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**DEFENDING AMERICA
REDEFINING THE CONCEPTUAL BORDERS
OF HOMELAND DEFENSE**

The Missile Threat from North Korea

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Introduction

The following report is a rough initial draft section of a full report on Homeland Defense being prepared as part of the CSIS Homeland Defense project. It is a rough working draft, and reflects solely the views of the author and not of the CSIS team working on the project. It is being circulated for comment and reaction and will be substantially modified and updated before being included in the final report.

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The Problem of Proliferation

The Russian and Chinese nuclear and missile threats unquestionably are the largest potential current threats to the American homeland. They currently, however, present little political risk. As such, they are not the threats the US currently plans to meet in deploying NMD – although such deployments would provide substantial defense capability against Chinese strikes and some capability against Russian accidental launches that did not involve weapons with sophisticated penetration aids.

As has been explained earlier, the US has down-sized its NMD programs to deal primarily only with “accidents” and the kind of missile threats posed by powers that are attempting to develop missile systems that can attack the US, potentially with biological or nuclear warheads. These threats are reflected in Table III.4, which lists nations that are known to have made significant efforts to research, develop, produce, or deploy weapons of mass destruction and long-range missile delivery systems since the end of World War II.

These activities of these states do not mean that the growth of new missile-borne threats to the American homeland is inevitable, and many proliferators now pose little or no threat to the US. Table III.4 lists a number of current proliferating states that clearly are unlikely to be threats to the US homeland. India and Pakistan are serious dangers to each other, and may supply other proliferating states, but there are no current indications they will ever be a threat to the American homeland. Similarly, it also lists a number of countries like Argentina, Brazil, Canada, Sweden, and South Africa which have frozen or rolled-back their efforts to proliferate.

The two most important potential threats to the US listed in Table III.4 are Iran and North Korea, although it is still possible that Iran and North Korea may not develop missiles that can directly threaten the American Homeland. Table III.4 also shows that current pace and scale of proliferation is serious, and there is no way to predict who will join the club of those states that can directly attack the US, or with what forces and what intent.

These uncertainties regarding the long-term impact of proliferation and technology transfer have helped polarize many of the arguments for and against NMD. There are well-developed bodies of literature that attempt to disprove that the proliferation of missile threats will present a major threat to the American homeland and an equally well-developed body of literature attempting to prove that the emerging threat is extremely serious. Neither body of literature is particularly convincing as a source of reliable prophecy.

The past history of efforts to predict the rate of proliferation is littered with false prophecies, failed analytic methodologies, and questionable intelligence – although there has been rough balance between exaggerating and underestimating the threat. The literature on potential threats is also often highly ideological, reflecting long-standing biases for and against SDI and NMD, attitudes towards given regimes,

and a transfer of known hostility to America's friends and allies to possible willingness to attack the American homeland. As is discussed in the next chapter, much of the American literature also focuses far too rigidly on the threat from missiles and nuclear weapons, and tends to ignore other methods of delivery and weapons of mass destruction.

At this point in time, it seems fair to say that virtually any position regarding the seriousness of the threat from nations like Iran and North Korea has some intellectual credibility simply because it is so impossible to predict the future. On the one hand, it is possible that missiles may remain a "regional" threat that does not lead new nations to target ballistic missiles on the US. On the other hand, it is clear that it is becoming easier for hostile states to acquire the capability to use missiles to strike at the US. The problems in technology systems integration, and manufacturing necessary to acquire acquiring boosters with ICBM ranges are becoming less serious. A number of developing states will acquire the technology to build missiles with the range and payload to deliver a nuclear or biological weapon against a target in the US over the next decade *if* they choose to do so. The history of past arms races is sometimes one of rollback, but it is also filled with sudden and unpredictable surges in new weapons and technologies.

Table III.4Who Has, Can Have, or Will Have Weapons of Mass Destruction?

<u>Country</u>	<u>Type of Weapon of Mass Destruction</u>			<u>Long-Range Missiles</u>	
	<u>Chemical</u>	<u>Biological</u>	<u>Nuclear</u>	<u>Theater</u>	<u>Intercontinental</u>
<u>East-West</u>					
Britain	Breakout	Breakout	Deployed	Deployed	SLBMs
Canada	-	Technology	Technology	-	-
France	Breakout	Breakout	Deployed	Deployed	SLBMs
Germany	Breakout	Breakout	Technology	Technology	-
Sweden	-	-	-	Technology	-
Russia	Residual	Residual	Deployed	Technology	ICBMS/SLBMs
US	Residual	Breakout	Deployed	Technology	ICBMS/SLBMs
<u>Middle East</u>					
Egypt	Residual	Breakout	-	Deployed	-
Israel	Breakout	Breakout	Deployed	Deployed	Technology/Booster
Iran	Deployed?	Breakout	Technology	Deployed	Technology/Booster
Iraq	Deployed	Deployed	Technology	Technology	?
Libya	Deployed	Research	-	Deployed	?
Syria	Deployed	Technology?	-	Deployed	-
Yemen	Residual	-	-	-	-
<u>Asia and South Asia</u>					
China	Deployed?	Breakout?	Deployed	Deployed	ICBMS/SLBMs
India	Breakout?	Breakout?	Deployed	Deployed	Technology
Japan	Breakout	Breakout	Technology	Technology	-
Pakistan	Breakout?	Breakout?	Deployed	Deployed	Technology?
North Korea	Deployed	Deployed	Technology	Deployed	Technology/Booster
South Korea	Breakout?	Breakout	Technology	Technology?	-
Taiwan	Breakout?	Breakout	Technology	-	-
Thailand	Residual	-	-	-	-
Vietnam	Residual	-	-	-	-
<u>Other</u>					
Argentina	-	-	Technology	Technology	-
Brazil	-	-	Technology	Technology	-
South Africa	-	-	Technology	Technology	-

North Korean Force Developments

An examination of the key case studies in proliferation makes these issues more clear. Each of the three nations involved -- North Korea, Iran, and Iraq -- present a different potential threat. In the case of North Korea, there are major debates among experts over just how serious a threat North Korea can be to US territory. Some experts believe that North Korea will pursue the development of long-range missiles and nuclear weapons regardless of what it may appear to agree to at the political level. Some believe that the North Korean regime cannot last long enough to present a serious threat, and others believe that North Korea will give up its efforts in return for aid and economic ties to other Asian states and the US. They point to a perceived breakthrough in the talks between North and South Korea in June 2000.

North Korea and Nuclear Weapons

There is no debate within the US intelligence community over the fact that North Korea has long had large stocks of chemical and biological weapons, and has deployed them in warheads that can be used in its Scud and extended range Scud missiles. There is more debate over whether North Korea has nuclear weapons and is continuing its nuclear weapons development and production program.

The first major reports of North Korea's nuclear program began in 1993, when analysts found satellite reconnaissance evidence that a North Korean nuclear reprocessing center at Yongbyon had begun to process plutonium. This led to a diplomatic confrontation and talks where the Clinton administration obtained a North Korean pledge to freeze plutonium production at the site. In exchange, the United States, South Korea and Japan agreed to give the North oil and technical assistance to build a peaceful nuclear power program. The agreement called for international monitoring of the Yongbyon site, and Energy Department experts were allowed to encase the spent fuel rods at the center to ensure that they could not be used for warheads. Before this production freeze, however, North Korea was able to produce about 26 pounds of weapons-grade plutonium. As a result, a consensus developed that North Korea could produce one or two bombs.

The current debate focuses on what North Korea has done since that time. The Clinton Administration initially declared that North Korea had agreed to freeze its entire nuclear program. It later became clear, however, that the agreement covered only Yongbyon and did not preclude nuclear activity at other sites. North Korea then dumped radioactive nuclear fuel out of the heavy water reactor into a cooling pool in order to replace it with fresh fuel rods. The US intelligence community estimated that the spent fuel rods contained enough plutonium for 10 nuclear warheads, and this raised serious questions as to whether North Korea was covertly going on with its nuclear program.

A report in the *New York Times*, which has been informally confirmed by several US experts, indicates that the Defense Intelligence Agency (DIA) began to report that it had detected a series of other secret sites, many of them underground, that analysts suspected were related to an ongoing nuclear program. By the late-1990's, DIA and the National Imagery and Mapping Agency, compiled a list of at least 10 potential sites which raised questions about their function without providing clear evidence of any weapons activity.

One installation, at Kumchangri, was believed to house an underground nuclear reactor and plutonium reprocessing operation. In May 1999, this led the US to pressure North Korea to allow an inspection of the installation which had the same visual signatures as if North Korea was installing an underground reactor, including the water supplies for water-cooling. When North Korea did allow inspection, however, the US only found a series of empty tunnels with no large underground chamber able

to hold a nuclear reactor. Another inspection in May 2000 had the same result.

The *Times* reported that some intelligence experts feel the US gave North Korea too much warning before inspecting the site, making it possible for the North Koreans to hide its purpose. However, State Department officials became leery of the DIA estimates, another installation DIA suspected proved to be nothing more than an underground storage site for the memorabilia of the North Korean leadership.

This eventually led Secretary of State Madeleine K. Albright and Lt. Gen. Patrick Hughes, director of the DIA, to clash over intelligence report suggesting that North Korea had built a storage installation that housed components for nuclear warheads. State Department officials indicated that DIA was reporting an over-pessimistic picture. DIA indicated in turn that the State Department was too willing to overlook reports of suspicious activity. In their view, the failure of a single inspection does not mean the United States should stop pressing the North Koreans about suspect installations, including the building suspected of housing warhead components. Some of the debate focused on an installation DIA suspected of being a storage building for components of nuclear warheads. The identity and exact location of this center, whose existence has not been released, but the *Times* reports that intelligence on the storage center was obtained at least three years ago, and was based not only on spy satellite photographs and intercepted communications, but also on "human intelligence" -- spies -- reporting to DIA.¹

North Korea and Long-Range Missiles

What is clear is that North Korea is steadily acquiring more advanced missile forces in spite of major economic problems, its rapprochement talks with South Korea in June 2000, and its agreements to suspend the test firing of long-range missiles in September 1999 and June 2000. Its ballistic missile force comprises some 36 launchers and 700 missiles and P'yongyang fields the largest ballistic missile force in the Third World.² It has tested a booster that could allow it to develop missiles that could strike the US, and it has had a serious nuclear weapons development effort in the past. As Table III.5 shows, North Korea also has a wide range of missile programs. It also has already deployed large numbers of shorter-range missiles with chemical and probably biological warheads. These include extended range Scud-type missiles with ranges over 1,300 kilometers. The US intelligence community also reported in June 2000 that North Korea did not suspend any other aspects of development and production after it agreed to suspend missile tests in September 1999.

North Korea launched a multistage Taepo Dong-1 missile across Japan on August 31, 1998 -- in an effort to place a satellite in orbit. The mission failed, but the United States and its allies were surprised and shocked by the missile's 2,000-kilometer range. David J. Osias, an officer of the Defense Intelligence Agency, stated that "The third stage concerns us. Nobody knew they had it," during a national media

update April 26-27, 1998 at the Army Space and Missile Defense Command headquarters.³

North Korea has limits. The Taepo-dong 1 test was a failure, and the missile was anything but an advanced design. The first stage was modified from a liquid-fueled Scud and the second from the No Dong. Both are 1960s technology. The third stage was a small, solid-fueled rocket designed to put a small satellite into space. It was too small to carry a nuclear weapon or an effective biological payload and dispersal system, and the system was so inherently inaccurate that it was unclear it had growth potential to hit a city-sized target. US experts feel that North Korea has since abandoned work on the Taepo-dong-1 missile, and is now developing the Taepo-dong-2. This missile is a two-stage system that uses a cluster of No-dong engines in the first stage and a single No-dong in the second stage. It has never been tested.⁴

Furthermore, North Korea agreed to suspend further tests of long-range missiles in September 1999 -- largely as a result of the negotiating efforts of former Secretary of Defense William Perry.⁵ This agreement was reached after the NIC report was written, and was renewed in June 2000. However, US intelligence community also reported in June 2000 that North Korea did not suspend any other aspects of development and production after it agreed to suspend missile tests in September 1999.

A CIA report in August 2000 summarized the state of proliferation in North Korea as follows,⁶

Pyongyang continues to acquire raw materials from out-of-country entities to produce WMD and ballistic missiles. During the reporting period, there were increased reflections of North Korean procurement of raw materials and components for its ballistic missile programs from various foreign sources, especially through firms in China. North Korea produces and is capable of using a wide variety of chemical and possibly biological agents, as well as their delivery means.

During the second half of 1999, Pyongyang sought to procure technology worldwide that could have applications in its nuclear program, but we do not know of any procurement directly linked to the nuclear weapons program. We assess that North Korea has produced enough plutonium for at least one, and possibly two, nuclear weapons. The United States and North Korea are nearing completion on the joint project of canning spent fuel from the Yongbyon complex for long-term storage and ultimate shipment out of the North in accordance with the 1994 Agreed Framework. That reactor fuel contains enough plutonium for several more weapons.

Pyongyang continues to seek conventional weapons via the gray market. In 1999, for example, North Korea acquired MiG-21 fighter aircraft from Kazakhstan.

...Throughout the second half of 1999, North Korea continued to export significant ballistic missile-related equipment and missile components, materials, and technical expertise to countries in the Middle East, South Asia, and North Africa. Pyongyang attaches a high priority to the development and sale of ballistic missiles, equipment, and related technology. Exports of ballistic missiles and related technology are one of the North's major sources of hard currency, which fuel continued missile development and production.

The Department of Defense issued a more detailed report in January 2001, which provided an exceptional amount of declassified intelligence on North Korean proliferation.⁷

Despite the June 2000 summit meeting and meetings between high level U.S. and North Korean officials on the one hand, and economic turmoil and continued food shortages on the other, we believe North Korea remains committed to maintaining strong military forces. These forces continue to be deployed close to the border with South Korea in an offensively oriented posture, and North Korea's NBC and missile programs likely remain key components of its overall security strategy. The most likely large-scale regional war scenario over the near term, which would involve the United States, would be on the Korean peninsula. In recent years, North Korea has continued to pose a complex security challenge to the United States and its allies. Prior to the 1994 Agreed Framework, North Korea is believed to have produced and

diverted sufficient plutonium for at least one, and possibly two, nuclear weapons. In addition, although North Korea froze the production of plutonium in 1994, there are concerns that North Korea is continuing with some elements of a nuclear weapons program. North Korea also possesses stockpiles of chemical weapons, which could be used in the event of renewed hostilities on the peninsula. Research and development into biological agents and toxins suggest North Korea may have a biological weapons capability. North Korea has hundreds of ballistic missiles available for use against targets on the peninsula, some of which are capable of reaching targets in Japan. Its missile capabilities are increasing at a steady pace, and it has progressed to producing medium-range ballistic missiles (MRBMs). North Korea also has continued development of even longer-range missiles that would be able to threaten areas well beyond the region, including portions of the continental United States. As a result of U.S. diplomatic efforts, however, the Democratic People's Republic of Korea (DPRK) has maintained a moratorium on launches of long-range missiles for over one year.

Lastly, North Korea's willingness to sell its ballistic missiles and related missile technologies and, potentially, share its NBC expertise are major proliferation concerns. North Korea's centrally planned economic system has been crippled over the past decade and is unable to meet the most basic needs of its people, although there is limited evidence that the economic decline may have slowed. Certainly, international food aid administered through the United Nations World Food Program has played a significant role in alleviating the food crisis. North Korea likely will continue to require international food assistance for the foreseeable future. The regime continues with its decades old policy to fund its military programs, including NBC and missile forces, at the expense of its civil economy.

...During the last several years, North Korea has made substantial progress with its ballistic missile forces in the areas of research and development, testing, deployment, and, most worrisome, exports. Despite efforts on the part of the United States and its East Asian allies to constrain North Korea's missile development, Pyongyang continues to move ahead.

North Korea produces SCUD B and SCUD C short-range ballistic missiles (SRBMs) as well as the No Dong MRBM. North Korea has over 500 SCUD missiles of various types in its inventory, and enough No Dong missiles for its own use as well as for export. In any attack on the South Korea, Pyongyang could use its missiles in an attempt to isolate the peninsula from strategic reinforcement. In addition, North Korea's No Dong missiles, with their 1,300 kilometer range, are capable of striking targets throughout the peninsula as well as in nearly all of Japan.

In August 1998, North Korea launched a three-stage Taepo Dong 1 system, which it characterized as a space launch vehicle (SLV) attempting to orbit a small satellite. The launch demonstrated several of the key technologies required to develop an ICBM, including stage separation. The existence of a third stage itself was an unanticipated development in the North Korean ballistic missile program. With the Taepo Dong 1, North Korea has now demonstrated the capability to reach the entire territory of South Korea and Japan, as well as large portions of China and Russia. Potentially, a three-stage Taepo Dong 1 SLV could deliver a light payload to the United States, although with very poor accuracy.

North Korea also has moved forward with the development of other longer-range missiles, which has become a matter of growing international concern. North Korea is developing the Taepo Dong 2 (ICBM), which could deliver a several-hundred kilogram payload to Alaska or Hawaii, and a lighter payload to the western half of the United States. A three stage Taepo Dong 2 could deliver a several-hundred kilogram payload anywhere in the United States. North Korea is much more likely to weaponize the more capable Taepo Dong 2 than the three-stage Taepo Dong 1 as an ICBM. During 1999, there were indications that North Korea would test the Taepo Dong 2, but Pyongyang in September 1999, announced it would refrain from testing long-range missiles while high-level talks to improve bilateral relations with the U.S. are ongoing. The DPRK subsequently reaffirmed the moratorium in June 2000, and again, in writing, in the October 2000 Joint Communiqué issue at the conclusion of Vice Marshal Jo Myong Rok's visit to Washington. During Secretary Albright's historic trip to Pyongyang 23-25 October, she discussed with DPRK Chairman Kim Jong Il a range of missile-related issues, including Kim's idea of trading long-range missile restraint for launches, outside DPRK borders, of DPRK civil satellites on non-DPRK boosters. However, significant issues remain to be resolved.

...North Korea has several types of short-range land-, air- and sea-launched anti-ship cruise missiles, which are potential means of delivery for NBC weapons. In the past, North Korea has produced two versions of anti-ship cruise missiles based on Soviet and Chinese designs; these have ranges of about 100 kilometers. In the future, North Korea may try to modify some of these anti-ship missiles to extend their range or acquire the technology to do so. Moreover, it may try to develop or purchase land attack cruise missiles. North Korea also has a variety of fighters, bombers, helicopters, artillery, rockets, mortars, and sprayers available as potential means of delivery for NBC weapons.

...During the last several years, North Korea has been a major proliferator of ballistic missiles and related technologies. The sale of No Dong missile technology to Iran has created an immediate, serious and growing capability to target U.S. forces, and our allies in the Middle East. North Korea also has provided missile technology to Pakistan. Further, these sales have had an impact on the strategic balance in the Middle East and in South Asia. In addition, these exports could lead to additional proliferation. For example, were states like Iran or Pakistan to become missile producers, they in turn could sell the missiles to other states of concern, further upsetting regional balances of power. In the past, North Korea also has brokered deals for missile-related technologies and components produced by third parties for customers in the Middle East. Pyongyang attaches a high priority to the development and sale of ballistic missiles, equipment, and related technology, as

these exports are one of the North's major sources of hard currency, which fuel continued missile development and production.

...The 1994 Agreed Framework between the United States and North Korea froze nuclear weapons material production at the Yongbyon and Taechon facilities. However, the United States believes North Korea produced and diverted sufficient plutonium for at least one nuclear weapon prior to the agreement. (In any event, North Korea will have to satisfy the International Atomic Energy Agency (IAEA) as to its exact plutonium holdings before key nuclear components can be delivered for the two light-water reactors that are to be provided under the Agreed Framework.)

North Korea removed spent fuel from the Yongbyon reactor in 1994. Had Pyongyang reprocessed the spent fuel from the Yongbyon reactor, it could have produced enough plutonium for several nuclear weapons. As part of the Agreed Framework, the IAEA has maintained a continuous presence at Yongbyon, and IAEA personnel have monitored canning of the spent fuel from the reactor. The canning of all accessible spent fuel rods and rod fragments, which was carried out by a team from the United States, under the auspices of the Department of Energy (DOE), was completed in April 2000. The U.S. team maintains a presence at the site to continue maintenance activities.

In 1998, the United States became concerned about an underground construction project at Kumchang-ni, in northern North Korea. The site was believed to be large enough to house a plutonium production facility and possibly a reprocessing plant. Through successful negotiations, U.S. officials were permitted to visit the facility at Kumchang-ni in May 1999. Based on the 1999 team's findings, it was concluded that the facility as then concurrently configured, was not suited to house graphite-moderated reactors or reprocessing operations. A second visit to Kumchang-ni was conducted in May 2000, during which the team found no evidence to contradict the 1999 conclusions.

In the summer of 1999, the United States dispatched former Secretary of Defense William Perry to consult with North Korea on key U.S. security concerns such as its nuclear and missile programs. In the North Korea Policy Review, Dr. Perry concluded that the nuclear freeze instituted at Yongbyon's facilities remained in effect, although the U.S. remains concerned about possible continuing North Korean interest in a nuclear weapons program. Moreover, there is some evidence that North Korea has tried to procure technology that could have applications in its nuclear program. North Korea has ratified the NPT. It has not signed the Comprehensive Test Ban Treaty (CTBT). Dr. Perry recommended that the U.S. should seek the complete and verifiable cessation of testing, production, and deployment of missiles exceeding the parameters of the MTCR, and the complete cessation of export sales of such missiles and the equipment and technology associated with them.

...North Korea has acceded to the Biological and Toxin Weapons Convention (BWC), but nonetheless has pursued biological warfare capabilities since the 1960s. Pyongyang's resources include a rudimentary (by Western standards) biotechnical infrastructure that could support the production of infectious biological warfare agents and toxins such as anthrax, cholera, and plague. North Korea is believed to possess a munitions-production infrastructure that would allow it to weaponize biological warfare agents and may have biological weapons available for use.

...Like its biological warfare effort, we believe North Korea has had a long-standing chemical warfare program. North Korea's chemical warfare capabilities include the ability to produce bulk quantities of nerve, blister, choking, and blood agents, using its sizeable, although aging, chemical industry. We believe it possesses a sizeable stockpile of these agents and weapons, which it could employ should there be renewed fighting on the Korean peninsula.

North Korea is believed to be capable of weaponizing such stocks for a variety of delivery means. These would include not only ballistic missiles, but also artillery and aircraft, and possibly unconventional means.

In fact, the United States believes that North Korea has some long-range artillery deployed along the demilitarized zone (DMZ) and ballistic missiles, some of which could deliver chemical warfare agents against forward-based U.S. and allied forces, as well as against rear-area targets.

North Korean forces are prepared to operate in a contaminated environment; they train regularly in chemical defense operations and are taught that South Korean and U.S. forces will employ chemical munitions. North Korea has not signed CWC, nor is it expected to do so in the near future.

These assessments make it clear that the North Korean threat is driven by theater considerations, and not innate hostility to the US. They also make it clear that the primary focus of North Korea's efforts is warfighting capability on the Korean Peninsula, and that North Korea is developing cruise missiles and other systems it could use to attack the US asymmetrically, not just long-range ballistic missiles. At the same

time, they also help explain why the report of the National Intelligence Council has seen North Korea as presenting the most serious near term threat to the US, and why this threat has been used as the rationale for setting early deadlines for the deployment of a US NMD system⁸

“After Russia and China, North Korea is the most likely to develop ICBMs capable of threatening the United States during the next 15 years.

- North Korea attempted to orbit a small satellite using the Taepo Dong-1 SLV in August 1998, but the third stage failed during powered flight; other aspects of the flight, including stage separation, appear to have been successful.
- If it had an *operable* third stage and a reentry vehicle capable of surviving ICBM flight, a converted Taepo Dong-1 SLV *could* deliver a light payload to the United States. In these cases, about two-thirds of the payload mass would be required for the reentry vehicle structure. The remaining mass is probably too light for an early generation nuclear weapon but could deliver biological or chemical (BW/CW) warfare agent.
- Most analysts believe that North Korea *probably will test* a Taepo Dong-2 this year, unless delayed for political reasons. A two-stage Taepo Dong-2 could deliver a several-hundred kilogram payload to Alaska and Hawaii, and a lighter payload to the western half of the United States. A three-stage Taepo Dong-2 could deliver a several-hundred kilogram payload anywhere in the United States.
- North Korea is much *more likely* to weaponize the more capable Taepo Dong-2 than the three-stage Taepo Dong-1 as an ICBM.”

North Korea’s Uncertain Public Profile in Proliferation

North Korea may be changing its attitudes towards South Korea, Japan, and the United States. However, North Korea has also followed a pattern where it moves towards the acquisition of nuclear and missile capabilities, and then appears pulls back in response to diplomatic efforts and incentives without providing conclusive evidence that it has actually changed its behavior. In 1994, North Korea signed an “Agreed Framework” in which it agreed to give up its use of the nuclear reactor at Yongbyon, that it was evidently using to produce fissile materials, in return for aid in developing two nuclear power reactors that have little or no value in producing such weapons. Similarly, North Korea agreed in May 1995, to allow the inspection of an underground site at Kumchangni, North Korea, which was believed to be large enough to house a reactor and a reprocessing facility. The agreement to allow a visit, and the inspection that followed, removed this concern.

North Korea has tended to see each new agreement as a bargaining step in its continuing challenge to the US, South Korea, and Japan. The Arms Control Association provides the following chronology of the negotiations with North Korea before and after the Perry agreement.⁹

- October 21, 1994: With North Korea threatening to withdraw from the NPT and the specter of war looming, the United States and North Korea culminated four months of negotiations by adopting the Agreed Framework in Geneva. To resolve U.S. concerns about Pyongyang’s plutonium producing reactors and Yongbyon reprocessing facility, the nuclear agreement calls for North Korea to freeze and eventually eliminate its nuclear facilities and allow the International Atomic Energy Agency to verify its holdings of fissile materials. In exchange, Pyongyang will receive two light-water reactors (LWRs) and annual shipments of heavy fuel oil during construction of the LWRs. Calling for improvement in political and economic relations, the nuclear accord has also served as a jumping off point for U.S.-North Korean dialogue over Pyongyang’s development and exports of ballistic missiles and their technology, as well

as other bilateral issues of concern.

- January 9, 1995: North Korea announces the lifting of restrictions on imports of U.S. products into North Korea and restrictions on port calls by U.S. vessels into North Korean ports.
- January 20, 1995: The Clinton administration eases sanctions on North Korea allowing limited financial transactions, telecommunications and information trade and U.S. imports of North Korean magnesite. The previous day, the first shipment of 50,000 tons of heavy fuel oil required by the Agreed Framework is shipped to Sonbong, North Korea.
- March 13, 1995: A statement released by the U.S. Embassy from U.S. Under Secretary of State for Arms Control and International Security Lynn Davis announces that U.S.-North Korean relations will not be normalized until Pyongyang ends its sales of ballistic missiles and related technology to countries like Iran and Syria.
- January 1996: In a letter to North Korea's Foreign Ministry, Deputy Assistant Secretary of State for East Asia Affairs Thomas Hubbard proposes new meetings to discuss missile proliferation issues. North Korea asserts that U.S. economic sanctions would have to be eased before a date for talks could be set. Washington counters that for greater sanctions relief, Pyongyang must address U.S. concerns about missile sales, forward-deployed conventional forces, terrorism, direct North-South talks and accounting for the missing-in-action from the Korean War.
- April 21-22, 1996: The U.S. and North Korea meet for their first round of bilateral missile talks in Berlin. The United States reportedly suggested that North Korea should adhere to the Missile Technology Control Regime (MTCR), an agreed policy of 29 nations to control sales of ballistic missiles, their components and technology. North Korea allegedly demanded the U.S. provide compensation for lost missile-related revenue. Assistant Secretary of State for East Asian and Pacific Affairs Winston Lord announced that Washington is willing to lift economic sanctions against North Korea in exchange for the termination of its missile production and export programs.
- May 24, 1996: The U.S. imposes sanctions on North Korea and Iran for missile technology related transfers. The sanctions prohibit any imports or exports to the sanctioned firms and a large sector of the North Korean economy considered missile-related. A general ban on trade with both countries makes the sanctions largely symbolic.
- June 22, 1996: North Korean shipments to Egypt of materials and support equipment for building Scud-C missiles are reported in a Washington Times story based on a leaked CIA report. The State Department refuses to confirm or deny the story, but U.S. officials say that ambiguities in the intelligence could prevent MTCR-related sanctions from being imposed on either country.
- September 18, 1996: A North Korean reconnaissance submarine runs aground on the eastern coast of South Korea, prompting Seoul to insist that implementation of the Agreed Framework be suspended until Pyongyang apologizes. After weeks of talks between U.S. and North Korean officials, Pyongyang issues an apology on December 29.
- October 16, 1996: After detecting North Korean preparations for a test of its 1,300-kilometer-range Nodong missile, The United States deploys a reconnaissance ship and aircraft to Japan. Following several meetings in New York between U.S. and North Korean diplomats, on November 8, the State Department confirms that the missile test has been canceled.
- June 11-13, 1997: The second round of U.S.-North Korean missile talks take place in Seoul with U.S. negotiators pressing North Korea not to deploy the Nodong missile and to end sales of Scud missiles and their components. The parties reach no agreement but reportedly lay the foundation for future talks.
- August 6, 1997: The United States imposes new sanctions on North Korea for unspecified missile-proliferation activities.
- August 27, 1997: A third round of U.S.-North Korea missile talks in New York are canceled by North Korea after Pyongyang's ambassador to Egypt and his brother, a Paris-based diplomat, defect to the United States. The ambassador is considered an intelligence 'gold mine' for his probable knowledge of North Korean missile sales in the Middle East and Persian Gulf regions.
- September 27, 1997: Adm. Joseph Prueher, commander of the U.S. Pacific Command, announces that North Korea is deploying military units with equipment designed to carry the Nodong missile.

- April 17, 1998: The U.S. imposes sanctions on North Korea and Pakistan in response to Pyongyang's transfer of missile technology and components to Pakistan's Khan Research Laboratory. The sanctions follow Pakistan's April 6 test of its new 1,300-kilometer-range Ghauri missile, which is believed to be based on North Korea's Nodong missile.
- June 10, 1998: Department of Defense officials confirm that North Korea's Nodong missile has now been deployed to field units, according to a story in the Washington Times.
- June 16, 1998: The official Korean Central News Agency (KCNA) reports that Pyongyang is willing to end its missile technology exports in exchange for suitable compensation. Later stories place North Korean estimates of appropriate compensation between \$500 million and \$1 billion per year. The lower amount is believed to approximate the peak revenue Pyongyang received from missile-related transfers to Tehran during the Iran-Iraq war.
- July 9, 1998: Secretary of Defense William Cohen says that development of North Korea's Nodong missile has been completed, but does not comment on deployment.
- July 22, 1998: Iran tests its 1,300-kilometer-range Shahab-3 missile. The State Department says the missile is largely derived from North Korea's Nodong missile.
- August 17, 1998: North Korean construction of an underground facility in Kumchang-ni that may be used for nuclear weapons-related purposes is reported by the New York Times. The Clinton administration says North Korea remains in compliance with the Agreed Framework but commences talks with Pyongyang to clarify the status of the site.
- August 31, 1998: North Korea launches a three-stage 1,500-2,000-kilometer-range Taepo Dong-1 missile that overflies Japan. North Korea announces the rocket successfully placed a small satellite into orbit, a claim denied by U.S. Space Command. Japan suspends signing a cost-sharing agreement for the Agreed Framework's LWR project until November 1998. The U.S. intelligence community admits to being taken by surprise by Pyongyang's mastery of missile staging technology and the use of a solid-rocket booster for the missile's third stage.
- September 1998: The U.S. Congress, outraged by Pyongyang's missile test in August and the potentially nuclear-related construction at Kumchang-ni prepares to block U.S. funding for the Agreed Framework unless North Korea addresses U.S. security concerns
- October 1, 1998: The third round of U.S.-North Korean missile talks begins in New York but makes little progress. The U.S. repeats its request for Pyongyang to circumscribe its missile programs in exchange for relief from economic sanctions. North Korea rejects the U.S. offer, on the grounds that the lifting of sanctions is implicit in the 1994 Agreed Framework.
- October 21, 1998: President Clinton signs the 1999 Defense Authorization bill, which includes funds to support the Agreed Framework. The money, however, is provided with several security-related conditions including the appointment of a North Korea policy coordinator.
- November 12, 1998: Former Secretary of Defense William Perry is appointed by the president to be North Korea policy coordinator. He immediately undertakes an interagency review of U.S. policy towards North Korea and begins consultations with South Korea and Japan aimed at forming a unified approach to dealing with Pyongyang.
- December 4-11, 1998: The United States and North Korea hold talks aimed at addressing U.S. concerns over the suspected underground nuclear facility in Kumchang-ni. Pyongyang reportedly accepts in principle the idea of a U.S. inspection of the site but is unable to agree with U.S. proposals for "appropriate compensation."
- February 2, 1999: CIA Director George Tenet testifies before the Senate Armed Services Committee that with some technical improvements, North Korea would be able to use the Taepo Dong-1 to deliver small payloads to parts of Alaska and Hawaii. Tenet also says that Pyongyang's Taepo Dong-2, if it had a third stage like the Taepo Dong-1, would be able to deliver large payloads to the continental United States, albeit with poor accuracy.
- March 16, 1999: U.S. and North Korean officials announce an agreement to provide a team of U.S. inspectors with access to the underground construction site in Kumchang-ni to verify North Korea's compliance with the Agreed Framework. Washington announces that in exchange, it will arrange a pilot agricultural program for North Korea. The Clinton administration also commits itself to providing 400,000 tons of food aid to North Korea on strictly

humanitarian grounds.

- March 29-30, 1999: U.S. and North Korean officials hold a fourth round of missile talks in Pyongyang. The United States again expresses concern over North Korea's missile development and proliferation activities and proposes a deal exchanging North Korean restraint for U.S. sanctions relief. The talks were described by U.S. officials as "serious and intensive," but succeed only in reaching agreement to meet again at an unspecified date.
- May 24-28, 1999: A U.S. inspection team visits the suspected nuclear site in Kumchang-ni. According to the State Department they find no evidence of nuclear activity or any evidence that Pyongyang has violated the Agreed Framework.
- May 25-28: Traveling to Pyongyang as a presidential envoy, William Perry meets with senior North Korean political, diplomatic and military officials to discuss a major expansion in bilateral relations if Pyongyang is willing to address U.S. security concerns. Perry delivers a letter from President Clinton to North Korean Supreme Leader Kim Jong Il, but the two do not meet. Perry reportedly calls on North Korea to satisfy U.S. concerns about ongoing nuclear weapons-related activities beyond the scope of the Agreed Framework and ballistic missile development and proliferation, in exchange for lifting U.S. sanctions, normalizing diplomatic relations and potentially, providing some form of security guarantee.
- June 17, 1999: North Korean preparations for a test of the new Taepo Dong-2 missile are reported by Japan's NHK public television citing unidentified U.S. military sources. On June 30, U.S. Deputy Assistant Defense Secretary Kurt Campbell confirms that North Korea has begun preparations for a launch. Campbell warns that any further missile testing would have "very real consequences for U.S. foreign policy toward North Korea."
- July 8, 1999: Japan's ambassador to the United States, Saito Kunihiko warns Tokyo would withhold its \$1 billion commitment to the Agreed Framework if North Korea conducts another missile test, the Washington Times reported.
- July 27, 1999: Secretary of State Madeleine Albright, South Korean Foreign Minister Hong Soon-Young, and Japanese Foreign Minister Komura Masahiko meet in Singapore to coordinate their policies and warn Pyongyang that any potential missile test "would have serious negative consequences" for North Korea.
- September 7-12, 1999: During general talks in Berlin, North Korea agrees to a moratorium on testing any long-range missiles for the duration of high-level talks with the United States. The United States agrees to a partial lifting of economic sanctions in North Korea. The two parties agree to continue high-level discussions. (Sanctions are not actually lifted until June 2000.)
- September 9, 1999: A U.S. National Intelligence Estimate reports that North Korea will "most likely" develop an ICBM capable of delivering a 200-kilogram warhead to the U.S. mainland by 2015.
- September 15, 1999: North Korean policy coordinator William Perry submits his review of U.S. policy toward North Korea to Congress and releases an unclassified version of the report on
- October 12, The report recommends "a new, comprehensive and integrated approach to...negotiations with the DPRK," which would involve a coordinated reduction in isolation by the United States and its allies in a "step-by-step and reciprocal fashion." Potential engagement mechanisms would include the normalization of diplomatic relations and the relaxation of trade sanctions.
- December 15, 1999: Five years after the Agreed Framework was signed, KEDO officials sign a turn-key contract with the Korea Electric Power Corporation (KEPCO) to begin construction on the two light-water reactors in Kumho, North Korea. KEDO officials attribute the delay in reaching the turn-key contract to complex legal and financial challenges and the tense political climate generated by the North Korean Taepo-Dong I test in August 1998.
- April 14, 2000: The United States announces sanctions on a North Korean firm, Changgwang Sinyong Corporation, for proliferating Category I items as defined by the MTCR, possibly to Iran. Category I items include complete missile systems with ranges exceeding 300 kilometers and payloads over 500 kilograms, major subsystems, rocket stages or guidance systems, production facilities for MTCR-class missiles, or technology associated with such missiles.
- June 14, 2000: Following a historic summit, North and South Korea sign a joint declaration stating they have "agreed to resolve" the question of reunification of the Korean Peninsula. The agreement includes promises to reunite families divided by the Korean War and other economic and cultural exchanges. No commitments are made regarding nuclear weapons or missile programs or military deployments in the Demilitarized Zone.

- June 19, 2000: Encouraged by the North-South agreement, the United States relaxes sanctions on North Korea, allowing a “wide range” of trade in commercial and consumer goods, easing restrictions on investment, and eliminating prohibitions on direct personal and commercial financial transactions. Sanctions related to terrorism and missile proliferation remain in place. In response, North Korea reaffirms its moratorium on missile tests.
- July 12, 2000: The fifth round of U.S.-North Korean missile talks ends without resolution in Kuala Lumpur. North Korea refuses to halt production of long-range missiles, citing self-defense in the face of “thousands” of U.S. nuclear warheads. However, North Korea does offer to stop missile production in exchange for \$1 billion per year. The United States rejects the proposition.
- July 19, 2000: During a meeting with Russian President Vladimir Putin, North Korean leader Kim Jong-Il reportedly promises to end his country’s missile program in exchange for assistance with satellite launches from those countries that have expressed concern about North Korea’s missile program.
- July 28, 2000: At the ASEAN Regional Forum in Bangkok, Thailand, Secretary of State Madeleine Albright engages in a “substantively modest” meeting with North Korea Foreign Minister Paek Nam Sun, the highest level of exchange to date. Paek gives no additional details about North Korea’s purported offer to end its missile program for space research assistance.
- August 13, 2000: Kim Jong-Il tells a meeting of 46 South Korean media executives in Pyongyang that his missile proposal was meant “in humor, while talking about science and state-of-the-art technologies,” according to the Korea Times. The report of the event is widely interpreted as undercutting the seriousness of Kim’s offer; however, English-language excerpts of Kim’s speech seem to confirm the offer of a deal: “I told...Putin that we would stop developing rockets when the United States comes forward and launches our satellites.”
- August 28, 2000: U.S. Ambassador Wendy Sherman travels to Moscow to confirm the details of Kim Jong-Il’s apparent missile proposal with her Russian counterparts. The State Department reiterates that it is taking the North Korean offer “seriously.”
- September 27, 2000: U.S.-North Korean talks resume in New York on nuclear issues, missiles, and terrorism. The two countries issue a joint statement on terrorism, a move that indicates progress toward removing North Korea from the State Department’s terrorism list.
- October 9-12, 2000: Kim Jong-Il’s second-in-command, Vice Marshal Jo Myong Rok, visits Washington as his special envoy, to deliver a letter to President Clinton and to meet with the secretaries of State and Defense. The move is seen as an affirmation of Kim Jong-Il’s commitment to improving U.S.-North Korean ties.
- October 12, 2000: The United States and North Korea issue a joint statement noting that resolution of the missile issue would “make an essential contribution to fundamentally improved relations” and reiterating the two countries’ commitment to implementation of the Agreed Framework. The statement also says that Secretary Albright will visit the North in the near future to prepare for a possible visit by President Clinton.
- October 18, 2000: Albright announces that she will travel to North Korea to meet with senior North Korean officials, including Kim Jong-Il.
- January 31, 2000: The US State Department announces that North Korea has agreed to send a high-level delegation to the US in March to discuss limits on long-range missile tests and its nuclear programs. The announcement comes after seven days of meetings between US and North Korean officials in Berlin.¹⁰
- June 2000: The leaders of North and South Korea meet and discuss a rapprochement and eventual reunification.
- June 2000: The US removes many trade sanctions. North Korea agrees to extend its suspension of long-range missile testing.

This chronology shows that North Korea has been highly unpredictable in the past and that it may well continue with covert or overt long-range missile, and weapons of mass destruction, programs in the future.

North Korea and SLV Development

It is worth noting in this regard, that the NIC also warns that the growing spread of space launch-vehicle (SLV) technology is making it progressively harder to distinguish between peaceful and military acquisition of the technologies and production capabilities needed to deploy a missile threat against the US. Once again, North Korea is a key case in point:¹¹

“Detecting or suspecting a missile development program and projecting the timing of the emerging threat, although difficult, are easier than forecasting the vehicle's configuration or performance with accuracy. Thus, we have more confidence in our ability to warn of efforts by countries to develop ICBMs than we have in our ability to describe accurately the missile configurations that will comprise that threat, especially years prior to flight testing. Furthermore, countries practice denial and deception to hide or mask their intentions—for example, testing an ICBM as a space launch vehicle.

We continue to judge that we may not be able to provide much warning if a country purchased an ICBM or if a country already had an SLV capability. Nevertheless, the initiation of an SLV program is an indicator of a potential ICBM program. North Korea and other countries, such as Iran and an unconstrained Iraq, could develop an SLV booster, then flight-test it as an ICBM with a reentry vehicle (RV) with little or no warning. Thus, we consider space launch vehicles, especially in the hands of countries hostile to the United States, to have significant ballistic missile potential.

We also judge that we may not be able to provide much, if any, warning of a forward-based ballistic missile or land-attack cruise missile (LACM) threat to the United States. Moreover, LACM development can draw upon dual-use technologies. We expect to see acquisition of LACMs by many countries to meet regional military requirements.

Space Launch Vehicle (SLV) Conversion. Nations with SLVs could convert them into ICBMs relatively quickly with little or no chance of detection before the first flight test. Such a conversion would include the development of a reentry vehicle (RV). A nation could try to buy an SLV with the intent to convert it into an ICBM; detection of the sale should provide a few years of warning before a flight test, although we are not confident that we could detect a covert sale. Finally, many SLVs would be cumbersome as converted military systems and could not be made readily survivable, a task that in many cases would be technologically and economically formidable.

Countries might mask their ICBM developments as SLV programs. They could test the complete booster and in most cases the guidance system, which would have to be reprogrammed to fly a ballistic missile trajectory. They could not mask a warhead reentry under the guise of a space launch. Nevertheless, they could develop RVs and maintain them untested for future use, albeit with significantly reduced confidence in their reliability.

- If the country had Russian or Chinese assistance in a covert development effort, it could have relatively high confidence that the RV would survive and function properly.
- If a country developed an untested RV without foreign assistance, its confidence would diminish, but we could not be confident it would fail. Significant amounts of information about reentry vehicles are available in open sources. A low performing RV with high flight stability would be a logical choice for developing an ICBM RV with minimal, or no, testing. The developing country could have some confidence that the system would survive reentry, although confidence in its proper delivery of the weapon would be lower without testing.”

Given this background, it is impossible to dismiss the possibility that North Korea might continue to develop nuclear weapons and long-range missiles in spite of its agreements not to do so and in spite of the public “rapprochement” it seemed to initiate with South Korea in June 2000.¹²

The Impact of North and South Korean Rapprochement and the New Kim Jong-II

At the same time, there has been progress. US and North Korean negotiations over North Korea's

missile program resumed after 16 months of halt in July 2000. During the four previous rounds of missile talks, which began in 1996, each time Pyongyang had offered to end missile exports if the U.S. agreed to compensate it in hard currency for lost earnings. The talks ended in a stalemate on July 12, 2000, when the United States refused to pay Pyongyang to curb its exports of missile technology. For the first time, the North Koreans priced their offer: \$1 billion a year in exchange for a halt to missile technology exports, and refused to stop developing missiles for self-defense.

When the US refused to pay, North Korea refused to stop developing missiles for self-defense, claiming the US had deployed “thousands of missiles” that threatened North Korea. Jang Chang Chon, head of North Korea’s bureau on U.S. affairs, stated, “That is why the United States has no right to make such unjust claims for the freeze of our missile capabilities.” Jang also said that Pyongyang regarded its missile program as part of its right to self-defense but that, North Korea remained willing to discuss the possibility of curbing exports of missile technology if paid enough. “We clarified that we will continue our discussions on the condition that the U.S. gives compensation for our economic and political losses in case of suspension.”

Robert Einhorn, assistant secretary of state for proliferation, then stated that no breakthrough had been expected. They agreed to meet again at an undetermined time and location. “The North Koreans should not be compensated for agreeing to stop conducting activities they should not be conducting in the first place. We are not prepared to pay cash compensation.” Einhorn indicated that the North Korea would gain far more politically and economically from a better security environment and normalized relations with Washington.¹³

Somewhat ironically, the US then asked Russian President Vladimir Putin to pass on its concerns that Pyongyang “deal” with its missile program. The reason was Putin’s visit to North Korea in July 2000 -- the first trip by a Russian or Soviet head of state to the country.

President Clinton's deputy national security adviser, Jim Steinberg, issued a statement saying that, “We welcome Russia taking an interest in issues of regional security,” he told reporters in response to a question at a briefing at the White House to discuss Clinton's upcoming visit to Japan. We very much hope and expect that when President Putin meets with (North Korean leader) Kim Jong-Il that he will reiterate the message the rest of the international community is giving which is one to welcome steps toward reconciliation between North and South and to encourage North Korea to take steps to deal particularly with its missile program.”

Putin gave reporters an interview before his visit in which he said that Russia would do everything it could to facilitate the process of normalization between the two Koreas and implied, that he might raise

the issue of North Korea's missile program precisely because Russia opposed an NMD system. Putin was quoted as saying that the best way to prevent missile use in the Korean peninsula was to guarantee security for the communist north, and as welcoming Pyongyang's pledge last year not to repeat 1998 missile tests and backed stiffer control of technologies.¹⁴

Putin announced on the first day of his visit to Pyongyang, that North Korean leader Kim Jong-Il had promised his country would abandon its missile program if other states provide it with technology for "peaceful space research." Exactly what, North Korea was not clear, but Putin suggested that it was not just launch services that would be provided by other nations, but foreign rocket boosters that would be brought to North Korea so that it could launch satellites into space. Putin said that Kim Jong-Il had, "voiced an idea under which North Korea is even prepared to use exclusively the rocket equipment of other countries for peaceful space research if they offered it." He stated that "North Korea is altogether prepared to use exclusively rocket equipment of other states for space research...We can minimize the threat by providing [rocket] boosters to North Korea." Putin and Kim Jong-Il also signed a joint declaration that called for "preservation and strengthening" of the ABM treaty. The Interfax news agency said Kim assured Putin that Pyongyang's rocket program is entirely peaceful.

A senior State Department official responded by stating that Putin's comment, "lends itself to at least two interpretations--one constructive and promising and the other very much the opposite...If what Putin and Kim Jung-Il agreed to would be that Russia and others provide launch capability outside North Korea...that could push a difficult and dangerous situation to a solution. If what they are talking about is Russia providing to North Korea the technology to accelerate its own rocket program, that would go very much in the other direction. That means this would exacerbate the problem instead of contributing to the solution."¹⁵

There were good reasons for this caution. It soon became clear that any comments made by Kim Jong Il offering to halt North Korea's missile program were either recanted by Kim Jong Il or misinterpreted by Putin. According to an August 15, 2000 report, Kim Jong-Il stated that the suggestion he made to Putin that North Korea would halt its program was made "laughingly." Kim Jong Il commented that "I told President Putin that if the US can launch a satellite for us, then we will not develop (missiles)." He went on to say that "We were talking about such a subject laughingly, and I said [it] to President Putin as a laughing subject but President Putin didn't say anything." Kim Jung-Il went on to say that Putin "grabbed my words" and reported them.¹⁶ Whether or not Kim Jung-Il is developing a story of misinterpretation as a means of withdrawing a formerly legitimate offer has yet to be determined. This may just be another case of the erratic foreign policy of the eccentric North Korean leader.

North Korea made it clear that it would not halt any of its missile programs without compensation.

On July 13, 2000, Jang Chang Chon, head of North Korea's bureau on U.S. affairs accused the US of deploying "thousands of missile" that threatened North Korea "That is why the United States has no right to make such unjust claims for the freeze of our missile capabilities." He said that North Korea's missile program would go on, and that North Korea demanded compensation of up to \$1 billion a year to permanently suspend missile technology exports.¹⁷ Shortly thereafter, the North Korean news agency reported that, "Today the biggest destabilizing military factor in East Asia is the development of the 'Theater Missile Defense' system jointly stepped up by the United States and Japan." The KCNA also accused Japan of trying to gain military supremacy in East Asia by deploying a missile defense program. "This proves that Japan is the most unstable state in the world that sparks a new arms race."¹⁸

So far, progress has been limited to a joint US and North Korean communiqué issued on October 12, 2000. This communiqué stated that, "resolution of the missile would make an essential contribution to a fundamentally improved relationship between them and to peace and security in the Asia-Pacific region. To further the efforts to build new relations, the D.P.R.K. informed the U.S. that it will not launch long-range missiles of any kind while talks on the missile issue continue."¹⁹ In addition, the US Secretary of State visited P'yongyang on October 23-24, and discussed on missile issues with Chairman Kim Jong-Il. The US and North Korean officials resumed missile talks in Kuala Lumpur on November 1-3, and it has been noted that "the delegation further clarified their respective position on the full range of missile issues and continued to expand areas of common ground, although significant issues remain to be explored and resolved."²⁰

Is North Korea a Continuing Threat?

The fact that North Korea has suspended long range missile testing does not mean that its programs do not continue. North Korea has so far honored its pledge not to test-fire its missiles and even renewed that pledge early in 2000, but US experts still detect work at the launch site, as well as other types of testing. "They continue to test motors, missile engines and things like that," said a senior military officer who closely monitors North Korea. "There's nothing on their launch pads, but they're continuing to make improvements."²¹

The US intelligence community issued a report on proliferation in August 2000, an NIE called "Foreign Responses to U.S. National Missile Defense Deployment" that saw North Korean force modernization as a serious threat.²² Reports on the NIE, in both the *New York Times* and *Washington Post*, indicated that Iraq, Iran and North Korea could develop ballistic missiles capable of hitting the United States by 2015. It also indicated that the threat from North Korea might be more imminent, despite a flurry of diplomatic activity by North Korea.

Although the NIE found that North Korea had abided by a pledge that it made last year not to test

its long-range missiles, it had continued building a three-stage missile that could hit the United States and could deploy it "in reasonably short order." The CIA's public report on proliferation found that North Korea procured raw materials and components for its ballistic missile program "from various foreign sources in 1999, especially through firms in China." While the CIA said it found no evidence of procurement activities directly linked to North Korea's nuclear weapons program, it did report that North Korean agents were searching worldwide for technology that could have applications for building such weapons.²³

At this point in time, there is no way to predict that North Korea *will* pose such a threat, or to predict the size, timing, and effectiveness, of any forces it may deploy. There is no way that the justification for an NMD system can be built around the certainty of a North Korean threat or tailored to some clear concept of what that threat will be. There equally is no way that the need for an NMD system can be dismissed because of the lack of a valid potential threat. As Secretary Cohen noted in a speech on July 11, 2000,²⁴

The North Koreans have stopped testing, but they could go forward whenever they choose to do so . . . depending upon their progress that they make [in talks] with South Korea. We cannot adjust or calibrate whether or not we are going to go forward with an NMD program based upon what the North Koreans may say from time to time. We have to assess what the capability is, and then make our own determination. I think it's clear based on what they have done in the past, they could achieve a long-range capability by 2005."

Similarly, President Clinton made the following remarks about North Korea during his speech announcing a delay in NMD deployment on September 1, 2000:

In 1994, six years after the United States first learned that North Korea had a nuclear weapons program, we negotiated the agreement that verifiably has frozen its production of plutonium for nuclear weapons. Now, in the context of the United States negotiations with the north, of the diplomatic efforts by former Defense Secretary Bill Perry and most lately the summit between the leaders of North and South Korea, North Korea has refrained from flight testing a new missile that could pose a threat to America. And we should be clear, North Korea's capability remains a serious issue and its intentions remain unclear. But its missile testing moratorium is a good development worth pursuing.

Until there is far more evidence regarding North Korea's long-term intentions, the US will have no way to know whether to be cautiously optimistic or cautiously pessimistic, and it certainly will not be able to rely on North Korean diplomatic rhetoric or the words of third country diplomats. The US will also not be in a position to know whether it will get firm strategic warning that North Korea is nearing the ability to deploy a nuclear-armed ICBM, although some warning seems likely in the form of a missile test program.²⁵

Table III. 5North Korean Missile Programs and Developments

<u>Type</u>	<u>Names</u>	<u>Range (KM)</u>	<u>Warhead (Kg)</u>	<u>Stages</u>	<u>Service Status</u>
SRBM	Hwasong 5, Scud B Storable liquid fuel; TEL launch Sold to Iran and a number of other states.	302-340	1000	1	Since 1985
SRBM	Hwasong 6, Scud C Storable liquid fuel; TEL launch. Sold to Iran and Syria. Deployed in hardened, underground shelters in North Korea.	500	770	1	Since 1989
MRBM	No Dong 1, Rodong 1, Scud D Storable liquid fuel; Uses missile-erector-launcher (MEL). Seems similar to Shihab 3 in Iran and Ghauri program in Pakistan. First test over East China Sea in May 1993, but did not go over 500 kilometers. Iranian and Pakistani observers were present at test. Estimate 50-100 missiles no produced.	1,350	1200	1	Since 1997
IRBM	Taep'o-Dong 1, No-Dong 2. Rodong 2, Scud X Some reports is similar to the Chinese DF-3.	1,500- 2,200	700- 1,000	2	1998?
SLV	Taep'o-Dong 1 Space Launch-Vehicle Partially successful test launch on August 23, 1998. Claim launched small satellite.	4,000	50-100	3	1998
ICBM	Taep'o-Dong 2, No Dong 3	4,000- 6,000	700- 1,000	2	2000+
ICBM	?	6,000+	100-500	3	?

Source: Adapted from Joseph S. Bermudez, Jr., "The Rise and Rise of North Korea's ICBMs, International Defense Review, 7/1999, pp. 57-61; IISS, Military Balance, 2000-2001, "North Korea

¹ New York Times, August 5, 2000, p. A-1.

² Joseph S. Bermudez Jr., "A History of Ballistic Missile Development in the DPRK," The Center For Nonproliferation Studies at the Monterey Institute of International Studies, Occasional Paper No.2, November 19, p. 1

³ Douglas J. Gilbert., "Missile Threats Growing as Nation Pursues Defense," American Forces Press Service, May 7, 1999.

⁴ New York Times, p. A-10.

⁵ For further details, see Review of United States Policy Toward North Korea: Findings and Recommendations, Unclassified Report by Dr. William J. Perry, U.S. North Korea Policy Coordinator and Special Advisor to the President and the Secretary of State, Washington, DC, October 12, 1999; and Testimony Before the Senate Foreign Relations Committee, Subcommittee on East Asian and Pacific Affairs, Washington, DC, October 12, 1999.

⁶ CIA, August 10, 2000, Unclassified Report to Congress on the Acquisition of Technology Relating to Weapons of Mass Destruction and Advanced Conventional Munitions, 1 July Through 31 December 1999 internet edition.

⁷ Department of Defense, Proliferation and Response, January 2001, North Korea section.

⁸ National Intelligence Council, "Foreign Missile Developments and the Ballistic Missile Threat to the United States Through 2015, (September 1999 (www.cia.gov/cia/publications/nie/nie99)). Also see the report of the Rumsfeld Commission, Commission to Assess the Ballistic Missile Threat to the United States, Executive Summary, July 15, 1998, pp. 6-7.

⁹ Arms Control Association, "Chronology of US-North Korean Missile Diplomacy and Events," July 1999.

¹⁰ New York Times, January 31, 2000, p. A-3/

¹¹ National Intelligence Council, "Foreign Missile Developments and the Ballistic Missile Threat to the United States Through 2015, (September 1999 (www.cia.gov/cia/publications/nie/nie99)).

¹² New York Times, June 15, 2000, p. A-1; Washington Post, June 15, 2000, p. A-1.

¹³ Associated Press, July 12, 2000, 0433 and 2334.

¹⁴ Reuters, July 17, 2000, 1510.

¹⁵ New York Times, July 17, 2000, p. A-6; Washington Post, July 17, 2000, p. A-1.

¹⁶ Washington Post, August 15, 2000, p. A-1, A-20.

¹⁷ News World Communications, Inc, July 13, 2000.

¹⁸ Associated Press, July 22, 2000, 0823.

¹⁹ The U.S. Department of State, "U.S.-D.P.R.K. Joint Communique," Oct 12 2000

²⁰ The U.S. Department of State, "U.S.-D.P.R.K. Conclude Three Days of Missile Talks," Press Statement, November 3, 2000

²¹ New York Times, June 18, 2000, internet edition.

²² Washington Post, July 7, 2000; p. A-13.

²³ New York Times, August 10, 2000; Washington Post, April 10, 2000, internet editions

²⁴ Washington Times, July 11, 2000, internet edition.

²⁵ White House Internet Briefing Room, September 3, 2000.