important responsibilities of safeguarding national sovereignty, and maintaining security and stability in border, coastal and sea areas, as well as entry and exit order at ports. It carries out diversified tasks of maintaining stability, combating crimes, conducting emergency rescues and providing security in border areas… The border public security force takes strict and coordinated measures against cross-border fishing activities, strengthens law enforcement by maritime

The PLAAF is the mainstay of national territorial air defense, and in accordance with the instructions of the CMC, the PLAA, PLAN and PAPF all undertake some territorial air defense responsibilities. In peacetime, the chain of command of China’s air defense runs from the PLAAF headquarters through...

106 Information Office of the State Council, The Diversified Employment of China’s Armed Forces, The People’s Republic of China, April 16, 2013, Section III.
the air commands of the military area commands to air defense units. The PLAAF exercises unified command over all air defense components in accordance with the CMC’s intent. China’s air defense system is composed of six sub-systems of reconnaissance and surveillance, command and control, aerial defense, ground air defense, integrated support and civil air defense.

China has established an air defense force system that integrates reconnaissance and early warning, resistance, counterattack and protection. For air situation awareness means, air detection radars and early warning aircraft are the mainstay, supplemented by technical and ECM reconnaissance. For resistance means, fighters, fighter-bombers, ground-to-air missiles and antiaircraft artillery troops are the mainstay, supplemented by the strengths from the PLAA air defense force, militia and reserves, as well as civil air defense. For integrated protection means, various protection works and strengths are the mainstay, supplemented by specialized technical protection forces.

…. The PLAN is improving the training mode of task force formation in blue water. It organizes the training of different formations of combined task forces composed of new types of destroyers, frigates, ocean-going replenishment ships and shipborne helicopters. It is increasing its research and training on tasks in complex battlefield environments, highlighting the training of remote early warning, comprehensive control, open sea interception, long-range raid, anti-submarine warfare and vessel protection at distant sea.

Finally, the 2013 White Paper discussed joint training and exercises with other nations’ militaries. Joint Navy, Army, Air Force, and health services provision training and exercises have all been increasing steadily, expanding in both depth and breadth. China has also conducted nine bilateral and multilateral anti-terrorism military exercises within the framework of the Shanghai Cooperation Organization.107

In adherence to the principles of being non-aligned, non-confrontational, and not directed against any third party, as well as the guidelines of mutual benefit, equality and reciprocity, the PLA has held, together with other countries, bilateral and multilateral exercises and training featuring multiple levels, domains, services and arms. Since 2002, the PLA has held 28 joint exercises and 34 joint training sessions with 31 countries in accordance with relevant agreements or arrangements. This is conducive to promoting mutual trust in the political and military fields, safeguarding regional security and stability, and accelerating the PLA’s modernization.

**China’s Improving Conventional Capabilities**

As Chapter 3 has already discussed, China’s offensive military and power projection capabilities have been steadily improving. China’s first aircraft carrier (Liaoning) was commissioned in September 2012, and it appears that sea-training of pilots is underway; prototype J-15 aircraft – indicating a potential multi-role capability, as opposed to solely air defense – and Z-8 AEW helicopter landings and takeoffs have been documented. The JZY-01, a carrier-borne, fixed-wing AEW aircraft, is also under development. The carrier has significant weapons (such as two 12-tube anti-submarine rocket launchers and four 18-cell FL-3000N missile systems) and radar (such as the Sea Eagle 3D search radar and an active phased array radar) systems installed.108

Other new systems like the DH-10 land-attack cruise missile launch tubes are now equipping a test vessel, while an air-launched version of the missile has been under development for over five years and may soon be deployed. A ship-based version of the DH-10 would be able

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107 Ibid., Section V.
to provide significant sea-based land-attack capabilities. Two new Type-052D destroyers have also been developed, indicating that the PLAN desires to enhance blue-water capabilities, though it remains unclear whether many ships will be built. Combined with other classes of ships as well as the Type-052Cs, the PLAN could develop a globally deployable destroyer fleet.\(^{109}\)

China has growing regional security interests, focusing on disputed territories, Taiwan, and the Korean Peninsula. The PRC has been developing corvettes that are geared towards this focus – such as the Type-056 that is to replace the outdated Jianghu-I frigates. It was developed quickly and six were launched in six months in 2012.\(^{110}\)

This suggests the Type-056 will be utilized in significant numbers, while simultaneously closing China’s anti-submarine warfare capability gap that regional countries have been trying to exploit. It also appears the country is developing a maritime patrol aircraft, the Shaanxi Y-8 MPA, which “will improve China’s surveillance over its littoral and its ability to detect the growing number of submarines in the region.”\(^{111}\)

**Ground Forces**

Recent Chinese official descriptions of each service do not address the risk of conflict in the Koreas or the rest of Northeast Asia, focusing instead on the general role of forces or operations other than war. They do, however, provide some insights into the Chinese view of how such forces might be used in the Koreas and Northeast Asia.

The Chinese Defense White Paper for 2013 focused on the readiness and joint warfare capabilities of the PLA and the internal security functions of Chinese paramilitary forces. This discussion often deals with Chinese ground forces in different sections, but if all of these sections are assembled together, they provide a considerable amount of detail on the overall structure of both the Chinese army and other elements of Chinese ground forces:\(^{112}\)

**Peoples Liberation Army (PLAA)**

The PLA Army (PLAA) is composed of mobile operational units, border and coastal defense units, guard and garrison units, and is primarily responsible for military operations on land. In line with the strategic requirements of mobile operations and multi-dimensional offense and defense, the PLAA has been reoriented from theater defense to trans-theater mobility. It is accelerating the development of army aviation troops, light mechanized units and special operations forces, and enhancing building of digitalized units, gradually making its units small, modular and multi-functional in organization so as to enhance their capabilities for air-ground integrated operations, long-distance maneuvers, rapid assaults and special operations.

The PLAA mobile operational units include 18 combined corps, plus additional independent combined operational divisions (brigades), and have a total strength of 850,000. The combined corps, composed of divisions and brigades, are respectively under the seven military area commands (MACs): Shenyang

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109 Ibid.
110 Ibid.
111 Ibid.
Anthony H. Cordesman and Ashley Hess

(16th, 39th and 40th Combined Corps), Beijing (27th, 38th and 65th Combined Corps), Lanzhou (21st and 47th Combined Corps), Jinan (20th, 26th and 54th Combined Corps), Nanjing (1st, 12th and 31st Combined Corps), Guangzhou (41st and 42nd Combined Corps) and Chengdu (13th and 14th Combined Corps).

… The PLA has a regular system of combat readiness. It improves infrastructure for combat readiness, carries out scenario-oriented drills, and earnestly organizes alert duties, border, coastal and air defense patrols and guard duties. It keeps itself prepared for undertaking operational tasks and MOOTW at all times. Based on different tasks, the troops assume different levels of readiness (Level III, Level II and Level I, from the lowest degree of alertness to the highest).

The routine combat readiness work of the PLAA serves to maintain normal order in border areas and protect national development achievements. Relying on the operational command organs and command information system, it strengthens the integration of combat readiness duty elements, explores joint duty probability within a theater, and optimizes the combat readiness duty system in operational troops at and above the regiment level. It ensures the implementation of combat readiness work through institutionalized systems and mechanisms. It creates a combat readiness system with inter-connected strategic directions, combined arms and systematized operational support. Thus, the PLAA keeps sound combat readiness with agile maneuvers and effective response.

The PLA takes scenario-based exercises and drills as the basic means to accelerate the transition in military training and raise combat capabilities. It widely practices in training such operational concepts in conditions of informationization as information dominance, confrontation between different systems, precision strike, fusion, integration and jointness. It organizes training based on real combat needs, formations and procedures. It pays special attention to confrontational command training, live independent force-on-force training and training in complex battlefield environments. Thus, the warfighting capabilities based on information systems have been thoroughly improved.

Carrying out trans-MAC training. To develop rapid-response and joint-operation capabilities in unfamiliar environments and complex conditions, the divisions and brigades of the same specialty with similar tasks and tailored operational environments are organized to carry out a series of trans-MAC live verification-oriented exercises and drills in the combined tactical training bases. In 2009, the Shenyang, Lanzhou, Jinan and Guangzhou MACs each sent one division to join long-distance maneuvers and confrontational drills. Since 2010, a series of campaign-level exercises and drills code-named “Mission Action” for trans-MAC maneuvers have been carried out. Specifically, in 2010 the Beijing, Lanzhou and Chengdu MACs each sent one division (brigade) led by corps headquarters, together with some PLAAF units, to participate in the exercise. In 2011, relevant troops from the Chengdu and Jinan MACs were organized and carried out the exercise in plateau areas. In 2012, the Chengdu, Jinan and Lanzhou MACs and relevant PLAAF troops were organized and carried out the exercise in southwestern China.

Highlighting force-on-force training. The various services and arms are intensifying confrontational and verification-oriented exercises and drills. Based on different scenarios, they organize live force-on-force exercises, online confrontational exercises and computer-simulation confrontational exercises.

Joint army training is gradually being increased in breadth and depth. Since 2007, the PLAA has conducted a number of joint training sessions with its counterparts of other countries. The PLAA joined the “Hand-in-Hand 2007” and “Hand-in-Hand 2008” joint anti-terrorism training sessions with the Indian army, “Peacekeeping Mission-2009” joint peacekeeping exercise with the Mongolian army, “Cooperation-2009” and “Cooperation-2010” joint security training exercises with Singapore, “Friendship Operation-2009” and “Friendship Operation-2010” joint military training of mountain troops with the Romanian army, and joint SOF unit training with the Turkish army. The PLAA special forces held the “Strike-2007,” “Strike-2008” and “Strike-2010” joint anti-terrorism training with their Thai counterparts, “Sharp Knife-2011” and “Sharp Knife-2012” joint anti-terrorism training with their Indonesian counterparts, “Friendship-2010” and “Friendship-2011” joint anti-terrorism training with their Pakistani counterparts, and “Cooperation-2012” joint anti-terrorism training with their Colombian
counterparts. In November 2012, joint anti-terrorism training was held with the Jordanian special forces and a joint humanitarian-assistance and disaster-relief tabletop exercise with the US army.

**Border and Coastal Defense Forces**

…The border and coastal defense forces of the PLAA are stationed in border and coastal areas, and on islands. They are responsible for defense and administrative tasks such as safeguarding the national borders, coastlines and islands, resisting and guarding against foreign invasions, encroachments and provocations, and assisting in cracking down on terrorist sabotage and cross-border crimes. The border and coastal defense forces focus on combat-readiness duties, strengthen the defense and surveillance of major directions and sensitive areas, watercourses and sea areas in border and coastal regions, maintain a rigorous guard against any invasion, encroachment or cross-border sabotage, prevent in a timely fashion any violation of border and coastal policies, laws and regulations and changes to the current borderlines, carry out civil-military joint control and management, and emergency response missions promptly, and effectively safeguard the security and stability of the borders and coastal areas.

…The border public security force is an armed law-enforcement body deployed by the state in border and coastal areas, and at ports. It assumes important responsibilities of safeguarding national sovereignty, and maintaining security and stability in border, coastal and sea areas, as well as entry and exit order at ports. It carries out diversified tasks of maintaining stability, combating crimes, conducting emergency rescues and providing security in border areas. The border public security force establishes border control zones along the borderlines, establishes maritime defense zones in the coastal areas, establishes border surveillance areas 20 to 50 meters in depth along land border and coastline areas adjacent to Hong Kong and Macao, sets up border inspection stations at open ports, and deploys a marine police force in coastal areas.

In recent years, regular strict inspections, management and control in border areas and at ports have been carried out to guard against and subdue separatist, sabotage, violent and terrorist activities by the “three forces” or hostile individuals. The border public security force takes strict and coordinated measures against cross-border fishing activities, strengthens law enforcement by maritime security patrols, and clamps down on maritime offenses and crimes. Since 2011, it has handled 47,445 cases, seized 12,357 kg of drugs, confiscated 125,115 illegal guns, and tracked down 5,607 illegal border-crossers.

**Militia Forces**

The militia takes an active part in combat readiness duties, joint military-police-civilian defense efforts, post duties, and border protection and control tasks in the border and coastal areas. Militia members patrol along the borders and coastlines all year round.

…The militia is an armed organization composed of the people not released from their regular work. As an assistant and backup force of the PLA, the militia is tasked with participating in the socialist modernization drive, performing combat readiness support and defensive operations, helping maintain social order and participating in emergency rescue and disaster relief operations. The militia focuses on optimizing its size and structure, improving its weaponry and equipment, and pushing forward reforms in training so as to enhance its capabilities of supporting diversified military operations, of which the core is to win local wars in informationized conditions. The militia falls into two categories: primary and general. The primary militia has emergency response detachments; supporting detachments such as joint air defense, intelligence, reconnaissance, communications support, engineering rush-repair, transportation and equipment repair; and reserve units for combat, logistics and equipment support.

…In peacetime, the PAPF’s main tasks include performing guard duties, dealing with emergencies, combating terrorism and participating in and supporting national economic development. In wartime, it is tasked with assisting the PLA in defensive operations. Based on the national information infrastructure, the PAPF has built a three-level comprehensive information network from PAPF general headquarters down to squadrons. It develops task-oriented weaponry and equipment and conducts scenario-based training so as to improve its guard-duty, emergency-response and counter-
terrorism capabilities. The PAPF is composed of the internal security force and other specialized forces. The internal security force is composed of contingents at the level of province (autonomous region or municipality directly under the central government) and mobile divisions. Specialized PAPF forces include those guarding gold mines, forests, hydroelectric projects and transportation facilities. The border public security, firefighting and security guard forces are also components of the PAPF.

The 2012 US DoD report on Chinese military power placed heavy emphasis on China’s expanding naval power and projection capabilities and summarized current developments in Chinese conventional forces as follows:113

**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.

The updated 2013 DoD report provided more detail on both Chinese regular ground forces and China’s internal security forces:114

The PLA is investing heavily in modernizing its ground force, emphasizing the ability to deploy campaign-level forces across long distances quickly. This modernization is playing out with wide-scale restructuring of PLA ground forces that includes a more rapid, flexible special operations force equipped with advanced technology; improved army aviation units utilizing ultra-low altitude mobility helicopters armed with precision-guided munitions; and command and control (C2) capabilities with improved networks providing real-time data transmissions within and between units. (p. 8)

In addition, the PLA has focused its modernization efforts on transforming from a motorized force, as well as improving the ground force’s armored, air defense, aviation, ground-air coordination, and electronic warfare (EW) capabilities. PLA ground forces have benefited from increased production of new equipment, including the Z-10 and Z-19 attack helicopters. New air defense equipment includes the PLA ground force’s first medium-range SAM, the CSA-16, as well as domestically-produced CSA-15s (a copy of the Russian SA-15) and a new advanced self-propelled air defense artillery system, the PGZ-07. PLA ground force restructuring is highlighted by the development of brigades as a key operational echelon for combat in diverse terrain and under complex electromagnetic conditions. (p. 9)

The ground force is a proponent of joint operations since it requires transport from other forces to operate beyond China’s borders. To assist with its power projection needs, PLA ground forces have practiced using commercial transport assets such as roll-on/roll-off ships, to conduct maritime crossing operations. However, broader joint operations capability are still the primary goal for the ground force, a goal that is now a mandate for all the military services following the General Staff Department’s (GSD) December 2011 creation of the Military Training Department to oversee all PLA training, ensuring all military services realize the “prominence of joint training.” (p. 9)

China’s internal security forces primarily consist of the People’s Armed Police (PAP), the Ministry of Public Security (MPS), and the PLA. The PAP is a paramilitary organization whose primary mission is domestic security. It falls under the dual command of the CMC and the State Council. Although there are different types of PAP units, such as border security and firefighting, the largest is internal security.

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PAP units are organized into “contingents” in each province, autonomous region, and centrally administered city. In addition, 14 PLA divisions were transferred to the PAP in the mid- to late-1990s to form “mobile divisions” that can deploy outside their home province. The official budget for China’s internal security forces exceeds that of the PLA. (p. 43)

The key mission of the MPS is domestic law enforcement and the “maintenance of social security and order,” with duties including anti-riot and anti-terrorism. There are approximately 1.9 million MPS police officers spread throughout local public security bureaus across the country.

The PLA’s main mission is external security, but assumes internal stability missions when needed. For example, the PLA may provide transportation, logistics, and intelligence. China may also task the militia to assist local public security forces with internal security roles, including protection of infrastructure and maintaining public order. (p. 43)

Chinese leaders perceive threats to the country’s internal security coming from popular protests regarding social, economic, environmental, and political problems. Beijing also perceives a security challenge from external non-state actors, such as the separatist East Turkestan Independence Movement and its reported connection with ethnic Uighur nationalist movements in the Xinjiang region. (p. 43)

China activated security forces, but not the PLA, in 2012 to quell incidents ranging from anti-foreign sentiment to socio-economic protests. China deployed paramilitary police in September to control anti-Japanese protesters across multiple cities during the Senkaku Islands dispute. Also in September, paramilitary police mobilized to a Foxconn Manufacturing factory in Shanxi province to put down a riot involving poor pay and working conditions. MPS forces and paramilitary police have deployed multiple times in 2012 to Sichuan and Qinghai provinces to control unrest over self-immolations of monks protesting Chinese rule over Tibet. (p. 43)

The IISS Military Balance for 2013 reported that China was modernizing its Army in ways that could allow it to significantly improve its capability to reinforce the DPRK if it chose to do so:115

“…[T]he army is continuing to reorganise and receive substantial investment, in efforts to make it a more flexible, leaner force capable of rapid combined-arms operations. At the heart of this transformation is the ‘brigadisation’ process, whereby regiments and divisions have been recast as combined-arms brigades. By early 2012, PLA army aviation regiments and armoured divisions were reforming as brigades. …The development of ‘heavy’, ‘medium’ and ‘light’ formations, along with the brigadisation process of ‘create, test and adjust’ is similar to the Russian experience of army reform and arguably mirrors the experiences of Western armed forces; the same can be said of the developing capabilities of the PLA ground forces, with increased emphasis on platforms capable of adapting to differing firepower, protection and mobility demands.

China is beginning to deploy bolt-on armor and the PLA is now self-sufficient in modern land weapons, including advanced systems like laser-guided artillery. The IISS reports that the PLA is deploying a new ZBD08 infantry fighting vehicle somewhat similar to the Russia BMP, but with “better armor and an improved main gun.”

Air and Air Defense Forces

The Chinese Defense White Paper for 2013 focused on the expanded mission capabilities of Chinese air and air defense forces and key aspects of their modernization and joint warfare capabilities. Once again, this discussion dealt with Chinese forces in different sections; if all

of these sections are assembled together, they provide a considerable amount of detail on the overall structure of Chinese air and air defense forces.\footnote{Fu Peng “The Diversified Employment of China’s Armed Forces; II. Building and Development of China’s Armed Forces,” English.news.cn, April 16, 2013. http://news.xinhuanet.com/english/china/2013-04/16/c_132312681_2.htm.}

The PLA Air Force (PLAAF) is China’s mainstay for air operations, responsible for its territorial air security and maintaining a stable air defense posture nationwide. It is primarily composed of aviation, ground air defense, radar, airborne and electronic countermeasures (ECM) arms. In line with the strategic requirements of conducting both offensive and defensive operations, the PLAAF is strengthening the development of a combat force structure that focuses on reconnaissance and early warning, air strike, air and missile defense, and strategic projection. It is developing such advanced weaponry and equipment as new-generation fighters and new-type ground-to-air missiles and radar systems, improving its early warning, command and communications networks, and raising its strategic early warning, strategic deterrence and long-distance air strike capabilities. The PLAAF now has a total strength of 398,000 officers and men, and an air command in each of the seven Military Area Commands (MACs) of Shenyang, Beijing, Lanzhou, Jinan, Nanjing, Guangzhou and Chengdu. In addition, it commands one airborne corps. Under each air command are bases, aviation divisions (brigades), ground-to-air missile divisions (brigades), radar brigades and other units.

…The PLAAF is the mainstay of national territorial air defense, and in accordance with the instructions of the CMC, the PLAA, PLAN and PAPF all undertake some territorial air defense responsibilities. In peacetime, the chain of command of China’s air defense runs from the PLAAF headquarters through the air commands of the military area commands to air defense units. The PLAAF exercises unified command over all air defense components in accordance with the CMC’s intent. China’s air defense system is composed of six sub-systems of reconnaissance and surveillance, command and control, aerial defense, ground air defense, integrated support and civil air defense. China has established an air defense force system that integrates reconnaissance and early warning, resistance, counterattack and protection. For air situation awareness means, air detection radars and early warning aircraft are the mainstay, supplemented by technical and ECM reconnaissance. For resistance means, fighters, fighter-bombers, ground-to-air missiles and antiaircraft artillery troops are the mainstay, supplemented by the strengths from the PLAA air defense force, militia and reserves, as well as civil air defense. For integrated protection means, various protection works and strengths are the mainstay, supplemented by specialized technical protection forces.

The PLAAF organizes the following routine air defense tasks: reconnaissance and early warning units are tasked with monitoring air situations in China’s territorial air space and surrounding areas and keeping abreast of air security threats. Command organs at all levels are tasked with assuming routine combat readiness duties with the capital as the core, and border and coastal areas as the key, and commanding air defense operations at all times. Routine air defense troops on combat duty are tasked with carrying out air vigilance and patrols at sea, conducting counter-reconnaissance in border areas and verifying abnormal and unidentified air situations within the territory. The air control system is tasked with monitoring, controlling and maintaining air traffic order so as to ensure flight safety.

…The PLAAF focuses its daily combat readiness on territorial air defense. It follows the principles of applicability in both peacetime and wartime, all-dimension response and full territorial reach, and maintains a vigilant and efficient combat readiness. It organizes air alert patrols on a regular basis to verify abnormal and unidentified air situations promptly. The PLAAF command alert system takes PLAAF command posts as the core, field command posts as the basis, and aviation and ground air defense forces on combat duty as the pillar.

…The PLAAF creates complex battlefield environments based on its training bases, organizes confrontational exercises on “Red-Blue” war systems under informationized conditions, either between MAC air forces or between a combined “Blue Team” and MAC air force (“Red Team”).
Joint air force training is also making progress. The PLAAF contingent held the “Shaheen-1” joint training of operational aerial maneuvers with its Pakistani counterpart in March 2011. China’s airborne commandos and their Venezuelan counterparts held the “Cooperation-2011” urban joint anti-terrorism training in October of the same year. China’s airborne troops joined their Belarusian counterparts in the joint training code-named “Divine Eagle-2011” and “Divine Eagle-2012” respectively in July 2011 and November 2012.

The DoD’s 2012 report on Chinese military power summarized developments in China’s air and air defense forces as follows:\[117\]

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 supersonic-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.

The updated 2013 DoD report discussed the full range of Chinese air and air defense force activities:\[118\]

China bases approximately 500 combat aircraft within unrefueled operational range of Taiwan and has the airfield capacity to expand that number by hundreds. China continues to field increasingly modern 4th generation aircraft, but the force still consists mostly of older 2nd and 3rd generation aircraft, or upgraded variants of those aircraft.

**Aircraft and Air Units**

Within two years of the J-20 stealth fighter’s first flight in January 2011, China tested a second next generation fighter prototype. The prototype, referred to as the “J-31,” is similar in size to a U.S. F-35 fighter and appears to incorporate design characteristics similar to the J-20. It conducted its first flight on October 31, 2012. (p. 8)

China continues upgrading its H-6 bomber fleet (originally adapted from the late 1950s Soviet Tu-16 design) with a new variant that possesses greater range and will be armed with a long-range cruise missile. China also uses a modified version of the H-6 aircraft to conduct aerial refueling operations for many of its indigenous aircraft, increasing their combat range.

China’s aviation industry is developing a large transport aircraft (likely referred to as the Y-20) to supplement China’s small fleet of strategic airlift assets, which currently consists of a limited number of Russian-made IL-76 aircraft. These heavy lift transports are needed to support airborne command and control (C2), logistics, paradrop, aerial refueling, and reconnaissance operations, as well as...
humanitarian assistance and disaster relief missions.

Developments in China’s commercial and military aviation industry indicate improved aircraft manufacturing, associated technology, and systems development capabilities. Some of these advances have been made possible by business partnerships with Western aviation and aerospace firms (including cleared U.S. defense contractors), which provide overall benefit to China’s military aerospace industry. China will continue to seek advancement in aerospace technology, capability, and proficiency to rival Western capabilities. (p. 8)

**Air Defenses and Weapons**

China has developed a national integrated air defense system (IADS) to defend key strategic cities and borders, territorial claims, and forces against threats from the air. Overall, China’s IADS represents a multilayered defense consisting of weapons systems, radars and C4ISR platforms working together to counter multiple types of air threats at various ranges and altitudes. One of China’s primary goals is to defend against precision strike munitions such as cruise and ballistic missiles, especially those launched from long distances. In order to counter precision strike munitions, China has developed advanced long-range SAM systems, airborne early warning platforms, and C2 networks. Defense against stealth aircraft and unmanned aerial vehicles is also a growing priority. Another aspect of China’s IADS development is the deployment of land-based air defense brigades beyond the eastern coast of China and improving the air defense of China’s naval fleets in the ECS and SCS. This is part of China’s longstanding effort to expand its capabilities from focusing on territorial defense to supporting both defensive and offensive operations. (p. 8)

China’s air force and navy employ land- and sea-based SAMs and antiaircraft artillery (AAA) and its ground forces employ short- and medium-range SAMs and AAA in extensive numbers. The PLA Air Force employs one of the largest forces of advanced long-range SAM systems in the world, including SA-20 battalions acquired from Russia and domestically-produced HQ-9 battalions. China has shown interest in acquiring Russia’s newest long-range SAM, the S-400 TRIUMF, but a contract has not been signed yet and Russian officials have stated China would not receive the S-400 until at least 2017. This SAM can target aircraft, cruise missiles, and tactical and medium-range ballistic missiles. (p. 67)

The PLA Air Force possesses one of the largest forces of advanced SAM systems in the world, consisting of a combination of Russian-sourced SA-20 battalions and domestically produced HQ-9 battalions. (p. 8)

**Early Warning Network.** Another element of China’s multilayered IADS is its extensive ground-based radar network. In the past, this ground-based early warning network and China’s Russian-acquired SAMs primarily protected Beijing and other key strategic locations in the eastern part of the country. China has since developed the KONGJING-2000 (KJ-2000) airborne early warning aircraft to provide coverage at long ranges and low altitudes for faster response and command targeting to weapons systems. In the future China may expand its national early warning network to protect China’s territorial air space and waters farther from the mainland, as well as to provide space defense. This effort would include China’s growing constellations of reconnaissance, data relay, navigation, and communications satellites. China is also improving reconnaissance technologies to include infrared, multiple-spectrum, pulsed doppler, phased array, and passive detection. Over-the-horizon skywave radar is also an important component of China’s improvement in its strategic early warning capabilities. (p. 68)

**C4ISR Network.** China’s IADS also includes a C4ISR network to connect early warning platforms, SAM and AAA, and command posts in order to improve communication and response time during operations. The network is intended to include battle damage assessment capability. China continues to make progress on command, communication, and control systems. China’s air defense brigades are training to use this information network and mobile C2 platforms to connect different types of weapons systems’ operations together by sending automated targeting information to them simultaneously. Weapon systems that are geographically separate, in different units, and a mix of older and newer battalions could achieve compatibility through the use of networked C2. China is also using
simulation systems to attempt to train for command of air defense operations in realistic operational conditions, including network warfare. China has deployed air defense brigades employing its newest SAM system to the western part of China to train for long-distance mobility and operations in high-altitude conditions, including operations in the conditions of network warfare. (p. 68)

The IISS *Military Balance for 2013* highlighted several developments in Chinese airpower that will allow it to significantly improve its capability to reinforce the DPRK if it chose to do so:119

- Development of extra types of J-11 fighter, including an apparent strike version of the aircraft that may be designated J-16.
- Flight testing of J-20 prototypes.
- Showing a new medium stealth fighter which may be called the J-21 or J-31.
- Replacing older fighters with J-10 medium fighters.
- Improving airlift by five second-hand Il-76s from Belarus and possibly seeking to buy 25 more from Russia.
- Developing a four-engine turbofan aircraft.
- Deploying more Y8 ISR aircraft.

China is also steadily increasing its UAV program, initiated in the 1960s. Chinese aerospace firms have developed dozens of UAVs, many being shown in military parades and air shows. Some look very similar to US Predator, Reaper, and Global Hawk drones. Analysts believe that China’s drone technology is rapidly maturing and that the country is close to widely using drones for combat strikes and surveillance;

China has announced its drones can conduct reconnaissance as well as carry missiles and bombs. UAVs are already used to patrol Chinese borders as well as conduct surveillance and photograph the islands that are currently under dispute with Japan. The PRC also plans to export drones to the Middle East and Central Asia at a much less expensive price than that of US models. This is one more capability area which could be used by the PLA to challenge US dominance in the Asia-Pacific as well as increase threat levels to neighboring countries.120

**Naval Forces**

The 2013 Chinese Defense White Paper highlighted the expanding “blue water” range of Chinese naval forces, improved readiness and training, and joint warfare capabilities – all of which increased Chinese capabilities to project power and execute area denial activities. If all of the various sections in the Whiter Paper that deal with the PLAN are assembled together, they provide a considerable amount of detail on both current PLAN capabilities and the trends in these forces:121

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The PLA Navy (PLAN) is China’s mainstay for operations at sea, and is responsible for safeguarding its maritime security and maintaining its sovereignty over its territorial seas along with its maritime rights and interests. The PLAN is composed of the submarine, surface vessel, naval aviation, marine corps and coastal defense arms. In line with the requirements of its offshore defense strategy, the PLAN endeavors to accelerate the modernization of its forces for comprehensive offshore operations, develop advanced submarines, destroyers and frigates, and improve integrated electronic and information systems. Furthermore, it develops blue-water capabilities of conducting mobile operations, carrying out international cooperation, and countering non-traditional security threats, and enhances its capabilities of strategic deterrence and counterattack. Currently, the PLAN has a total strength of 235,000 officers and men, and commands three fleets, namely, the Beihai Fleet, the Donghai Fleet and the Nanhai Fleet. Each fleet has fleet aviation headquarters, support bases, flotillas and maritime garrison commands, as well as aviation divisions and marine brigades. In September 2012, China’s first aircraft carrier Liaoning was commissioned into the PLAN. China’s development of an aircraft carrier has a profound impact on building a strong PLAN and safeguarding maritime security.

…The PLAN strengthens maritime control and management, systematically establishes patrol mechanisms, effectively enhances situational awareness in surrounding sea areas, tightly guards against various types of harassment, infiltration and sabotage activities, and copes promptly with maritime and air incidents and emergencies. It advances maritime security cooperation, and maintains maritime peace and stability, as well as free and safe navigation. Within the framework of the Military Maritime Consultative Agreement (MMCA), the Chinese and US navies regularly exchange maritime information to avoid accidents at sea. According to the Agreement on Joint Patrols by the Navies of China and Vietnam in the Beibu Gulf, the two navies have organized joint patrols twice a year since 2006.

…Intensifying blue water training…The PLAN is improving the training mode of task force formation in blue water. It organizes the training of different formations of combined task forces composed of new types of destroyers, frigates, ocean-going replenishment ships and shipborne helicopters. It is increasing its research and training on tasks in complex battlefield environments, highlighting the training of remote early warning, comprehensive control, open sea interception, long-range raid, anti-submarine warfare and vessel protection at distant sea. The PLAN organizes relevant coastal forces to carry out live force-on-force training for air defense, anti-submarine, anti-mine, anti-terrorism, anti-piracy, coastal defense, and island and reef sabotage raids. Since 2007, the PLAN has conducted training in the distant sea waters of the Western Pacific involving over 90 ships in nearly 20 batches. During the training, the PLAN took effective measures to respond to foreign close-in reconnaissance and illegal interference activities by military ships and aircraft. From April to September 2012, the training vessel Zhenghe completed global-voyage training, paying port calls to 14 countries and regions.

To fulfill China’s international obligations, the Chinese navy carries out regular escort missions in the Gulf of Aden and waters off Somalia. It conducts exchanges and cooperation with other escort forces to jointly safeguard the security of the international SLOCs. As of December 2012, Chinese navy task groups have provided protection for four WFP ships and 2,455 foreign ships, accounting for 49% of the total of escorted ships. They helped four foreign ships, recovered four ships released from captivity and saved 20 foreign ships from pursuit by pirates.

Chinese navy escort task forces have maintained smooth communication with other navies in the areas of joint escort, information sharing, coordination and liaison. They have conducted joint escorts with their Russian counterparts, carried out joint anti-piracy drills with naval ships of the ROK, Pakistan and the US, and coordinated with the European Union to protect WFP ships. It has exchanged boarding visits of commanders with task forces from the EU, NATO, the Combined Maritime Forces (CMF), the ROK, Japan and Singapore. It has exchanged officers for onboard observations with the navy of the Netherlands. China takes an active part in the conferences of the Contact Group on Piracy off the Coast of Somalia (CGPCS) and “Shared Awareness and Deconfliction” (SHADE) meetings on international merchant shipping protection.
Since January 2012, independent deployers such as China, India and Japan have strengthened their convoy coordination. They have adjusted their escort schedules on a quarterly basis, optimized available assets, and thereby enhanced escort efficiency. China, as the reference country for the first round of convoy coordination, submitted its escort timetable for the first quarter of 2012 in good time. India and Japan’s escort task forces adjusted their convoy arrangements accordingly, thereby formulating a well-scheduled escort timetable. The ROK joined these efforts in the fourth quarter of 2012.

The routine combat readiness work of the PLAN serves to safeguard national territorial sovereignty and maritime rights and interests. It carries out diversified patrols and provides whole-area surveillance in a cost-effective way. The PLAN organizes and performs regular combat readiness patrols, and maintains a military presence in relevant sea areas. All fleets maintain the necessary number of ships patrolling in areas under their respective command, beef up naval aviation reconnaissance patrols, and organize mobile forces to conduct patrols and surveillance in relevant sea areas, as required.

Joint maritime exercises and training are being expanded. In recent years, the Chinese navy has taken part in the “Peace-07,” “Peace-09” and “Peace-11” multinational maritime exercises hosted by Pakistan on the Arabian Sea. The PLA and Russian navies held the “Maritime Cooperation-2012” military drill in the Yellow Sea off China’s east coast focusing on joint defense of maritime traffic arteries. Chinese and Thai marine corps held the “Blue Strike-2010” and “Blue Strike-2012” joint training exercises. During mutual port calls and other activities, the Chinese navy also carried out bilateral or multilateral maritime exercises and training in such tasks as communications, formation movement, maritime replenishment, cross-deck helicopter landing, firing at surface, underwater and air targets, joint escort, boarding and inspection, joint search and rescue and diving with its counterparts of India, France, the UK, Australia, Thailand, the US, Russia, Japan, New Zealand and Vietnam.

In combination with its routine combat readiness activities, the PLAN provides security support for China’s maritime law enforcement, fisheries, and oil and gas exploitation. It has established mechanisms to coordinate and cooperate with law-enforcement organs of marine surveillance and fishery administration, as well as a joint military-police-civilian defense mechanism. Further, the PLAN has worked in coordination with relevant local departments to conduct maritime survey and scientific investigation; build systems of maritime meteorological observation, satellite navigation, radio navigation and navigation aids; release timely weather and sea traffic information; and ensure the safe flow of traffic in sea areas of responsibility.

Together with the marine surveillance and fishery administration departments, the PLAN has conducted joint maritime exercises and drills for protecting rights and enforcing laws, and enhanced its capabilities to coordinate command and respond to emergencies in joint military-civilian operations to safeguard maritime rights. The “Donghai Collaboration-2012” joint exercise was held in the East China Sea in October 2012, involving 11 ships and eight planes.

As an important armed maritime law-enforcement body, the border public security force exercises jurisdiction over both violations of laws, rules and regulations relating to public security administration and suspected crimes committed in China’s internal waters, territorial seas, contiguous zones, exclusive economic zones and continental shelf. In recent years, the border public security force has endeavored to guarantee the security of sea areas, strengthened patrols, surveillance and management along the sea boundary in the Beibu Gulf and around the Xisha sea areas, and effectively maintained maritime public order and stability.

The 2012 DoD report on Chinese military power summarized developments in China’s naval forces as follows:122

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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.

The updated DoD report for 2013 again provided more details:123

The PLA Navy remains at the forefront of the military’s efforts to extend its operational reach beyond East Asia and into what China calls the “far seas.” Missions in these areas include protecting important sea lanes from terrorism, maritime piracy, and foreign interdiction; providing humanitarian assistance and disaster relief; conducting naval diplomacy and regional deterrence; and training to prevent a third party, such as the United States, from interfering with operations off China’s coast in a Taiwan or South China Sea conflict. The PLA Navy’s ability to perform these missions is modest but growing as it gains more experience operating in distant waters and acquires larger and more advanced platforms. The PLA Navy’s goal over the coming decades is to become a stronger regional force that is able to project power across the globe for high-intensity operations over a period of several months, similar to the United Kingdom’s deployment to the South Atlantic to retake the Falkland Islands in the early 1980s. However, logistics and intelligence support remain key obstacles, particularly in the Indian Ocean. (p. 38)

In the last several years, the PLA Navy’s distant seas experience has primarily derived from its ongoing counter-piracy mission in the Gulf of Aden and long-distance task group deployments beyond the first island chain in the western Pacific. China continues to sustain a three-ship presence in the Gulf of Aden to protect Chinese merchant shipping from maritime piracy. This operation is China’s first enduring naval operation beyond the Asia region.

Additionally, the PLA Navy has begun to conduct military activities within the Exclusive Economic Zones (EEZs) of other nations, without the permission of those coastal states. Of note, the United States has observed over the past year several instances of Chinese naval activities in the EEZ around Guam and Hawaii. One of those instances was during the execution of the annual Rim of the Pacific (RIMPAC) exercise in July/August 2012. While the United States considers the PLA Navy activities in its EEZ to be lawful, the activity undercuts China’s decades-old position that similar foreign military activities in China’s EEZ are unlawful. (p. 38)

The PLA Navy has made long-distance deployments a routine part of the annual training cycle. In 2012, it deployed task groups beyond the first island chain seven times with formations as large as seven ships. These deployments are designed to complete a number of training requirements, including long-distance navigation, C2, and multi-discipline warfare in deep sea environments beyond the range of land-based air defense.

The PLA Navy’s force structure continues to evolve, incorporating more platforms with the versatility for both offshore and long-distance operations. In addition to the recently-commissioned KUZNETSOV-class aircraft carrier (CV) Liaoning, China is engaged in series production of the LUYANG-class III DDG, the JIANGKAI-class II FFG, and the JIANGDAO-class FFL. China will also begin construction on a new Type 081-class landing helicopter assault ship within the next five years. China will probably build several aircraft carriers over the next 15 years.

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Limited logistical support remains a key obstacle preventing the PLA Navy from operating more extensively beyond East Asia, particularly in the Indian Ocean. China desires to expand its access to logistics in the Indian Ocean and will likely establish several access points in this area in the next 10 years (potential sites include the Strait of Malacca, Lombok Strait, and Sunda Strait). These arrangements will likely take the form of agreements for refueling, replenishment, crew rest, and low-level maintenance. The services provided will likely fall short of U.S.-style agreements permitting the full spectrum of support from repair to re-armament. (p. 39)

Regular Naval Forces

The PLA Navy has the largest force of major combatants, submarines, and amphibious warfare ships in Asia. China’s naval forces include some 79 principal surface combatants, more than 55 submarines, 55 medium and large amphibious ships, and roughly 85 missile-equipped small combatants. (p. 6)

The current mainstay of the Chinese submarine force is modern diesel powered attack submarines (SS). In addition to 12 KILO-class submarines acquired from Russia in the 1990s and 2000s (eight of which are equipped with the SS-N-27 ASCM), the PLA Navy possesses 13 SONG-class SS (Type 039) and eight YUAN-class SSP (Type 039A). The YUAN-class SSP is armed similarly to the SONG-class SS, but also includes an air-independent power system. China may plan to construct up to 20 YUAN-class SSPs. (p. 7)

Since 2008, the PLA Navy has embarked on a robust surface combatant construction program of various classes of ships, including guided missile destroyers (DDG) and guided missile frigates (FFG). During 2012, China continued series production of several classes, including construction of a new generation of DDG. Construction of the LUYANG II-class DDG (Type 052C) continued, with one ship entering service in 2012, and an additional three ships under various stages of construction and sea trials, bringing the total number of ships of this class to six by the end of 2013. Additionally, China launched the lead ship in a follow-on class, the LUYANG III-class DDG (Type 052D), which will likely enter service in 2014. The LUYANG III incorporates the PLA Navy’s first multipurpose vertical launch system, likely capable of launching ASCM, land attack cruise missiles (LACM), surface-to-air missiles (SAM), and anti-submarine rockets. China is projected to build more than a dozen of these ships to replace its aging LUDA-class destroyers (DD). China has continued the construction of the workhorse JIANGKAI II-class FFG (Type 054A), with 12 ships currently in the fleet and six or more in various stages of construction, and yet more expected. These new DDGs and FFGs provide a significant upgrade to the PLA Navy’s area air defense capability, which will be critical as it expands operations into “distant seas” beyond the range of shore-based air defense. (p. 7)

Augmenting the PLA Navy’s littoral warfare capabilities, especially in the South China Sea and East China Sea, is a new class of small combatant. At least six of the JIANGDAO-class corvettes (FFL) (Type 056) were launched in 2012. The first of these ships entered service on February 25, 2013; China may build 20 to 30 of this class. These FFLs augment the 60 HOUBEI-class wave-piercing catamaran missile patrol boats (PTG) (Type 022), each capable of carrying eight YJ-83 ASCMs, for operations in littoral waters. (p. 7)

The PLA Navy also increased its amphibious force in 2012. Two YUZHAO-class amphibious transport docks (LPD) (Type 071) were accepted into service during the year bringing the total of YUZHAO LPDs to three. (p. 7)

The PLA Navy remains at the forefront of the military’s efforts to extend its operational reach beyond East Asia and into what China calls the “far seas.” Missions in these areas include protecting important sea lanes from terrorism, maritime piracy, and foreign interdiction; providing humanitarian assistance and disaster relief; conducting naval diplomacy and regional deterrence; and training to prevent a third party, such as the United States, from interfering with operations off China’s coast in a Taiwan or South China Sea conflict. The PLA Navy’s ability to perform these missions is modest but growing as it gains more experience operating in distant waters and acquires larger and more advanced platforms. The PLA Navy’s goal over the coming decades is to become a stronger regional force that is able to project power across the globe for high-intensity operations over a period of several months, similar to
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**Maritime Paramilitary Forces**

During the 2012 Scarborough Reef and Senkaku Island tensions, the China Maritime Surveillance (CMS) and Fisheries Law Enforcement Command (FLEC) ships were responsible for directly managing the disputes on a daily basis, while the PLA Navy maintained a more distant presence away from the immediate vicinity of the contested waters. China prefers to use its civilian maritime agencies in these disputes, and use the PLA Navy further ashore from disputed areas or as an escalatory measure. The five civilian agency entities, commonly referred to as the “Five Dragons” are: (p.40)

- **Anti-Smuggling Bureau (ASB):** Subordinate to the General Administration of Customs and Ministry of Public Security. Armed entity responsible for criminal investigations and smuggling cases along China’s inland border posts and rivers. (p.40)
- **China Coast Guard (CCG):** Subordinate to the Ministry of Public Security. Active duty maritime police force responsible for combating maritime crime. (p.40)
- **China Maritime Surveillance (CMS):** Subordinate to the State Oceanic Administration and Ministry of Land and Resources. Responsible for asserting China’s marine rights and sovereignty claims in disputed maritime regions. (p.40)
• **Fisheries Law Enforcement Command (FLEC):** Subordinate to the Ministry of Agriculture. Enforces PRC fisheries laws and handles fishery disputes with foreign entities across China’s exclusive economic zone (EEZ).

• **Maritime Safety Administration (MSA):** Subordinate to the Ministry of Transport. Responsible for safety of life at sea (SOLAS), maritime pollution control, and cleanup, port inspection, and maritime investigation.

In the next decade, an expanded and modernized force of civilian maritime ships will afford China the capability to more robustly patrol its territorial claims in the ECS and SCS. China is continuing with the second half of a modernization and construction program for its maritime law enforcement agencies. The first half of this program, from 2004-2008, resulted in the addition of almost 20 ocean-going patrol ships for the CMS (9), Bureau of Fisheries (BOF) (3), Maritime Safety Administration (MSA) (3), and China Coast Guard (2). The second half of this program, from 2011-2015, includes at least 30 new ships for the CMS (23), BOF (6), and MSA (1). Several agencies have also acquired ships that were decommissioned from the PLA Navy. Some old patrol ships will be decommissioned during this period. In addition, MLE agencies will likely build more than 100 new patrol craft and smaller units, both to increase capability and to replace old units. Overall, CMS total force level is expected to increase 50 percent by 2020 and BOF by 25 percent. MSA, China Coast Guard, and Maritime Customs force levels will probably remain constant, but with larger and more capable units replacing older, smaller units. Some of these ships will have the capability to embark helicopters, a capability that only a few MLE ships currently have. The enlargement and modernization of China’s MLE forces will improve China’s ability to enforce its maritime sovereignty. (p.40)
Figure IV.39 Chinese Military Forces and Regions (Japanese 2012 Summary)

<table>
<thead>
<tr>
<th></th>
<th>China</th>
<th>Taiwan (Reference)</th>
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<tr>
<td><strong>Total military forces</strong></td>
<td>Approx. 2.3 million troops</td>
<td>Approx. 290,000 troops</td>
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<tr>
<td><strong>Ground forces</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group troops</td>
<td>Approx. 1.6 million troops</td>
<td>Approx. 200,000 troops</td>
</tr>
<tr>
<td>Tanks</td>
<td>Type-98A/99, Type-96/A, Type-88A/B and others</td>
<td>M-60, M-68A/H and others</td>
</tr>
<tr>
<td></td>
<td>Approx. 8,200 vehicles</td>
<td>Approx. 1,830 vehicles</td>
</tr>
<tr>
<td><strong>Maritime forces</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Warships</td>
<td>Approx. 1,090 vessels/1.352 million tons</td>
<td>Approx. 340 vessels/208,000 tons</td>
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<tr>
<td>Destroyers &amp; frigates</td>
<td>Approx. 80 vessels</td>
<td>Approx. 30 vessels</td>
</tr>
<tr>
<td>Submarines</td>
<td>Approx. 60 vessels</td>
<td>4 vessels</td>
</tr>
<tr>
<td>Marines</td>
<td>Approx. 10,000 troops</td>
<td>Approx. 15,000 troops</td>
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<tr>
<td>Combat aircraft</td>
<td>Approx. 2,070 aircraft</td>
<td>Approx. 520 aircraft</td>
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<tr>
<td>Modern fighters aircraft</td>
<td>J-10 x224, Su-27/J-11 x244, Su-30 x97 (Fourth-generation fighters x565)</td>
<td>Mirage 20000 x57 F-16 x1 46 F-CK-1 (IDF) x1 28 (Fourth-generation fighters x331)</td>
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<tr>
<td><strong>Reference</strong></td>
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<tr>
<td>Population</td>
<td>Approx. 1.337 billion</td>
<td>Approx. 23 million</td>
</tr>
<tr>
<td>Term of service</td>
<td>2 years</td>
<td>1 year</td>
</tr>
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</table>

Figure IV.40: Chinese Ground Forces by Region – Part One (US 2012 Summary)

Figure IV.40: Chinese Ground Forces by Region – Part Two (US 2013 Summary)

Figure IV.41: Chinese Naval Forces by Region (US 2012 Summary)

Figure IV.42: Chinese Air Forces by Region – Part One (US 2012 Summary)

Figure IV.42: Chinese Air Forces by Region – Part Two (US 2012 Summary)

Figure IV.43: The Chinese High Command (as of 2011)

Japan

Japan is constitutionally limited as to how militarized it can be – it cannot have an offensive force, but can provide for its own self-defense. Article 9 of the Japanese Constitution renounces war, the possession of war potential, and the state’s right of belligerency. At the same time, Japan may defend itself – which the government interprets as having the minimum level of armed forces necessary for self-defense.

The exact limit of this ‘minimum level’ varies based on available technology, the international situation, and other factors, and is discussed and decided annually by the Japanese Diet during budget considerations. Offensive weapons whose sole capability is massive destruction of another country – such as ICBMs or long-range strategic bombers – are not permissible. It should be stressed, however, that these conditions may change strikingly in the future in reaction to China’s ongoing force modernization and the level of US-Chinese military cooperation or competition.

The Japanese government sees exercising the right of self-defense as legitimate if three conditions are met: 124

1. When there is an imminent and illegitimate act of aggression against Japan;
2. When there is no appropriate means to deal with such aggression other than by resorting to the right of self-defense; and
3. When the use of armed force is confined to be the minimum necessary level.

Although self-defense is not necessarily confined to the boundaries of Japanese land, water, and airspace, the Constitution is interpreted to not permit armed troops to be sent to other countries with the purpose of using force – such as overseas troop deployments. 125 As a result, Japan’s defense policy is now shaped by policies and laws that limit its military capabilities.

Japan’s Basic Policy for National Defense was adopted in 1957, with the objectives of preventing indirect and direct invasions, eliminating any threat of invasion, and protecting Japan’s democratic status, peace, and independence. The Policy also describes four tenants as the basic way to achieve these objectives: 126

1. Support the activities of the United Nations, cooperate with other nations, and aim to achieve world peace.
2. Establish the foundation necessary to ensure a stable quality of life for the people, boost nationalism, and guarantee the nation’s safety.
3. Progressively develop efficient national defense capabilities to the necessary limit for self-defense in accordance with national power and circumstances.
4. Deal with foreign invasions of Japan based on security arrangements formed with the United States until the United Nations becomes able to effectively prevent the said threats.

In addition, Japan is unable to manufacture or possess nuclear weapons under the Atomic Energy Basic Law and has ratified the NPT. The country adheres to The Three Non-Nuclear

125 Ibid.
126 Ibid., p. 111-2.
Principles - Japan will not have, produce, or allow into the country nuclear weapons. The military is also under civilian control, meaning that the Japanese diet decides budgets and laws related to the Self-Defense Forces (SDF), such as the number of personnel and principal SDF institutions. National defense is part of the Cabinet’s executive power – and Cabinet ministers are required by the Constitution to be civilians. The Prime Minister is the commander-in-chief, while the Minister of Defense has general control over SDF activities, and the Cabinet’s Security Council discusses important national defense issues.\textsuperscript{127}

\textbf{Japanese Security Policies}

Japan has a variety of policies to defend itself adequately; a significant part of this defense involves combined Japan-US capabilities. However, Japan recognizes that its own efforts are the primary force behind achieving its basic security goals. The 2010 NDPG – discussed in Chapter 3 – calls for the nation to undertake strategic and integrated activities as follows:\textsuperscript{128}

\begin{itemize}
  \item[a.] The improvement of intelligence collection and analysis capabilities in the government ministries and agencies, a strengthened cross-governmental information security system, the promotion of space development and use of outer space from the perspective of information gathering, communications, and comprehensive strengthening of the posture and response capability to deal with cyber attacks.
  \item[b.] Cooperation among government organizations under normal conditions; integrated response by the government in the occurrence of various contingencies; examination of functions and systems related to governmental decisionmaking and response through initiatives such as regular simulations and comprehensive training and exercises; and consideration of necessary actions including legal measures.
  \item[c.] Establishment of a body in the Prime Minister’s Office which will be responsible for national security policy coordination among relevant ministers and for providing advice to the Prime Minister after examination of organization, functions, and structure of the cabinet regarding security issues, including the Security Council.
  \item[d.] Improvement of systems for responding to various disasters and for civil protection; and close cooperation between national and local governments to ensure an appropriate response.
  \item[e.] Cooperation among governmental organizations in the efforts to improve the global security environment; participation in international peace cooperation activities in an efficient and effective manner through collaboration and cooperation with non-governmental organization and other entities; review and consideration of the five principles for participation in peacekeeping operations and other policies regarding Japan’s participation in consideration of actual situation of U.N. peacekeeping operations.
  \item[f.] Efforts to make Japan’s security and defense policies easier to understand; and strengthened overseas information dissemination to further deepen international community’s understanding of Japan’s security and defense policies.
\end{itemize}

\textbf{The 2012 Japanese Defense White Paper}

At the same time, the Japanese military is now undergoing a major period of modernization and reorganization. The 2012 Japanese Defense White Paper discusses some basics of the organizational structure, which can also be seen in Figure IV.44.

\textsuperscript{127} Ibid.
\textsuperscript{128} Ibid., p. 117-9.
Japan is working to develop a “Dynamic Defense Force” – discussed previously in Chapter 3 – to better handle any threat to the country. The Japanese-US Alliance is acknowledged as vital, while the US’ military presence in Japan, as a deterrent against and responder to any potential military situation, provides security to the Asia-Pacific region. The US’ presence also allows Japan to participate in multilateral security cooperation and more effectively respond to any global security challenges. Japan is working to develop and deepen the Alliance by:129

(1) Continuous engagement in strategic dialogue and specific policy coordination with the United States, including bilateral assessment of the security environment and bilateral consultations on common strategic objectives, and roles, missions and capabilities.

(2) The promotion of cooperation in existing fields, including intelligence cooperation, deepening of bilateral contingency planning, various operational cooperation including that upon situations in areas surrounding Japan, ballistic missile defense and equipment and technology cooperation, as well as consultations to improve the credibility of extended deterrence and information security.

(3) Studying measures to enhance Japan-U.S. cooperation with the United States in order to strengthen the U.S. forces’ deterrent and response capability to regional contingencies.

(4) Strengthening various regular cooperation, such as joint training and joint/shared usage of facilities, and promote regional and global cooperation through international peace cooperation activities, maintenance and enhancement of global commons such as outer space, cyberspace and sea lanes, as well as in the field of climate change.

Japan is also working with the US regarding US force posture and the burden of US military presence on local communities. The country is also committing to provide more support for US forces stationed there.

129 Ibid.
The Roles of the Japanese Self Defense Forces

The Japanese SDF plays a variety of roles, concentrating on ISR activities and quick responses in the case of any uncertain situation. Priorities include:\(^\text{130}\)

1. Ensuring security of the sea and airspace surrounding Japan,
2. Response to attacks on offshore island,
3. Response to cyber attacks,
4. Response to attacks by guerrillas and special operation forces,
5. Response to ballistic missile attacks,
6. Response to complex contingencies, and
7. Response to large-scale and/or chemical, biological, radiological and nuclear (CBRN) disasters.

In its efforts to maintain stability in the Asia-Pacific, Japan plans to:\(^\text{131}\)

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\(^\text{130}\) Ibid., p. 118-9.

\(^\text{131}\) Ibid., p. 175.
○ Promote bilateral and multilateral defense cooperation and exchanges as well as joint training and exercises in a multilayered manner.

○ In the field of non-traditional security, Japan will promote practical cooperation by utilizing SDF capabilities including disposal of land mines and unexploded shells.

○ Development and strengthening of regional cooperation practice and capacity building support for nations in the region.

In order to “improve the global security environment,” Japan will conduct the following:¹³²

○ International peace cooperation activities, including peace building such as humanitarian and reconstruction assistance and ceasefire monitoring

○ Arms control and disarmament, nonproliferation, and capacity building support.

○ Tackling international terrorism, securing the safety of maritime traffic, and maintaining maritime order.

Organization, Equipment, and Disposition of the SDF

The 2012 White Paper assesses the Japanese SDF’s Specific Forces, especially in terms of their operational capabilities and disposition, as follows:¹³³

Ground Self-Defense Force

In principle, the GSDF will achieve appropriate force disposition of highly mobile units with ISR capabilities according to geographical characteristics in order to integrally intertwine various functions and effectively respond to various contingencies. These units can be rapidly deployed to various locations, and are capable of performing diverse missions, including international peace cooperation activities. In so doing, priority will be placed on the defense of off-shore islands where SDF units are not currently stationed, and the organization and personnel structure of units will be reviewed so as to ensure thorough rationalization and streamlining of the defense forces.

Furthermore, the GSDF will continue to maintain the Central Readiness Force in order to effectively handle air transportation, airborne operations, defense against NBC weapons, special operations and international peace cooperation activities. Also, in order to provide air defense to protect operational units and key areas, seven surface-to-air guided missile units will be maintained, reducing one unit from the current eight units while adopting more advanced surface-to-air guided missiles for these units.

As a result, compared to the 2004 NDPG, the 2010 NDPG calls for the following:

(1) The authorized number of active duty personnel will be changed from 148,000 to 147,000, while total authorized personnel will be changed from 155,000 to 154,000;

(2) Tanks will be reduced from approximately 600 to approximately 400 vehicles, while artillery pieces (main artillery in the 2004 NDPG) will be reduced from approximately 600 to approximately 400 pieces; and

(3) Surface-to-air missile units will be optimized/rationalized from eight anti-aircraft artillery groups to seven anti-aircraft artillery groups/regiments (six anti-aircraft artillery groups and one anti-aircraft artillery regiment).

¹³¹ Ibid.
¹³² Ibid.
¹³³ Ibid., p. 121-7.
The basic tactical unit structure of eight divisions, six brigades, and one armored division will be maintained.

**Maritime Self-Defense Force**

The principal aims of the Maritime Self-Defense Force include defense of the seas surrounding Japan, ensuring the security of sea lanes, and international peace cooperation activities through regularly conducting such operations as ISR, and anti-submarine operations.

(1) The Destroyer unit was initially expected to consist of mobile operations units (32 ships), which respond swiftly to various contingencies and in international peace cooperation activities, and area deployment units (3 ships in 5 guard zones, 15 ships in all), which conduct watch and defence operations in coastal waters. However, in light of growing demand for mobile operations squadron due to the expansion of international peace cooperation activities and other developments, the 2010 NDPG provides that area deployment units change their structure to function efficiently beyond guard zones, and to operate in watch and surveillance in the southwestern area and in international peace cooperation activities. As a result, the Escort Ship Squadron is restructuring its forces to maintain four-unit Escort Corps (16 ships) whose basic unit consists of four escort ships, in addition to the four-unit Escort Group (32 ships) whose basic unit consists of eight escort ships. The squadron now comprises 48 escort ships in all.

(2) As the geographical relationship between strategic sea areas and military bases is taken into account in the 2010 NDPG, the submarine units increase the number of vessels to 22 to reinforce the posture to deploy submarines in key sea traffic points in the East China Sea and the Sea of Japan, to regularly conduct ISR over a wide range of waters surrounding Japan including the southwestern area, and to ensure the superiority of information and swiftly detect indications of security.

(3) The Patrol aircraft units continue to maintain a nine-unit aviation corps consisting of four-unit fixed-wing patrol aircraft units and a five-unit patrol helicopter units. The squadron’s capabilities are aimed at regularly conducting ISR over a broad range of seas surrounding Japan and to be effective in patrolling these seas and in ensuring the security of sea lanes.

(4) The Minesweeping units continue to maintain one-unit mine-sweeping group aimed at performing effectively in minesweeping operations in the seas surrounding Japan in order to ensure the safety of the lives of citizens which rely on marine transportation.

**Air Self-Defense Force**

The primary focus of the Air Self-Defense Force is conducting continuous ISR in the seas and airspace surrounding Japan, general air defense, and air defense of key areas using a full range of capabilities.

(1) The Aircraft control warning units, which conduct continuous ISR in the surrounding seas and airspace, have maintained an eight-unit warning group and a 20-unit warning corps. In view of limits on human resources, however, the units have been reorganized in order to achieve comprehensive air defense capabilities as effectively as possible, with the eight-unit warning group reduced by four units. The squadron now maintains a four-unit warning group and a 24-unit warning corps. In addition, the Surface-to-Air Guided Missile Squadron continues to maintain a six-unit Air Defense Missile Group which provides air defense in key political, economic, and defense areas.

(2) To provide a full range of capabilities for use in the defense of Japan’s airspace, the Air Self-Defense Force maintains a 12-squadron fighter unit (including a squadron that maintains new fighter aircraft with advanced capabilities), a one-squadron air reconnaissance unit that performs air reconnaissance, a three-squadron air transport unit which swiftly transports troops in a variety of situations and which is actively involved in international peace cooperation activities, and a one-unit flight corps consisting of an air refueling and transport squadron that has air refueling functions and transport functions that can also be used in international peace cooperation activities.

In light of the security environment surrounding Japan, the Government’s severe financial situation, and other pertinent factors, the Air Self-Defense Force has sought efficiency relating to major equipment,
reducing the number of strategic combat aircraft from approximately 350 to 340. However, it still maintains approximately 260 fighter aircraft.

Russia

The 2013 IISS *Military Balance* gives a short summary of the Russian military’s general capabilities:

Russia remains a significant military power, with a sizeable nuclear arsenal. Efforts are under way to recapitalise strategic and conventional weapons inventories, though progress has been at best patchy. Defence reforms begun in 2008 continue with higher pay rates introduced at the beginning of 2012. The aim is to recruit and retain more contract personnel, though conscription remains for the moment. Some analysts believe that key elements of the reform process are largely complete, such as the initiative to transform the army towards a combined arms brigade-based structure, though adjustments are still to be made, largely in the internal formation of these units. The air force continues to receive small numbers of new aircraft, with new equipment also being delivered to the army in modest amounts. A handful of new ships are also in various stages of build or delivery to the navy. The overall equipment modernisation plan to 2020, however, could be jeopardised by the Finance Ministry’s aim of curtailing proposed defence spending by 20% in the 2013–15 period.

While the Russian Military Doctrine of 2010 lacks specifics regarding its armed forces and does not discuss any role they might play in Asia and the Koreas, it does give some general guidelines as to what roles the Russian military is expected to play:

The main tasks of the Armed Forces and other troops in peacetime are:

a) to defend the sovereignty of the Russian Federation and the integrity and inviolability of its territory;

b) to ensure strategic deterrence, including the prevention of military conflicts;

c) to maintain the composition and state of combat and mobilizational readiness and training of the strategic nuclear forces, forces and resources that support their functioning and use, and command and control systems at a level guaranteeing the infliction of the required damage on the aggressor whatever the conditions of the situation;

d) to provide timely warning to the supreme commander in chief of the Russian Federation Armed Forces of an air or space attack and notification to the organs of state and military administration and the troops (forces) about military dangers and military threats;

e) to maintain the capability of the Armed Forces and other troops for the timely deployment of groupings of troops (forces) in potentially dangerous strategic salients, and also to maintain their readiness for combat use;

f) to ensure the air defence of the Russian Federation’s most important military facilities and readiness to rebuff strikes by means of air and space attack;

g) to deploy and maintain, in the strategic space zone, orbital groupings of space devices supporting the activities of the Russian Federation Armed Forces;

h) to protect important state and military facilities, facilities on lines of communication, and special cargoes;

i) to maintain the infrastructure of the Russian Federation’s territory and prepare lines of communication for defence purposes, including the construction and modernization of

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special-purpose facilities and the construction and major refurbishment of highways of
defence significance;
j) to protect citizens of the Russian Federation outside the Russian Federation from armed
attack;
k) to participate in operations in the maintenance (restoration) of international peace and
security, to adopt measures to avert (eliminate) a threat to peace, and to suppress acts of
aggression (violation of the peace) on the basis of decisions of the UN Security Council or
other bodies authorized to adopt such decisions in accordance with international law;
l) to combat piracy and ensure the safety of shipping;
m) to ensure the security of the economic activities of the Russian Federation on the high
seas;
n) to combat terrorism;
o) to prepare for carrying out territorial defence and civil defence measures;
p) to participate in the protection of public order and the safeguarding of public security; q) to
participate in the elimination of emergencies and the restoration of special-purpose facilities;
r) to participate in securing a state of emergency.

… The main tasks of the Armed Forces and other troops during a period of direct threat of aggression
are:

a) to implement a package of additional measures aimed at lowering the level of the threat
of aggression and increasing the level of combat and mobilizational readiness of the Armed
Forces and other troops with a view to carrying out mobilizational and strategic deployment;
b) to maintain the nuclear deterrence potential at the established degree of readiness;
c) to participate in maintaining a martial law regime;
d) to fulfill the Russian Federation’s international commitments with regard to collective
defence and rebuffing or prevention, in accordance with the norms of international law, of
an armed attack on another state that has made the corresponding request to the Russian
Federation.

… The main tasks of the Armed Forces and other troops in wartime are to rebuff aggression against the
Russian Federation and its allies, to inflict defeat on the aggressor’s troops (forces), and to force him to
cease hostilities on terms that meet the interests of the Russian Federation and its allies.

**Figure IV.45** shows the Russian military districts and provides a chart of the primary force
numbers and capabilities for each military branch, according to 2012 Japanese estimates.
Furthermore, **Figure IV.46** shows the Russian forces that are stationed near the North
Korean border – meaning, those that would be available in the short-term if a militarized
situation escalated on the Peninsula.

In broad terms, however, Russia is far more like to use its diplomatic influence and military
power to try to deter, limit, and end a Korean conflict than play a direct military role. It has
far too many economic interests in the stability of Northeast Asia and few military or
territorial ambitions. While a more direct role is possible, the odds are strongly against it and
it would take radical shift in the regional power struggle that directly threatened Russian
interest to cause the country to intervene in a war in the Koreas.
Figure IV.45: Russian Military Districts and Major Forces

![Map of Russian Military Districts and Major Forces](image)

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<table>
<thead>
<tr>
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<th></th>
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</thead>
<tbody>
<tr>
<td><strong>Total military forces</strong></td>
<td>Approx. 960,000 troops</td>
</tr>
<tr>
<td><strong>Ground forces</strong></td>
<td></td>
</tr>
<tr>
<td>Ground troops</td>
<td>Approx. 310,000 troops</td>
</tr>
<tr>
<td>Tanks</td>
<td>2,800 (Not including mothballed tanks)</td>
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<tr>
<td></td>
<td>Approx. 70,600 including mothballed tanks</td>
</tr>
<tr>
<td><strong>Maritime forces</strong></td>
<td></td>
</tr>
<tr>
<td>Warships</td>
<td>Approx. 980 vessels Approx. 2,047,000 tons</td>
</tr>
<tr>
<td>Aircraft carriers</td>
<td>1 vessel</td>
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<tr>
<td>Cruisers</td>
<td>5 vessels</td>
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<tr>
<td>Destroyers</td>
<td>17 vessels</td>
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<tr>
<td>Frigates</td>
<td>31 vessels</td>
</tr>
<tr>
<td>Submarines</td>
<td>62 vessels</td>
</tr>
<tr>
<td>Marines</td>
<td>Approx. 9,500 troops</td>
</tr>
<tr>
<td>Combat aircraft</td>
<td>Approx. 1,940 aircraft</td>
</tr>
<tr>
<td><strong>Air forces</strong></td>
<td></td>
</tr>
<tr>
<td>Bombers</td>
<td>Tu-160 16 aircraft Tu-95 53 aircraft Tu-22 172 aircraft</td>
</tr>
<tr>
<td><strong>Reference</strong></td>
<td></td>
</tr>
<tr>
<td>Population</td>
<td>Approx. 139 million</td>
</tr>
<tr>
<td>Term of service</td>
<td>1 year (In addition to conscription, there is a contract service system)</td>
</tr>
</tbody>
</table>

Figure IV.46: Russian Forces Arrayed Near the North Korean Border

Notes:
1. "" represents the number of divisions and brigades.
2. ↓ represents the locations of main naval bases.
3. ▪ represents the locations of main air bases.
4. Figures shown are approximate.
5. In addition to above, 3 brigades are present in the western part of the Eastern Military District.

V. Korean Special, Asymmetric, and Paramilitary Forces

The DPRK and ROK have long competed in creating effective special and paramilitary forces. Pyongyang has also developed major capabilities for unconventional warfare in the border/DMZ area to attack deep into the ROK. The DPRK has mixed attacks by covert and Special Forces with limited naval and artillery strikes, while using missile and nuclear tests to obtain asymmetric leverage.

According to the South Korean Ministry of National Defense:\textsuperscript{135}

The North has been strengthening its special warfare capabilities by deploying light infantry divisions to the frontline corps and adding an infantry regiment to the frontline. The number of special force troops is estimated to reach approximately 200,000. It is assumed that these troops have been trained to conduct composite operations, such as major target strikes, assassination of important figures, and disruption of rear areas, after infiltrating the rear areas of the South through either underground tunnels or AN-2 planes.

The DPRK has been increasingly belligerent throughout 2012 and early 2013, significantly escalating tensions on the Peninsula. In 2012, in addition to two missile tests, the DPRK also jammed aircraft and naval GPS functionality using 50-100km range Soviet vehicle-mounted radar systems. The DPRK continued denial of service cyber attacks on ROK institutions, including government agencies and the military.

The DPRK also has the world’s third-largest chemical weapons arsenal, the world’s largest Special Forces, a fleet of mini-submarines, and a significant artillery capability arrayed against Seoul and other key ROK locations.\textsuperscript{136}

The sheer variety of each side’s capabilities to conduct irregular or asymmetric warfare, and the DPRK’s aggressiveness in threats and limited attacks, can be destabilizing and lead to miscalculation and escalation. Such forces also present a problem for any potential arms control agreement, since they give the DPRK a potential advantage in threatening and attacking the ROK that would be enhanced by any general reductions in conventional forces.

\textbf{Paramilitary, Police, Internal Security, and Special Forces}\textsuperscript{137}

Paramilitary, police, and internal security forces play an important role in the Korean balance, but making accurate counts of these forces is even more difficult than estimating the size of more “conventional” forces. It is even harder to estimate the size and role of internal security forces, although these can play a major part in securing rear areas and forcing soldiers to fight.

The assessments that follow again reflect ROK and Western sources and viewpoints. It was not possible to find comparable assessments that reflect a DPRK view. Once again, it is important to note that the DPRK may see its choices as forced upon it by outside threats and


\textsuperscript{136} IISS, \textit{Military Modernization 2013}, p. 270.

\textsuperscript{137} Due to secrecy and limited open source information, all available personnel figures are rough estimates.
pressures. At the same time, these differences between the DPRK and the ROK act as a warning that the internal security structures of each state show differences that reflect their ability and willingness to use force and to escalate.

**DPRK**

The DPRK has a wide range of forces and activities that support asymmetric warfare as well as covert operations in peacetime.

**Special Forces**

The DPRK’s Special Forces are the most important fighting element of its irregular and asymmetric forces. The North Korean military is very proud of these forces and often refers to them as “human torpedoes” (Navy), the “invincibles” (Air Force), and “human bombs protecting the center of the revolution” (Army). The 2010 ROK Defense White Paper notes an increase in DPRK Special Forces to 200,000, from 180,000 in 2008. The 2010 ROK Defense White Paper notes an increase in DPRK Special Forces to 200,000, from 180,000 in 2008.

The US DoD report on DPRK forces issued in May 2013 notes that, North Korean SOF are likely some of the most highly trained, well-equipped, best-fed, and most motivated forces in the KPA. As North Korea’s conventional capabilities decline relative to the ROK and United States, we believe North Korea increasingly regards SOF capabilities as a vital tool for asymmetric coercion.

An ROK estimate of the structure of DPRK Special Forces is shown in Figure V.1. The IISS estimated that the DPRK’s Special Purpose Forces Command had a total of 88,000 personnel in 2013. The land component reportedly comprised eight (Reconnaissance General Bureau) Special Forces battalions, 17 reconnaissance battalions, nine light infantry bridges, and six sniper brigades. The air component had three airborne brigades, one airborne battalion, and two sniper brigades. The naval component had two amphibious sniper brigades.

Jane’s discusses the DPRK Special Forces in more detail; the different types of Special Forces and their respective missions and roles are depicted in Figure V.2. Most sources – including ROK and US intelligence and military sources – believe that the DPRK Special

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141 IISS, Military Balance, 2013. Note that the word “sniper” can also mean “sharpshooter” or “marksman.”
Forces number approximately 200,000 personnel and are divided into two categories: light infantry units (140,000 troops) and the 11th Storm Corps (60,000 troops).

According to *Jane’s*, the primary missions of these Special Forces units are: “reconnaissance, establishing a ‘second front’ within the ROK strategic rear, destruction and disruption of the ROK/US C4ISR structure, neutralisation of ROK and US air bases, and neutralisation of ROK and US missiles and weapons of mass destruction. These missions include operations against US bases in Japan. Navy sniper brigades have the added mission of capturing the ROK islands along the Northern Limit Line in the West Sea.”

DPRK Special Forces are divided into seven divisions (with an organic light infantry battalion or regiment), five to seven reconnaissance battalions, and 25 Special Forces brigades, with the latter composed as follows:

- 12 Light infantry/mechanised light infantry
- 3 Reconnaissance brigades
- 3 Airborne brigades
- 3 General sniper brigades
- 2 Navy sniper brigades
- 2 Air Force sniper brigades

The 11th Storm Corps is the main DPRK military organization that trains and undertakes special and unconventional warfare. In peace, the 11th Storm Corps likely has administrative control over all special operations units, while during war it is the primary headquarters for coordination. USFK Commander General Walter Sharp described the 11th Storm Corps in February 2011 as “elite special operations units capable of carrying out highly complicated missions,” and ROK sources believe that Colonel General Choe Kyong-song is the commander. It has been reported that the cover designation of the 11th Storm Corps is the 630th Large Combined Unit.

While the majority of the planes that comprise the Air Force are older models, the DPRK can deploy Special Force operatives effectively behind ROK front lines in an attack. There are more than 20 air operation and reserve bases run by the DPRK Air Force, some of which have underground runways.

The 11th Storm Corps Bureau, as well as the Reconnaissance General Bureau, has access to “specialised high-speed semi-submersible infiltration landing craft (SILC), Yugo, and Yono-class SSM and Sang-O and K-300 (an improved Sang-O) class SSC.”

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143 Ibid.
144 Ibid.
the DPRK military can transport approximately 4,000 troops by air and 15,000 troops by sea at one time, due to the economic difficulties of the past 30 years and the correlated reduction in operational readiness, it is likely that this capacity has dropped by 20-40%.\textsuperscript{147}

**Additional Paramilitary and Reserve Forces**

The DPRK has an expansive system of additional paramilitary and reserve forces, which are also summarized in Figure V.3. A ROK Ministry of Unification report notes,\textsuperscript{148}

According to one of North Korea’s four military guidelines, “to arm the entire population,” the regime has mobilized around 30 percent of the population between the ages of 14 to 60 to acquire over 7.7 million reserve forces. Every member of the reserve forces is given various combat gears, including personal arms, equipment, and crew-served weapons. These forces respond to emergency calls and enter boot camps to receive 15 to 30 days of military training at least once a year.

Upon the departure of the Chinese army in 1958, North Korea organized its reserve forces and civil defense corps called the Worker-Peasant Red Guards (WPRG) in January 1959, in addition to reorganizing discharged soldiers among the WPRG members into the Reserve Military Training Unit (RMTU) in 1963.

The Red Youth Guards (RYG), a military organization for senior middle school students, was created in September 1970. The RMTU, the core of North Korea’s reserved forces, consists of men between the ages of 17 and 50, as well as unmarried women volunteers between ages of 17 and 30. Its local units are organized into either divisions or brigades depending on the size of the administrative unit or workplace…. The RMTU members are given 100 percent of personal arms and equipment as well as 70 to 80 percent of crew-served weapons, and are required to complete as much as 500 hours of training each year.

The intensity of their training is equivalent to those taken by active-duty soldiers. As the RMTU is organized, equipped with firearms and undergo intensity of training similar to those of soldiers on active duty, they can be immediately mobilized to defend rear areas or called up as reserve forces in case war breaks out. At present the RMTU accounts for over 600,000 troops.

Meanwhile, the WPRG was renamed as the Worker-Peasant Red Army (WPRA) at the Party Conference that convened on September 28, 2010, and is expected to play a role similar to that of the regular army. The WPRA currently consists of those men not belonging to the RMTU who can be mobilized between ages of 17 and 60, as well as of women who are organized at each administrative unit and workplace between ages of 17 and 30.

Along with the civil defense corps, the WPRA’s basic responsibilities include guarding the workplace and other important facilities, as well as regional and antiaircraft defense. They are supplied with all personal arms and equipment and some crew-served weapons. A total of 160 hours of training is required. Their current numbers stand at 5.7 million.

In addition, the Red Youth Guards (RYG) consists of male and female senior middle school students aged between 14 and 16. Organized into companies and battalions at each school, RYG members are subject to a total of 160 hours of on-campus drills every Saturday and seven days of training during vacations, including a shooting exercise using live rounds at the RGY drill camp. As the royal guards of the regime, the RYG are mainly responsible for removing anti-revolutionary elements and playing a leading role in improving North Korea’s combat capability.

\textsuperscript{147} Ibid.

In an emergency, they would perform the duties of rear guards or suicide squads to supplement those of junior army officers. They are supplied with all personal arms and equipment and some crew-served weapons. They undergo a total of 450 hours of training (substantially increased from 270 hours in the past) a year. Their current number stands at one million.

North Korea also has about 400,000 reserve troops affiliated with other paramilitary forces, including the Ministry of People’s Security, the Logistics Mobilization Guidance Bureau, an agency responsible for providing and managing war supplies, and the Speed Battle Youth Storm Trooper Squad, a team that is often brought into public work projects. They are on a constant alert for immediate mobilization.

**Figure V.1: Reserve and Paramilitary Forces**

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<thead>
<tr>
<th></th>
<th>South Korea</th>
<th>North Korea</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reserve and Paramilitary Forces</td>
<td>3040000</td>
<td>7700000</td>
</tr>
</tbody>
</table>

### Figure V.2: DPRK Special Operation Forces, Missions and Roles

<table>
<thead>
<tr>
<th>Type of Special Forces</th>
<th>Missions and Roles</th>
</tr>
</thead>
<tbody>
<tr>
<td>** Objectives **</td>
<td>Attack and destroy targets, distrust the enemy’s rear area, launch terrorist attacks, neutralize major strategic and tactical facilities (communication stations, missile bases, airfields, etc.)</td>
</tr>
<tr>
<td>** Sniper Brigades **</td>
<td>Breach the enemy’s major defense lines, disguise as ROK troops and infiltrate, strike strategic targets with 82-mm mortars and multiple rocket launchers, organize pro-DPRK sympathizers</td>
</tr>
<tr>
<td>** Seaborne Sniper Brigades **</td>
<td>Start a guerilla war using hi-speed boats and LCACs, launch a surprise attack on naval vessels, radar bases, and supply bases</td>
</tr>
<tr>
<td>** Air Force Sniper Brigades **</td>
<td>Strike equipment and facilities in air bases</td>
</tr>
<tr>
<td>** Airborne Infantry Brigades **</td>
<td>Destroy logistics bases, secure strategic strongholds, block reinforcement</td>
</tr>
<tr>
<td>** Army Corps Reconnaissance Battalions **</td>
<td>Open secret passages, reconnoiter, kidnap key figures, destroy enemy facilities</td>
</tr>
<tr>
<td>** Light Infantry Brigades **</td>
<td>Secure key launts, support main units, launch attacks on enemy command posts (comprised of a total of 6 battalions, each with 6 companies; each company consists of 120 troops and equipped with 60-mm mortars and portable missile launchers)</td>
</tr>
</tbody>
</table>


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### Figure V.3: The DPRK’s Reserve and Paramilitary Forces

<table>
<thead>
<tr>
<th>Type</th>
<th>Strength</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>** Reserve Military Training Unit **</td>
<td>60,000</td>
<td>Subject to combat mobilization; men (ages 17-50) and women (ages 17-30)</td>
</tr>
<tr>
<td>** Worker and Peasant Red Guard **</td>
<td>5.7 million</td>
<td>Similar to the ROK’s Homeland Reserve Forces</td>
</tr>
<tr>
<td>** Red Youth Guard **</td>
<td>1 million</td>
<td>Military organization of middle school students</td>
</tr>
<tr>
<td>** Paramilitary units **</td>
<td>400,000</td>
<td>Secret Service Command, Speed War Youth Shock Troops, Ministry of People’s Security Logistics Mobilization Guidance Bureau</td>
</tr>
<tr>
<td>** Total **</td>
<td>7.7 million</td>
<td></td>
</tr>
</tbody>
</table>


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**Infiltration Routes**

There are a number of different estimates of the efforts the DPRK has made to create tunnels under the DMZ. Work by *Jane’s* and GlobalSecurity.org notes that the DPRK has created a series of infiltration tunnels since the 1970s, four of which have been discovered by US and ROK forces (see Figure V.4 below). Each uncovered shaft was large enough to permit the
passage of an entire infantry division in one hour, though the tunnels were not wide enough for tanks or vehicles. All the tunnels ran in a north-south direction and did not have branches, and, with each discovery, engineering within the tunnels has become progressively more advanced.\textsuperscript{149}

According to North Korean defectors, Kim Il-sung issued a sweeping order in the early 1970s that required every Korean People’s Army (KPA) division along the DMZ to dig and maintain at least two tunnels into South Korea.\textsuperscript{150} The existence of such tunnels was reported by \textit{Jane’s} using information from a KPA engineer who had defected in 1974.\textsuperscript{151} These reports were confirmed in late November 1974 when an ROK Army patrol stumbled upon a DPRK tunnel, complete with reinforced concrete slabs, electric power and lighting, weapons storage, sleeping areas, and a narrow-gauge railway with carts.\textsuperscript{152}

This tunnel’s size was about three feet by four feet and, though of unknown length, the tunnel was estimated to be large enough to hide an entire infantry regiment – or to funnel thousands of soldiers into the South in short order.\textsuperscript{153} Another tunnel was discovered in March 1975. It measured 3,300 meters long, and, as \textit{Jane’s} reports, 1,100 meters of this length extended into ROK territory. It was dug at a depth of between 50 and 150 meters and measured 2m tall by 2m wide. As many as 8,000 troops may have been able to move through it in an hour.\textsuperscript{154}

US and ROK forces uncovered two more tunnels in 1978 and 1990, the latter of which was 145 meters deep and large enough for three armed soldiers to run through side-by-side. The US and ROK have since made constant efforts to detect any such tunnels and tunneling efforts, but it is not possible to be certain how many exist, their location, or their capacity. \textit{Jane’s} reports that there are an estimated 20-25 such tunnels.\textsuperscript{155}

Other sources agree with \textit{Jane’s}, placing estimates at around twenty.\textsuperscript{156} ROK and US abilities to detect such tunnels through advanced technology like ground sensing radars, seismic monitors, and other devices – as well as classic measures like counter-tunneling – is unknown. The threat posed by any remaining tunnels and their potential to insert combat forces behind ROK-US forward defenses is substantial. If North Korea does attempt a military attack upon the South, it could be that the tunnels of the Korean DMZ will play a role in that conflict.

\textsuperscript{150} Ibid.
\textsuperscript{153} Ibid.
\textsuperscript{155} Ibid.
As of 2012, some estimates indicated there were more than 8,200 underground facilities across the DPRK, including tunnels, underground shelters, and mines. Jane’s reports an “extensive nationwide system in excess of 11,000 fortified underground facilities.”

In addition, the military has disguised and camouflaged camps and facilities several times greater in scale than the camps that are not extensively camouflaged. The KPA conducts camouflage, concealment, and deception (CCD) operations at all levels; in fact, 2004 was the “Year of Camouflage” for the KPA:

A KPA manual smuggled out of the DPRK in 2010 has instructions concerning camouflage, concealment and deception of the complete range of military equipment and facilities including “command posts, foxholes, runways, fighter jet and naval bases, and cave strongholds.” The same manual stated that “Yugoslavian forces in an exposed camp deployed fake anti-aircraft guns, ground-to-air missiles, aircraft and tanks made of logs, plywood and cloth, and hid their actual weapons. As a result, NATO forces in fact destroyed only 13 of the 300 tanks though it claimed to have destroyed 40 per cent of the armoured targets.” Lessons learned such as those have strongly influenced KPA CCD operations.

Evidence of the influence of these lessons can be seen in the DPRK’s 2010 provocations. Directly before the November 2010 attack on Yeonpyeong Island (discussed in Chapter 4), the DPRK’s military reportedly deployed decoy inflatable or painted plywood 122 mm and 240 mm rocket launchers among the real launchers to increase the difficulty of counter-battery artillery attacks and retaliation air strikes. ROK officials have stated that the KPA “is developing sophisticated camouflage and deceptions to avoid surveillance and precision bombing by state-of-the-art South Korean and US reconnaissance equipment and weapons systems ...It seems they’ve got all sorts of decoy equipment and facilities, from fake cave positions of long-range guns and fake naval ships to fake aircraft, fake runways and bogus guns.”

After the attack, the KPA appears to have tried to deceive ROK and US intelligence by continuously deploying SAM units and then removing them. Furthermore, reportedly the DPRK military was putting new and improved armored vehicle and fighter plane decoys in the DMZ corps.

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160 Ibid.
161 Ibid.
Figure V.4: DPRK Infiltration Tunnels Discovered by the ROK, to Date

<table>
<thead>
<tr>
<th>Location</th>
<th>Tunnel No 1</th>
<th>Tunnel No 2</th>
<th>Tunnel No 3</th>
<th>Tunnel No 4</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Location</strong></td>
<td>8 km northeast of Korangpo</td>
<td>13 km north of Chorwan</td>
<td>4 km south of Panmunjon</td>
<td>26 kilometers northeast of Yanggu</td>
</tr>
<tr>
<td><strong>Invasion route</strong></td>
<td>Korangpo-Uijongbu-Seoul</td>
<td>Chorwan-Pochon-Seoul</td>
<td>Munsan-Seoul</td>
<td>Sohwa-Wontong-Seoul</td>
</tr>
<tr>
<td><strong>Troop capacity</strong></td>
<td>4,000/h*</td>
<td>8,000/h</td>
<td>8,000/h</td>
<td>8,000/h</td>
</tr>
<tr>
<td><strong>Total length</strong></td>
<td>3.5 km</td>
<td>3.5 km</td>
<td>1.64 km</td>
<td>2.05 km</td>
</tr>
<tr>
<td><strong>Length south of Military Demarcation Line</strong></td>
<td>1,000 m</td>
<td>1,100 m</td>
<td>435 m</td>
<td>1,030</td>
</tr>
<tr>
<td><strong>Depth below surface</strong></td>
<td>45 m</td>
<td>50-160 m</td>
<td>73 m</td>
<td>145 m</td>
</tr>
<tr>
<td><strong>Discovery date</strong></td>
<td>November 1974</td>
<td>March 1975</td>
<td>October 1978</td>
<td>March 1990</td>
</tr>
</tbody>
</table>

* This tunnel has concrete lining.


Artillery Near the DMZ

The vast majority of North Korea’s military equipment is outdated in comparison with that used by South Korean and US forces, but the KPA often substitutes numbers and “mass” for modernization and quality. There are reports that the KPA has created thousands of artillery emplacements near the DMZ that are capable of inflicting significant damage and civilian casualties on Seoul.

US General Walter Sharp, a former commander of US troops in South Korea, said the North has “an old but very large military that is positioned in a very dangerous place, very close” to South Korea.162 In addition to its ballistic missiles, reports indicate that the KPA has approximately 8,500 artillery pieces (and 5,100 MRLs), the majority of which are located along the DMZ in natural caves, man-made tunnels, and bunkers (known as Hardened Artillery Sites, or HARTS).163

The quality of DPRK artillery forces and their competence is questionable. Despite North Korea’s use of radar in its November 2010 artillery bombardment of Yeonpyeong, the accuracy of the attack was poor. South Korean Ministry of National Defense (MND) sources  

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state that the KPA fired approximately 170 rounds; of these, 90 (53%) impacted the waters surrounding the island, while 80 (47%) impacted on the island.\footnote{164}{Joseph S. Bermudez Jr., “The Yonp’yong-do Attack, November 23, 2010, Pt II,” \textit{KPA Journal} 1, no. 12.}

Although inconclusive, the poor accuracy suggests that despite DPRK pre-attack planning and exercises, KPA artillery troops – at least those in the IV Corps – are in need of greater training. Additionally, ROK MND sources claim that approximately 25% of the 80 rounds that impacted the island were duds and failed to detonate on impact (12% if the total of 170 is taken into consideration).\footnote{165}{Ibid.} This high failure rate suggests that some DPRK-manufactured artillery munitions, especially MRL rounds, suffer from either poor quality control during manufacture or that storage conditions and standards are poor.

Despite the limits to the quality of DPRK artillery platforms, a DPRK artillery attack on the ROK would most likely be devastating, especially in the environs surrounding Seoul. Lee Yang Ho, ROK Defense Minister during the 1994 nuclear crisis, said one computer simulation conducted during his term projected 1 million dead: “all industry would be destroyed, gas stations, power plants. This is such a densely populated area that even if North Korean artillery were not very accurate, any place you would hit there would be huge numbers of casualties.”\footnote{166}{Barbara Demick, “Seoul’s Vulnerability Is Key to War Scenarios,” \textit{Los Angeles Times}, May 27, 2003.}

\textbf{ROK}

The IISS only provides limited data on the ROK’s Special Forces. Its 2013 \textit{Military Balance} estimates one (Special Warfare) command with seven Special Forces brigades. The IISS includes the ROK’s 4,500 man Coast Guard in its count of active paramilitary forces. The ROK Coast Guard has some 50 Patrol and Coastal Combatants with 5 larger patrol boats, 16 coastal patrol boats, and 10 small coast ships. It has roughly 30 logistics and support craft, 5-7 smaller maritime patrol aircraft, 8 helicopters, and 9 light transports.\footnote{167}{IISS. \textit{Military Balance, 2013}.}

According to \textit{Jane’s}, the ROK’s Special Forces are approximately 20,000 troops strong. They are well-trained, modeled on US Special Forces and using US equipment. Each military branch (Army, Navy, Air Force, Marine Corps) has its own special operations units, though the largest is the Army Special Warfare Command (SWC) with 10,000 troops that “are tasked with infiltrating deep behind enemy lines for reconnaissance and surveillance, destruction of key military facilities, sabotage, and kidnapping enemy VIPs. Additionally, they combat terrorism, protect VIPs, and carry out top-secret operations. Furthermore, the SWC also has brigades whose specific duty is to engage and eliminate the DPRK’s light infantry troops if they infiltrate the ROK.”\footnote{168}{“Spotlight on S. Korea’s Special Forces,” \textit{The Chosun Ilbo} (English edition), January 24, 2011, http://english.chosun.com; “S. Korea’s Special Forces ‘Vastly Outnumbered’ by N. Korea’s,” \textit{The Chosun Ilbo} (English edition) (6 January 2011), http://english.chosun.com; “History of Special Operations Command Korea” United States Eighth Army website (2010), http://8tharmy.korea.army.mil/}

The SWC also prepares for a wide array of potential scenarios, such as DPRK use of WMD, missiles, terrorist actions, or other provocations to gain concessions. In the case of an internal
DPRK crisis, the SWC also must be ready to handle crises such as an outbreak of civil war, manmade or natural disasters, large-scale refugee flow, loss of control or transfer of WMD, and the DPRK’s collapse. In the case of military action on the Peninsula, the SWC would combine with US Special Operations Korea, currently based in Yongsan, to jointly make the Combined Unconventional Warfare Task Force. This combined force would then plan and conduct special operations on the Peninsula.\textsuperscript{169}

The ROK Navy’s Special Forces unit is modeled on the US’ Underwater Demolition Team unit, and is similarly intensively trained, competent, and able to undertake operations flawlessly – such as its rescue of the \textit{Samho Jewelry}’s 21 crewmembers after the ship was hijacked by Somali pirates in early 2010. The Air Force also maintains an elite Special Forces group, able to infiltrate behind enemy lines in advance of airlift operations or airborne troops, in order to accurately guide planes in their troop and equipment drops.\textsuperscript{170}

\textbf{Counterterrorism, Terrorism, and Low-Level Asymmetric Warfare}

There is no clear dividing line between terrorism and asymmetric warfare. It is also a historical fact that the side with the stronger regular military forces is either less likely to use such tactics or conceals them in the form of state-sponsored terrorism.

\textit{DPRK}

The DPRK has repeatedly challenged the ROK using low-level covert operations and asymmetric attacks, using these incidents to put pressure on both the ROK and the US. The DPRK has also deployed large amounts of its force structure for the same purpose, keeping the ROK under constant pressure. It has created a special balance in the border area by creating tunnel systems and deploying large amounts of artillery in caves and sheltered positions within range of Seoul, as discussed above.

\textit{Limited Attacks and Covert Operations}

The US and ROK feel that the historical record shows that there was nothing new about the DPRK’s use of limited or asymmetric attacks – some of which the US and ROK have labeled as terrorism – in 2010. The DPRK’s willingness – and inventiveness – in using the threat and reality of such attacks was so consistent between 1950 and 2007 that it led the Congressional Research Service to prepare a 36-page chronology which covered 164 examples of armed invasion; border violations; infiltration of armed saboteurs and spies; hijacking; kidnapping; terrorism (including assassination and bombing); threats/intimidation against political


leaders, media personnel, and institutions; incitement aimed at the overthrow of the ROK government; actions undertaken to impede progress in major negotiations; and tests of ballistic missiles and nuclear weapons.\footnote{\textit{North Korean Provocative Actions, 1950–2007}, Congressional Research Service, RL30004, April 20, 2007.}

The CRS report summarizes these trends as follows:

The most intense phase of the provocations was in the latter half of the 1960s, when North Korea (Democratic People’s Republic of Korea, or DPRK) staged a series of limited armed actions against South Korean and US security interests. Infiltration of armed agents into South Korea was the most frequently mentioned type of provocation, followed by kidnapping and terrorism (actual and threatened). From 1954 to 1992, North Korea is reported to have infiltrated a total of 3,693 armed agents into South Korea, with 1967 and 1968 accounting for 20\% of the total. Instances of terrorism were far fewer in number, but they seemed to have had a continuing negative impact on relations between the two Koreas. Not counting the DPRK’s invasion of South Korea that triggered the Korean War (1950-1953), the DPRK’s major terrorist involvement includes attempted assassinations of President Park Chung Hee in 1968 and 1974; a 1983 attempt on President Chun Doo Hwan’s life in a bombing incident in Rangoon, Burma (Myanmar); and a mid-air sabotage bombing of a South Korean Boeing 707 passenger plane in 1987. Reported provocations have continued intermittently in recent years, in the form of armed incursions, kidnappings, and occasional threats to turn the South Korean capital of Seoul into “a sea of fire” and to silence or tame South Korean critics of North Korea. Then, in July 2006, North Korea launched seven missiles into the Sea of Japan, and in October 2006, it tested a nuclear bomb.

While it was not possible to find comparable assessments from a DPRK viewpoint, it is important to note that Pyongyang may see the use of unconventional or asymmetric warfare as the only way it can safely – and effectively – exert military pressure on the ROK and the US and force the pace of negotiation. In realpolitik, the difference between terrorism and asymmetric warfare is often a matter of perspective and semantics.

\textit{Ties to Outside Actors}

The DPRK has provided financial support and training to Palestinian and Iranian militant groups in the past. It has directly initiated terrorist attacks, such as the 1987 bombing of a Korean Air flight. Despite issuing a joint statement with the US in 2000 renouncing terrorism, the country has continued to collaborate with former terrorist groups in its illegal activities – which will be discussed further in the next section. In an assessment of counterterrorism and terrorism in the DPRK, the US State Department reports,\footnote{\textit{Country Reports on Terrorism 2011}, July 2012, p. 42-43.}

\textbf{Overview:} The Democratic People’s Republic of Korea (DPRK) is not known to have sponsored any terrorist acts since the bombing of a Korean Airlines flight in 1987. On October 11, 2008, the United States rescinded the designation of the DPRK as a state sponsor of terrorism in accordance with criteria set forth in U.S. law, including a certification that the government of the DPRK had not provided any support for international terrorism during the preceding six-month period and the provision by the DPRK of assurances that it will not support acts of international terrorism in the future.

Four Japanese Red Army members who participated in a jet hijacking in 1970 continued to live in the DPRK. The Japanese government continued to seek a full accounting of the fate of 12 Japanese nationals believed to have been abducted by DPRK state entities in the 1970s and 1980s. The DPRK has not yet fulfilled its commitment to reopen its investigation into the abductions.
Legislation and Law Enforcement: The United States re-certified North Korea as “not cooperating fully” with U.S. counterterrorism efforts under Section 40A of the Arms Export and Control Act, as amended. In making the annual determination designating the DPRK as “not cooperating fully,” the Department of State reviewed the country’s overall level of cooperation in our efforts to fight terrorism, taking into account U.S. counterterrorism objectives with the DPRK and a realistic assessment of its capabilities.

Countering Terrorist Finance: The Financial Action Task Force (FATF) remained concerned about the DPRK’s failure to address the significant deficiencies in its regulatory regimes. In January, the DPRK engaged the FATF to discuss its anti-money laundering and counterterrorist financing regulatory regimes. While the FATF welcomed this initial engagement and said it remained open to further engagement, there were no further contacts. In its public statement in February, the FATF publicly urged the DPRK to immediately and meaningfully address these deficiencies. The DPRK’s financial system was opaque and compliance with international standards was difficult to gauge....

Regional and International Cooperation: In June, the UN Counter-Terrorism Committee Executive Directorate (CTED) held consultations with the DPRK on strengthening its implementation of United Nations Security Council Resolutions 1267/1989, 1988, and 1373. CTED plans to continue to engage the DPRK to assist in its implementation of those resolutions.

It was reported in April 2013 that the DPRK and Iran agreed on a deal to exchange DPRK mineral resources for Iranian crude oil, a further increase in economic ties between the two countries.173

WMD and Missile Exports

The DPRK has also export missile technology and may develop the potential for exporting nuclear materials or weapons nuclear export to other countries or non-state actors – including terrorist organizations. Reporting by the US Department of Defense cites two possible cases of exporting missile and WMD-related technology and equipment:174

• In addition to Burma, Iran, and Syria, past clients for North Korea’s ballistic missiles and associated technology have included Egypt, Iraq, Libya, Pakistan, and Yemen.

• In October 2009, the ROK seized North Korean-origin chemical warfare protective suits destined for Syria.

A US expert reports that,175

In April 2004 President of the Supreme People’s Assembly Presidium Kim Yong-nam told visiting journalist Selig Harrison, “We make a clear distinction between missiles and nuclear material. We’re entitled to sell missiles to earn foreign exchange. But in regard to nuclear materials, our policy past, present, and future is that we would never allow such transfers to al-Qaeda or anyone else.” Foreign Minister Paik Nam-soon added, “We denounce al-Qaeda, we oppose all forms of terrorism, and we will never transfer our nuclear material to others.” As the nuclear stalemate continued, however, the

173 “N. Korea, Iran strike mineral resources-for-oil deal,” Yonhap News Agency, April 25, 2013.
DPRK shifted. In 2005 Harrison reported that Vice Foreign Minister Kim Gye-gwan had warned, “[The United States] should consider the danger that we could transfer nuclear weapons to terrorists, that we have the ability to do so.” Kim said the regime had no plans to transfer but would not rule it out “if the United States drives [us] into a corner.” James Kelly, the U.S. State Department’s assistant secretary for East Asian and Pacific Affairs, testified in July 2004 that a similar threat had been made during trilateral talks in April 2003.

The possibility of nuclear material exports should not be exaggerated. Moreover, DPRK-produced plutonium would not be ideal for terrorist groups lacking in high levels of nuclear weapons sophistication, as the type of bomb design that can utilize plutonium is difficult to build, compared to a uranium-based weapon. On the other hand, an operational highly-enriched uranium program could increase proliferation risk. While a uranium bomb would require twice as much fuel, it is easier to weaponize and thus more attractive to non-state actors or states generally lacking in nuclear sophistication.176

**ROK**

For the ROK, the State Department reports, 177

**Overview:** The Republic of Korea strengthened its counterterrorism efforts in 2011. The Republic of Korea’s National Intelligence Service (NIS), the Korean National Police Agency (KNP), and various intelligence entities worked in close coordination with U.S. and international counterparts to access and contribute to multiple counterterrorism databases. The Government of the Republic of Korea reviewed and strengthened its emergency response plan.

In September 2011, the FBI Legal Attaché Office in Seoul worked jointly with the NIS and KNP to investigate an international terrorism subject who had relocated to the Republic of Korea. Subsequently, NIS and KNP provided information and monitored the subject until he departed the country.

**Legislation and Law Enforcement:** In September 2005, the Republic of Korea signed the International Convention for the Suppression of Acts of Nuclear Terrorism (ICSANT) and the National Assembly ratified it in December 2011.

**Countering Terrorist Finance:** The Republic of Korea is a member of the Financial Action Task Force (FATF) and the Asia/Pacific Group on Money Laundering (APG), a FATF-style regional body. The National Assembly passed the “Prohibition of Financing for Offenses of Public Intimidation Act” in September, which the Financial Intelligence Unit (FIU) had submitted in October 2010. Prior to passing the Act, the National Assembly made important changes to the law. In addition to criminalizing the provision, collection, and delivering of funds and assets to terrorists and terrorist organizations, the revised act established a freezing regime that controls the disposition and transfer of movable and immovable assets, bonds, and other property or property rights.

In December 2010, the FIU submitted a separate bill amending the Financial Transaction Reports Act to impose stricter penalties on financial institutions that violate reporting requirements. The bill was pending in the National Assembly at year’s end….

**Regional and International Cooperation:** South Korea is a member of the United Nations, Asia-Pacific Economic Cooperation (APEC), the Association of Southeast Asian Nations’ (ASEAN) Regional Forum, ASEAN+3, East Asia Summit, the Asia-Europe Meeting (an interregional forum consisting of the EC, 27 EU members and 13 members of the ASEAN Plus), Asia Cooperation Dialogue, Forum for East Asia-Latin America Cooperation, the Organization for Economic

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176 Ibid., p. 102.
Cooperation and Development, the G20, and the Conference on Interaction and Confidence-Building Measures in Asia. It is also a partner country of the Organization for Security and Cooperation in Europe and the North Atlantic Treaty Organization.

In 2011, the South Korean government organized numerous international conferences to share information and best practices. It hosted the Seventh Plenary Meeting of the Global Initiative to Combat Nuclear Terrorism in June, and the Third APEC Seminar on the Protection of Cyberspace in September. South Korea also hosted the FATF/APG workshop on Money Laundering Typologies in December.

The South Korean government held bilateral consultations on counterterrorism with the United Kingdom, Japan, China, Russia, Algeria, Uzbekistan, and Israel.

DPRK Drug and Weapons Sales and Other Illegal Activities

The DPRK engages in a variety of illegal and questionable activities in order to raise money for the continued existence of the regime. After defaulting on its international debts in 1975, the regime ordered its embassies to finance their own operations. Since this time – starting in 1976 – the DPRK has become extensively involved in transnational criminal smuggling, including drugs, counterfeit US currency, endangered species products, counterfeit pharmaceuticals, counterfeit cigarettes, and has even opened an international chain of restaurants. It has also been reported that the DPRK is engaged in insurance fraud and human trafficking.

Although it would appear to be secondary to financial incentives, the DPRK does claim ideological justifications for these criminal acts – explaining them as tools of guerilla warfare undermining the enemy and as a justified action under the previously-explained idea of juche (self-reliance).178

Drugs

DPRK diplomats would rely on their diplomatic immunity and used diplomatic pouches to purchase drugs – mainly opiates – for resale in foreign countries. Diplomats have also been caught smuggling other objects, such as pharmaceuticals, products made from endangered species, and gems. Scandinavia ejected most of the DPRK diplomatic corps from the country after a series of drug seizures linked to DPRK embassies worldwide.179

After three years of diplomatic relations, Venezuela expelled all DPRK diplomats in 1977 for trafficking drugs. Russia arrested a DPRK envoy in 1996 with 50 pounds of heroin. Two years later, Russia arrested another two diplomats with 35 kilograms of cocaine, while Egypt arrested a diplomat trying to smuggle 500,000 tablets of rohypnol into the country. That same

year, Germany arrested a deputy ambassador in the possession of heroin, and China arrested a consulate employee with 9 kilograms of opium.\footnote{Paul Rexton Kan, Bruce E. Bechtol Jr., Romert M. Collins, \textit{Criminal Sovereignty: Understanding North Korea’s Illicit International Activities}, Strategic Studies Institute, March 2010, p. 10-11.}

Overall, there have been at least 50 cases in 20 countries linking the DPRK to drug trafficking, most of which involve the detention and/or arrest of DPRK diplomats.\footnote{Liana Sun Wyler and Dick K. Nanto, \textit{North Korean Crime-for-Profit Activities}, Congressional Resource Service, p. 3-4.} In the wake of these arrests, the DPRK has increasingly turned to distribution networks run by organized crime gangs.\footnote{Paul Rexton Kan, Bruce E. Bechtol Jr., Romert M. Collins, \textit{Criminal Sovereignty: Understanding North Korea’s Illicit International Activities}, Strategic Studies Institute, March 2010, p. 10-11.}

Bureau 39, one of the Korean Workers’ Party Central Committee’s offices that obtains luxury items for DPRK elites, also procures components and technology for weapons programs and sets up illegal activities to fund its operations. The office, which is entirely outside the jurisdiction of the DPRK’s cabinet and separate from its national economic planning process, was reportedly established in 1974 and put the currency it generated into a slush fund of about $5 billion that was exclusively under the control of Kim Jong-il.\footnote{Sheena Chestnut, “Illicit Activity and Proliferation: North Korean Smuggling Networks,” \textit{International Security} 32:1, 2009, p. 90-93; Paul Rexton Kan, Bruce E. Bechtol Jr., Romert M. Collins, \textit{Criminal Sovereignty: Understanding North Korea’s Illicit International Activities}, Strategic Studies Institute, March 2010, p. 2-7.} It was reported in April 2013 that Kim Jong-un is believed to have more than $1 billion held in secret bank accounts in Austria, Switzerland, and Luxembourg.\footnote{“N Korean leader has over $1 billion in slush funds abroad: report,” Yonhap News Agency, April 25, 2013.}

Bureau 39 operates through Korea Workers’ Party-run and government-established front companies, such as Zokwang Trading Company (Macao) and Daesung Congguk (Austria). According to defectors, the DPRK regime cannot last without the income generated through Bureau 39’s illegal activities.\footnote{Sheena Chestnut, “Illicit Activity and Proliferation: North Korean Smuggling Networks,” \textit{International Security} 32:1, 2009, p. 90-93; Paul Rexton Kan, Bruce E. Bechtol Jr., Romert M. Collins, \textit{Criminal Sovereignty: Understanding North Korea’s Illicit International Activities}, Strategic Studies Institute, March 2010, p. 2-7.} Figure V.5 shows a 2009 representation of DPRK government offices, with Bureau 39 at the top.

Having lost the support of its Cold War patrons, the DPRK significantly increased its involvement in drug trade and trafficking in the mid-1990s, roughly concurrent with Kim Jong-Il’s accession to leadership. Drugs, counterfeit currency, and other illegal items were produced in the country and then transferred to criminal organizations – such as the Official Irish Republican Army, Japanese Red Army, Russian Mafiya, Chinese Triads, Taiwanese organized crime syndicates, and the Japanese Yakuza – for transport and distribution. Criminal groups also started to smuggle counterfeit currency and drugs on ships in mismarked or disguised containers, hiding money in jars of honey, inside the linings of
boxes, and inside cigarettes. Customs officials have discovered these containers in the US, Taiwan, and Japan.\textsuperscript{186}

The DPRK has also indirectly promoted social stability in other countries through its links to non-state actors and criminal gangs. For example, the DPRK has assisted guerillas in Myanmar by acting as a middleman, providing weapons in exchange for drugs. This has resulted in perpetuation of the insurgency, with the rebels having an increased weapons capacity as well as money to buy more arms, hold large areas of territory, and continue violence and human rights abuses, such as the forced recruitment of child soldiers.\textsuperscript{187}

Defectors have testified that drug production began in the late 1970s, followed later by the establishment of an experimental farm in 1988-9 in Hamkyung province (where pharmaceutical plants process it into heroin, as well). There was also a countrywide public order to produce opium for export in the early 1990s – at which point the police ordered farms to switch from grain production to growing poppies. Of course, this undermines subsistence agriculture and contributes to the North’s famines.\textsuperscript{188}

The major narcotics produced are heroin and methamphetamine. One refugee described the DPRK as a “narco-state in which all aspects of the drugs operation – from school children toiling in poppy fields to government-owned processing plants to state-owned cargo ships and trading companies – are controlled by Kim [Jong-II].” State farms and villages have production targets. Bureau 39 oversees the international distribution of drugs with the help of the military, using commercial and military vessels, diplomatic personnel, and state-owned businesses to launder the profits.\textsuperscript{189}

One CRS report describes the reported drug manufacturing activities of the DPRK as follows:\textsuperscript{190}

\textbf{Opiates.} According to press reports and North Korean defectors, farmers in certain areas have been ordered to grow opium poppies in the past. In 2006 congressional testimony, a representative of the State Department reported that North Korea cultivates 4,000 to 7,000 hectares of opium poppy, producing approximately 30 to 44 metric tons of opium gum annually. Though such estimates appear reasonable, they are nevertheless based on indirect and fragmented information. With the caveat that conclusive “hard” data is lacking, U.S. government investigative agency sources estimate North Korean raw opium production capacity at 50 tons annually. North Korean government chemical labs reportedly have the capacity to process 100 tons of raw opium poppy into opium and heroin per year.

\begin{itemize}
\item \textsuperscript{186} Sheena Chestnut, “Illicit Activity and Proliferation: North Korean Smuggling Networks,” \textit{International Security} 32:1, 2009, p. 85-95
\item \textsuperscript{187} Paul Rexton Kan, Bruce E. Bechtol Jr., Romert M. Collins, \textit{Criminal Sovereignty: Understanding North Korea’s Illicit International Activities}, Strategic Studies Institute, March 2010, p. 17-18.
\item \textsuperscript{190} Liana Sun Wyler and Dick K. Nanto, \textit{North Korean Crime-for-Profit Activities}, Congressional Resource Service, p. 6.
\end{itemize}
Methamphetamine. North Korea’s maximum methamphetamine production capacity is estimated to be 10 to 15 metric tons of the highest quality product for export. This coincides with a time when markets for methamphetamine are dramatically expanding in Asia, especially in Thailand, Japan, the Philippines, and more recently in Cambodia and China.

There have been several instances in which drugs linked to the DPRK have been caught en route:\(^{191}\)

In 2001, the Japanese Coast Guard and a North Korean ship exchanged fire, resulting in the sinking of the North Korean naval vessel that was operated by North Korean special forces. Japanese authorities subsequently determined that the North Korean ship entered Japanese waters to deliver methamphetamines to Japanese Yakuza members. In the following year, Taiwanese authorities stopped and searched a Taiwanese fishing trawler which contained 174 pounds of heroin that it had received from a North Korean gunboat. In 2003, Australian police arrested three men in a coastal village west of Melbourne who had received $50 million of street-ready heroin from a dinghy launched by the state owned North Korean ship, *Pong Su*, which lay just off shore. North Korea has used its merchant fleet to act as a middleman for other groups involved in drug trafficking by bartering other goods, such as weapons, in exchange for drugs. A North Korean vessel laden with small arms was detained by authorities in Myanmar who believed that local insurgent groups were intent on trading heroin for the arms.

**Pharmaceuticals and Cigarettes**

There are reports that the DPRK makes fake Viagra and Cialis in factories in Chongjin and also produces counterfeit cigarettes. By 2005, the DPRK had become one of the primary sources of internationally-branded cigarettes, producing several brands in approximately 12 factories owned by both DPRK entities and by Taiwanese- or Chinese-operated companies.\(^{192}\) From 2002-2005, DPRK-sourced Marlboros were recovered across the US in over 1,300 incidents.\(^{193}\)

According to a former State Department official, a standard 40-foot container of counterfeit cigarettes can cost as little as $70,000 to produce but can have a street value of $3-4 million. Federal charges filed in 2006 document that over a period of several years, criminal gangs brought one 40-foot container into the US per month; the cigarettes are also sold in other Asian countries such as Singapore, Taiwan, the Philippines, Belize, Vietnam, and Japan. As early as 1995, Taiwan seized 20 containers of counterfeit cigarette wrappers on a ship going to the DPRK that could have been used to produce up to $1 billion (street value) in counterfeit cigarettes. Defectors have reported factories in several areas in the DPRK, with workers belonging to a special work force team that receives extract rations.\(^{194}\)


Most of the DPRK-owned enterprises producing cigarettes illegally are located near Pyongyang. Rajin, a free trade zone port city on the east coast of the DPRK seems to be another main hub of counterfeit cigarette activity – where many of the factories are reportedly financed and owned by Chinese criminal organizations. One report indicated that the North Korean regime gives permission for port usage to certain deep-sea smuggling vessels and also offers a secure delivery channel for the gangs. According to the CRS,\(^{195}\) A 2006 article on North Korean cigarette production found that DPRK cigarette manufacturers have been turning more toward producing domestic low-priced brand cigarettes instead of counterfeit products. The article states that relative to the price of rice, the price of a package of cigarettes has been falling and their quality has been rising. In 2007, the DPRK imported $12.95 million ($14.1 million in 2006 and $13.5 million in 2005) in tobacco products from China. Domestic brands now are taking market share from imports, and North Korean cigarette producers — even the factories operated by the No. 39 Department of the Workers’ Party, which accumulates and manages Kim Jong-il’s slush funds — reportedly have been producing more for the domestic market than counterfeits of brands such as Mild Seven, Crown (both Japanese brands), and Dunhill.

Media reports indicate that Greek authorities seized some four million cartons of contraband cigarettes through the fall of 2006, of which three million were aboard North Korean vessels. For example, on September 25, 2006, Greek officials detained a North Korean freighter that was carrying 1.5 million cartons of contraband cigarettes and arrested the seven seamen on board. According to information from Greek customs authorities, the ship’s load of counterfeit, duty-unpaid cigarettes would have brought 3.5 million euros in taxes.

Furthermore, state-run factories manufactured pharmaceuticals and processed and packaged opiates and methamphetamines. DPRK drugs, counterfeit currency, cigarettes, and pharmaceuticals can be forensically identified as coming from the DPRK and are actually very high-quality products in both packaging and manufacturing/chemical purity. However, reports indicate that the DPRK’s criminal network partners now operate their own production and distribution networks within and outside of the DPRK, for example producing lower-quality counterfeit currency.\(^{196}\)

**Supernotes, Insurance, and Trafficking**

DPRK state-run factories also print counterfeit US $100 bills (the “Supernote”). Part of the US-led 2005 Banco Delta Asia freeze of DPRK funds (discussed later in this report) was to stop Bureau 39 from laundering Supernotes – which have been described by the US secret Service as the most sophisticated counterfeits in the world.

These bills, allegedly manufactured in the city of Pyeongseong, use high-tech Japanese equipment, paper from Hong Kong, and French ink. The Supernote has been found in Las Vegas, first in 2005 and again in 2007, when a Chinese businessman was arrested laundering the bills in casinos. One Supernote distribution ring involved the Official Irish Republican Army distributing the notes to Ireland, Great Britain, Poland, Denmark, the Czech Republic, and more.


Media reports indicate that counterfeit $100 bills are used in North Korean markets as currency and are valued at about the equivalent of $70. It is not clear, however, whether the counterfeit bills circulating are from existing stocks or are currently being produced. The anti-counterfeiting security features incorporated into new U.S. bills make counterfeiting much more difficult.

In late 2006, media reports surfaced that the DPRK could be involved in insurance fraud at a state level. Some experts believe that property damage claims are significantly overstated, claims are made for deaths that are not due to an accident, and accident circumstances are being changed. DPRK state-initiated insurance fraud has not been conclusively confirmed, though this type of activity would fit the DPRK’s criminal patterns. One source estimated that the DPRK’s 2006 fraudulent claims could have been more than $150 million. On the reported insurance fraud and endangered species trafficking, the CRS reports,\footnote{Ibid., p. 13-14.}

A recent example cited in media reports of possible DPRK state involvement in insurance fraud involves a ferry accident that reportedly occurred in April 2006 near the coastal city of Wonsan. After the accident, North Korea declared that 129 people had died, all of whom were provided life insurance coverage when they bought a ticket. It was claimed that most of the victims had died of hypothermia, although weather data apparently indicated that temperatures were warmer than reported by Pyongyang’s Korea National Insurance Corporation. In another case, in July 2005, a medical rescue helicopter apparently crashed into a government owned disaster supply warehouse, setting it on fire. It reportedly took the DPRK authorities only 10 days to file a claim that included a detailed inventory of hundreds of thousands of items — a task which insurance industry officials say normally takes most governments many months.\ldots

Several reports link North Korean officials with trafficking in endangered species, which is in contravention to the U.N. Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).\footnote{Ibid., p. 14-15.} The DPRK is not a member of CITES; however, DPRK diplomats allegedly have been caught trafficking in CITES-protected species between treaty member states, including France, Russia, and Kenya. According to the State Department, known DPRK violations of CITES began in the 1980s and have mainly involved trafficking in elephant ivory and rhino horn. Although some may argue that cases of endangered species smuggling by DPRK diplomats may have been for personal use, the sheer size of confiscated shipments — as much as several hundred kilograms each — suggests that endangered species trafficking could have been planned by a North Korean government entity.

Furthermore, the CRS also discusses the DPRK’s potential human trafficking activities:\footnote{Ibid., p. 14-15.}

According to the State Department, North Korea is a source country for men, women, and children trafficked for forced labor and commercial sexual exploitation and has been listed by the U.S. government as a “Tier 3” country for as long as it has been included in the State Department’s Trafficking in Persons annual reports. As a Tier 3 country, North Korea reportedly does not comply with minimum standards for eliminating trafficking and is not making significant efforts to do so.

It remains unclear to what extent DPRK profits from human trafficking activities as a source of revenue. However, the State Department indicates that North Korea directly contributes to labor
trafficking by maintaining a system of force labor prison camps inside the country, where an estimated 150,000 to 200,000 prisoners are forced to log, mine, and tend crops. According to Mark Lagon, Director of the U.S. Office to Monitor and Combat Trafficking in Persons, the most common form of DPRK trafficking are North Korean women and children who voluntarily cross the border into China and are picked up by trafficking rings and sold as brides in China and elsewhere, including Russia and Mongolia. The 2007 Trafficking in Persons report further states that North Korean women and girls may also be lured out of DPRK with promises of food, jobs, and freedom, only to be forced into prostitution, marriage, or exploitative labor arrangements in China.

Illicit Revenue and the DPRK’s Official Stance

The DPRK receives an estimated annual income of $15 million to $100 million from counterfeiting, $80-160 million from cigarette counterfeiting, and a total annual criminal activities income of $500 million\(^{201}\) to $1 billion.\(^{202}\)

In the past several years, there have been few drug trafficking incidents directly linked to the DPRK government, leading the State Department to report in 2008 that DPRK drug trafficking “appears to be down sharply and there have been no instances of drug trafficking suggestive of state-directed trafficking for five years.”\(^{203}\) This could be due to increased international attention to the DPRK’s activities, or because the DPRK has increased its use of criminal gangs instead of being directly involved in the distribution of its illegal products.

It must be noted that the DPRK denies allegations of any state-sponsored criminal acts and has accused the US of counterfeiting its own currency in an attempt to frame the DPRK. International and regional powers have either declined to comment on the issue or expressed skepticism as to the DPRK’s involvement in these types of activities, though recently it would appear that there has been a subtle shift towards supporting the US’ allegations.\(^{204}\)

Meanwhile, US officials have grown more certain in their conclusions; one State Department official testified to the Senate in 2006 that, “There’s no doubt that the government of the [DPRK], the Korean Workers’ Party, and the Korean People’s Army are all involved in criminal activities.”\(^{205}\) In addition, there seem to have been recent attempts by the DPRK to control and cut back on drug trafficking, especially outside of the state’s authority; reports also indicate increasing drug addiction inside the country:\(^{206}\)

An emerging genre of reports, yet to be substantiated, suggests that as state control of drugs in the DPRK becomes looser, a growing amount of stimulants for domestic sale and consumption are being produced privately by scientists in the DPRK and funded by private investors. Some reports suggest drug abuse is becoming widespread among senior military officials and also among the poor as a


\(^{203}\) Ibid., p. 5.


\(^{205}\) Ibid.

means to dull hunger. Others suggest that drug addiction is spreading among cadres such as the officer corps of the People’s Army Security Department and high-ranking party officials. A scenario is being presented of drugs sold openly at farmers markets, at times being used instead of currency in transactions.

**Weapons Sales**

While the DPRK does import weapons components – such as a jet mill used for missile fuel in 1994 and a blocked shipment of power-control devices that could be used in uranium centrifuges or missile launches – the country also sells its ballistic missiles and related technologies to other countries. With the funds it receives from these weapons sales, the DPRK can further develop missiles.\(^{207}\) There have also been reports of chemical and biological weapons assistance to Syria and Iran, though this is far from being conclusively substantiated.\(^{208}\)

The US Department of Defense reports that,\(^{209}\)

North Korea uses a world-wide network to facilitate arms sales activities and maintains a core group of recipient countries including Burma, Iran, and Syria. North Korea has exported conventional and ballistic missile-related equipment, components, materials, and technical assistance to countries in Africa, Asia, and the Middle East. Conventional weapons sales have included ammunition, small arms, artillery, armored vehicles, and surface-to-air missiles.

North Korea uses various methods to circumvent UNSCRs, including falsifying end-user certificates, mislabeling crates, sending cargo through multiple front companies and intermediaries, and using air cargo for deliveries of high-value and sensitive arms exports.

- In June 2011, a vessel bound for Burma, suspected of carrying military-related cargo, returned to North Korea after refusing a U.S. Navy inspection request.
- In February 2010, South Africa seized North Korean-origin spare tank parts destined for the Republic of Congo.
- In December 2009, Thai authorities impounded the cargo of a chartered cargo plane containing about 35 metric tons of North Korean weapons including artillery rockets, rocket-propelled grenades, and surface-to-air missiles.

The DPRK has exported approximately 500 ballistic missiles over the past 20 years, with over 80% of these exports taking place between 1987 and 1993. The country transferred 100-400 Scud-B missiles to Iran in 1987-1988, along with 25-40 to the UAE in 1989. Technical assistance in the production of Scud-C was given to Iran and Libya; the latter also received an unknown number of Scud-Bs, which were further exported to Ethiopia, Burma, Congo, and Vietnam. Libya and Egypt both received technical help for Scud-C production, while the DPRK exported Scud-Cs to Iran, Yemen, Syria, and Libya.

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It is likely that the DPRK also provided technical assistance to Iran for *Nodong* production and exported *Nodongs* to Pakistan, Libya, Syria, Iran, Iraq, and Egypt. Missile components and related items were found on a DPRK freighter headed to Libya in 1999, while another DPRK freighter transported *Scud* missiles to Yemen in 2002. Furthermore, 18 *Musudan* missiles were transferred to Iran in 2005.210 Burma (Myanmar) has also reportedly received DPRK missile assistance and conventional missile exports, in contravention of UN sanctions on the DPRK.211

By 1993, the DPRK reportedly had contracts with Libya, Iran, and possibly Syria and Pakistan to sell the *Nodong* missile. In 2002, US and Spain intercepted a DPRK ship headed to Yemen with a cargo of 15 *Scud* missiles, conventional warheads, and 85 drums of inhibited red fuming nitric acid, used in *Scud* missiles.212 However, DNI Dennis Blair testified to Congress in 2009 that,213

Pyongyang is less likely to risk selling nuclear weapons or weapons-quantities of fissile material than nuclear technology or less sensitive equipment to other countries or non-state actors, in part because it needs its limited fissile material for its own deterrent. Pyongyang probably also perceives that it would risk a regime-ending military confrontation with the United States if the nuclear material was used by another country or group in a nuclear strike or terrorist attacks and the United States could trace the material back to North Korea. It is possible, however, that the North might find a nuclear weapons or fissile material transfer more appealing if its own stockpile grows larger and/or it faces an extreme economic crisis where the potentially huge revenue from such a sale could help the country survive.

The economic desperation of the regime, especially in an atmosphere of increasing international sanctions, could increase the country’s level of acceptable risk – perhaps resulting in nuclear smuggling, as previously discussed.

If the DPRK does decide to engage in such activities, it would have the channels and capacity to do so. Experts state that the North has the capability to make both “plutonium metal or plutonium oxide powder, the two most likely forms for transport,” it would then be possible to shield six palm-sized pucks of plutonium from sensors. And while the US and its partners have increased the pressure on the DPRK’s Navy through Proliferation Security Initiative (PSI) interdictions, overland and air smuggling routes have also been developed that can be used for proliferation purposes. Furthermore, while there were 11 PSI interdictions in 2004, there are an estimated 65 nuclear smuggling events annually – if the

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210 It should be kept in mind that these export approximations are all reported; thus, the reports might not be true. At the same time, there could also be significant missile exports that were not reported; Markus Schiller, *Characterizing the North Korean Nuclear Missile Threat*, RAND, 2012, p. xiii, 38.


213 Dennis C Blair, *Annual Threat Assessment of the Intelligence Community*, Senate Select Committee on Intelligence, February 12, 2009.
North wanted to proliferate nuclear materials, it would likely be successful in at least some of its attempts.\textsuperscript{214}

Figure V.5: The DPRK’s Legal, illegal, and Illicit Activities Network (2010)

**ROK Weapons Sales**

Because of force structure reductions and the corresponding likely lack of increase in domestic procurement demand, the ROK is promoting export of military equipment. Sales abroad reached $2.4 billion in 2011\(^{215}\) – higher than the goal of $1.6 billion thanks to the success of the T-50 Golden Eagle aircraft – while domestic sales were $7 billion.\(^{216}\)

The ROK aims to be among the world’s top 8 exporters by 2015\(^{217}\) and by 2017 total ROK defense exports are forecast to be $10 billion.\(^{218}\) Items exported include aircraft engine and wing assemblies, small-caliber munitions, tank production technology, submarine combat systems, and wheeled armored vehicles.\(^{219}\)

Figure V.6 shows the increase in numbers of ROK weapons sales and defense companies over the past several years, along with total defense industry sales. The ROK is hoping to link defense exports with civilian industries like shipbuilding, exploiting existing export strengths. Regarding ROK military exports, the IISS reported,\(^{220}\)

> South Korea’s aerospace industry is the least developed sector, although the co-development of the T-50 trainer and the FA-50 light fighter variants show longer-term potential. Indonesia signed a contract in May 2011 for 16 T-50s, and the Philippines selected it in August 2012. The largest potential market is in the US, where the air force’s T-X trainer competition (for up to 350 aircraft) could provide a major boost to the T-50.

In naval systems, South Korea already produces Aegis destroyers and its own LHDs. In February 2012, Daewoo Shipbuilding won a contract to build four military oilers for the UK Royal Navy and also won a US$1.1bn contract to build four submarines for Indonesia. South Korea has established capacity in manufacturing armoured vehicles, such as the XK-2 tank and K9/10 self-propelled howitzers, which Seoul hopes to export. Lower labour costs, precision engineering, and South Korea’s military experience have boosted defence-industrial prospects.

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DPRK: Cyber, Economic Warfare, and SIGINT Capabilities

There are a variety of North Korean paramilitary and covert activities that also deserve mention. The DPRK has a significant intelligence program directed towards the ROK.\(^221\)

North Korea’s intelligence resources are focused primarily on South Korea and are dedicated to influencing public opinion, collecting sensitive information on U.S. and Republic of Korea government and military targets, and in some cases assassinating high-profile defectors and outspoken critics of the North Korean regime. North Korean intelligence officers and agents for years have infiltrated South Korea by posing as defectors. Firsthand accounts of confessed North Korean agents describe long-term strategies that can involve many years of living in South Korea as sleeper agents before being tasked with a mission. North Korean intelligence activity is likely greatest in East Asia; however, the full extent of activity outside the Korean peninsula is unknown.

Cyber

As note earlier, DPRK cyber warfare capabilities are a growing problem. Former US Forces Korea Commander James Thurman testified in front of the House Armed Services Committee in March 2012 that “North Korea employs sophisticated computer hackers

trained to launch cyber infiltration and cyber attacks against Korea and the United States,” showing that the DPRK has stepped up its efforts to enhance its cyber-attack capacity in recent years. In response to the DPRK’s growing abilities, the US plans to assist the ROK and Japan in building up their cyber defenses.222

There has also been speculation regarding a potential working relationship between the DPRK and Iran in cyberweapons development. While US officials say that there is no proof of such cooperation, a senior Israeli military official reportedly stated that Israel had evidence the DPRK and Iran were beginning to collaborate on development of cyberweapons.223

The IISS summarizes the DPRK’s cyber capabilities and history:224

Since the 1970s, the North Korean military (the Korean People’s Army – KPA) has maintained a modest electronic warfare (EW) capability. As a result of strategic reviews following Operation Desert Storm, the KPA established an information warfare (IW) capability under the concept of ‘electronic intelligence warfare’ (EIW). Complementing these EIW developments, the KPA is believed to have expanded its EW capabilities with the introduction of more modern ELINT equipment, jammers and radars. In 1998, Unit 121 was reportedly established within the Reconnaissance Bureau of the General Staff Department to undertake offensive cyber operations. Staff are trained in North Korea but some also receive training in Russia and China. In early 2012, activity attributed to Pyongyang included jamming the global positioning systems of aircraft using Seoul’s main international airports, as well as those of vessels in nearby waters for two weeks. North Korea also continued to launch distributed denial of service attacks on South Korean institutions and pursue cyber infiltration against military and other government agencies.

The DoD reported in May 2013 that,225

North Korea probably has a military computer network operations (CNO) capability. Implicated in several cyber attacks ranging from computer network exploitation (CNE) to distributed denial of service (DDoS) attacks since 2009, the North Korean regime may view CNO as an appealing platform from which to collect intelligence.

• According to a ROK newspaper, Seoul’s Central Prosecutor’s office attributed to North Korea a CNO activity on the ROK’s National Agricultural Cooperative Federation (Nonghyup Bank) servers in April 2011. Through remote execution, actors rendered the bank’s online services inaccessible and deleted numerous files concerning customer bank accounts while removing all evidence of CNO activity in the bank’s servers.

• In the years spanning 2009-2011, North Korea was allegedly responsible for conducting a series of distributed denial of service (DDoS) attacks against ROK commercial, government and military websites, rendering them inaccessible.

Technical attribution of cyberspace operations remains challenging due to the internet’s decentralized architecture and inherent anonymity. Given North Korea’s bleak economic outlook, CNO may be seen as a cost-effective way to modernize some North Korean military capabilities. As a result of North

223 Ibid.
224 IISS, Military Balance 2013, p. 312.
Korea’s historical isolation from outside communications and influence, it is likely to employ Internet infrastructure from third-party nations.

The DPRK is believed to have a cyber warfare unit called “Number 21,” composed of 3,000 elite hackers who break into networks for information and spread viruses – similar to espionage and vandalism, not warfare. The DPRK is also believed to train these experts as part of its computer warfare strategies at the electronic warfare department of a military technician training center.226

Two DPRK defectors who claimed to have been part of the cyber warfare department reported in 2011 that the department was vast, highly professional, and recruited hackers straight out of primary school. They are sent to Russia or China for training and receive special treatment by the DPRK – like housing or other privileges for their families and themselves. This is in part to reduce the temptation to defect, as they have access to the internet – unlike most other DPRK citizens – and thus know of the relative prosperity enjoyed by most other countries.227

One defector provided five reasons as to why the DPRK has decided to focus energy and resources into developing a cyber warfare program: cyber military strength is cost effective, provides higher utility than other forces, the DPRK is confident of its software development capabilities, it sees the internet as inherently weak and thus an easy target, and cyber warfare is asymmetrically advantageous for the DPRK. As the country is almost entirely not connected to the internet, it is much less exposed to such attacks – as opposed to the ROK, which is one of the most connected societies in the world.228

The DPRK is suspected of having been behind major cyber attacks on the ROK in 2008, when the DPRK shut down approximately 400 computers at Lee Myung-bak’s presidential transition office, and in 2009, when the websites of governmental institutions such as the National Assembly and the Presidential Office were paralyzed in a distributed denial-of-service (DDoS) attack.229

The 2009 attack involved 435 different servers in 61 countries.230 The ROK’s Seoul Central District Public Prosecutors’ Office announced in May 2011 that its investigation into a network failure of Nonghyup bank in March 2011 showed the issue was caused by a cyber-attack in which North Korea was involved.231 Another early 2011 attack paralyzed the

228 Ibid.
websites of 40 public and financial institutions, including the presidential office. In 2012, a major South Korean newspaper, JoongAng Ilbo, was also attacked.  

The DPRK is also suspected to be behind another attack on March 20, 2013 when a hacking attack originating from a Chinese IP address paralyzed approximately 32,000 computers at the ROK’s two largest public broadcasters, a news channel, and three large banks. The broadcasters attacked were on a list of ROK media firms denounced by the DPRK in 2012 for the right-wing manipulation of ROK public opinion.

The ROK traced the IP address of the hacker to a registration in Ryugyong-dong in Pyongyang (the capital of North Korea), and the hacker first accessed the ROK websites weeks before the March 2013 attack. The methods used in the attack were similar to those used by the DPRK’s Reconnaissance General Bureau, which has in the past lead hacking attempts against the ROK.

To undertake the attack, 76 pieces of malicious code were used; 18 bits of code have been identified as exclusively used by DPRK hackers in previous attempts. The attack also involved routing through the US, ROK, and eight other countries in an apparent attempt to disguise its identity; 49 infiltration routes were used (25 local; 24 foreign), of which 22 were IP addresses the DPRK has used before in attacks.

From 2008-2012, ROK public institution websites have received 73,030 hacking attempts – though the vast majority have not been conclusively tied to DPRK. ROK officials also say that DPRK computers were used to distribute malicious software by accessing ROK financial firms’ networks 1,590 times between June 2012 and April 2013.

In April 2013, the ‘hacktivist’ group Anonymous claimed to have initiated “Operation Free Korea,” a series of cyber attacks on the DPRK. The group first hacked the DPRK’s China-based website Uriminzokkiri.com, took control of the related Flickr and Twitter accounts, and posted a warning, a manifesto, a series of demands, and a wanted poster of Kim Jong-un with a pig snout and Mickey Mouse on his chest.

The group claimed to have stolen 15,000 membership passwords to the Uriminzokkiri website, releasing personal details of these accounts. Other, smaller pro-DPRK sites were also hacked, with personal details of members released. Any ROK citizens whose information is found on these membership lists could face criminal prosecution.

238 Ibid.
Anonymous also initiated a DDoS attack of DPRK-related websites like Uriminzokkiri.com and Air Koryo on Kim Il-sung’s birthday in early April. One hacker belonging to the group was interviewed by an ROK news agency, saying, “Anonymous members not only want to attack the government’s homepage, but will try to steal personnel data of North Korean leaders, and even hack into the North’s nuclear facilities.” Although there is no evidence the group has gotten into DPRK servers or intranet, they claim to have plans to do so.\(^{239}\)

**Economic Warfare and SIGINT**

*Jane’s* also notes that, since the mid-1990s, the DPRK has increased its economic warfare (EW) efforts as one of the primary components of an asymmetric warfare strategy against the US and the ROK. The administration and training of all EW and signals intelligence (SIGINT) assets in the Army is overseen by the Electronic Warfare Bureau (EWB). The DPRK keeps a police battalion at the DMZ, composed of eight to 12 police companies, that is in charge of a variety of ground-surveillance equipment – such as thermal and infrared imaging devices, acoustic and seismic sensors, and radar. The police force also has a basic SIGINT collection ability, especially at the Joint Security Area at Panmunjom.\(^{240}\)

Deployed near the DMZ, division-level SIGINT/EW units have responsibility for operations, spanning from their forward line to 15-30 km behind the US/ROK force deployment. At the corps level, SIGINT/EW battalions have responsibility for up to a 75-150 km depth. In addition, EWB independent units also likely support corps and division efforts.\(^{241}\)

In August 2010, users of Global Positioning System (GPS) in the northwest section of the ROK, including sections of the West Sea, experienced an unexpected degradation or loss of signal. Subsequent investigation revealed that the cause for this was jamming - presumably by the KPA - from an emitter located in the area around Kaesong.

While the DPRK has intermittently conducted jamming operations against ROK/US military and commercial broadcasts over the years this was the first major incident of GPS jamming. The KPA reportedly acquired GPS jamming equipment from Russia during the 1990s or early 2000s and subsequently modified it and began manufacturing two different systems. Subsequent reports indicated that the KPA’s GPS jammers were mobile units mounted on “electronic warfare vehicles.”

Following the November 2010 attack upon the island of Yonp’yong-do the ROK Army deployed UAVs to monitor KPA activities. The KPA, however, reportedly jammed the UAV’s navigation system, rendering them ineffective. More jamming occurred in March 2011 during the joint ROK-US ‘Ulchi Freedom Guardian’ exercises, when the KPA engaged in random GPS jamming harassment by sporadically jamming at five to 10 minutes intervals.

The jamming originated from the area of Haeju, Kaesong and Kumgang-san and had a range of approximately 100 km. During March 2011 and the again for 16 days in May 2012 the KPA conducted GPS jamming operations along the west coast, north of Seoul. The May incident affected the operations of 670 commercial airliners and 110 vessels in the Yellow Sea. These operations are believed to have conducted by elements of the Reconnaissance General Bureau.

\(^{239}\) Ibid.


\(^{241}\) Ibid.
ROK Cyber Defense

As has been touched upon earlier, South Korea has been increasing its asymmetric capabilities in order to better defend against new forms of DPRK attacks. In terms of cyber capabilities, the IISS report stated,242

South Korea established a Cyber Warfare Command Centre in early 2010, with over 200 personnel, in the wake of a substantial distributed denial of service attack in 2009. The new centre responds to the attention given to cyber and information security by the National Intelligence Service and the Defense Security Command. South Korea published an ‘Internet White Paper’ in 2009.

Other sources indicate the ROK plans to add 1,000 personnel to its Cyber Warfare Command Center over the 2013-2017 period. Increasing personnel and attention to this area is part of a much broader cyberwarfare effort by the ROK’s National Intelligence Service and the Defense Security Command.243

The DPRK has accused South Korea and the US of carrying out cyber attacks on DPRK websites;244 one DPRK state-run paper stated in March 2013, “It is nobody’s secret that the U.S. and south Korean puppet regime are massively bolstering up cyberforces in a bid to intensify the subversive activities and sabotages against the DPRK...They are seriously mistaken if they think they can quell the DPRK’s voices of justice through such base acts.”245

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243 Ibid.
VI. US Forces in Korea and the Pacific

As has been discussed in Chapter 4, US forces serve a variety of roles in aiding the ROK. The US plays a critical role in a wide range of scenarios ranging from limited DPRK probes to all-out war. In peacetime, they act as a tripwire in case of DPRK aggression. The ROK military also relies heavily on US capabilities in several areas, such as military intelligence – in particular, signals and imagery intelligence and analysis. US presence allows the ROK to counterbalance pressure and deter potential military intervention from nearby major powers, such as China or Japan, in the event of DPRK collapse and/or Korean reunification. Finally, US forces have also contributed to ROK economic development by reassuring foreign countries and investors that the ROK is a stable country. 246 The US can also offer the ROK extended deterrence in the face of DPRK nuclear and missile threat.

The US Forces Korea (USFK) described their mission as follows in a 2010 report,247

Our mission remains to deter North Korean provocations and aggression and, if deterrence fails, to fight and win. We accomplish our mission with forward-stationed, agile, well-trained forces on the Korean peninsula, ready to fight tonight and defeat aggression side by side with our Korean allies…. Should our deterrence options fail, we are prepared to defeat any aggression against the ROK.

USFK-ROK History

The United States has long seen the ROK as a critical ally; the US also has legal obligations to the country under UN Security Council Resolutions passed in 1950 that make the US the head of the United Nations Command, as well as under the ROK-US Mutual Security Agreement of 1954, which committed both nations to assist each other in case of attack from outside forces.

The US is part of the ROK-US Combined Forces Command (CFC) established in 1978. At that time, the lead role for defense and control of the ROK forces was transferred from the UN to the CFC. ROK and US national command authorities give guidance and direction to the CFC Commander through a bilateral Military Committee Meeting and a Security Consultative Meeting.

The Commander of USFK serves as Commander-in-Chief of both the UN Command (CINCUNC) and the CFC and is responsible for maintaining the armistice agreement that suspended the Korean War on July 27, 1953. Figure VI.1 provides a graphic representation of how the ROK-US alliance has progressed.

In 1994, armistice control of ROK military forces was returned to the ROK Joint Chiefs of Staff, though the US retained operational control in the event of armed conflict. Armistice control includes the ROK Joint Chiefs of Staff taking responsibility for organizing, training,


equipping, and operating ROK military forces, as well as controlling daily defensive land, sea, and air missions.

In 2003, the US and ROK agreed to a realignment of US forces from the center and north of Seoul to south of the city. The two countries also agreed to a dismantlement of the US-ROK CFC and a transition of wartime operational control (OPCON) to the ROK Joint Chiefs of Staff by April 2012, though this has since been pushed back to 2015.

At a US-ROK summit meeting in June 2009, the two countries announced the “Joint Vision for the Alliance of the United States of America and Republic of Korea,” which promoted the evolution of the alliance through an expansion of the territorial scope and a widening of the partnership into non-military areas.

**Figure VI.1: The ROK-US Alliance**

![Evolution of the ROK-U.S. Alliance](image)


**The Current Status of the USFK-ROK Alliance**

After new DPRK military provocations in 2010, OPCON transfer was delayed to December 1, 2015. This will result in a change from the current “joint defense system” to a situation of ROK forces leading and US forces supporting, especially in key capability areas. Reasons given by the ROK Ministry of National Defense for the delay were:248

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The change of the security environment on the Korean Peninsula, including an increase in military threats from North Korea.

A time of leadership change in and around the Korean Peninsula, including the presidential election of the Republic of Korea; and

Public demand, noting the necessity to adjust the period of the transfer, and the reflection of financial conditions necessary to fulfill future military capabilities.

A joint statement resulting from the October 2010 42nd Security Consultative Meeting described guidelines for US-ROK defense cooperation. The US-ROK Strategic Alliance 2015, a framework for OPCON transfer, was also signed at this time.\(^{249}\) It plans for synchronized and enabling initiatives to enhance ROK capabilities to take over OPCON for a smooth transition in the combined defense of the ROK.\(^{250}\)

The key elements of Strategic Alliance 2015 consist of the following: refining and improving our combined ROK-U.S. defense plans, defining and developing new organizational structures required for the ROK to lead the war effort, implementing more realistic exercises based on the North Korea of today and the future, preparing for the transfer of wartime operational control to the ROK Joint Chiefs of Staff in late 2015, and consolidating U.S. military units within the two enduring hubs as part of the Yongsan Relocation Program and Land Partnership Program. United Nations Command will continue to enforce and maintain the Armistice Agreement even after the full implementation of SA 2015.

The goal of all ROK and U.S. Alliance initiatives, as laid out in the plan, is to build adaptive capabilities to deter and defeat future provocations and fight and win on the peninsula, should deterrence fail.

In terms of organizational structure and command and control, United States Forces Korea will become the United States Korea Command, or U.S. KORCOM, providing the necessary manpower for the command’s supporting relationship to the ROK Joint Chiefs of Staff.

The KORCOM commander will maintain operational control of United States military forces and the ROK JCS Chairman retains full operational control of the ROK military forces. The ROK and U.S. national commands will function in a doctrinally supporting to supported relationship with ROK JCS in the lead.

The Republic of Korea will continue to strengthen and reinforce its intelligence, operations planning and execution, and joint battlefield management capabilities. The operational control transition timeline provides the Republic of Korea the time needed to field many critical, organic systems in their internal defense reform plan that will enable them to lead the war effort.

Strategic Alliance 2015 also provides renewed focus on ensuring realistic training that fully takes into account the current threat environment.

This was the driving focus in planning the recent annual Ulchi Freedom Guardian 2010 exercise, demonstrating the ROK and U.S. militaries are ready to address the full range of North Korean actions and provocations. Finally, the plan better synchronizes ongoing transformation efforts, such as the relocation of U.S. forces in Korea, to ensure all ongoing initiatives are aligned and mutually supportive.

The new bilateral plan reaffirms the U.S. commitment to the ROK and the region and ensures both nations are prepared to swiftly counter, deter, and defeat any North Korean provocations and


aggression. This Strategic Alliance 2015 plan continues to build an even stronger ROK-U.S. partnership and alliance.

The two countries also agreed to an Extended Deterrence Policy Committee (EDPC) to institutionalize deterrence cooperation in October of 2010. In October 2011, the two countries drew up a “South Korea-United States Counter Provocation Plan,” in which both “agreed to develop ‘combined readiness capabilities’ along South Korea’s disputed maritime border with North Korea, the Northern Limit Line (NLL). It was agreed that a new consultative body called the Korea-US Integrated Defense Dialogue (KIDD) would be established to oversee collaboration efforts between the US and South Korea” – including the EDPC, the Security Policy initiative, and the Strategic Alliance 2015 Working Group.251

In November 2011, the EDPC held a tabletop strategy exercise and further discussed a counter-provocation agreement in January 2012. At the first KIDD meeting in April 2012, the two countries’ militaries discussed operational scenarios for possible DPRK nuclear attacks. Bilateral security exercises – like Foal Eagle and Key Resolve – continued, with Max Thunder held in May 2012; it was the largest air defense exercise to date, including 60 military aircraft. Also, the ROK has been participating in US missile defense exercises for years and is working to develop its own missile defense system by 2015.252 The US has also committed to “providing specific bridging capabilities until the ROK obtains full self-defense capabilities, and to contribute to enduring capabilities for the life of the Alliance.”253

The most recent KIDD was in Washington, DC, from February 21-22, 2013:254

The KIDD comprised the executive meeting, the Security Policy Initiative (SPI), the Strategic Alliance 2015 Working Group (SAWG), and the Extended Deterrence Policy Committee (EDPC). Over the course of the two-day KIDD, ROK Deputy Minister for Policy Lim, Kwan-bin met with Under Secretary of Defense for Policy James Miller, Assistant Secretary of Defense for East Asia Mark Lippert, and Deputy Assistant Secretary of Defense for East Asia David Helvey. The key results and significance of the meetings are as follows:

- The ROK and the U.S. agreed to enhance collaboration for deterrence and mutual response against North Korean nuclear threats.
- The ROK and the U.S. defined the North Korean nuclear test as a serious act of provocation and agreed to strengthen tailored deterrence for each nuclear situation.
- Alliance issues such as the USFK base relocation are on track.
- The ROK and the U.S. will continue to develop a future-oriented strategic alliance in commemoration of the 60th anniversary of the Alliance.

In the course of OPCON transition, ROK forces have gradually assumed responsibility for an increasing number of mission areas previously undertaken by US forces, including:255

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…front-line control along the DMZ and control of the Joint Security Area at Panmunjom, maritime counter-infiltration operations, rapid mine-laying, search and rescue, rear-area chemical and biological decontamination, military police operations and battlefield counter-battery artillery operations.

Despite speculation that the DPRK’s early 2013 provocations would lead to another delay in OPCON transfer, on April 22, 2013, the ROK Defense Ministry reaffirmed its commitment to keep to the scheduled 2015 transfer. The US Eighth Army commander, Lt. General John Johnson, also reaffirmed that OPCON transfer preparations were on track and that the US would help deter DPRK aggression even after the ROK takes control. At the same time, public opinion is increasingly supporting a delay in the process.256

The tensions between the ROK and DPRK also led to a new US emphasis on the US-ROK alliance in the spring of 2013. Presidents Obama and Park both cited the strength of the US-ROK alliance at a joint press conference in Washington on May 7, 2013 and provided clear statements of each country’s policies regarding the DPRK.

President Obama stated,257

President Park, in your first months in office South Korea has faced threats and provocations that would test any nation. Yet you’ve displayed calm and steady resolve that has defined your life. Like people around the world, those of us in the United States have also been inspired by your example as the first female President of South Korea. And today I’ve come to appreciate the leadership qualities for which you are known -- your focus and discipline and straight-forwardness. And I very much thank you for the progress that we’ve already made together.

Today… We agreed to continue modernizing our security alliance. Guided by our joint vision, we’re investing in the shared capabilities and technologies and missile defenses that allow our forces to operate and succeed together. We are on track for South Korea to assume operational control for the alliance in 2015. And we’re determined to be fully prepared for any challenge or threat to our security. And obviously that includes the threat from North Korea.

If Pyongyang thought its recent threats would drive a wedge between South Korea and the United States, or somehow garner the North international respect, today is further evidence that North Korea has failed again. President Park and South Koreans have stood firm, with confidence and resolve. The United States and the Republic of Korea are as united as ever. And faced with new international sanctions, North Korea is more isolated than ever. In short, the days when North Korea could create a crisis and elicit concessions -- those days are over.

Our two nations are prepared to engage with North Korea diplomatically and, over time, build trust. But as always -- and as President Park has made clear -- the burden is on Pyongyang to take meaningful steps to abide by its commitments and obligations, particularly the denuclearization of the Korean Peninsula.

And we discussed that Pyongyang should take notice of events in countries like Burma, which, as it reforms, is seeing more trade and investment and diplomatic ties with the world, including the United States and South Korea.

257 Office of the Press Secretary, “Remarks by President Obama and President Park of South Korea in a Joint Press Conference,” The White House, May 7, 2013.
For our part, we’ll continue to coordinate closely with South Korea and with Japan. And I want to make clear the United States is fully prepared and capable of defending ourselves and our allies with the full range of capabilities available, including the deterrence provided by our conventional and nuclear forces. As I said in Seoul last year, the commitment of the United States to the security of the Republic of Korea will never waver.

More broadly, we agreed to continue expanding our cooperation globally. In Afghanistan -- where our troops serve together and where South Korea is a major donor of development assistance -- we’re on track to complete the transition to Afghan-led operations by the end of next year. We discussed Syria, where both our nations are working to strengthen the opposition and plan for a Syria without Bashar Assad. And I’m pleased that our two nations -- and our Peace Corps -- have agreed to expand our efforts to promote development around the world.

… President Park and myself very much share the view that we are going to maintain a strong deterrent capability; that we’re not going to reward provocative behavior. But we remain open to the prospect of North Korea taking a peaceful path of denuclearization, abiding by international commitments, rejoining the international community, and seeing a gradual progression in which both security and prosperity for the people of North Korea can be achieved.

If what North Korea has been doing has not resulted in a strong, prosperous nation, then now is a good time for Kim Jong-un to evaluate that history and take a different path. And I think that, should he choose to take a different path, not only President Park and myself would welcome it, but the international community as a whole would welcome it.

And I think that China and Russia and Japan and other key players that have been participants in Six-Party talks have made that clear. But there’s going to have to be changes in behavior. We have an expression in English: Don’t worry about what I say; watch what I do. And so far at least, we haven’t seen actions on the part of the North Koreans that would indicate they’re prepared to move in a different direction.

**President Park replied,**

First of all, the President and I shared the view that the Korea-U.S. alliance has been faithfully carrying out its role as a bulwark of peace and stability on the Korean Peninsula and in Northeast Asia, and that the alliance should continue to serve as a linchpin for peace and stability on the Korean Peninsula and in Asia. In this regard, I believe it is significant that the joint declaration on the 60th anniversary of our alliance we adopted spells out the direction that our comprehensive strategic alliance should take.

Next, the President and I reaffirmed that we will by no means tolerate North Korea’s threats and provocations, which have recently been escalating further, and that such actions would only deepen North Korea’s isolation. The President and I noted that it is important that we continue to strengthen our deterrence against North Korea’s nuclear and conventional weapons threat, and shared the view that in this respect, the transition of wartime operational control should also proceed in a way that strengthens our combined defense capabilities and preparations being made toward that way as well.

We also shared the view that realizing President Obama’s vision of a world without nuclear weapons should start on the Korean Peninsula and we stated that we would continue to strongly urge North Korea, in close concert with the other members of the Six-Party talks and the international community, to faithfully abide by its international obligations under the September 19th Joint Statement and the relevant Security Council resolutions.

Korea and the U.S. will work jointly to induce North Korea to make the right choice through multifaceted efforts, including the implementation of the Korean Peninsula trust-building process that I had spelled out.

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258 Office of the Press Secretary, “Remarks by President Obama and President Park of South Korea in a Joint Press Conference,” The White House, May 7, 2013.
I take this opportunity to once again send a clear message: North Korea will not be able to survive if it only clings to developing its nuclear weapons at the expense of its people’s happiness. Concurrently pursuing nuclear arsenals and economic development can by no means succeed.

This is the shared view of the other members of the Six-Party talks and the international community. However, should North Korea choose the path to becoming a responsible member of the community of nations, we are willing to provide assistance, together with the international community.

The President and I also had in-depth discussions on ways to enhance our global partnership. First, we noted together that Northeast Asia needs to move beyond conflict and divisions and open a new era of peace and cooperation, and that there would be synergy between President’s Obama’s policy of rebalancing to Asia and my initiative for peace and cooperation in Northeast Asia as we pursue peace and development in the region. We shared the view about playing the role of co-architects to flesh out this vision.

Furthermore, we decided that the Korea-U.S. alliance should deal not just with challenges relating to the Korean Peninsula and Northeast Asia, but confronting the broader international community.

…recently North Korea seems to be deescalating its threats and provocations -- what seems to be behind that? You asked these two questions. In fact, North Korea is isolated at the moment, so it’s hard to find anyone that could really accurately fathom the situation in North Korea. Its actions are all so very unpredictable. Hence, whether the Syrian situation would have an impact is hard to say for sure.

Why is North Korea appearing to deescalate its threats and provocations? There’s no knowing for sure. But what is clear and what I believe for sure is that the international community with regard to North Korea’s bad behavior, its provocations, must speak with one voice -- a firm message, and consistently send a firm message that they will not stand, and that North Korea’s actions in breach of international norms will be met with so-and-so sanctions and measures by the international community. At the same time, if it goes along the right way, there will be so-and-so rewards. So if we consistently send that message to North Korea, I feel that North Korea will be left with no choice but to change.

And instead of just hoping to see North Korea change, the international community must also consistently send that message with one voice to tell them and communicate to them that they have no choice but to change, and to shape an environment where they are left with no choice but to make the strategic decision to change. And I think that’s the effective and important way.

With regard to the North Korea issue, Korea and the United States, as well as the international community -- the ultimate objective that all of us should be adopting is for North Korea to abandon its nuclear weapons and to induce it to become a responsible member of the international community. This serves the interest of peace on the Korean Peninsula and the world, and it also serves the interest of North Korea’s own development as well. That is my view.

And so, in order to encourage North Korea to walk that path and change its perceptions, we have to work in concert. And in this regard, China’s role, China’s influence can be extensive, so China taking part in these endeavors is important. And we shared views on that.

With regard to China and Russia’s stance, I believe that China and Russia -- not to mention the international community, of course -- share the need for a denuclearized Korean Peninsula and are cooperating closely to induce North Korea to take the right path. In the case of China, with regard to North Korea’s missile fire and nuclear testing, China has taken an active part in adopting U.N. Security Council resolutions and is faithfully implementing those resolutions.

And with regard to Russia, Russia is also firmly committed to the denuclearization of the Korean Peninsula. And with regard to the adoption of U.N. Security Council resolutions on North Korea, it has been very active in supporting them. And they’ve also worked very hard to include a stern message to North Korea in the joint statement of the G8 Foreign Ministers meeting. Such constructive efforts on the part of China and Russia are vital to sending a unified message to North Korea that their nuclear weapons will not stand, and encouraging and urging North Korea to make the right decision.
… If North Korea engages in provocations, I will fully trust the judgment of our military. So if our military makes a judgment which they feel is the right thing, then they should act accordingly. And this is the instruction that I had made.

And North Korea has to pay a price when it comes not only with regard to provocations, but also with regard to the recent Kaesong industrial complex issue, where, based on agreements between the two sides, companies had believed in the agreement that was made and actually went to invest in the Kaesong industrial complex, but they suddenly completely dismissed and disregarded this agreement overnight, and denied various medical supplies and food supplies to Korean citizens left in that industrial complex, refusing to accept our request to allow in those supplies, which is what prompted us to withdraw all of our citizens from that park. This situation unfolded in the full view of the international community.

So who would invest, not to mention Korean companies, but also companies of other countries, who would invest in North Korea in a place that shows such flagrant disregard for agreements, and how could they, under those circumstances, actually pull off economic achievement? So I think in this regard, they’re actually paying the price for their own misdeeds.

These close US and ROK relations at the official level have not always been mirrored at the popular level, but much depends on the circumstances at the time. Korean popular attitudes towards have been US are mixed, and much depends on the poll being referenced. The ROK’s Asan Institute conducted a 2012 poll that showed that 94% of South Koreans supported the US-ROK alliance, only 67% supported a long-term US military presence, and just 57% had a favorable overall view of the US. In addition, only 40% thought that the US took ROK interests into proper consideration when making international policy disputes, and 19% thought that the US had taken a fair position during ROK-Japan territorial disputes in late 2012.  

A Pew poll at a time of crisis in ROK-DPRK relations in April 2013 found that some 78% of South Koreans had a favorable opinion of the US and confidence in President Obama’s leadership – almost double Obama’s approval rating in the US (45%) – and that this percent had not changed since President Obama took office in 2009. This is compared with a 70% favorable opinion at the end of President George W. Bush’s second term, in itself a large increase from only 46% after the US invasion of Iraq in 2003. 

Polls of American attitudes towards the ROK also vary, depending in part on the level of US tension with the DPRK at the time. One March 2013 poll found that 21% of Americans believed that the DPRK was not a threat, and only 41% hold a favorable view of the ROK – the same percentage as has a favorable view of China. Another Gallup poll in April 2013

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found that the majority of Americans (55%) said the United States should use its military forces to help defend the South, while only 34% said the U.S. should not do so.\footnote{Max Fisher, “Poll shows Americans are obsessed with North Korea, overstate its threat,” \textit{Washington Post}, April 11, 2013. http://www.washingtonpost.com/max-fisher/2012/10/9d0a891e-12e7-11e2-a16b-2c110031514a_page.html.}

These results must be interpreted in the light of the fact that only 7 of 10 Americans said they followed the development of issues in the Koreas. While 43% said it was likely the ROK and DPRK might have a clash or conflict in the next six months, 44% said it was not likely. Moreover, an earlier poll had found that 83% of Americans saw the DPRK’s nuclear efforts as a threat, even though the poll was taken shortly before the DPRK’s third test.\footnote{Gallup Politics, April 4, 2013, http://www.gallup.com/poll/161630/americans-say-aid-south-korea-attacked.aspx; Gallup Politics, February 18, 2013, http://www.gallup.com/poll/160541/say-north-korean-nukes-critical-threat.aspx.} A Pew poll in May 2013 found that 36% of Americans were following the news on the Koreas “very closely” – and 56% saying the US should take the threat “very seriously.” But these attitudes appear to be largely because 47% of Americans thought the DPRK could already launch a nuclear missile at targets in the US – a threat that does not actually exist.\footnote{Max Fisher, “Poll shows Americans are obsessed with North Korea, overstate its threat,” \textit{Washington Post}, April 11, 2013. http://www.washingtonpost.com/max-fisher/2012/10/9d0a891e-12e7-11e2-a16b-2c110031514a_page.html.}

In practice, public opinion polls on national security issues often do more to reflect the fact no current action is being debated or called for at a senior political level than provide insight into the strength of an alliance in a crisis.

**US Forces in Korea**

The major US force elements now stationed in Korea include the Eighth US Army, US Air Forces Korea (Seventh Air Force), and US Naval Forces Korea. At one point the US occupied some 85 active installations in the ROK, but it has cut its total military manning by over a third from about 44,200 personnel in 1990 and 36,300 personnel in 2000 to the current agreed force level of 28,500. US Army forces in the ROK are under the Eight US Army. The only combat formation remaining in the ROK is the 2\textsuperscript{nd} Infantry Division, with one infantry Brigade Combat Team and an aviation brigade.\footnote{IHS Jane's: Defence & Security Intelligence Analysis, “Jane’s World Armies: South Korea,” \textit{IHS Jane’s}, November 27, 2012. http://www.janes.com.}

\textbf{Figure VI.2} shows a brief Japanese estimate of how the forces the US still maintains in the ROK compare with those of the DPRK and the ROK. As has been noted previously, the Japanese data provides a useful estimate of how small the US forces in the ROK now are and shows that they have been reduced to a size that is largely demonstrative, providing a basis for rapid US power projection as well as a de facto trigger force in the face of a major DPRK attack.

As has been noted in the previous chapters, the US does not announce the details of its current equipment holdings in the ROK, nor does the IISS provide this information. Global Security estimates that US equipment now includes some 140 M1A1 tanks, 170 Bradley

These estimates seem dated and may exaggerate some aspects of the equipment in active US forces.

Global Security also estimated that US Air Forces Korea possessed approximately 100 aircraft: advanced fighters, (i.e., 70 F-16s), 20 A-10 anti-tank attack planes, various types of intelligence-collecting and reconnaissance aircraft including U-2s, and the newest transport aircraft. This number may not reflect recent force cuts, and the Japanese estimate of 60 US combat aircraft (including 40 modern F-16s) seems more correct. Of course, if necessary US air strength could be rapidly reinforced by the Seventh Fleet and the Seventh Air Force Command.\footnote{US Forces Order of Battle,” Global Security; Japanese Ministry of Defense, Defense of Japan 2012, p 14.}

ROK Ministry of Defense estimates of US equipment in Korea are shown in Figure VI.3. A recent Brookings report, shown in Figure VI.4, also provides an estimate of US military resources, with numbers similar to the Japanese figures. The report’s brief comparison of US-ROK forces with DPRK forces is given in Figure VI.5.

US Naval Forces Korea, US Marine Forces Korea, and Special Operations Command Korea are small headquarters and power projection support elements in peacetime. However, the US Pacific Command (USPACOM) can rapidly provide reinforcements. Depending on how a crisis unfolds in Korea, the US reinforced forces will act according to either the Flexible Deterrence Option (FDO) or the Force Module Package (FMP).\footnote{Republic of Korea, Ministry of National Defense, 2010 Defense White Paper, p. 55.} The FDO is the diplomatic, intelligence, military, and economic option to be implemented for the purpose of deterring war – should it appear imminent. The FMP refers to the major combat units and support units that will be reinforced in the early phase of a war. Included in the FMP reinforcements are major forces, such as immediate deployment of aircraft and the aircraft carrier battle group.
Figure VI.2: Japanese Estimates of US, ROK, and DPRK Forces in the Korean Peninsula

Figure VI.3: ROK Reporting on Major Organizations and Assets of the USFK

**Major Organizations of the USFK**

- United States Forces-Korea (USFK)
  - Eighth United States Army (EUSA)
  - U.S. Naval Forces-Korea
  - U.S. Marine Forces-Korea (MARFOR-K)
  - U.S. Special Operations Command-Korea (SOCKOR)
- U.S. Air Forces-Korea

**Major Assets of the USFK**

- Troops: 28,000
- Tanks: 50
- Fighters: 90
- Armored vehicles: 110
- Attack helicopters: 20
- Patriot/ATACMS: 40/60

*Figures approximate*

Figure VI.4: American Military Assets in the ROK

<table>
<thead>
<tr>
<th>Asset</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Army troops</td>
<td>~18000</td>
</tr>
<tr>
<td>Air Force troops</td>
<td>~8400</td>
</tr>
<tr>
<td>U-2r [Aircraft]</td>
<td>3</td>
</tr>
<tr>
<td>F-16 [Aircraft]</td>
<td>60</td>
</tr>
<tr>
<td>A-10 [Aircraft]</td>
<td>21</td>
</tr>
<tr>
<td>AH-64 D Apache [Helicopter]</td>
<td>24</td>
</tr>
<tr>
<td>M2A1 Bradley IFV [Tank]</td>
<td>66</td>
</tr>
<tr>
<td>M1A2 Abrams [Tank]</td>
<td>48</td>
</tr>
<tr>
<td>M109 SP Howitzer [Artillery]</td>
<td>16</td>
</tr>
<tr>
<td>Stryker [Armored Fighting Vehicle]</td>
<td>900</td>
</tr>
</tbody>
</table>


Figure VI.5: A Comparison of ROK, Combined US-ROK, and DPRK Military Assets

<table>
<thead>
<tr>
<th>Platform</th>
<th>ROK Total</th>
<th>ROK-US(^{269}) Total</th>
<th>DPRK Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multirole Fighters</td>
<td>400</td>
<td>686</td>
<td>74</td>
</tr>
<tr>
<td>Ground Attack and Bombers</td>
<td>70</td>
<td>103</td>
<td>162</td>
</tr>
<tr>
<td>Attack Helicopters</td>
<td>60</td>
<td>94</td>
<td>20</td>
</tr>
<tr>
<td>Main Battle Tank</td>
<td>2,414</td>
<td>2,483</td>
<td>3,500</td>
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<tr>
<td>Armored Combat Vehicle</td>
<td>220</td>
<td>1,163</td>
<td>2,500</td>
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<tr>
<td>Expeditionary/Fighting Vehicles</td>
<td>2,850</td>
<td>2,912</td>
<td>560</td>
</tr>
<tr>
<td>Towed and Self-Propelled Artillery</td>
<td>11,038</td>
<td>11,108</td>
<td>21,000</td>
</tr>
</tbody>
</table>


Comparative Capabilities

General Walter L. Sharp, former Commander of UNC/CFC/USFK, provided the following overview of the capabilities of DPRK and US-ROK forces, as well as the ongoing US force changes, in a speech to the East Asia Institute on July 9, 2010:\(^{270}\)

\(^{269}\) This includes only those resources that the US has in the ROK, not those that could be transferred there in the case of a conflict.
2010 has proven to be a very fast paced year. I’d like to begin our discussion today by sharing with you three things which I think greatly influence and impact our efforts: First, the North Korean threat, second, the North Korean attack on the Cheonan, and third, our combined transformation efforts.

First, North Korea poses a serious asymmetric threat to peace and stability in Northeast Asia. While the responsible nations of the world are looking to reduce their weapons of mass destruction, North Korea is continuing its development of these weapons systems and their delivery vehicles. Clearly this is a dangerous situation, not just for the United States, not just for the Republic of Korea, but also for the entire region.

Another unconventional threat posed by North Korea is in the size and disposition of their special operations forces. Even in armistice, North Korea has displayed the willingness to use these forces. The threats of the North Korean forces have shown themselves in their attack on the Cheonan, and the assassination team targeting the senior most individual to have defected from North Korea.

North Korea also continues to build their conventional capabilities and threaten their use as a means to manipulate the world community. One of North Korea’s largest capabilities, in terms of quantity and disposition, exists in the form of artillery and missile forces. This poses an asymmetric threat, one that holds at risk the capital of one of the world’s most important economies right here in Seoul.

While North Korea remains a potent military threat, they do not have the ability to reunify the peninsula by force. However, as demonstrated by the attack on the Cheonan and the asymmetric aspects of the North Korean threat that I discussed earlier, this merely changes the nature of the threat and how we are prepared to deter and defeat it. Let me be clear, by no means does North Korea’s inability to reunify the peninsula by force equate to an absence of a serious military threat. Rather, North Korea maintains a range of capabilities to engage in provocations. However these provocations and North Korea’s irresponsible behavior in the international arena to include events such as the continued oppression of its own people, the seizure of ROK assets at the Mt. Kumgang Resort, the sinking of the Cheonan, and the development of nuclear capabilities have significantly eroded their ability to effectively use other means to exercise national power in the region.

With very few diplomatic, informational, and economic options available, North Korea is forced to rely almost exclusively on military instruments when it decides to engage in provocations and we must therefore be ever vigilant.

Sun Tzu once said, “Thus the highest form of generalship is to attack the enemy’s strategy; the next best is to attack his alliances; the next, in order, is to attack the enemy’s army in the field...” More so than ever before, North Korea knows that they cannot defeat our strong and well prepared armies, air forces, navies, and marines, so they are now attacking us in other ways.

... However, the ROK-US Alliance needs more from the entire international community and all countries in the region, in particular China, to work with us in responding to North Korean provocations. We strongly desire Chinese cooperation in addressing North Korea’s aggressive behavior, and in particular would welcome Chinese action, even if behind the scenes, to assist in convincing North Korea that its path to security and prosperity lies in stopping its provocative behavior, better relations with its neighbors, and complete, irreversible denuclearization.

It is important that we be willing to have detailed discussions with the Chinese about interests related to the Korean peninsula. I believe it is safe to say that the US and ROK are willing and eager to engage in discussions about each of our interests. We hope that China will do the same. The more we can talk and reach a common understanding about regional security challenges, the better we are able to maintain stability and prosperity in this region. America’s five bilateral treaty alliances in Asia have long underpinned regional stability and prosperity. In Northeast Asia, our relationships with Korea and Japan serve as a foundation for American efforts to provide regional stability and prosperity. We look
forward to the continued strengthening of these Alliances and the contributions that they make to the region.

I would now like to spend a little bit of time discussing where the ROK-US Alliance is heading in the next few years. From what I mentioned earlier, it is clear that North Korea has increased their efforts to attack our Alliance and our strategic objectives. In addition, the security environment requires that we continue to prepare for any possible threats. To do this, we are continuing to strengthen the Alliance through our ongoing transformation initiatives. We will first demonstrate to the North Koreans that our Alliance and our collective Armed Forces remain strong and cannot be broken. Secondly, we will continue to modify our strategy to create adaptive, agile plans and combat forces that can anticipate and defeat our enemy’s provocations, deter aggression, and if deterrence fails, to fight and win.

The decision to delay the transition of wartime operational control until late 2015, as announced by President Lee and President Obama at last weekend’s G-20 meeting in Toronto, Canada, demonstrates the strength and agility of this Alliance. Although the ROK and US militaries were on track for OPCON transition in 2012, this adjustment will provide us with additional time to look at OPCON in a broader construct and to further synchronize the various Alliance initiatives and focus on meeting the established timelines for these initiatives. It also allows us to ensure each of the initiatives are mutually supportive and that they collectively support the Joint Vision Statement signed by President Lee and President Obama in 2009.

We will proceed very rapidly to develop a new OPCON Transition plan. This new plan, a plan for the Alliance of 2015, will help align all of our transformation initiatives we have worked on. It will truly be an overarching plan for the Alliance of 2015. Detailed discussion will start at this month’s 2+2 talks here in Seoul and be approved at the autumn Security Consultative Meeting between the Secretary of Defense and the Minister of Defense.

The goal of all of our ROK and US transformation efforts is to build adaptive capabilities to deter and defeat any future provocations and to fight and win on the peninsula if this deterrence fails. Transformation efforts consist of the preparation for the transfer of Wartime Operational Control; refining and improving our combined plans; the definition and development of new organizational structures and command and control relationships; the procurement, and integration of Republic of Korea capabilities to lead the warfight; more realistic training based on the North Korean threat of today and the future, as well as continued support for exercises and humanitarian assistance/disaster relief operations in the region; the consolidation of US military units into two enduring hubs; and lastly, tour normalization for US forces here in Korea.

Let me talk briefly about each of these elements, because these are the elements we will synchronize between now and 2015. To move to the Alliance of 2015, we will seek to better align in our planning efforts. We are taking the opportunity to review our plans and ensure they are realistic based upon the full scale of possible scenarios. This includes North Korean provocations, instability, or full-scale war on the peninsula. We will also ensure that our plans properly address the KORCOM to ROK JCS supporting to supported command and control structures. By doing so, we will ensure that we have the correct and most up-to-date plans in place to guarantee security and stability in the region.

Next, we will be continuing our transformation efforts in the areas of organizational structure and command and control. US Forces Korea will become the United States Korea Command or US KORCOM, providing the necessary manpower for our supporting relationship with the ROK Joint Chiefs of Staff. As a result of the OPCON transition, the KORCOM staff will be dual-hatted as Combined Forces Command, much the same way the US Forces Korea staff is dual hated in CFC.

At the same time the United States is transforming our organizational structures, the ROK will also continue to strengthen and build on the “JCS centric operational execution system” which will ensure and reinforce its intelligence, operations planning and execution and joint battlefield management capabilities. The Republic of Korea JCS is developing the command and control systems capable of real time battlefield management and enhanced warning and target acquisition. In turn, the ROK Army
is transforming its forces and creating a Ground Forces Operations Command. This command will be stood up a certified by 2015 before OPCON transition takes place.

In support of their planned defense reform, the ROK is already undergoing a process of procuring equipment, and training and organizing forces to lead the warfight. Until these capabilities exist, the United States will provide the agreed upon bridging and enduring capabilities. If OPCON transition had occurred in 2012, ROK forces would have had to rely on some US bridging capabilities, but by adjusting OPCON transition to 2015, the Republic of Korea will have time to field many of the critical organic systems in their Defense Reform plan that will enable them to lead the warfight.

The new Alliance 2015 plan improves our overall readiness by allowing time for these key warfighting headquarters to be established and the Republic of Korea to acquire critical Command and Control systems and capabilities. The final hand off of wartime Operational Control will be smoother and the end result will be better command and control of Alliance forces. The Strategic Alliance plan for 2015 also gives us the ability to better synchronize and improve our exercises... more robust and realistic exercises that will be based on the North Korean threat of today and the future.

The decision to adjust OPCON transition also allows us to synchronize the movement of US forces on the peninsula. Currently, US forces are undergoing two major infrastructure moves as part of this transformation. The major southward moves to US Army Garrison-Humphreys will begin in 2012 and will accomplish several goals. First, the relocation allows the United States to give back land, including the Yongsan Garrison here in Seoul, back to the Republic of Korea. Second, it allows for a consolidation of US forces into two hubs and will reduce the KORCOM footprint from 110 installations down to 48. The KORCOM headquarters will remain at in Seoul until after the OPCON transition is complete. These two milestones are synchronized with the rest of the strategic Alliance plan for 2015, and will greatly increase KORCOM’s ability to command and control US forces and support Korean forces.

The US is committed to ensuring all elements of the new Alliance plan are in place to facilitate its completion by late 2015. We are also reaffirming our commitment through the Tour Normalization program, which directly affects our ability to be able to fight across the full spectrum of conflict that I spoke about earlier. Since the beginning of the summer of 2008, the number of families in Korea has increased from 1,700 to over 4,200 with a goal of almost 5,000 families here by the summer of 2011. Moving forward, we will begin to assign families to Korea for three years, while unaccompanied and...

I am absolutely confident that our new bilateral plan to get us to 2015— the strategic alliance of 2015—will better synchronize our ongoing transformation efforts, it will reaffirm the US commitment to the ROK and the region; ensure both nations are even better prepared to swiftly counter, deter, and defeat any North Korean provocations and aggression; and will ultimately result in a much stronger Alliance.

**USFK Relocation**

The USFK is undergoing force repositioning, consolidating and relocating the US forces in the ROK into two areas south of Seoul – a southwest and a southeast hub – as a result of these shifts. These changes are shown in detail in Figure VI.6.271

The Southwest hub at Osan Air Base and U.S. Army Garrison Humphreys is to be the future centerpiece of the U.S. force structure within Korea. The southwest hub is already home to 7th Air Force headquarters and as U.S. forces realign south of the Han River, it will become home to the future U.S. KORCOM, 8th Army headquarters and 2nd Infantry Division. The Southeast hub at Daegu, Chinhae and Busan serve as the logistics distribution center and storage location for wartime and contingency preposition stocks. The two enduring hubs will be transformed into world-class enduring installations, promoting the Republic of Korea as an “assignment of choice.”

Two major ROK-U.S. bilateral agreements enable the consolidation and relocation effort: the 2002 Land Partnership Plan (LPP) and the 2004 Yongsan Relocation Plan (YRP). The LPP consolidates and relocates those U.S. forces north of the Han River, excluding forces from the greater Seoul metropolitan area, provides U.S. forces dedicated time on the ROK training areas and ranges, and ensures safety easements are provided and enforced. The YRP agreement relocates a majority of U.S. forces and UNC activities from Seoul to the USAG Humphreys. The YRP agreement also calls for a residual element to remain in Seoul to facilitate communications and maintain existing relationships with the ROK and other government and non-government agencies in the Seoul area.

The implementation of these plans will be accomplished in two phases - Phase 1 Consolidation and Phase 2 Relocation.

The ROK-U.S. Alliance is currently in Phase 1. As part of the U.S. relocation and camp consolidation efforts, the U.S. has returned an approximately 13.6 thousand acres of land that has been vacated by U.S. forces. In turn, the ROK procured approximately 3.5 thousand acres of land for U.S. use in expanding facilities within the two enduring hubs. Particularly important was the ROK’s grant of an initial 913 acres of land at USAG-Humphreys, enabling the ROK-U.S. Alliance to begin designing, planning and coordinating construction efforts. Funds required for land, facilities, moving services, and other expenses directly related to the YRP implementation are provided by the ROK, while the costs of LPP are shared between the ROK and U.S.

Approximately $1.2 billion of facilities and infra-structure are under construction at USAG-Humphreys with an additional $2.9 billion in facilities and infra-structure under design. The major facilities to be constructed are: medical facilities like the hospital, dental clinic and troop medical clinics; headquarters facilities (KORCOM, 8th Army, 2nd Inf. Div. and Installation Management Command-Korea); family housing and schools; a communications center and the operational and support facilities necessary for the relocation of 2nd Inf. Div.

The success of the planned relocation is predicated upon sustaining the U.S. force’s readiness to “fight tonight.” Units will be packaged and moved in manageable components. Throughout the realignment, units will maintain their full spectrum of operational and support capabilities. Force relocation is a win-win for the Alliance as it optimizes ROK-U.S. use of land and enhances U.S. force protection, readiness, quality of life, safety and ultimately the ROK-U.S. mutual defense.

In summary, U.S. priorities remain focused on transforming to meet future security demands and to strengthen the ROK-U.S. Alliance. Critical to the strategy is the repositioning and consolidation of forces. The repositioning of U.S. forces is a major signal of continued U.S. military commitment to the ROK-U.S. Alliance. The consolidation of these forces increases readiness, efficiency and cost savings; enhances quality of life; increases training opportunities, and offers a less intrusive presence.

The ROK is providing significant support for this relocation, guaranteeing the commercial rights of the construction contractors for the next 45 years. Overall, The US and the ROK are working closely on a number of related issues through a variety of channels:272

The Special Measures Agreement (SMA) negotiation concerning South Korea’s payment of part of the expenses for the USFK14; the transfer of wartime operational control to the ROK military on December 1, 2015 as agreed between President Lee Myung-bak and President Barrack Obama at a summit on June 26, 2010; the development of the Strategic alliance 2015 adopted at the 42nd ROK-U.S. Security Consultative Meeting (SCM) held in Washington, D.C. on October 8, 2010; the development of the Extended Deterrence Policy Committee (EDPC) designed to heighten the effectiveness of extended deterrence; preparations for the Nuclear Security Summit to be held in Seoul in March 2012; and ways to enhance the efficacy of ROK-U.S. combined exercises.

Military Exercises

The ROK military engages in military exercises with the US and other countries on a regular basis. Major joint/combined exercises and training include ‘Foal Eagle’ (US-ROK), ‘Hoguk’ (US-ROK), ‘Reception, Staging, Onward Movement, and Integration’ (US-ROK), ‘Ulchi Focus Lens’ (ROK-US), and ‘Khaan Quest’ (US-ROK-Mongolia).\(^{273}\)

US-ROK joint military exercises have led to DPRK protests for many years. The North’s reaction to Foal Eagle and Key Resolve in 2013 has been especially extreme. Key Resolve lasted from March 11-21 and worked to improve ROK and US combined forces’ “operation capabilities, coordinating and executing the deployment of US reinforcement forces, and maintaining the ROK military’s combat capabilities,” according to a USFK statement. 2013 was the first year that the exercise was led by the ROK Joint Chiefs of Staff instead of the CFC. Approximately 10,000 ROK and 3,500 US forces participated.\(^{274}\)


Foal Eagle is an annual two-month long ROK-US military exercise, one of the largest and longest exercises in the world, in which the US and ROK practice responding to an invasion. According to the Pentagon, Foal Eagle is purely a way to train for a defensive operation, utilizing Army, Navy, Air Force, and Special Operations forces. In the 2013 Foal Eagle – spanning March and April – approximately 10,000 US troops are directly involved. Another purpose of the exercises is for ROK and US troops to meet their counterparts. As such, the exercise involves community service, tours, sports tournaments, and liaison exchange.

In the first phase of the joint exercises, the US and ROK practiced deploying and coordinating their air forces; on the US side, equipment included F-16s, A-10s, E-3s – from Kunsan (8th Fighter Wing), Osan (51st Fighter Wing), and Kadena (18th Fighter Wing) Air Bases. Later in March, F-22 Raptors, B-2 stealth bombers, and B-52s also joined the exercises. According to USPACOM, “Th[e] mission by two B-2 Spirit bombers assigned to 509th Bomb Wing, which demonstrates the United States’ ability to conduct long range, precision strikes quickly and at will, involved flying more than 6,500 miles to the Korean Peninsula, dropping inert munitions on the Jik Do Range, and returning to the continental U.S. in a single, continuous mission.”

In response to a war with the DPRK, the F-22s could be one of the initial aircraft used by the US to escort bombers and/or destroy the North’s artillery – reportedly without being detected. According to one report,

… [F]or the recent show of force, the U.S. Air Force simply put the advanced stealth fighters on “static display,” meaning they were parked while senior South Korean military leaders -- very publicly -- reviewed America’s premier fighter up close and personal. They also received an orientation and “familiarization training,” said Col. Kathy Wilkinson, a Pentagon spokeswoman. That training “includes pilots talking about how they fly to planners talking about integrating that asset into combined arms operations.”

The Navy was also involved in the exercises; by the middle of March four Arleigh Burke-class guided-missile destroyers had arrived in the ROK – the USS Fitzgerald, John S. McCain, Lassen, and McCampbell. The ships, hailing from the Japan-based Destroyer Squadron 15, conducted naval drills with ROK vessels. Furthermore, a Los Angeles-class fast attack submarine, the USS Cheyenne, conducted naval exercises and made port calls. While the submarine did not have nuclear weapons, it was equipped with Harpoon anti-ship missiles, Tomahawk cruise missiles, and Mark-48 torpedoes, which can be used against both land and sea targets, at close and far ranges.

Aside from exaggerated propaganda over the threat of invasion and national security concerns, the DPRK also protests against US-ROK military exercises for a more practical reason – when the US and ROK undertake joint exercises, this forces the DPRK military to be on high alert and undertake military exercises in return. This, in turn, drains a significant

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276 Ibid.
277 Ibid.
278 Ibid.
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amount of resources from the country – such as fuel for planes and tanks – which the DPRK cannot afford.279

**Military Operation Plans**

The current US-ROK military operation plan (OPLAN) 5027 has gone through many variations over the past 50 years, with different potential contingencies resulting in different responses. In the event of a DPRK invasion, OPLAN 5027 calls for the US to increase the number of ground troops by as many as 690,000, fighter planes by 2,000, and warships by 160. However, these are worst-case sizing requirements.

The current OPLAN has five different stages, including “first deploying the U.S. military’s flexible deterrence power, destroying strategic targets in the North, entering the north, controlling the military of the occupied territory and finally, unification of the peninsula under the control of the South Korean government.”280

Both countries realize, however, that such a large number of ground troops may not be necessary or practical and that a Korean War-type of major war of attrition may not be necessary or even likely. Since 2010, both the ROK and the US have been developing a new OPLAN better-suited to modern battlefield conditions, with ROK forces taking the lead and US forces providing support.281 These changes will be a key part of the planned OPCON transfer in 2015.

The US and the ROK have also been working over the past decade to transition a conceptual plan (CONPLAN) for a DPRK regime collapse, CONPLAN 5029, into an operational plan (OPLAN 5029).282 According to one South Korean article, OPLAN 5029 prepares for five or six different scenarios of DPRK upheavals, such as a civil war due to a coup d’état or regime change, a ROK hostage incident, a large natural disaster, the outflow of WMD, and a large-scale DPRK citizen defection. One ROK news source reported,283

> The efforts to flesh out OPLAN 5029 are prompting some observers to comment that one of the most problematic aspects of the OPLAN 5029 discussion is that it places the CFC and not the South Korean government as the main agency in charge with handling the “sudden change” in North Korea, an issue that led to a dispute in 2005 between South Korea and the U.S.

A senior foreign policy and national security official from the Roh administration said, “The Roh Moo-hyun administration determined that a major issue with OPLAN 5029 involved the sovereignty of South Korea and thus halted drafting the plan in agreement with then-U.S. President George W. Bush during the June 2005 South Korea-U.S. summit.” This official also said that in the working plan discussed by South Korean and U.S. military authorities at the time, the CFC commander would take the initiative in responding to all situations, not just ones in the military sector, in the event of a North Korean upheaval. The official added, “If an upheaval takes place in North Korea, it is natural that the

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South Korean president should have the authority to lead the response, and it is appropriate that the South Korean president responds by giving directions to the South Korean Joint Chiefs of Staff.”

It was reported in February 2013, however, that US-ROK negotiations had stalled. Instead, there might be a new OPLAN 5015 developed that would replace both 5027 and 5029, incorporating strategies in both. The two countries were also reported to have had different opinions on how to deal with the DPRK after its December 2012 missile launch and February 2013 nuclear test. The ROK military requested USFK to include in OPLAN 5015 a counterplan against DPRK provocation and a plan for a pre-emptive strike against the DPRK’s nuclear test site(s). However, the US military maintained that in the case of DPRK provocation, OPLAN 5015 should focus on preventing the war from spreading in order to reduce the likelihood of an intervention by the Chinese military.284

It should also be noted that some sources report that China has developed a contingency plan for sudden changes in the DPRK, entitled “the Chick plan.” Reportedly, this plan involves security measures to protect the areas near the DPRK-Chinese border. It was also reported that the Chinese have already invested in bridges across the Yalu and Tumen rivers to support its planning, while gathering PLA Army troops in nearby Shenyang.285 China has deployed four rapid deployment forces near the Korean Peninsula that can be used, among other things, in the event of a contingency situation on the Peninsula.286

**A Preemptive Strike Option?**

Some US media and analysts outside the US government have suggested that that the US could preemptively strike the DPRK, forcing regime change. In an analysis of this potential option, the IISS writes that despite US and ROK qualitative superiority, the allies were not “confident of winning an offensive war against North Korea without sustaining heavy military and collateral casualties.”287

Even a surprise US-led attack would not be able to prevent significant artillery bombardment of Seoul, located approximately 40 kilometers from the DMZ – where about 70% of DPRK artillery and forces are located. Many DPRK political and military leaders would be able to hide in the DPRK’s many underground, making it hard to find and attack them. Nor is there a clear line of approach to Pyongyang.288

Moreover, the DPRK’s armed forces – a total active-duty strength of over one million – seem to be determined, loyal, and believe in the DPRK regime’s political legitimacy. As such, they likely would not collapse or surrender in large numbers, requiring a correspondingly large number of US-ROK ground troops to sustain a strike. Furthermore, the DPRK has a large

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288 Ibid.
arsenal of ballistic missiles and unconventional weapons – discussed later in this report – which could be used against allied forces. An IISS analysis notes,\textsuperscript{289}

Due to these considerations, a full scale pre-emptive attack to remove the North Korean regime is considered by Washington, Seoul and Tokyo to be an impractical option. More limited pre-emptive options include air strikes against known or suspected North Korean nuclear facilities, chemical weapons storage sites, missile launchers and firing bunkers, or North Korean artillery locations near the DMZ. But, these limited options suffer two basic disadvantages. Firstly, from a practical standpoint, it would be difficult to conduct a fully effective first strike, given the uncertainty and multiplicity of targets….Secondly, a limited pre-emptive attack runs the risk of provoking North Korean retaliation….

[T]here is little enthusiasm in Washington, and much less in Seoul and Tokyo, for a surprise ‘surgical strike’ to knock out North Korea’s key military assets. However, if the allies believed that war was inevitable and that North Korea was preparing to attack, a pre-emptive strike would hold great advantages. Likewise, if Pyongyang feared an attack on its critical military assets, it would be under pressure to use its weaponry before these assets could be destroyed on the ground.

While senior US military officers and intelligence analysis are not on public record regarding these views, many seem to agree with the IISS’ analysis of the risks involved.

**US Forces Japan (UFJ)**

The 50th anniversary of the Japan-US Security Treaty took place in 2010, and Japan 2010 White Paper describes Japan’s intention to implement deepening military cooperation in the coming years. These areas of bilateral cooperation included extended deterrence, information security, missile defense, and space, as well as individual security areas including humanitarian assistance, disaster relief, and cyber issues. US forces stationed in Japan serve as a deterrent and can function as an offensive “spear” in the event of armed aggression against the country. In the wake of early 2013 DPRK provocations and Japan’s increased threat perception, the US and Japan agreed on increased missile defense cooperation as well as coordination to monitor and respond to any DPRK escalations.\textsuperscript{290}

**US Deployments in Japan**

\textsuperscript{289} Ibid.
Figure VI.7 shows a Japanese estimate of the US forces in Japan. This estimate demonstrates that US forces in Japan are larger than US forces in the ROK. More importantly, Japan provides the US with critical basing and staging facilities for any serious Korean conflict.

The IISS 2013 edition of the Military Balance has different figures. It estimates a total of 36,700 personnel, with 2,500 on the US Army 9th Theater Area Command (Zama), 6,750 in the 7th Fleet Command (Yokosuka). The naval forces include a carrier group with one carrier, two guided missile cruiser, seven guided missile destroyers, four mine warfare vessels, an amphibious command ship, and three amphibious warfare ships.291

In addition, the IISS reports 12,500 personnel in the USAF 5th Air Force which is headquarter at Kadena Air Base in Okinawa with forces that include 18 F-16C/D, 2 E-3B, and 24 F-15C/Ds. It reports 14,950 US Marines in the US 3rd Marine division and associated air units in Okinawa.292

These forward deployed forces make Japan a critical partner in any US effort to aid the ROK by building up US forces in Korea, and in sustain a US presence in the event of war. Japan’s security does depend on both US security guarantees and Japan’s willingness to show it will support the US and ROK in any confrontation, crisis, or conflict with the DPRK.

Moreover, US ability to use Japan to stage its power projection forces would, however, be as important in a crisis as the force normally stationed there. Accordingly, the US “rebalancing” of its force posture throughout Asia will be critically dependent to some degree on the US and Japanese strategic alliance.

The Strengths and Weakness of the US-Japanese Alliance

An analysis by the US Congressional Research service summarizes the strengths and weakness of the US strategic relationship with Japan as follows:293

Japan and the United States are military allies under a security treaty concluded in 1951 and revised in 1960. Under the treaty, Japan grants the United States military base rights on its territory in return for a U.S. pledge to protect Japan’s security. Although defense officials had hoped that the 50th anniversary of the treaty would compel Tokyo and Washington to enhance bilateral defense cooperation, a rocky start by the Democratic Party of Japan (DPJ) government generated concern about the future of the alliance.

The coordinated response to the March 2011 disaster by the U.S. and Japanese militaries made a strong statement about the strength and the value of the bilateral alliance, and commitment from top U.S. leadership to assist the nation in its recovery may have assuaged fears that the alliance was adrift after a series of public disagreements.

On the other hand, the crisis response did little to change the fundamental challenges of the thorny base relocation issue in Okinawa. Although the governments have now amended the plan to allow several thousand marines to depart Okinawa in order to ease local frustrations, fundamental questions about the existence of problematic military facilities and the political sustainability of the Marine Corps presence on the island remain.

292 Ibid.
The relocation of Futenma air station is the largest and most controversial part of a broad overhaul of U.S. force posture in Japan and bilateral military activities, but it is not the only element. In 2002, the U.S. and Japanese governments launched the Defense Policy Review Initiative (DPRI) to review force posture and develop a common security view between the two sides. With the exception of the Henoko relocation, the plan has been largely successful. A training relocation program allows U.S. aircraft to conduct training away from crowded base areas to reduce noise pollution for local residents.

U.S. Carrier Air Wing Five is being relocated from Atsugi Naval Air base to the Iwakuni base, where a new dual-use airfield is operational. In 2010, U.S. Army Japan established at Camp Zama (about 25 miles southwest of Tokyo) a forward operational headquarters, which can act as a bilateral joint headquarters to take command of theater operations in the event of a contingency.

The SDF Air Defense Command facility at Yokota U.S. Air Base was recently completed. Since 2006, a bilateral joint operations center at Yokota allows for data-sharing and coordination between the Japanese and U.S. air and missile defense command elements. In June 2011, Japan announced a long-sought agreement to allow the transfer of jointly developed missile components to third parties, representing an exception to Japan’s ban on arms exports.

Several legal factors restrict Japan’s ability to cooperate more robustly with the United States. The most prominent and fundamental restriction is Article 9 of the Japanese constitution, drafted by American officials during the post-war occupation, that outlaws war as a “sovereign right” of Japan and prohibits “the right of belligerency.” It stipulates that “land, sea, and air forces, as well as other war potential will never be maintained.” However, Japan has interpreted this clause to mean that it can maintain a military for national defense purposes and, since 1991, has allowed the SDF to participate in non-combat roles overseas in a number of U.N. peacekeeping missions and in the U.S.-led coalition in Iraq.

The principle of “collective self-defense” is also considered an obstacle to close defense cooperation. The term comes from Article 51 of the United Nations Charter, which provides that member nations may exercise the rights of both individual and collective self-defense if an armed attack occurs. The Japanese government maintains that Japan has the sovereign right to engage in collective self-defense, but a 1960 decision by the Cabinet Legislation Bureau interpreted the constitution to forbid collective actions because they would exceed the minimum necessary use of force to defend Japan itself. Participation in non-combat logistical operations and rear area support of other nations, however, has been considered outside the realm of collective self defense.

Prime Minister Abe has repeatedly proposed that this restriction be reconsidered, a move that has been welcomed by U.S. officials in the past.

During the deployment of Japanese forces to Iraq, the interpretation prevented the SDF from defending other nations’ troops. Some Japanese critics have charged that Japanese Aegis destroyers should not use their radar in the vicinity of American warships, as they would not be allowed to respond to an incoming attack on those vessels. As the United States and Japan increasingly integrate missile defense operation, the ban on collective self-defense also raises questions about how Japanese commanders will gauge whether American forces or Japan itself is being targeted. Under the current interpretation, Japanese forces could not respond if the United States were attacked.

In December 2010, Japan agreed to continue Host Nation Support (HNS), the funds provided to contribute to the cost of stationing U.S. troops in Japan, at current levels for the next five years, starting in FY2011. The agreement came as a compromise, as the government of then-Prime Minister Naoto Kan had been pressured to cut Japan’s contribution due to Japan’s ailing fiscal health. Japan pays for most of the salaries of about 25,000 Japanese employees at U.S. military installations. The current agreement calls for Japan to pay about 188 billion yen annually (about $2.2 billion at 82 yen to one USD) through FY2016 to defray the costs of stationing troops in
Japan. The agreement also commits to reducing the number of Japanese nationals working for the U.S. military and affirms that the proportion of utility costs paid by the Japanese government will fall from 76% to 72% over a five-year period.

...Another source of strategic anxiety in Tokyo concerns the U.S. extended deterrence, or “nuclear umbrella,” for Japan. The Bush Administration’s shift in negotiations with Pyongyang triggered fears in Tokyo that Washington might eventually accept a nuclear armed North Korea and thus somehow diminish the U.S. security guarantee for Japan. These anxieties have persisted despite repeated statements by both the Bush and Obama Administrations to reassure Tokyo of the continued U.S. commitment to defend Japan. However, Japan’s sense of vulnerability is augmented by the fact that its own ability to deter threats is limited by its largely defensive-oriented military posture. Given Japan’s reliance on U.S. extended deterrence, Tokyo is wary of any change in U.S. policy—however subtle—that might alter the nuclear status quo in East Asia

Resolving the Okinawa Issue?

As a Congressional Research Service report notes, many of the tensions between the US and Japan over the basing of US forces in Japan have centered around Japanese objections to the deployment of US forces in Okinawa, the size of the US Marine base there and its air activities, its proximity to civilians, and crimes by US military personnel. These issues seem to have been resolved in April 2013 – although the long history of the dispute involves indicates that more depends on actual implementation than agreement on a plan. A report by the US DoD notes that,

The realignment, including consolidation, of U.S. forces within Okinawa is a significant effort by the U.S. and Japanese Governments which recognize the importance of enhancing Japanese and U.S. public support for the security alliance, which contributes to a sustainable presence of U.S. forces at facilities and areas in Japan as stated in the October 29, 2005 document of the Security Consultative Committee (SCC) entitled “U.S.-Japan Alliance: Transformation and Realignment for the Future”.

When implemented, the realignment will ensure a life-of-the-Alliance presence for U.S. forces in Japan as stated in the May 1, 2006 document of the SCC entitled “United States-Japan Roadmap for Realignment Implementation” (Realignment Roadmap) and will maintain deterrence and mitigate the impact of U.S. forces on local communities.

In order to realize the realignment, the U.S. and Japanese Governments have developed and will implement this consolidation plan. This consolidation plan, including sequencing steps, was jointly developed for facilities and areas remaining in Okinawa.

The U.S. and Japanese Governments reaffirm their commitment to the steady implementation of the realignment. The U.S. Government (USG) remains committed to return lands on Okinawa as designated U.S. Marine Corps forces relocate from Okinawa, and as facilities become available for units and other tenant activities relocating to locations on Okinawa.

The Government of Japan (GOJ) noted its responsibility to relocate all functions and capabilities that are resident in U.S. facilities designated for return, and that are required by U.S. forces remaining in Okinawa, including the housing necessary to support the remaining U.S. Marine Corps units, in coordination with the USG.

In the April 27, 2012 SCC Joint Statement, the U.S. and Japanese Governments confirmed that the total or partial return of the six facilities and areas designated in the Realignment Roadmap remains

unchanged and that the land of aforementioned facilities and areas utilized by U.S. forces are eligible for return in three categories, as follows:

1) Areas eligible for immediate return upon completion of necessary procedures;

2) Areas eligible for return once the replacement facilities in Okinawa are provided; and,

3) Areas eligible for return as U.S. Marine Corps forces relocate from Okinawa to locations outside of Japan.

This consolidation plan was developed reflecting the precepts that regular training and exercise, as well as the availability of facilities and areas for these purposes, are essential to ensure the readiness, employability, and interoperability of U.S. forces, and that adequate capacity of U.S. facilities and areas is necessary, and the capacity above typical daily peacetime usage levels plays a critical and strategic role in meeting contingency requirements. This capacity can provide an indispensable and critical capability toward meeting local emergency needs such as in disaster relief and consequence management situations.

In addition, in the April 27, 2012 SCC Joint Statement, it was noted that the effort to develop this consolidation plan should consider the possible impact of the joint and shared use of facilities located on Okinawa and that joint and shared use of facilities was a key objective of the Realignment Roadmap. The U.S. and Japanese Governments confirmed that joint and shared use by Japan Self-Defense Forces will continue to be discussed at a variety of fora, including the Joint/Shared Use Working Group, which was established in December 2010. The discussion at this working group will be reflected in master planning for facilities and areas remaining in Okinawa to implement this consolidation plan.

Timelines for completing the implementation of this consolidation plan are event-driven. Recognizing the strong desires of Okinawa residents, this consolidation plan is to be implemented as soon as possible while ensuring operational capability, including training capability, throughout the process. The U.S. and Japanese Governments agree that no further significant changes will be required for the foreseeable future. The USG will implement this consolidation plan subject to the Agreement under Article VI of the Treaty of Mutual Cooperation and Security between Japan and the United States of America, Regarding Facilities and Areas and the Status of United States Armed Forces in Japan (SOFA), including continuing to observe the needs for facilities and areas for the purposes of SOFA. Timelines for the return of facilities and areas...of this consolidation plan will be updated by the U.S. and Japanese Governments and publicly released every three years.

If is its implemented, the “Consolidation Plan for Facilities and Areas in Okinawa” will consolidate and close dozens of US military bases and US-controlled locations across Okinawa and put an end to negations that began with a 2006 road map. The Plan calls for 2,500 acres of land to be returned to Japan, including six major facilities and several smaller areas, while a coastal US Marine base would be expanded to include a new V-shaped runway built out into the sea. A US senior defense official remarked, “This is important because it lays out the plan for us to have a long-term presence in Okinawa, and one that is politically sustainable.”

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295 Kevin Baron, “U.S., Japan to announce new plan for Okinawa,” Foreign Policy – The E-Ring, April 4, 2013.
Figure VI.7: Japanese Estimates of US Forces Japan (USFJ) in 2012

United States Pacific Command (US PACOM)

The USPACOM strategy clearly defines the role of PACOM in dealing with the DPRK, defending the ROK, and in seeking cooperation with China.\(^{296}\)

The U.S. regards coercive activities by North Korea, in particular its pursuit of nuclear weapons and ballistic missile capabilities, to comprise the most urgent security threat in the region. USPACOM is fully committed to maintaining peace on the Korean Peninsula by effectively working with our allies and other regional states to deter and defend against North Korean military provocations, weapons proliferation, and illicit trafficking; and to support enforcement of international sanctions restricting North Korean arms trade and other prohibited activities.

… North Korea’s ongoing efforts to engage in WMD-related proliferation and arms sales in defiance of UN sanctions make it a primary actor of concern with respect to weapons of mass destruction (WMD). In addition, terrorist groups may leverage WMD-related expertise, technologies, dual-use material, and other resources to acquire chemical or biological weapons. This situation requires USPACOM, acting with domestic and foreign partners, to continue to enhance its capabilities to effectively counter the development and proliferation of WMD.

… USPACOM will enhance interoperability with allies and partners and develop the capacity of partners to cooperatively address regional challenges. This effort will move beyond traditional relationships to include security cooperation with China and others when there are shared interests and where cooperation can produce mutual benefits.

… The United States believes that a strong U.S.-China partnership is essential for peace, prosperity, and both regional and global security. The U.S. continues to welcome a prosperous and successful China that plays a greater role in global affairs, but China’s growing military capabilities coupled with its lack of transparency is concerning. Therefore, the United States and China must continue to pursue a more transparent, enduring, stable, and reliable military-to-military relationship by maintaining a consistent and meaningful dialogue to prevent miscommunication or miscalculation. We see opportunities for cooperation in areas such as humanitarian relief and disaster response, counter-piracy efforts, non-proliferation, counter-terrorism, noncombatant evacuation operations (NEOs), military medicine, and maritime safety. Such opportunities will enhance our bilateral relationship with China as we work toward common goals, candidly address our differences, and demonstrate mutual commitment to the security and stability of the Asia-Pacific region.

The Prelude to “Rebalancing”

While the rebalancing of US forces in Asia has already been described in detail, it is important to note that the reinforcing and repositioning US troops in the Pacific that is part of the new US strategy described in *Sustaining US Global Leadership: Priorities for the 21st Century* – and made public in January 2012 – has long been a US goal.

Admiral Willard, former US PACOM Commander, summarized both the US role in the Pacific and the need to strengthen it, in his annual testimony to the Senate Armed Service Committee on March 24, 2010:\(^{297}\)

Five of our nation’s seven mutual defense treaties are with nations in the Asia-Pacific region. We continue to work closely with these regional treaty allies—Australia, Japan, Republic of Korea,


Republic of the Philippines and Thailand—to strengthen and leverage our relationships to enhance security within the region.

. . . The US–ROK alliance remains strong and critical to our regional strategy in Northeast Asia. General Sharp and I are aligned in our efforts to do what is right for the United States and the ROK as this alliance undergoes a major transformation. I will defer to General Sharp’s testimony to provide the details of our relationship on the Peninsula, but note that General Sharp’s progress in handling the transition of wartime Operational Control (OPCON) to the ROK military has been exceptional as has his leadership of US Forces Korea.

The transformation of the US–ROK alliance will ultimately assist the ROK to better meet security challenges both on and off the peninsula. The ROK currently maintains a warship in the Gulf of Aden in support of counter-piracy and maritime security operations, and has provided direct assistance to Operation Enduring Freedom, including demonstrating strong leadership in its decision to deploy a Provincial Reconstruction Team to Afghanistan this year. Of particular note is the evolving trilateral security cooperation between the US, ROK, and Japan. Although there are still policy issues to be addressed in realizing its full potential, the shared values, financial resources, logistical capability, and the planning ability to address complex contingencies throughout the region make this trilateral partnership a goal worth pursuing.

… Our alliance with Japan is the cornerstone of our security strategy in Northeast Asia. Despite some recent challenges related to US basing in Japan, the military relationship, as well as the overall alliance, remain strong… That being said, we must make every effort—particularly as we celebrate the 50th anniversary of the alliance—to remind the citizens of both the US and Japan of the importance of our alliance to enduring regional security and prosperity.

US Pacific Command remains committed to the implementation of the Defense Policy Review Initiative (DPRI). Initiated by the US Secretaries of State and Defense with their Japanese counterparts in 2002, progress on Alliance Transformation and Realignment through the execution of the 2006 Roadmap for Realignment are critical next steps. Major elements of the Realignment Roadmap with Japan include: relocating a Marine Corps Air Station and a portion of a carrier air wing from urbanized to rural areas; co-locating US and Japanese command and control capabilities; deploying US missile defense capabilities to Japan in conjunction with their own deployments; improving operational coordination between US and Japanese forces; and adjusting the burden sharing arrangement through the relocation of ground forces.

The rebasing of 8,000 Marines and their dependents from Okinawa to Guam remains a key element of the Realignment Roadmap. Guam-based Marines, in addition to those Marine Forces that remain in Okinawa, will sustain the advantages of having forward-based ground forces in the Pacific Command AOR. Currently the Government of Japan (GOJ) is reviewing one of the realignment elements that addresses the Futenma Replacement Facility (FRF) and related movement of Marines Corps aviation assets in Okinawa; an action which is directly linked to the relocation of Marines to Guam and a plan to return significant land area to Japan. The GOJ has indicated it expects to complete its review by May of this year. The US remains committed to the 2006 DPRI Roadmap as agreed to by both countries.

The Japan Self-Defense Force is advancing its regional and global influence. In the spring and early summer of 2009, Japan deployed two JMSDF ships and two patrol aircraft to the Gulf of Aden region for counter-piracy operations. Although their Indian Ocean-based refueling mission recently ended, Japan remains engaged in the region by providing civil and financial support for reconstruction and humanitarian efforts in Afghanistan and Pakistan for the foreseeable future.

Although the Japanese defense budget has decreased each year since 2002, the Japan Self-Defense Forces continue their regular bilateral interactions with the US, and in some multi-lateral engagements with the US and our other allies, such as the Republic of Korea and Australia. Last year witnessed the completion of several successful milestones in our bilateral relationship, including the completion of a yearlong study of contingency command and control relationships and Ballistic Missile Defense
The Evolving Military Balance in the Korean Peninsula and Northeast Asia

(BMD) testing of a third Japan Maritime Self-Defense Force Aegis destroyer. Japan continues to maintain over $4 billion in annual Host Nation Support (HNS) to our Japan-based force. Japan HNS contribution remains a vital strategic pillar of respective US and Japanese alliance commitments.

**The 2012 Shifts in Strategy**

It is important to note, however, that no US strategy document ever used the term pivot or called for a major build-up of US forces. The text of *Sustaining US Global Leadership: Priorities for the 21st Century* stated that,298

U.S. economic and security interests are inextricably linked to developments in the arc extending from the Western Pacific and East Asia into the Indian Ocean region and South Asia, creating a mix of evolving challenges and opportunities. Accordingly, while the U.S. military will continue to contribute to security globally, *we will of necessity rebalance toward the Asia-Pacific region*. Our relationships with Asian allies and key partners are critical to the future stability and growth of the region. We will emphasize our existing alliances, which provide a vital foundation for Asia-Pacific security.

We will also expand our networks of cooperation with emerging partners throughout the Asia-Pacific to ensure collective capability and capacity for securing common interests. The United States is also investing in a long-term strategic partnership with India to support its ability to serve as a regional economic anchor and provider of security in the broader Indian Ocean region. Furthermore, we will maintain peace on the Korean Peninsula by effectively working with allies and other regional states to deter and defend against provocation from North Korea, which is actively pursuing a nuclear weapons program.

PACOM issued a strategic guidance for US priorities and engagement with the region in early 2012. The current PACOM Commander, Samuel J. Locklear III, outlined five priorities in implementing the program:299

- Strengthen and advance alliances and partnerships;
- Mature the US-China military-to-military relationship;
- Develop the US-India strategic partnership;
- Remain prepared to respond to a Korean Peninsula contingency; and
- Counter transnational threats.

Locklear identified North Korea as the most important trouble spot in the region, commenting that “If there is anything that keeps me awake at night, it’s that particular situation… We have to ensure that we maintain as much of a stable environment on the Korean Peninsula as we can.”300

**The Total Size of PACOM Forces**

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300 Ibid.
Figures VI.8 and VI.9 show that US forces in Japan are only part of the resources the US could bring to bear assuming it relied on total PACOM forces. A PACOM estimate in May 2013, summarized force strength as follows:\footnote{\url{http://www.pacom.mil/about-uspacom/facts.shtml}}

U.S. military and civilian personnel assigned to USPACOM number approximately 330,000, or about one-fifth of total U.S. military strength. U.S. Pacific Fleet consists of approximately 180 ships (to include five aircraft carrier strike groups), nearly 2,000 aircraft, and 140,000 Sailors and civilians all dedicated to protecting our mutual security interests. Marine Corps Forces, Pacific possesses about two-thirds of U.S. Marine Corps combat strength, includes two Marine Expeditionary Forces and about 85,000 personnel assigned. U.S. Pacific Air Forces is comprised of approximately 43,000 airmen and more than 435 aircraft. U.S. Army Pacific has more than 60,000 personnel assigned, including five Stryker brigades. Of note, component command personnel numbers include more than 1,200 Special Operations personnel. Department of Defense Civilians employees in the Pacific Command AOR number about 38,000. Additionally, the U.S. Coast Guard, which frequently supports U.S. military forces in the region, has approximately 27,000 personnel in its Pacific Area.

It is important to note that while these force levels are impressive, they again represent a major cut in US forces and presence since 1990, cuts that have taken place during a period in which both China and the DPRK have made major increases in their conventional and WMD capabilities. There has been a steady downward trend in the total numbers of personnel, combat aircraft, and major combat ships from the end of the Cold War in 1991 onwards.

\footnote{\url{http://www.pacom.mil/about-uspacom/facts.shtml}.}
**Figure VI.8: US Forces in the Pacific in 2013, Equipment by Type and Location**

Pacific Command (PACOM) Headquartered in Hawaii

**Guam**

<table>
<thead>
<tr>
<th>Equipment Type</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Submarine, nuclear powered</td>
<td>3</td>
</tr>
</tbody>
</table>

**Japan**

<table>
<thead>
<tr>
<th>Equipment Type</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carrier, nuclear powered</td>
<td>1</td>
</tr>
<tr>
<td>Cruiser, with guided missiles</td>
<td>2</td>
</tr>
<tr>
<td>Destroyer, with guided missiles</td>
<td>7</td>
</tr>
<tr>
<td>Amphibious command ship</td>
<td>1</td>
</tr>
<tr>
<td>Mine countermeasures</td>
<td>4</td>
</tr>
<tr>
<td>Amphibious assault ship</td>
<td>1</td>
</tr>
<tr>
<td>Landing ship, dock</td>
<td>2</td>
</tr>
<tr>
<td>Landing platform, dock</td>
<td>1</td>
</tr>
<tr>
<td>Aircraft, fighter</td>
<td>54</td>
</tr>
<tr>
<td>Aircraft, airborne early warning</td>
<td>2</td>
</tr>
<tr>
<td>Aircraft, transport</td>
<td>13</td>
</tr>
<tr>
<td>Aircraft, CSAR</td>
<td>8</td>
</tr>
<tr>
<td>Aircraft, tanker</td>
<td>12</td>
</tr>
<tr>
<td>Helicopter, transport</td>
<td>34</td>
</tr>
</tbody>
</table>

**ROK**

<table>
<thead>
<tr>
<th>Equipment Type</th>
<th>Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main battle tank</td>
<td>M-1 Abrams</td>
</tr>
<tr>
<td>Main battle tank</td>
<td>M-2/M-3 Bradley</td>
</tr>
<tr>
<td>Main battle tank</td>
<td>M-109</td>
</tr>
<tr>
<td>Helicopter, attack</td>
<td>AH-64 Apache</td>
</tr>
<tr>
<td>Helicopter, transport</td>
<td>CH-47 Chinook</td>
</tr>
<tr>
<td>Helicopter, utility</td>
<td>UH-60 Black Hawk</td>
</tr>
<tr>
<td>Artillery, multiple rocket launcher</td>
<td>MLRS</td>
</tr>
<tr>
<td>Air defense, surface-to-air missile</td>
<td>MIM-104 Patriot</td>
</tr>
<tr>
<td>Equipment Type</td>
<td>Quantity</td>
</tr>
<tr>
<td>---------------------------------------------------------</td>
<td>----------</td>
</tr>
<tr>
<td>Submarine, nuclear powered, with ballistic missiles</td>
<td>8</td>
</tr>
<tr>
<td>SSN, with dedicated, non-ballistic missiles</td>
<td>19</td>
</tr>
<tr>
<td>Submarine, nuclear powered</td>
<td>8</td>
</tr>
<tr>
<td>Carrier, nuclear powered</td>
<td>5</td>
</tr>
<tr>
<td>Cruiser, with guided missiles</td>
<td>11</td>
</tr>
<tr>
<td>Destroyer, with guided missiles</td>
<td>24</td>
</tr>
<tr>
<td>Frigate, aviation</td>
<td>12</td>
</tr>
<tr>
<td>Mine countermeasures</td>
<td>2</td>
</tr>
<tr>
<td>Amphibious assault ship</td>
<td>4</td>
</tr>
<tr>
<td>Landing platform, dock</td>
<td>3</td>
</tr>
<tr>
<td>Landing ship, dock</td>
<td>4</td>
</tr>
</tbody>
</table>

Source: Based primarily on material in International Institute for Strategic Studies, *The Military Balance 2013* (London: Routledge, 2013). Figures do not include equipment used for training purposes. All equipment figures represent equipment in active service.
Figure VI.9: US Forces in the Pacific in 2013, Forces by Role and Location

Japan

<table>
<thead>
<tr>
<th>Quantity</th>
<th>Role</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Army</strong></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>HQ (9th Theater Army Area Command) – Zama</td>
</tr>
<tr>
<td><strong>Navy</strong></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>HQ (7th Fleet) – Yokosuka [1 base at Sasebo; 1 base at Yokosuka]</td>
</tr>
<tr>
<td><strong>Air Force</strong></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>HQ (5th Air Force) – Okinawa-Kadena</td>
</tr>
<tr>
<td>1</td>
<td>FTR WING with:</td>
</tr>
<tr>
<td></td>
<td>2 FTR SQN with a total of 18 F-16 Fighting Falcon – Misawa</td>
</tr>
<tr>
<td>1</td>
<td>FTR WING with:</td>
</tr>
<tr>
<td></td>
<td>- Okinawa-Kadena</td>
</tr>
<tr>
<td></td>
<td>1 AEW&amp;C SQN with 2 E-3B Sentry</td>
</tr>
<tr>
<td></td>
<td>1 CSR SQN with 8 HH-60G Pave Hawk</td>
</tr>
<tr>
<td></td>
<td>2 FTR SQN with a total of 24 F-15C/D Eagle</td>
</tr>
<tr>
<td></td>
<td>1 LIFT WING with 10 C-130H Hercules</td>
</tr>
<tr>
<td></td>
<td>2 C-12J</td>
</tr>
<tr>
<td>1</td>
<td>TPT WING with 10 C-130H Hercules - Yakota</td>
</tr>
<tr>
<td>1</td>
<td>3 Beech 1900C (C-12J)</td>
</tr>
<tr>
<td>1</td>
<td>Special Ops GRP – Okinawa-Kadena</td>
</tr>
<tr>
<td><strong>Marines</strong></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>DIV (3rd)</td>
</tr>
<tr>
<td>1</td>
<td>FTR SQN with 12 F/A-18D Hornet</td>
</tr>
<tr>
<td>1</td>
<td>TKR SQN with 12 KC-130J Hercules</td>
</tr>
<tr>
<td>2</td>
<td>TPT HEL SQN with 12 CH-46E Sea Knight</td>
</tr>
<tr>
<td>1</td>
<td>TPT HEL SQN with 12 MV-22B Osprey</td>
</tr>
<tr>
<td>3</td>
<td>TPT HEL SQN with 10 CH-53E Sea Stallion</td>
</tr>
</tbody>
</table>

ROK

<table>
<thead>
<tr>
<th>Quantity</th>
<th>Role</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Army</strong></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>HQ (8th Army) – Seoul</td>
</tr>
<tr>
<td>1</td>
<td>HQ (2nd Inf Div) – Tongduchon</td>
</tr>
<tr>
<td>1</td>
<td>HBCT</td>
</tr>
<tr>
<td>1</td>
<td>CBT AVN BDE</td>
</tr>
<tr>
<td>1</td>
<td>ARTY BDE</td>
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<tr>
<td></td>
<td>AD BDE</td>
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<tr>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td><strong>Air Force</strong></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>HQ (7th Air Force) – Osan</td>
</tr>
<tr>
<td>1</td>
<td>FTR Wing, with 1 FTR SQN with 20 F-16C/D Fighting Falcon – Osan</td>
</tr>
<tr>
<td>1</td>
<td>1 FTR SQN with 24 A-10 Thunderbolt II</td>
</tr>
<tr>
<td>1</td>
<td>ISR SQN with U-2S – Osan</td>
</tr>
<tr>
<td>1</td>
<td>FTR Wing, with 1 FTR SQN with 20 F-16C/D Fighting Falcon – Kunsan</td>
</tr>
<tr>
<td>1</td>
<td>Special Ops SQN</td>
</tr>
</tbody>
</table>

Source: Based primarily on material in IISS, The Military Balance 2013. Figures do not include equipment used for training purposes. All equipment figures represent equipment in active service.

### The US and Extended Regional Deterrence

The shifts in the wider military balance affecting both the Koreas and the rest of Asia help explain the fact that the US is simultaneously seeking arms control and examining developments for a new approach to regional extended deterrence as an alternative approach to enhancing regional stability.

As the US Nuclear Posture document issued in 2010 makes clear, this could involve further major changes in the military balance:

> The United States is committed to the long-term goal of a world free of nuclear weapons. The President has directed a review of potential future reductions in US nuclear weapons below New START levels. Several factors will influence the magnitude and pace of such reductions.

> … Any future nuclear reductions must continue to strengthen deterrence of potential regional adversaries, strategic stability vis-à-vis Russia and China, and assurance of our allies and partners.

> This will require an updated assessment of deterrence requirements; further improvements in US, allied, and partner non-nuclear capabilities; focused reductions in strategic and non-strategic weapons; and close consultations with allies and partners. The United States will continue to ensure that, in the calculations of any potential opponent, the perceived gains of attacking the United States or its allies and partners would be far outweighed by the unacceptable costs of the response.

> … Accordingly, the United States is fully committed to strengthening bilateral and regional security ties and working closely with its allies and partners to adapt these relationships to emerging 21st century requirements. We will continue to assure our allies and partners of our commitment to their security and to demonstrate this commitment not only through words, but also through deeds. This includes the continued forward deployment of US forces in key regions, strengthening of US and allied non-nuclear capabilities, and the continued provision of extended deterrence. Such security relationships are critical not only in deterring potential threats, but can also serve our non-proliferation goals—by demonstrating to neighboring states that their pursuit of nuclear weapons will only undermine their goal of achieving military or political advantages, and by reassuring non-nuclear US allies and partners that their security interests can be protected without their own nuclear deterrent capabilities. Further, the United States will work with allies and partners to strengthen the global non-proliferation regime, especially the

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implementation of existing commitments within their regions.

Security architectures in key regions will retain a nuclear dimension as long as nuclear threats to US allies and partners remain. US nuclear weapons have played an essential role in extending deterrence to US allies and partners against nuclear attacks or nuclear-backed coercion by states in their region that possess or are seeking nuclear weapons. A credible US “nuclear umbrella” has been provided by a combination of means—the strategic forces of the US Triad, non-strategic nuclear weapons deployed forward in key regions, and US-based nuclear weapons that could be deployed forward quickly to meet regional contingencies.

The mix of deterrence means has varied over time and from region to region…During the Cold War, the United States forward-deployed nuclear weapons in both Europe and Asia, and retained the capability to increase those deployments if needed. At the end of the Cold War, a series of steps were taken to dramatically reduce the forward presence of US nuclear weapons. Today, there are separate choices to be made in partnership with allies in Europe and Asia about what posture best serves our shared interests in deterrence and assurance and in moving toward a world of reduced nuclear dangers.

… In Asia and the Middle East—where there are no multilateral alliance structures analogous to NATO—the United States has mainly extended deterrence through bilateral alliances and security relationships and through its forward military presence and security guarantees. When the Cold War ended, the United States withdrew its forward-deployed nuclear weapons from the Pacific region, including removing nuclear weapons from naval surface vessels and general purpose submarines. Since then, it has relied on its central strategic forces and the capacity to re-deploy non-strategic nuclear systems in East Asia, if needed, in times of crisis.

The Administration is pursuing strategic dialogues with its allies and partners in East Asia and the Middle East to determine how best to cooperatively strengthen regional security architectures to enhance peace and security, and reassure them that US extended deterrence is credible and effective.

Unless dramatic shifts take place to limit the DPRK nuclear and missile efforts, they are almost certain to lead to some new mix of US, Japanese, and ROK efforts to build up radically more effective air and missile defenses, offer at least enhanced conventional deterrence in the form of weapons of mass effectiveness, and possibly include a more structured form of US theater nuclear umbrella.

Barring major new limits to the DPRK’s nuclear and missile efforts, these developments are almost certain to lead to some new mix of US, Japanese, and ROK efforts to build up radically more effective air and missile defenses, offer at least enhanced conventional deterrence in the form of weapons of mass effectiveness, and possibly include a more structured form of US theater nuclear umbrella or “extended deterrence.”
About the Authors

Anthony H. Cordesman holds the Arleigh A. Burke Chair in Strategy at CSIS and acts as a national security analyst for ABC News. He is a recipient of the Department of Defense Distinguished Service Medal. During his time at CSIS, he has completed a wide variety of studies on energy, US strategy and defense plans, the lessons of modern war, defense programming and budgeting, NATO modernization, Chinese military power, the lessons of modern warfare, proliferation, counterterrorism, armed nation building, the security of the Middle East, and the Afghan and Iraq conflicts. (Many of these studies can be downloaded from the Burke Chair section on the CSIS website at http://www.csis.org/program/burke-chair-strategy.) Cordesman has directed numerous CSIS study efforts on terrorism, energy, defense planning, modern conflicts, and the Middle East. He has traveled frequently to Afghanistan and Iraq to consult for MNF-I, ISAF, US commands, and US embassies on the wars in those countries, and he was a member of the Strategic Assessment Group that assisted General Stanley McChrystal in developing a new strategy for Afghanistan in 2009. He frequently acts as a consultant to the US State Department, Defense Department, and intelligence community and has worked with US officials on counterterrorism and security areas in a number of Middle Eastern countries.

Before joining CSIS, Cordesman served as director of intelligence assessment in the Office of the Secretary of Defense and as civilian assistant to the deputy secretary of defense. He directed the analysis of the lessons of the October War for the secretary of defense in 1974, coordinating the US military, intelligence, and civilian analysis of the conflict. He also served in numerous other government positions, including in the State Department and on the NATO International Staff. In addition, he served as director of policy and planning for resource applications in the Energy Department and as national security assistant to Senator John McCain. He had numerous foreign assignments, including posts in the United Kingdom, Lebanon, Egypt, and Iran, as well as with NATO in Brussels and Paris. He has worked extensively in Saudi Arabia and the Gulf.

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