

ARTICLE No 2

Ballistic Missile Defence in Asia **By** **Ingolf Kiesow**

Abbreviations

ABL	Airborne Laser
ABM	Anti Ballistic Missile Treaty
AWS	Aegis Weapon System
BMD	Ballistic Missile Defense
BPI	Boost Phase Intercept
CTBT	Comprehensive Nuclear Test Ban Treaty
GPALS	Global Protection Against Limited Strikes
ICBM	Intercontinental Ballistic Missile
IRBM	Intermediate Range Ballistic Missile
MRBM	Medium Range Ballistic Missile
MTCR	Missile Technology Control Regime (agreement on)
NAD	Navy Area Defense
NMD	National Missile Defense
NTW	Navy Theater Wide Defense
PLA	People's Liberation Army (of China)
PRC	People's Republic of China
ROK	Republic of Korea (South Korea)
SALT	Strategic Arms Limitation Talks
SDI	Strategic Defense Initiative
SDS	Strategic Defense System
SRBM	Short Range Ballistic Missile
THAAD	Theater High Altitude Air Defense
TMD	Theater Missile Defense

UAV

Unmanned Aerial Vehicle

Introduction

Already at the outbreak of the Gulf War, USA had developed a kind of short range anti ballistic missile defence for the protection of troop units. It was the so-called Patriot system. Its effectiveness was limited, though, and even American troops in barracks in Riyadh in Saudi-Arabia had to take a direct hit, which could not be prevented by the Patriot anti missile missiles.

After the Gulf War, there was no immediate new conceptual dimension to warfare theory discussions, caused by the experiences from the use of the Patriot system. There was only a continuation and reinforcement of the debates about the use and delivery of Weapons of Mass Destruction (WMDs) and countermeasures against them. In Sweden the impact of the Patriots had been too weak, in spite of the alarm caused by the discoveries about Saddam Hussein's arsenal. A Swedish summary of the Gulf War only mentions the Patriots, without real analysis of their role in the war.¹ It took almost ten years for the new dimension of missile defence in warfare to get focused worldwide attention.²

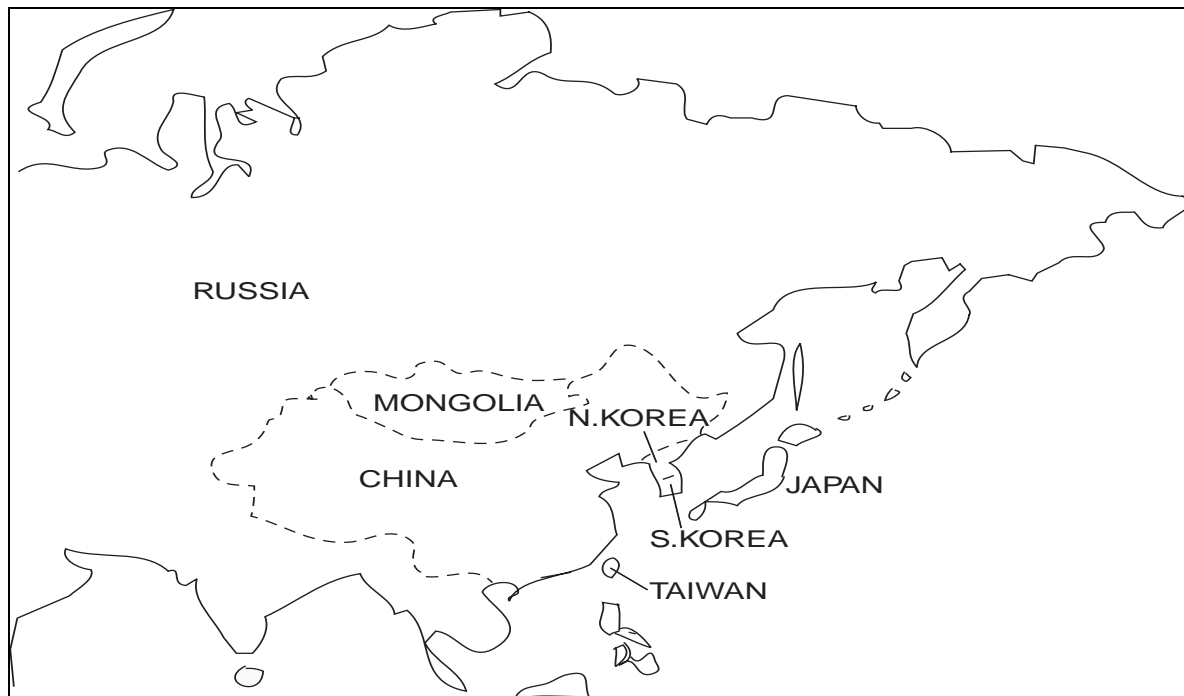
Today, however, the concept of Ballistic Missile Defence (BMD) has changed the perspective "from strategic nuclear attack with global catastrophe as a consequence, to non-strategic ballistic missile attack by "rogue states" in geographically confined regional conflicts". The pattern of conflicts and confrontation has "transformed from dichotomy to multipolarity, and from symmetrical- to asymmetrical confrontation with differentiated actors with different nature. Thus the post Cold War security situation is subject to higher degree of anarchy and unpredictability, with diffused image of threat".³

The ambiguity is more dangerous in East Asia than elsewhere in the world, because there are already other factors making East Asia unstable and dangerous. Two of the world's three most dangerous unresolved questions, the Taiwan question and the question of the two Koreas stem from territorial disputes in East Asia (the third one being Kashmir). There is neither regional security framework nor any institutionalised confidence building mechanism at work. There are asymmetric and differentiated parties competing for influence and power, namely the two largest economies in the world (USA and Japan), an economically troubled Russia, a rather poor China, and one of the poorest countries in the world, namely North Korea, armed to the teeth. Large and stable democracies like USA, Japan, South Korea and Taiwan are competing with non-democratic powers like China and North Korea. Three major nuclear powers, USA, China and Russia are actors in East Asia, as well as a potentially nuclear-armed country, North Korea.

¹ Wetterqvist, Fredrik, and Johansson, Lennart (1991) *Kriget vid Persiska Viken 1990-91*, Stockholm, National Defence Research Establishment, p. 46.

² It should, however, be mentioned that a separate study was made five years later at FOI on the effect of the SCUD-missiles; Tarras-Wahlberg, Erland and Sjöberg, Eric (1995) *Skydd mot ballistiska robotar*, Stockholm, National Defence Research Establishment, Sweden.

³ Ikegami-Andersson, Masako (2000) *Theatre Missile Defence in East Asia*, paper at Pugwash Meeting, no. 257 26-28 October 2000, Center for Pacific Asia Studies, Stockholm University.



Overview of countries in Asia with a direct relevance to the debate on missile defence in Asia, made at the Swedish Defence Research Agency, 2001

Because the BMD is so expensive, the possession of a BMD system is becoming a symbol of super power status, and for the have-nots, who can ill afford a complete system, like China, it becomes a provocation.

The questions that this article tries to cover are the following:

- What are the basic features of the new BMD systems now being introduced in Asia?
- What underlying factors have motivated the emergence of BMD in Asia?
- What can be the consequences of the introduction of BMD – if any – in the form of new military and political structures in Asia?

In the search for the answers, mainly the following different kinds of sources have been used.

Information on events has been taken from official newspapers and publications as much as possible, otherwise well known newspapers and journals or from the works of researchers.⁴

Information on policies and military assets has been taken from the respective countries, wherever available from official sources. A problem has been the lesser degree of openness on these matters in China and North Korea. As a second choice, information from open American and other “western” sources has been used.

⁴ It should be mentioned that there is no local lingua franca in Asia. The situation differs from the situation in the former East Bloc, where Russian was spoken and written by practically all persons with a higher education and communication between the member countries was made in Russian. In Asia, the different countries have to communicate in English with each other. In India, (because so many different minority languages are spoken), English is even used for communication between different parts of the country, and many local newspapers are published in English. Writing regarded as relevant to the neighbours is usually made in English or translated into English.

Interviews with academics, government functionaries and experts have also been used, but mainly to get overall perspectives and background information. Most interviews were not made under such conditions that the person in question would expect to be quoted. They were made with representatives of foreign ministries, ministries of defence, strategic institutes and defence research institutes, but given as “background information”. This background information has been most valuable to understand the situation and make the report relevant. However, the views expressed were not necessarily reflecting the official policy or position of the institution concerned.⁵ Since the persons interviewed have the right not to be quoted, no further indication of the source could be made than “notes by the author”.

⁵ In Japan, The National Institute for Defense Studies, The Research Institute for Peace and Security, The International Institute for Policy Studies, were visited and in South Korea, the Saejong Institute, The Institute for Foreign affairs and National Security and The Korean Institute for Defense Analyses. In China, similar institutions were visited.

CHAPTER ONE: BMD in America

The American experience on BMD thinking goes back to the middle of the 1960s. The Soviet Union was then preparing an anti ballistic missile defence system around Moscow. Furthermore, in USA, the emergence of China as a nuclear power, albeit with limited missile resources, had initiated preparations for the so-called Sentinel program. The development of nuclear doctrine in both super powers, however, finally led them to rethink the consequences of this type of arms race.⁶

The most important objection from the critics to an Anti-Ballistic Missile Treaty (ABM) was that ABM systems would destroy the balance between USA and the Soviet Union. So many and so well protected nuclear missiles had been deployed that any effort to destroy them all in one initial attack was certain to fail. A second strike capability had developed. In this situation the attacker could be certain to face destruction as well, especially since both sides had developed so great numbers and nuclear weapons so powerful that most of each country would become inhabitable after a nuclear exchange. The mutual awareness of this fact had a deterring effect, which was strong enough to keep both sides from attacking, thus creating a “balance”.

This balance could be disturbed by the introduction of an ABM system, since an attacking party could believe that it would be possible to defend a power centre and/or missile silos against all incoming missiles, survive a counter attack and gain final victory. The further development of ABM systems would therefore create an arms race beyond imaginable proportions, with each side trying to overwhelm the other side with ever increasing numbers of missiles and anti missile weapons.⁷ Since both sides hesitated in the face of such perspectives and since the Soviet Union changed its attitude to the ABM defence for other reasons as well, contacts were established, and in 1972 USA and the Soviet Union managed to agree on the so-called Anti Ballistic Missile Treaty. The ABM Treaty was actually part of a greater package of agreements on limitation of nuclear armaments, contained in the so-called interim SALT 1 agreement, agreed at in the negotiating process called the Strategic Arms Limitation Talks (SALT).⁸

In 1984 President Reagan introduced the Strategic Defense Initiative (SDI), a study of the feasibility of a missile defence system. The Strategic Defense System (SDS) carried it on in 1987, based on six major subsystems. It underwent different phases and was replaced by a system that was called Global Protection Against Limited Strikes (GPALS) in 1991. As the name suggests, it was a program focusing at responding to the shorter-range missiles. The technology of weapons for mass destruction had proliferated, the strategic threat from the Soviet Union had almost disappeared and the costs for the SDS had appeared to be very high and the technical problems involved in responding to the longer-range missiles had appeared to be more difficult to solve than initially expected. All these factors contributed to the change of focus.⁹

⁶ Axberg, Stefan and Dörfer, Ingmar (2001) *"Missilhot mot Sverige"*, Booklet issued by the Swedish National Defence Commission, Regeringskansliet, Försvarsdepartementet, Stockholm 2001 p.10.

⁷ Myrdal, Alva (1976) *The Game of Disarmament*, New York, Pantheon Books, p.116.

⁸ Ahlström, Christer (2000) "Nationellt missilförsvar och 1972 års ABM-fördrag in *the Journal of the Swedish Royal Academy of War Science*, Booklet no. 5, 2000; Rydqvist, John (2001) *Missile Defence as symbol and weapon*, Swedish Defence Research Agency, Stockholm, Report FOI-R--0072--SE.

⁹ Baucom, Donald R. (2001) *Ballistic Missile Defense: A brief History*, <http://www.acq.osd.mil/bmdo/bmdolink/html/history.html>, accessed 21 January 2002.

During the 1990s the basic thinking evolved that today is seen in the three-levels of

- A ground-based National Missile Defense (NMD)
- A ground- or sea-based Theater Missile Defense (TMD) and
- A space-based global defence.

A North Korean decision in 1998 to test fire the Taepon Dong Missile had consequences, which were probably more far reaching than the decision maker(s) had imagined. The consequences were reinforced by the psychological effects of an Indian nuclear test and by the ensuing Pakistani explosion of a nuclear device. The talk of “an Islamic bomb” added fuel to the debate about nuclear terrorism in USA and other western countries.

There is a certain irony in the fear of attacks from so-called rogue states or “states of concern”. For almost any smaller or medium sized state, it would mean suicide to attack a super power like USA with a single nuclear device and then not be in a position to make a second strike, but the fact is that the threat from terrorist organisations as exemplified by Osama Bin Laden’s Al Qaeda is more dangerous, because it is usually very difficult to deter. A terrorist organisation could deliver weapons of mass destruction – even a nuclear device – hidden as innocent container goods, and there is no realistic way of planning a defence or deterrence for that kind of a threat. Yet, public opinion in a country like USA requires of its government that it prepare a defence against rogue state attacks.

Even if the North Korean missile could not reach the American Continent, it raised a response in America similar to the response in Japan. The immediate reaction was to “fix THAAD problems overdrive”.¹⁰ THAAD (Theater High Altitude Area Defense) was then the most advanced project in the American plans for a Theater Missile Defense (TMD). It is still being developed, and it is supposed to target incoming missiles, while they are still at high altitudes. The project team had started test firing in 1995 but met with a number of set backs in the form of missed targets and other technical problems. New budget allocations were now made for the continuation of the test firings.

At the beginning of the new millennium, there has emerged a new dimension to the issue of ballistic missile defence in the American defence debate, and that is the tendency to point openly at China as a possible adversary. China is now more openly than in earlier ABM debates being pronounced as the real reason for the building of an American national missile defence system.

Against this background, recommendations by strategic institutes and think tanks tend to take the so-called China threat seriously. Among key recommendations about Asian reactions to U.S. Missile Defense, Michael J. Green and Toby F. Dalton recommend that USA assess China’s options objectively.

“It is important to recognise that Beijing will modernise its ICBM force for survivability no matter what the United States does with NMD. An NMD decision will probably increase the rate of that modernisation, but NMD is not the only important factor. Other factors, such as the Cross-Strait dialogue, U.S. China political/economic Co-operation, and the success of

¹⁰ *Janes Defence Weekly*, 14 October 1998; 21 July 1999 and 21 August 1999.

Chinese economic reforms will also be important in determining how aggressive the Peoples Liberation Army response is.”¹¹

A study at the Institute for Strategic Studies at the U.S. National Defense University by Jason D. Ellis and Todd M. Koca concludes as follows:

“Some claims by opponents of ballistic missile defence that prospective deployments will trigger a reactive Chinese arms build up of long range missile systems tend to confuse cause and effect. China is modernising and numerically increasing its deployed missile forces; ballistic missile defence is a countermeasure against that build up, not its cause”.

A simple account of approximately 20 long range nuclear weapons for China (or even the approximately 400 currently available strategic and tactical nuclear warheads) misses a critical point: that the U.S. ability to achieve its regional security objectives, predicted in part on power projection requirements, may be adversely affected by Chinese nuclear and missile capabilities.

In response to China’s missile build up, the United States should continue to develop appropriate ballistic defence systems in conjunction with its allies.”¹²

In May 1998, Boeing had been given a contract, potentially worth USD 5.2 billion to develop a National Missile Defense System (NMD). The project involves further developing of the THAAD as well as developing “kill vehicles”, radar systems, battle management, command and control systems in the NMD.

The NMD alone is calculated to cost USD 60 billion¹³ with other planned ingredients in the form of a boost-phase interception system and a mid-course system

The total cost for a U.S. Ballistic Missile Defence system could be calculated at between 160 and USD 200 billion over twenty years or 8- 10 billion USD per year, which means 2.5 – 3 per cent of the annual U.S. defence budget.¹⁴

None of the systems have been developed against any specific threat. The scare from the North Korean test firing, however, has helped all these projects, which have been on the drawing boards in space and defence industries for decades, to gain a new momentum. It certainly influenced the Bush camp during the pre-election planning period to take an active stand on this issue. The then Governor George W. Bush made the following statement in May 2000:

“The Clinton administration at first denied the need for a national missile defense system. Then it delayed. Now the approach it proposes is flawed – a system initially based on a single site, when experts say that more is needed. A missile defence system should not only defend our country; it should defend our allies, with whom I will consult as we develop our plans.

¹¹ Green, Michael J. and Dalton, Toby F.(2000) *Asian Reactions to U.S. Missile*, The National Bureau of Asian Research, Washington Nov. 2000 (nbr@nbr.org).

¹² Ellis, Jason D. and Koca, Todd M., (2000) *China Rising: New Challenges to the U.S. Security Posture*, (October 2000), Strategic Forum no. 175, Institute for National Strategic Studies, National Defence University, (www.ndu.edu/strforum/sf175.html).

¹³ *Far Eastern Economic Review*, 21 September 2000, p. 22.

¹⁴ Dörfer, Imgmar (2001), *Ballistic Missile Defense*, Swedish Defence Research Agency, Stockholm.

And any change in the ABM Treaty must allow the technologies and experiments required to deploy adequate missile defense.”¹⁵

¹⁵ U.S. Department of State, International Information Programs, (2000) U.S. Foreign Policy Agenda, 2000, (<http://usinfo.state.gov/journals/itps/0900/ijpe/ijpe0900.htm>).

CHAPTER TWO: BMD in Japan

Research on possible BMD systems has been going on slowly but systematically in Japan since the early 1980s.

In the middle of a delicate and unstable environment in Asia, the BMD question was jump started in August 1998, when North Korea launched a missile, which was described as a communications satellite carrying vehicle named Taepon Dong 1 SLV. It overflowed Japan, and it immediately caused “serious concerns that regional destabilisation will be the consequence”.¹⁶

The missile was said to carry a satellite with telecommunications equipment, but whether or not it did actually contain such equipment, it demonstrated North Korea’s capability to send a three-stage missile, carrying a small but not insignificant payload to intercontinental ballistic missile ranges.¹⁷ It is estimated by U.S. intelligence to have a range of 2 000 kilometres, and it is known that North Korea is working on Taepon Dong 2, which could have a range of up to 5 000 kilometres.

North Korea possesses weapons of mass destruction according to U.S. intelligence reports.

“A large number of North Korean chemical weapons threaten both our military forces and civilian population centres. We assess that North Korea is self sufficient in the production of chemical components for first generation chemical agents. They have produced munitions stockpiles estimated at up to 5 000 metric tons of several types of chemical agents. We assess that North Korea has the capability to develop, produce and weaponize biological warfare agent.

While North Korea denies possession of nuclear weapons and has frozen its nuclear program at Yongbyon, we remain concerned the North could revive a weapons production program.”¹⁸

That and the general fear all Japanese harbour for nuclear destruction since the attacks on Hiroshima and Nagasaki explains why the reaction in Japan was immediate and drastic. The reaction was reinforced by the fact that the missile crossed Japanese air space on its way into the Pacific Ocean. Among the decisions taken as a result of the North Korean missile launching were:

- A decision in December 1998 by the Japanese Government to co-operate with the Government of USA to make research on the Navy Theater Wide Defense. A Memorandum of Understanding was signed in July 1999, in connection with a visit by the then U.S. Secretary of Defense, William Cohen.
- A decision to allocate 962 million yen in the state budget for 1999 for research on an SM-3 missile system.

¹⁶ Self-Defence Agency, *1999 Defense of Japan*, Originally published by the Self-Defense Agency, translated and printed by Urban Connections, Japan 1999 - p.83.

¹⁷ Walpole, Robert (2000) *Prepared testimony of Robert Walpole, CIA, before the U.S. Senate, February 9, 2000.*

¹⁸ U.S. secretary of Defense (2000) *2000 Report by the U.S. Secretary of Defense on the military situation on the Korean Peninsula*, 12 September 2000.

- A decision ratified by Parliament in November 1998 to build four advanced reconnaissance satellites for dual use, civilian and military. The Japanese Constitution prohibits military use of the outer space. The satellites shall make it possible to react faster on crises in the neighbourhood and increase the possibilities to forecast and follow natural disasters, and it will make it possible to trace missiles.

To take up co-operation with USA on research on BMD was not a new idea for the Japanese. Japan had been using U.S. equipment in its self-defence Forces, but it had also developed a rather prominent space research capability, including heavy-duty booster rockets matching the heaviest U.S. and Soviet rockets for lifting satellites into space already in the early 1980s. Its electronic industry was leading in many fields and development and research on sensor technology and exotic new materials was also well advanced.¹⁹

When President Ronald Reagan introduced the Strategic Defense Initiative in his “Star War Speech” in 1983, it was clear that USA would need the co-operation of its allies in order to develop superiority fast enough to win the armament race over the Soviet Union. Japan was invited, and in 1985 an exchange of notes was made the basis for this work. Two new agreements and the subsequent necessary Japanese legislation also created a legal framework for the transfer of “dual use high technology”.²⁰ Before the co-operation had had the opportunity to deliver any substantial result, the SDI lost its impetus by the decline and collapse of the Soviet Union and the ensuing end of the Cold War. The focus shifted during the Gulf War to “Theater Defence” against incoming missiles.

Since the Patriot missiles already mentioned contained some elements of Japanese technology, their use in the Gulf War made it natural for USA to invite Japan to further development co-operation of these so called “Theater Missile Defenses”(TMDs). They were named thus, since they were covering only a limited area – a “Theater” - with their intended defence capability, unlike the BMD (or NMD) aiming at the defence of whole nations.

The official invitation from USA was made in September 1993, by the establishment of a Japanese American TMD working group, aimed at developing a missile defence against threats from ballistic missiles sent by so-called rogue states. A common feasibility study to make decisions on Japan’s future air defence system and technological feasibility of BMD was initiated in 1995.²¹

In other words, when the scare came from the North Korean missile test firing in August 1998, the BMD idea had lost most of its sense of urgency, but it was not discontinued, and the ground was well prepared, the initiative this time actually came from the Japanese Parliament. It decided in September 1998, “The Government will take all measures to ensure the security of Japan”. By December the same year the Government announced that it would proceed with co-operative technical research with the United States from 1999 on the Navy Theater Wide Defense. It also declared clearly that now “there are no alternatives to the BMD system”.²²

¹⁹ Kiesow, Ingolf (1993) *Asien Attraherar*, National Defence Research Establishment, Stockholm, Report A 10043-1.4 March 1993, p. 46-48.

²⁰ Ikegami-Andersson, Masako (1998) *Military Technology and U.S.-Japan Security*, Uppsala University, Gotab.

²¹ Self-Defense Agency "1999 Defense of Japan", Originally published by the Self-Defense Agency, translated and printed by Urban Connections, Japan, 1999, p.81; Cambone, Stephen A.(1997) The United States and Theatre Missile Defence in North-east Asia, *Survival*, vol.39, no.3, Autumn 1997, pp. 66-84.

²² *ibidem* p. 83.

CHAPTER THREE: Different areas of planned American BMD in The Western Pacific

Before dealing with the consequences of the introduction of BMD for the situation today, some basic technical information is needed regarding the different layers of the planned American BMD in the Western Pacific.

President Reagan's Strategic Defence Initiative produced a number of new research projects and a few new weapons systems, such as the Patriot, but not any system, which was in contradiction to the original ABM treaty – at least not according to the U.S. interpretation of that treaty. The program did provoke some new research in the then Soviet Union and later Russia and in China. In the case of the Soviet Union that effort may have contributed to the fall of the Union, but it did not lead to any revolutionary new technology. The Soviet Union produced a few TMD systems similar to the U.S. Patriot, and at least two of them are considered quite efficient, especially the S-300 V. However, the Russian TMD systems did not represent technological breakthroughs.

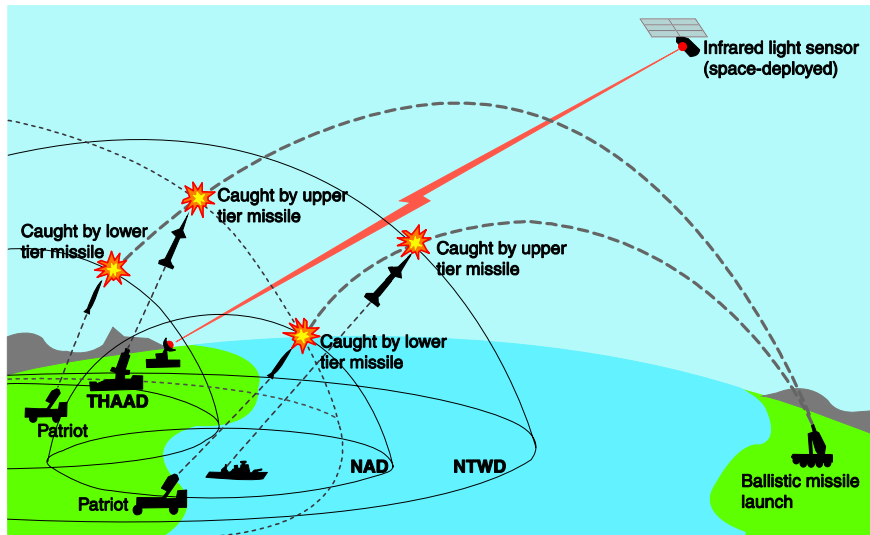
The main importance lay in the combined effects of the research efforts included in the SDI program. After the end of the Cold War President George Bush and the then Secretary of Defense, Caspar Weinberger made statements about the U.S. defence research and development policy, stressing the importance of maintaining this technological edge over the rest of the world.

The Gulf War offered a test bed for the new technologies and for ensuing new tactical doctrines. These experiences have been analysed under the concept of "Revolution in Military Affairs", RMA. One conclusion has been the emergence of the concept of "Asymmetric Wars", which are relevant to strategic doctrines in Asia, especially in China.²³

Many nations developed new missile systems, but none as systematically and wide ranging as USA. Today there can be identified four areas of existing and/or planned missile defence systems, all of them relevant to the development of the strategic environment of East Asia.

They are: lower tier TMD, upper tier TMD, U.S. NMD, and Boost Phase Intercept (BPI). They are illustrated in the picture on the next page, made at the Swedish Defence Research Agency:

²³ Freedman, Lawrence (1998) *Revolution in Strategic Affairs*, Adelphi Papers 318, The International Institute for Strategic Studies, London.



- Lower tier systems defend against short-range threats, such as short-range ballistic missiles (SRBMs, up to 1 000 kilometres), cruise missiles, and aircraft. There are two types, Patriot and Navy Area Defense (NAD). Upgrades of the original Patriot, renamed Patriot Advanced Capability-2 (PAC-2) was sold to Japan and Taiwan. A newer and updated version, the PAC-3 will have the capability to intercept cruise and ballistic missiles as well as aircraft and is scheduled to be available in 2001.

The U.S. Navy Area Defense (NAD) system has recently been discontinued.²⁴ It was based on the Aegis Weapon System (AWS) deployed on guided missile cruisers and destroyers. The version now in use has a demonstrated capability against both cruise and high altitude anti ship missiles, and a planned new version would have added an anti-SRBM capability around 2003.

- Upper tier systems defend against medium range threats, such as medium range ballistic missiles (MRBMs, 1 000 to 3 500 kilometres) and Intermediate Range Ballistic Missiles (IRBMs, 1 500 to 5 500 kilometres). The U.S. Army is developing the Theater High Altitude Air Defense (THAAD) system and the Navy is working on the Navy Theater Wide (NTW) system.

THAAD is designed to knock down medium range missiles (using a “kinetic kill vehicle”) and operate in both endo-and exo-atmosphere. If the current technical problems are overcome, THAAD can be deployed around 2007.

The U.S. Navy Theater Wide system will be deployed on Aegis equipped ships, possibly in conjunction with the Navy Area Defense System. In contrast to NAD, NTW cannot be used against short range or cruise missiles, but it has the ability to defend large areas from missile attack – like the whole territory of Japan and/or Taiwan. Deployment is likely to take place after 2006.

- The U.S. NMD system employs faster interceptors of longer range than those used in the upper tier TMD systems and will defend all fifty states (of the continental USA) at apex of their ballistic curve in the exoatmosphere. Current plans for NMD rely on the use of

²⁴ *International Herald Tribune*, 17 December 2001.

ground based interceptors. The earliest planned configuration, the C-1 will include 20 interceptors based in Alaska and could be deployed by 2005 or 2006. It is designed to intercept up to five intercontinental ballistic Missiles (ICBMs with ranges of more than 5 500 kilometres) equipped with single warheads and simple penetration aids. An expanded C-2 system, projected to be ready around 2007, would include 100 interceptors in Alaska and could potentially defend against an attack of 25 single warhead ICBMs with simple decoys or five ICBMs with advanced countermeasures. A C-3 system, which could be fielded between 2010 and 2015, would include 250 interceptors deployed in Alaska and Grand Forks, and could potentially defeat 50 single-warhead ICBMs with simple decoys or 20 ICBMs with advanced countermeasures.

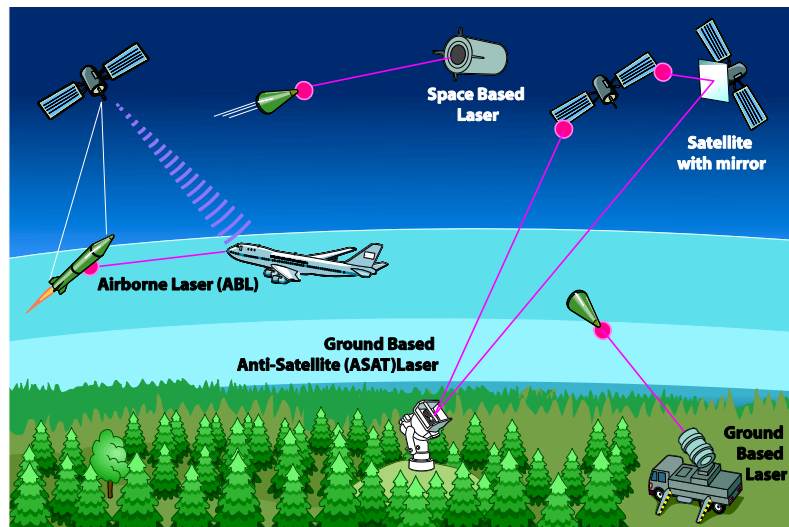
The NMD has been renamed Ground-based Midcourse Segment (GMDS) and is the part of the missile policy that has attracted most criticism both within USA and abroad.²⁵

- Boost-phase intercept systems attack a missile shortly after it is launched, while it is in its ascent phase, but before it exits the atmosphere. All ballistic missiles are most vulnerable in the first minutes after they are launched – the boost phase – because they are easy to detect and track due to the relatively slow speed while boosting and the hot fumes of the burning propellant.²⁶ Several proposals have been made for a boost phase intercept missile defence system. Because BPI avoids the complexity of warhead discrimination in the terminal phase of missile flight –the Achilles heel of the TMD and NMD systems – the countermeasures, sub munitions or multiple warheads would not fool it.

²⁵ *Defense News*, 17-23 December 2001.

²⁶ Swedish Defence Research Agency Booklet No 1 (2001) *Elektromagnetiska vapen och skydd*.

Four BPI systems are currently under discussion or development. They are illustrated in the picture below, made at the Swedish Defence Research Agency:



Firstly, the U.S. Air Force is developing the **Airborne Laser (ABL)**, which uses a converted Boeing 747 and an oxygen-iodine chemical laser to shoot down missiles in their ascent phase. A fleet of seven ABLs could perhaps be operational by 2008. A second programme under discussion is the use of **Unmanned Aerial Vehicles (UAVs)** to launch high-speed airborne interceptors. The third system being researched is a **space-based laser**. If deployed, a constellation of 20 satellites, each carrying a hydrogen fluoride chemical laser would shoot down missiles in their boost phase. This programme has been under development since the 1980s (but without any tests as yet). A fourth option, using forward-deployed Aegis ships, is under discussion as a possible **sea-based BPI system**.²⁷

²⁷ Green, Michael J. and Dalton, Toby F.(2000) *Asian Reactions to U.S. Missile*, The National Bureau of Asian Research, Washington Nov. 2000 (nbr@nbr.org).

CHAPTER FOUR: BMD response in East Asia and the American perception thereof

U.S. policy on the BMD issue is guided more by considerations emanating from responses in the East Asian region than from Europe or from Russia.

This may not be astonishing. North Korea's is a potential threat to its neighbours in Asia and, theoretically, even to the American homeland. Japan has participated actively in the early stages of BMD development and has a rather active role in research and development after the North Korean launching of the Taepon Dong missile. China's arms modernisation and plans to prepare for a military take-over of Taiwan (if necessary) are ambitious. China's build up of its strategic nuclear missile forces constitute a potential threat to the American homeland. Russia, on the other hand, is showing a non-aggressive attitude and an eroding nuclear arsenal. NATO countries, including Canada have generally appeared to have a rather disinterested or sometimes negative attitude to BMD.

Against this background, it is natural for U.S. studies to focus on the consequences in Asia in order to prepare for the continuation of the BMD build up. Two such studies will be taken as examples of the conclusions reached in America. The first study²⁸, made by The National Bureau of Asian Research (NBR), deals with the whole BMD issue.²⁹

A Stimson Center working group deals only with the TMD issue and made the second study.³⁰ It had been given the specific task to make recommendations about future American sales of TMD weapons, which means that it does not comment on countries that are not potential adversaries.

Japan

According to the American reports, if the United States is to carry out its alliance tasks, U.S. forces based in Japan require protection against missile attacks on their bases.

Missile defence decisions in Japan are taking place in the larger context of a changing Japanese strategic culture, more permissive defence politics and a more assertive debate on TMD. However, Japan has not shown any interest in the Theater High Altitude Air Defense (THAAD) nor in the discontinued Navy Area Defense (NAD) systems.

While North Korea's short range Nodong missile poses the immediate ballistic missile threat to Japan – because the U.S. "nuclear umbrella" does not so easily deter it over Japan and because of the animosity against Japan over historical issues, it is China's medium-range ballistic missiles (MRBMs) that pose the long-term threat.

According to experts interviewed in Japan, this American perception was basically confirmed, but moderated by the following observations. Although in general, there was no hiding that Japan is gradually acquiring a more independent defence capability, not through planned

²⁸ Green, Michael J. and Dalton, Toby F.(2000) *Asian Reactions to U.S. Missile*, The National Bureau of Asian Research, Washington Nov. 2000 (nbr@nbr.org).

²⁹ The two studies are similar in content, but have been made during somewhat different periods in time.

³⁰ *Theater Missile Defenses in the Asia-Pacific Region: A Henry L. Stimson Center Working Group Report*

procurement or training, but because of the technological development, Japanese technology is providing the country with more and more domestic capability. It was usually stressed, however, that this does not imply any intention to act independently. The defence treaty with USA will remain the cornerstone for all defence matters. TMD is the only element of BMD, included in Japanese defence planning. The Japanese research in this field was regarded more as a pre feasibility study. It was seen as a tactical system and not as a threat to the strategic balance. It is intended as defence against attacks by the so-called rogue states only. Japan participates in the TMD for the sake of the alliance with USA. TMD is not possible for Japan to use independently. It is also strictly defensive in the hands of Japan. The technology is still regarded as uncertain.

However, it was observed that if TMD were to be combined with a BPI system, it could become something more, a beginning of a national missile defence for Japan.³¹

There are several factors that make the decisions about a possible acquisition of missile defence systems difficult for Japan.

- TMD is expensive.
- NTW is not proven technology.
- There are legal and constitutional issues.
- Although Japan's view of China has become markedly more negative in recent years, many public officials in Tokyo worry about being drawn into a China Taiwan conflict by participating in a U.S. missile defence system that could extend to Taiwan.

(On this issue, it should be added that, according to Japanese experts interviewed by the author, Japan U.S. relations have changed after 1997. They have become more directed toward regional stability, Taiwan, South China Sea, sea-lanes etc. At the same time, South Korea and Japan improve relations rapidly, which further strengthens the pattern of regional

³¹ The American perception of the Japanese attitude to the different layers of BMD, is described as follows:

Lower Tier: Japan has deployed PAC-2 plus and will likely procure PAC-3 when it becomes available in the next few years.

Upper Tier: Japan is likely to continue with joint NTW development and will probably decide to procure and deploy the Block I system when it becomes available around 2007. (Japan committed \$ 10 million in fiscal year 2000 for joint research with The USA on NTW and is planning on funding development of a continuation of that project at 250-350 million for 2000-05.)

U.S. National Missile Defense: At a meeting of the Diet on 1 August 2000, the Japanese Prime Minister, Yoshiro Mori stated that Japan "understands" why the United States is pursuing NMD, it was noted in both the American reports.

They also observed that one complication for Japan, arising from its possible engagement in the NTW development, is the breakout potential for the (upper tier sea based) NTW to be used as a sea based platform for NMD. A proposal by the U.S. Navy to use NTW as a part of the NMD architecture may worry some Japanese policymakers who do not want Japan to be implicated by China as a participant in the U.S. NMD system.

Boost Phase Intercept: Japan has made no official statement on U.S. plans for a boost phase intercept system. The Aegis platform might be appropriate for a possible BPI system. If the United States does choose to pursue a sea based or air based boost phase system in Asia, Japanese support would - in the opinion of the NBR - be crucial because both systems would likely be based in Japan.

co-operation. That is a concern for China, because it means in practice another alliance enlargement. To achieve real stability in the area, confidence-building measures are required, but China does not accept the idea of disarmament and weapons control as yet. Some observers thought that there is a need really to put pressure on China on this issue. PLA was perceived to be very different from the civilian leadership, much more nationalistic and getting more influence, which should be given attention).

The Stimson Centre working group recommends the United States to keep Japan involved in the NTW development process, but leave any future deployment options for Japan open. Any deployment of upper tier TMD for U.S. and Japanese forces should be conducted in a way that strengthens the credibility of the alliance. Decisions regarding command and control arrangements of upper tier TMD systems will be a critical issue in the U.S.-Japan alliance as well as in Japanese civil military relations.

There is concern within the Asia-Pacific region about the long-term implications of Japan having its own upper tier TMD systems under independent command and control. The region is equally concerned about the United States, Japan and South Korea, and possibly Taiwan combining their TMD assets into a Northeast Asia TMD network. Therefore, the Stimson working group recommends that the U.S. and Japanese governments study in detail the long term implications of integrating or not integrating TMD systems, before deployments proceed. Furthermore, the U.S. government needs to clarify that missile defence systems complement, and do not substitute for, extended nuclear deterrence.

While the Japanese goal is a national missile defence system with a stand-alone capability, rather than to provide support for a U.S. system, the working group believes that deployment and operation of upper tier systems by the Japan Self-Defense Forces (JSDF) could have significant foreign policy consequences for Japan. The U.S. and Japanese governments should jointly assess in depth the diplomatic, political and military ramifications of Japanese NTW for Sino Japanese relations and Sino American relations. Missile defences should be discussed in the context of overall regional – and global security strategy.

Republic of Korea

According to the American analyses, U.S. missile defence requirements are quite different from South Korean priorities. South Korea must balance its security needs against its desire for peace and unification with North Korea.

South Korea properly assumes that the United States would deploy additional lower tier TMD systems to help protect sites essential to allied military operations. Forward deployed, lower tier TMD systems operated by U.S. forces would have an integrated command and control system, further strengthening alliance ties.

Defence experts in Seoul stated to the author that South Korea does not want a national Korean TMD, the reasons being:

- Protection is not good enough against nearby missiles,
- It is too expensive,
- China would react negatively,

- Korea benefits from the protection of the U.S. TMD umbrella over the U.S. troops in Korea, even without a national Korean missile defence.

South Korea's President wants USA to remain in the area after a possible reunification of Korea, and North Korea's President Kim Jung-II has told him that he would tolerate continued U.S. presence in Korea. The significance of this statement by the North Korean leader is not altogether clear, but it seemed that certain government officials in Seoul feel that continued U.S. military presence in Korea of some kind would be possible even after reunification – should such a development ever occur.

Some Korean experts thought that NMD is a source of insecurity, because of the tendency to provoke a Chinese-Russian collective attitude in opposition to BMD in general. It may be added that in Japan the experts were of the opinion that the present tie up of Russia and China in the Shanghai 5-Group is nothing more than a “marriage of convenience”. They find it convenient to use it also for opposition against the American BMD plans, and it will not lead them into further co-operation in military and strategic matters. Russia has its own problems with China in the Russian Far East. The South Korean experts, however, expressed concern that Japan's participation may cause an arms race, since China fears a Japanese military build up. China and North Korea and Russia all feel threatened by Upper tier TMD. Japanese-Korean relations are improving fast, but at the same time, Chinese-Japanese relations become increasingly competitive, which is a worry for South Korea, according to the Korean defence experts.³²

The Stimson Centre working group considers that while land based, upper tier TMD deployments in South Korea could provide some utility against longer range North Korean missiles aimed at Japan or U.S. bases located in Japan, a far stronger case can be made for sea based, upper tier TMD deployments by the U.S. Navy. These weapons have already proven their interception capabilities through rigorous flight-testing. The Working group supports the deployment of sea based, upper tier TMD systems that would not be “South Korea specific”. Instead, they would serve as instruments of regional security against existing and prospective ballistic missile capabilities that could harm U.S. forward-deployed forces, friends, and allies in the region.

³² The following is the U.S. perception of the situation in Korea's relation to the different layers of BMD:

Lower Tier: South Korea supports the current U.S. Patriot deployment there, although it will not likely be in the financial position to purchase its own lower tier system soon.

Upper Tier: Currently South Korea would likely support U.S. upper tier deployment, which could consist of several THAAD units. But if North and South Korea reach a peace agreement, South Korean support for TMD would probably decline significantly.

U.S. National Missile Defense. While many of its Asian neighbours criticised U.S. NMD plans at the Asian Regional Forum in July 2000, South Korea remained silent.

Boost Phase Intercept: There is no official position on a U.S. boost phase system. Korean support, should the United States deploy such a system, could be important, since Airborne Laser (ABL) might be based in South Korea and sea based assets would require anti submarine, anti air and other South Korean support to operate near the peninsula. Alternatively, if the peace process is successful, South Korea may be less supportive of U.S. missile defence and may raise barriers to U.S. basing of missile defence assets in Korea. This could complicate U.S. NTW, sea based NMD, or boost phase intercept plans.

Taiwan

According to U.S. intelligence, the transfers of some TMD systems to Taiwan could produce a wide range of negative consequences for cross strait and U.S.-China relations. The main concern is to avoid giving Beijing the impression that the U.S. Taiwan mutual defence treaty is being restored.

China first began deploying short-range M-9 and M-11 missiles opposite Taiwan in 1990, and the number of deployed missiles is estimated to grow from the 150-200 currently deployed to possibly 650 in the next several years.

In the mid-1980s Taiwan began the development of an indigenous lower tier system called Tien Kung (Sky Bow), which is similar to the U.S. Patriot system. In 1993 Taiwan requested purchase of the PAC-2 system, but Washington wavered, instead allowing Raytheon to sell Taiwan Patriot fire control units to augment the Tien Kung, which Taiwan deployed in September of that year.

In June 1994 Raytheon signed a PAC-2 contract with Taiwan, but delivery was slow. After China test fired more SRBMs near Taiwan in March 1996, just prior to Taiwan's first democratic election, the United States agreed to speed up delivery of the PAC-2 units, which began in January 1997. During the 1999 annual arms sales talks, Taiwan requested four Aegis equipped destroyers (with a view toward sea based TMD) and the PAC-3 system. Washington deferred a decision on whether to approve this purchase.

After the NRB and Stimson Centre reports were made, the annual arms sales talks were held with Taiwan during the spring 2001. Taiwan requested permission to purchase:

- Four destroyers equipped with the Aegis battle management radar system,
- Four Kidd class destroyers,
- 12 Orion PC-3 submarine hunting aircraft and
- A variety of other air, ground and naval systems.

All these requests with the exception for the Aegis destroyers were approved for sale. This should be seen against the background of the recommendations in the above-mentioned reports and other recommendations from U.S. military expertise. They believed that Aegis equipped ships operated by the U.S. Navy, working in conjunction with other U.S. military assets, would have far more utility than Aegis equipped ships operated by Taiwan's navy. Thus, the Stimson working group believed that TMD on U.S. ships would serve as a better response to Beijing's missile build up and enhance regional stability, while averting steps that might precipitate political and military crises that the United States seeks to avoid.³³

³³ The U.S. perception of Taiwan's relation to the BMD reads as follows: *Lower Tier*: If the United States does not sell PAC-3 or Aegis to Taiwan, Taiwan may well request coverage under a U.S. deployed Navy Theater Wide system (or NTW).

Upper Tier: Taiwan has deferred its interest in an upper tier system at this time. The military utility for Taiwan of such a system is even less than for a lower tier system. Should the United States or Japan deploy an upper tier system in East Asia, Taiwan will almost certainly request coverage, particularly if cross-Strait relations remain tense. Exclusion from TMD might provide the impetus for Taiwan to begin work on a counter strike force, and this outcome would be equally, if not more disturbing.

By the time Taiwan or the United States deploys PAC-3, NAD, or NTW, China will be likely to field so many SRBMs in Fujian province that any TMD system could be overwhelmed. It is therefore the political significance of TMD (principally the Aegis, but also PAC-3) for Taiwan that is important to its security. If the United States denies the sale of Aegis, Taiwan hopes to be included in a regional shield operated by the United States. In either case, the result would be closer defence co-operation between Taiwan and the United States and an increase in Taiwan's security.

The Stimson Centre working group concludes that the sale of upper tier TMD systems to Taiwan should not be considered for the time being, but should be considered in the future, depending on the evolution of the ballistic missile threat to Taiwan. The working group, however, supports additional transfers of land based, lower tier TMD systems. The basic message the United States now needs to convey to Beijing and Taipei is that the use of force across the Taiwan Strait would have profoundly negative ramifications for the entire Asia Pacific region. "U.S. arms sales should reinforce, not undercut this message."

The People's Republic of China

According to the American reports, TMD (particularly U.S.-Taiwan TMD co-operation), and even more so NMD, would present complex strategic challenges for China. TMD would reduce China's ability to coerce Taiwan and divide Japan and the United States in a crisis, while NMD would reduce China's overall ability to deter the United States. As long as the United States is the dominant power in Asia, China cannot be "the pre eminent Asian power".

China's arguments against the deployment of U.S. NMD include:

- Missile defence runs against the trend of the time and does not help the international arms control and disarmament efforts. It will have a far-reaching and profound negative impact on the global and regional strategic balance and stability in the 21st century.
- Missile defence violates the ABM Treaty.
- Missile defence perpetuates the Cold War mentality.
- Missile defence encourages an arms race.
- Missile defence leads to missile proliferation.
- Missile defence threatens the non-proliferation regime.
- Missile defence leads to anti satellite (ASAT) capability. Chinese experts have warned that NTW would have the ability to strike Chinese satellites in low orbit.

While talking to Chinese experts, the author tried to find out if there are other contributing reasons for the Chinese positions. The result was that basically all official arguments (as listed above) against the U.S. NMD were repeated on different occasions and by different persons. However, it was also said that China opposes any kind of modification of the ABM Treaty, even a limited one, because it would mean a break through and be the beginning of further steps by USA on the way to a hi-tech arms race. Therefore, China opposes any kind of a compromise. It was confirmed that not even a limited BPI defence system would be allowed in any arrangement wherein China would become a partner.

USA was accused of trying to invent an enemy in order to excuse its own excessive armaments. Both threats from so-called rogue states and China were said to be imaginary and nonsensical. On TMD it was said that they watched carefully if TMD is given to Taiwan. Aegis is a part of the future U.S. TMD system. U.S. Congress must avoid giving that to Taiwan.

Concerning Japan, several experts mentioned the troubled past history and the “evil” memories of Japanese occupation. One person elaborated on the wish for a better-balanced U.S. relationship in the “triangle” between China, America and Japan, claiming that the latter gets too much attention and favours. Another attacked the Japanese White Paper on Defence 2000 for painting a Chinese threat picture as an excuse for getting more money from the taxpayers.

A paper by Hong Yuan, Chinese Academy of Social Sciences illustrates the impression of Japan that seems to influence Chinese strategists:

- The strategic evolution in Japan has its own covert purpose and target. The TMD is a “breakthrough of military revolution”.
- The TMD is a weapon system with both defensive and offensive capabilities. Moreover, “it is a guarantee for Japan to be a big military power”.
- To get rid of its own public-relations dilemma, “Japan is taking a building shields first, then swords- policy”.
- We can assume that once TMD is deployed, Japan will get itself nuclearized and go forward to become a military power.³⁴

The American reports on the Asian response to TMD include the conclusion that because of the long lead times involved in developing a new missile, it is evident that China had already built and would build new systems regardless of the U.S. missile defence plans. There is no evidence that China has made a decision to speed up its current modernisation effort and deploy DF-41s instead of the older DF-5 (currently China’s only missile capable of reaching USA). No decision to MIRV them (outfit them with multiple, independently target able re entry vehicles) in order to overwhelm U.S. NMD seems to have been taken.³⁵

³⁴ Yuan, Hong (2000) *"The influence of TMD system in Japan on China's security"*, paper distributed during a seminar at FOI, November 2000.

³⁵ *Lower Tier*: Taiwan's current lower tier capability does not threaten to undermine China's overwhelming missile superiority. (In fact, China is developing its own lower tier system based on the Russian S-300 SAM.) Neither would China be overly threatened by a Taiwanese upgrade to PAC-3. Any U.S. assistance with PAC-3, however, including early warning or systems integration, would produce a much stronger Chinese response. *Upper Tier*: An upper tier defence would have some operational impact on China, since the lower rate of penetration could force Beijing to consider the more politically difficult option of Weapons of Mass Destruction (WMD) to attack hard targets. Beneath its general anti missile defence position, Beijing appears to have taken two separate response paths - one for current U.S. NTW cooperation with Japan and one for possible U.S. cooperation with Taiwan. With regard to U.S.-Japan NTW cooperation, Beijing has focused its criticism on the dangers of Japanese nuclear armament, the integrating effect on the U.S.-Japan alliance, the impact on China's deterrent, the possibility for deployment to Taiwan, and violations of the agreement on a Missile Technology Control Regime (MTCR).

China currently deploys 80 or more missiles capable of reaching Japan. If Japan or the United States deploys an upper tier system, China has two options: either qualitatively or quantitatively to build up its MRBM forces in order to overwhelm TMD of its adversaries, or to attack TMD assets (radar installations, potentially satellites, and Aegis ships).

On the other hand, U.S. intelligence experts believe China *will* increase its ICBM forces to 200 deployed warheads by 2015 if the United States deploys NMD. This represents both a significant qualitative and quantitative improvement in Chinese nuclear forces beyond current Chinese planning. Typical Chinese countermeasures could include separating Re-entry Vehicles (RVs), spinning RVs, decoys, and shrouds. It is assumed that China has the technological prowess to employ such countermeasures, and it has probably been developing them for some time.

The American experts believe that there are also considerations that lead to limitations of the number of choices available to China. The closer the United States and China become economically, the less likely it is that China will pursue responses that could harm this relationship (for example, proliferation of missiles to third countries, which would result in swift legislative sanctions from Capitol Hill).

Democratic People's Republic of Korea

The Taepo Dong missile, which overflew Japan in the direction of Hawaii in 1998, raised U.S. concerns that soon a missile capable of reaching the United States could be for sale. According to the American reports, the short range North Korean Nodong missile is suspected of being closely related to the Pakistani Ghauri and Iranian Shahab missiles. The longer range Taepo Dong could become North Korea's next missile export. From North Korea's perspective, missile sales are necessary to bolster its faltering economy. There are some signs that North Korea, in order to raise funds, would be willing to barter for its missile program and prepared to agree to halt missile testing while it negotiates with the United States.

Both TMD and NMD would reduce North Korea's ability to blackmail, coerce, and even deter the United States and its Asian allies, according to the American reports. During the Cold War the Soviet Union provided some measure of guarantee to North Korea that U.S. air

Even if Beijing has internalised the likelihood of Japanese participation in TMD, there is no question that China will take strong and deliberate actions in response to a U.S. decision to include Taiwan in NTW development or deployment. It is less probable, but not impossible that China may feel it necessary to use force pre-emptively against Taiwan prior to U.S. TMD deployment, particularly if it believes that the U.S. Taiwan defence partnership is qualitatively increasing.

U.S. National Missile Defence: Chinese defence experts continue to debate whether countermeasures or the next generation of Chinese ICBMs could overwhelm a U.S. NMD system. There is, nevertheless, a broad consensus in Beijing that NMD deployment would erode China's deterrent. Currently China has 20 DF-5 missiles capable of hitting the United States, and it is likely that a C-1 system could disable most of them. A more capable system, perhaps including an enhanced NTW element, could possibly intercept all of China's current ICBMs. And if the United States could rely on NMD to intercept some tens of ICBMs, a first strike against China would reduce the number of incoming missiles to the point where the United States might become protected. This would seriously diminish China's ability to deter or coerce the United States.

Boost Phase Intercept: China has made no official statement regarding BPI, and at this point it is only possible to speculate on the Chinese response to this type of system. It is likely that BPI is less problematic for China than NMD, since its DF-5s are probably based too far inland (at Xuinhua and Luoling) to be threatened by Air Borne Laser, sea based BPI or an unmanned aerial vehicle based BPI system. Overall, BPI would not justify massive Chinese ICBM proliferation because the coverage would not threaten China's deterrent to the extent that NMD would.

assets in Japan would remain at risk. With the end of Soviet and Chinese military support, North Korea has had no choice but to take on that mission unilaterally. North Korean improvements over the decades to Russian and Chinese based SCUD technology finally allowed the North to develop its own missiles in the 1990s, capable of fulfilling this mission. Assuming that North Korea does not barter away its missile program, NMD and TMD will counter that capability and leave North Korea exposed. North Korea does not have many concrete options to counter U.S. missile defence. Although recent peace initiatives have had some success (exemplified by the 2000 summit between Kim Dae-jung and Kim Jung-Il), North Korea has actually increased its operational tempo and deployed approximately 100 short-range Nodong missiles.

President Putin reported from his visit to Pyongyang in June 2000 that Kim Jung-Il offered to give up North Korea's missile program in exchange for commercial satellite launch services. This offer was not taken seriously in USA. How North Korea responds to a U.S. deployment of TMD and NMD will depend on several other variables. The state of its own missile program and the state of the North South dialogue could influence North Korea's reaction.

For the near future, the U.S. perception is that regardless of the U.S. missile defense, it appears highly unlikely that the short range Nodong missile threat to the region will subside. Meanwhile, the longer range Taepon Dong missile threat will continue to grow.

Russia

Since part of Russia is situated in Northeast Asia and has an important role in the strategic picture there, some basic reflections relevant to the region in the American reports merit mentioning.

Russia has been playing the game of strategic offence and defence with the United States since the beginning of the Cold War and, as party to the ABM Treaty, is more familiar with this diplomatic arena. Nevertheless, like China and North Korea, Russia has been strongly opposed to the American NMD plans.

Russia's weak financial position will force the retirement of thousands of warheads, leaving Russia with possibly as few as 1 000 deployed strategic warheads by the time NMD is deployed.³⁶ This has most likely been an important reason for President Putin to modify the

³⁶ *Upper Tier*: Although NTW probably violates the high velocity limitations set fourth in the 1997 TMD demarcation agreement, Russia is unlikely to do more than protest. It is possible that Russia might help China attempt to defeat such a system, for example by selling it more advanced anti ship cruise missiles (ASCMs).

U.S. National Missile Defence: How Russia responds to the U.S. NMD will hinge in large part on whether the United States can convince Russia to renegotiate the ABM Treaty to allow a limited system.

Russia has also tabled a proposal in the strategic talks for a warhead ceiling of 1 000-1 500 and could insist on this deep reduction in forces in exchange for an ABM deal.

Specific to its role in Asia, Moscow could also pursue a closer relationship, perhaps even a defence partnership, with China. However, there are limits to this relationship. China's nuclear build up could erode Russia's nuclear superiority, further weakening Russia's position in the Far East. Sino-Russian cooperation against missile defence may not amount too much more than low-level defence cooperation and certainly nothing akin to the Sino-Soviet relationship of the early 1950s.

opposition to the American BMD plans from being strongly opposed to calling it a mistake that is however, unlikely to threaten Russia. That development will be dealt with below under Chapter five.

India

According to the American reports, India has been opposed to missile defence in general, because it has feared China's reaction. India's missile development activities reveal a greater fear of China than of Pakistan, which is India's most likely adversary because of the conflict about Kashmir. When India made its nuclear weapons test in 1998, defense minister Fernandes mentioned fear of China's intentions as a main reason for the development of nuclear weapons.

One possibility for India to increase its relative military capability is to upgrade its defence relationship with Russia. Although it is not clear if Pakistan or India is really close to taking that step, India has discussed the possibility to develop a Submarine Launched Ballistic Missile system since the 1980s and studied Russian submarine technology. Further development of that project would give India a second strike capability.³⁷

Because of its longer range, there is no practical need for developing the Agni II MRBM India tested in April 1999 for use against Pakistan, but it can strike within Chinese Territory. Chengdu and Liupanshui, both large Chinese cities, would be within the range of the Agni II, as would several missile bases.

It merits mentioning, that since the American reports were written, India test fired a nuclear capable Agni II ballistic missile on 17 January 2001 "in its final configuration" meaning that India will be prepared to start its production soon. The test firing coincided with a visit to India by Li Peng, China's second highest leader.³⁸ The message was clear; China should be aware that India has a nuclear response capability. India's test firing of the Agni II means that an arms race is already going on between China and India, at least in the opinion of some American commentators.

There are many in India, who see it the same way, as was illustrated by substantial increases in the defence budget (by 28 per cent for the budgetary year of 2000 and by 13.8 per cent for 2001) as well as plans for both submarine launched ballistic missiles and cruise missile systems.³⁹

Another factor has contributed to a change in India's attitude to the BMD issue, namely a generally improved relationship with USA.⁴⁰ Russia is no longer a super power with

Boost Phase Intercept: It is unclear how Russia might react to a boost phase intercept system. BPI would be much less effective against Russia's nuclear deterrent than land based NMD. It could not shoot down any ICBMs launched from deep within Russian territory and might therefore be more palatable to Moscow.

³⁷ *Japan Times*, 23 February 2001.

Japan Times, 23 February 23, 2001 P. 4, *Hindustan Times*, 18 January 2001.

³⁹ *The Hindustan Times*, 13 February 2001.

⁴⁰ See the article "Up-dating the introduction to Part Two; The consequences of the War in Afghanistan for Central Asia and South Asia.

capability to back up India as a regional power (albeit Russia remains in its role as India's main arms supplier). USA has a great economic power of attraction that has become more important to India with the modernisation of its industry. A rapprochement had begun in early 2001, and since then, it has been in India's long-term interest to support USA. Indian politicians have expressed "understanding" for the American BMD plans and have not been criticising them. There are also discussions about the purchase of seven Israel produced Barak ship based anti missile systems.⁴¹

⁴¹ *The Hindustan Times*, 11 February 2001

CHAPTER FIVE: Changes under President George W. Bush

During 2000 a report by the Center for Strategic and International Studies in Washington concluded that from China's perspective, even a relatively limited U.S. NMD program would seriously degrade current China missile attack capabilities if China launched anything but its entire ICBM force in a single volley. However, China seems likely to increase its ICBM, SLBM and cruise missile threat against the United States in any case. China's actions will be shaped by intentions and not by any limits on its capabilities. The basic conclusion was that USA needs a homeland defence that is matched by sea-based theatre missile defences for the U.S. fleet, the defence of U.S. bases and facilities in Japan and by missile defence of Taiwan.⁴²

However, a series of unsuccessful missile tests resulted in a decision by President Clinton, announced on 1 September 2000, to defer the decision about initiating the construction of radar facilities needed for the NMD programme until the president for the next term had been installed. The programme was not entirely halted for the rest of that autumn, but no new tests were made.⁴³

The Secretary of Defense in the Clinton Administration made a report to Congress on Theater Missile Defense Architecture Options for the Asia-Pacific Region. "Due to time constraints", the report did not examine boost-phase intercept systems like Airborne Laser (ABL) and Space-Based laser (SBL). This was not done until the beginning of 2001.

After installation of the new President

On 11 January 2001, a commission under chairmanship of Donald Rumsfeld then concluded that the relative dependence of the United States on space makes its space systems potentially attractive targets. Response is needed, especially against China, in order to avoid a "Space Pearl Harbour". A number of recommendations are made "to enable the U.S. to sustain its position as the world's leading space-faring nation." They include such measures of space warfare as to acquire

"Space systems that can be deployed in independent operations or in support of air, land and sea forces to deter and defend against hostile actions at the interests of the United States".⁴⁴

One of the first actions by the new presidential administration was to initiate work by a think tank under the Director of Pentagon's Office of Net Assessment, Andrew Marshall to offer a fresh look at how to structure U.S. forces in the post Cold War period. It seemed probable that the administration would try to establish a new military strategy to enable the United States to pull back its overseas military presence and replace it with new capabilities.

⁴² Cordesman, Anthony (2000), *China and the U.S.: National Missile Defenses and Chinese Nuclear Modernization*, Center for Strategic Studies, Washington, pp 1, 6, 21 and 24-25.

⁴³ Baucon, Donald R. (2000), *History of ballistic Missile Defence*, <http://www.defenselink.mil/pubs>, accessed 6 December, 2001.

⁴⁴ *Report of the Commission to assess United States National Security Space Management and Organisation; Executive summary Pursuant to Public Law 106-65, January 11, 2001*, Washington D.C.

President Bush made a major speech on missile defence 1 May 2001. He called for an ambitious anti-missile system and said that it was time to “move beyond the constraints of “ the ABM treaty. He promised unilateral cuts in the U.S. nuclear arsenal and close consultations with friends and allies. He added:

“We will reach out to other interested states, including China and Russia. We’re not presenting our friends and allies with unilateral decisions already made”.

He urged U.S. friends and other major powers, notably including Russia, to join in forging a broad new approach to mutual security that would no longer revolve around the Cold War notion of nuclear deterrence.

The new Secretary of Defense was Donald H. Rumsfeld, who also served as the chairman of the Commission to Assess the Ballistic Missile Threat to the United States. He initiated a thorough series of studies of the American defence policy, of which the most important result was the Quadrennial Defense Review published 30 September 2001, three weeks after the attack on the World Trade Center in New York.⁴⁵

The report contains an ambitious approach to the BMD issue. Development of BMD is given priority. Three new features are prominent in the new approach. The missile defence is to be integrated into other defence systems, it shall be multi-layered, and it shall protect not only American people but also U.S. friends and allies (as had already been declared by the president in his 1 May speech):

“The continued proliferation of ballistic and cruise missiles poses a threat to U.S. territory, to U.S. forces abroad, at sea, and in space, and to U.S. allies and friends. To counter this threat, the United States is developing missile defences as a matter of priority. Integrating missile defenses with other defensive as well as offensive means will safeguard the Nation’s freedom of action, enhance deterrence by denial, and mitigate the effects of attack, if deterrence fails. The ability to provide missile defenses in anti-access and area-denial environments will be essential to assure friends and allies, protect critical areas of access, and defeat adversaries. DoD must be prepared to provide near-term capabilities to defend against rapidly emerging threats and more robust capabilities that evolve over time”.

DoD has refocused and revitalized the missile defense program, shifting from a single-site

“National” missile defense approach to a broad-based research, development, and testing effort aimed at deployment of layered missile defenses. These changes in the missile defense program will permit the exploration of many previously untested technologies and approaches that will produce defenses able to intercept missiles of various ranges and in various phases of flight. These defenses will help protect U.S. forward-deployed forces. Moreover, they will provide limited defence against missile threats not only for the American people, but also for U.S. friends and allies.”

The BMD debate continues

⁴⁵ *Quadriennial Defense Review Report*, <http://www.defenselink.mil/pubs/qdr2001.pdf> , accessed 7 December 2001.

Rumsfeld seemed to have a substantial BMD plan in his mind. However, opposition has always been voiced against the NMD plans, also in USA. Some warnings have appeared from security advisers such as the special assistant to the former president Bill Clinton for Defense Policy and Arms Control, Hans Binnendijk. He is afraid that “overreaching” could divide the Atlantic Alliance and possibly drive Russia and China together in a true strategic partnership.⁴⁶ Criticism of the BMD programs was heard on the grounds that the new technologies are all untested and not to be trusted. Pentagon officials were for instance quoted, as saying that a sea based missile defence cannot be in operation within a decade. Boost Phase Intercept systems were not to be expected until 2003 and then only in testing. Deployment will not take place before 2007. Even if the programs were to be accelerated – which is an expected outcome of the “top-to-bottom” review – a workable missile defence system “is still years away”.⁴⁷ Other technical objections were added. Analysts said that the effectiveness of the high-frequency x-band radar that is a key component of the NMD might be weakened by rainy weather.⁴⁸ Wobbling, rudimentary warheads from rogue states would be the most elusive targets according to some Pentagon scientists.⁴⁹

Senator Joseph Biden was leading a democratic campaign during the summer 2001 to reduce funds for missile defence testing. Strategists like Thomas L. Friedman argued that testing in breach of the ABM Treaty would be harmful to U.S. interests, since it would induce president Putin to reverse his going-west policy.⁵⁰ Melvin A. Goodman argued that a serious problem would arise, if the BMD could be made to work, in the form of reactions from the international community. Ties between Russia and China would improve, angry reactions from European allies would weaken the American leadership of NATO, the U.S. counter-proliferation and disarmament policies would be weakened and America would lose its limited leverage on the nuclear policies on India and Pakistan.⁵¹

However, the general tendency in Congress has been one of support to the Administration’s pursuit of ballistic missile defences, as was stated in an address to the Asia Society by the Chairman of the House International Relations Committee, Mr. Henry Hyde in February 2001. He also underlined the importance of forward based American forces, and he countered critics in the region with the argument that proliferation of ballistic missiles in China and North Korea had made the BMD necessary.⁵² That majority standpoint was not changed during the year 2001.

Some success was also achieved in BMD research. The optical systems component of a planned space based BPI laser weapon was successfully tested in January 2001.⁵³ That has a special significance, since President Vladimir Putin has expressed that Russia might even co-operate with USA in developing such a system in the context of a “common shield”.⁵⁴ That would make it easier for the U.S. administration to get a broad support in Congress. Other BMD efforts made some headway. The Department of Defense announced its decision to

⁴⁶ *International Herald Tribune*, March 2001.

⁴⁷ *Far Eastern Economic Review*, 22 February 2001 p.29.

⁴⁸ *Defense News*, 20-26 August 2001.

⁴⁹ *International Herald Tribune*, 20 July 2001.

⁵⁰ *International Herald Tribune*, 29 November 2001.

⁵¹ <http://homelandsecurity.org/journal>, accessed 4 December 2001.

⁵² Hyde, Henry (2001) *A Congressional Perspective on Asia at the Outset of the Bush Administration* Address to the Asia Society, February 28, 2001.

⁵³ *International Herald Tribune*, 27 January 2001.

⁵⁴ *International Herald Tribune*, December 2000.

begin the site preparations for the potential deployment location in Alaska for Interceptor silos and Command and Control facilities for the NMD system.⁵⁵ On 3 December 2001 a test involving a planned intercept of an intercontinental ballistic missile was successfully completed over the Pacific Ocean. It was the third successful intercept in five attempts to use an “exoatmospheric kill vehicle” to intercept and destroy a long-range ballistic missile.⁵⁶

⁵⁵ <http://www.defenselink.mil/news>, accessed 60 December 2001.

⁵⁶ *Ibidem*.

Reactions from other countries

Efforts to persuade the **U.S. allies in Europe** to abandon their initial scepticism and even opposition have been moderately successful. The EU High Representative for the Common Foreign and Security Policy, Javier Solana, has been quoted as saying that prospects for NMD backing have improved; France's Foreign Minister Mr. Védérine has toned down former, rather sharp criticism from his own country. Germany's Foreign Minister, Mr. Fischer, has been quoted saying that in the NMD issue Germany is basically on the side of USA. Britain's Prime Minister, Mr. Blair has said, "there is a way through which we meet America's objectives and other peoples' concern".⁵⁷

President Putin on his side formally handed over a proposal for a common European shield (of Russian make) to NATO Secretary General George Robertson on 20 February 2001. The latter stressed that the United States "already has made its decision to have an effective missile defence".⁵⁸ A number of American high level contacts with Russia tried to convince the Russian leadership of the advantages of allowing America to introduce U.S. BMD systems, even when they are in breach of the ABM Treaty and even when they are not part of any common shield system.

A partial break-through with possible consequences for the future was made after the 11 September terrorist attack on the World Trade Center in New York. President Putin was the first head of state of a foreign country to present his condolences to President Bush. The U.S. air force had been alerted and the air space over USA had been closed for some hours, which had caused a full Russian nuclear alert. It had to be broken by President Putin himself after having been informed of the reason for the alerts. He immediately took a position of full support for the U.S. contingency measures and only one month later, he arrived on a pre-planned visit to USA. The two presidents agreed

"On strategic defenses and the ABM Treaty .to continue consultations within the broad framework of the new strategic relationship."⁵⁹

The basic agreement included an intention by USA to slash the number of warheads in the ICBM arsenal from currently 7,000 to about 2000 and in the Russian arsenal from 6,000 to about 1,500. The details were to be negotiated and there was no agreement as yet whether this should mean just de-alerting the missiles or actually destroying the warheads. President Bush stated that there was still a disagreement about the value of keeping the ABM Treaty in force. Bush did feel that it was "outdated", Putin that "we will continue our discussions".⁶⁰

When, on 13 December 2001, Bush announced that USA would withdraw from the ABM-Treaty, Putin called it "a mistake" and insisted that a new arms-control regime must quickly replace the discarded treaty. He said, however, that the withdrawal would not threaten Russia.⁶¹

⁵⁷ *International Herald Tribune*, 19 February 2001.

⁵⁸ *International Herald Tribune*, 20 February 2001.

⁵⁹ *Joint statement by President Vladimir V. Putin of Russia and President George W. Bush of the USA on a New Relationship Between Russia and the USA*, Ministry of Foreign Affairs of the Russian Federation, <http://www.in.mid.ru.website>, accessed 16 November, 2001.

⁶⁰ *Japan Times*, 15 November 2001, *Outlook*, <http://www.oulookindia.co/fullprint.asp>, accessed 16 November 2001.

⁶¹ *International Herald Tribune*, 14 December 2001.

From Beijing, the signals on BMD have been overwhelmingly negative. *China Daily* has carried leading articles about the United States deploying 64 more cruise missiles in Guam, thereby reinforcing its military presence in Asia.⁶² In March 2001, China announced that it would increase the budget for defence by 17,7 per cent this year, its biggest expansion in real terms in the last 20 years. In that connection Foreign Minister Tang Jiaxuan said that if the U.S. side insists on selling advanced weapons systems to Taiwan, including particularly the Aegis missile destroyers and the Patriot anti missile defence systems that would send a very wrong signal. “USA should come to recognition of the serious dangers involved”.⁶³

How the leaders in Beijing are perceiving the BMD as a threat was illustrated by China’s disarmament Ambassador in Geneva Sha Zukang. He made a statement at a press conference in Beijing in March 2001 explaining all the important reasons for China not to accept any American NMD. The last point in the list of arguments was that

“The U.S. also intends to deploy TMD in the region. Research and deployment of TMD itself may not constitute a violation of the ABM treaty. But the crucial question is how large is the scale and what are the nature and the function of the TMD that the U.S. is preparing to deploy in Asia. If this TMD can be used as part of NMD and constitute the front deployment of NMD in the region, then the negative impact on regional security and stability will be no less than the NMD itself.”⁶⁴

The foreign ministers of China and Russia signed a protocol regarding a draft treaty on friendship and co-operation between the two countries on 28 April.⁶⁵ President Jiang Zemin visited Moscow in July 2001. They stated their appreciation of the ABM Treaty as a guarantor for stability and peace.

In September 2001 the American Administration let loose a trial balloon, saying through a “senior administration official” that the United States would not oppose China’s plans to build up its fleet of nuclear missiles, expecting in return that China would not object to the U.S. missile defence programme. This balloon did not travel far. The President’s own security adviser Condolezza Rice emphasised that the U.S. was not seeking a deal with China. Senator Biden criticised the statement as “absurd”.⁶⁶

There was no mentioning of discussions about the ABM treaty, when President Bush met President Jiang Zemin in Shanghai in October 2001. The occasion was obviously and somewhat unexpectedly not used for any effort to overcome the disagreement on this issue. China’s objections remain adamant.

The reaction from Beijing, when President Bush announced the U.S. withdrawal from the ABM-Treaty, was muted. The leaders had taken note of the reports and expressed their concern, but there were no threats of withdrawing from the arms limitation talks, as had sometimes previously been the case in Chinese media.⁶⁷

⁶² *China Daily*, 28 December 2000 p.4.

⁶³ *International Herald Tribune*, 25 March 2001.

⁶⁴ *Opening remarks at the NMD Briefing by Ambassaodr Sha Zukang*, Beijing, March 14, 2001.

⁶⁵ *Wall Street Journal*, 29 April 2001.

⁶⁶ *International Herald Tribune*, 3 September 2001.

⁶⁷ *International Herald Tribune*, 14 December 2001.

The U.S. co operation with **Japan** suffered a temporary setback in June, when a row broke out between the Japanese foreign minister and officials of the foreign ministry. It was revealed that the foreign minister had expressed opinions about the American NMD that was strongly critical in talks with foreign ministers of other countries. It was revealed shortly before a visit to USA. Prime Minister Koizumi had to step in and have a meeting with her and the Defense Director General Nakatani to reaffirm Japan's official position that it "understands" U.S. missile defence plans.⁶⁸

In **Korea**, South Korea's President, Kim Dae Jung, seemed to have backed Russian opposition to the American NMD during a visit by Russia's President Vladimir Putin in February 2001. A joint statement said that they "agreed that the 1972 ABM Treaty is a cornerstone of strategic stability and an important foundation for international efforts on nuclear and non proliferation". Two days later South Korea's Foreign Ministry backtracked; saying that endorsement of the ABM Treaty did not mean it was opposed to the U.S. missile defence plan.⁶⁹

Four days later, North Korea declared it might resume its nuclear development program and resume its missile launches.⁷⁰ The South Korean Government had to resign in September 2001 because of a parliamentary vote for the dismissal of the Unification minister Lim Dong Won. Afterwards the so called sunshine policy toward North Korea has been tuned down considerably, especially since the initiator of that policy, President Kim Dae Jung, failed to be re-elected as president of his own party.

On 27 March 2001, the U.S. Council on Foreign Relations' Task Force on Managing Change on the Korean Peninsula published its recommendations to the President. They included that the United States should resume talks on missiles, when ready, but must make the bottom line clear:

- 1) Effective verification,
- 2) Elimination of long range missiles already deployed,
- 3) No sensitive technology transfer in aid programmes and
- 4) Reduction of tensions and conventional military threat.

Pursuit of such negotiations should be separated from the United States own decision to develop and deploy missile defences.⁷¹

India had been planning for some time to develop a ballistic missile defence system based on imported Russian missiles, an Israeli radar system and domestic command and control systems.⁷² During a visit in Moscow in June 2001 by India's then defence and foreign minister Jashwant Singh a deal was announced, according to which India would buy a new version of the S-300V missile called 9M82M. It has a claimed capability against cruise missiles, aircraft and medium-range ballistic missiles.

⁶⁸ *Nikkei Weekly*, 4 June 2001, *Japan Times*, 16 June, 2001.

⁶⁹ *SCMP*, 28 February 2001 and *International Herald Tribune*, 3-4 March 2001.

⁷⁰ *Japan Times*, 5 March 2001.

⁷¹ Northeast Asia Peace and Security Network (2001) NAPSNet@nautilus.org

⁷² *Asian Defence Journal*, No 11, 2000.

In May 2001 India's Foreign Ministry declared understanding and even support for the contents of the speech by President Bush on 1 May about American BMD-policy. Indian officials have tried to stress that no overt endorsement was made of the American NMD plan, but the declaration contains positive formulations.⁷³

It can be added that after 11 September, India's relation with USA has warmed up considerably and visits of high military officials have been exchanged. Prime Minister Vajpayee even had to declare that no military alliance was being made.⁷⁴

In August 2001 the U.S. secretaries of state and defence visited **Australia**. U.S. and Australian officials talked about closer military co-operation among themselves, Japan and South Korea as a counterweight to China's growing power. The Australian Government wholeheartedly supports the American BMD plans and Australia is hosting an U.S. over the horizon radar station, which is a vital part of the American NMD system. Both U.S. and Australian officials denied that they were planning any new alliance or combination of existent U.S. alliances with Australia, Japan and South Korea, but Foreign Secretary Powell added

“We just began talking about that today. There might be a need for us to seek opportunities to come together and talk more often. So, yes, we've talked about that, but not in the form of some kind of new organisation”.⁷⁵

Boost-phase interception

The integration of BMD in actual defence system planning has been fast since the Rumsfeld led commission report on 11 January 2001 was made public. Fact sheets available at the home page of the Department of Defense give a picture of a future Family of Systems concept with six different systems in function together in an integrated defence of both the “friends and allies” and the American homeland against missile threats.

Of special interest to the Asian region are the Boost Phase Segment (BPI) and the Navy Theater Wide Ballistic Missile Defense (NTW). The BPI is supposed to develop a sea-based kinetic energy project aiming at a product line development decision in 2003-2005. It is being developed together with a similar system for sea-based mid-course roles.⁷⁶

The NTW is supposed to

“Provide intercept capability against medium and long-range Theater Ballistic Missiles (TBM) near the TBM site to effect ascent phase intercepts, along the TBM trajectory as it passes over water or along the coast to effect midcourse intercepts and near the defended area to provide descent phase intercepts to achieve an additional layer of defence for lower tier systems. It is going to be introduced aboard the 50 Aegis equipped cruisers and destroyers of the U.S. Navy beginning in 2003”.

⁷³ *Hindustan Times*, 6 May 2001.

⁷⁴ *Asian Age Online*, <http://www.hclinfonet.com>, accessed 13 November 2001.

⁷⁵ <http://www.washtimes.com>, accessed 3 August, 2001.

⁷⁶ Fact sheets about Navy Area Ballistic Missile Defense Program, Navy Theater Wide Ballistic Defense and The Family of Systems Concept, <http://www.acq.osd.mil/bmdolink/html/boost>, accessed 6 December, 2001.

Japan is being involved in the NTW research and development program. Mitsubishi Heavy Industries has formed a joint research group with Raytheon Co. and Mc Douglas Corp. and was granted a contract by the U.S. Government to develop a missile-defence system to cover not only Japan but also the entire Western Pacific region. It was later directed toward a boost-phase interceptor project, but there has emerged some differences between U.S. and Japanese authorities. The commonly financed project is a different one (the NTW is said to be intended to **effect ascent phase intercepts**, which is not the equivalent to Boost-phase), but American efforts to merge the projects have not been welcome in Japan.

A boost-phase interception system in Japan would mean that Japan would contribute to the defence of the American homeland. When it has to be targeted, a missile in ascent over China could be directed at any place – and possibly at the American continent or at U.S. Navy ships. Japan's constitution was strongly influenced by the U.S. occupation forces, when it was prepared and according to the generally accepted interpretation in Japan, it does not allow participation in common defence, more specifically defence of the American continent or U.S. Navy ships.⁷⁷ Whether Japan will contribute to an American BPI-system can become a delicate issue with a potential to cause controversy in the Japanese Diet. A redefinition is going on between Japan and USA about how to pursue the co-operative research and development of sea-based missile defence projects in the wake of the Pentagon's overhaul of U.S. anti-missile programs. Japan has informed the U.S. side of its intention to continue funding research and development but made no commitment to field a missile defence system.⁷⁸

The other way around, a Japanese stand-alone BMD shield with BPI capability, using intelligence gathered by Japanese satellites and also in other respects of command and control using Japanese stand-alone systems would raise concern among Japan's neighbours, especially China. A Japanese national satellite system is already under way. There seems to be less and less room for Japan's Government to further avoid a decision that will decide the course between building a common defence with USA and other Western Pacific nations or a Japanese stand-alone BMD shield. Not doing anything is no longer an alternative.

The interest of the Japanese Government is demonstrated by the efforts to keep the program alive. Japan has concentrated on such areas of importance as the interceptor's nosecone, its kinetic warhead, the seeker and the rocket motor for the missile's second stage. Japan is reported to have been lobbying hard to keep the effort alive, when there were plans within the American BMDO (Ballistic Missile Defense Organisation)⁷⁹ to abandon further funding of the common research project.⁸⁰ After a meeting in Washington on 10 December 2001 between Defense Secretary Donald Rumsfeld and Japan's Defense Agency "Director General", General Nakatani, an agreement was reached to redefine how the two nations will pursue co-operative research and development on sea-based missile defense projects in the wake of the U.S. overhaul of its antimissile programs. This is the result of the NTW program having been absorbed into a Sea-Based Midcourse program, which will have the additional capability to kill long-range ICBMs, according to an American official interviewed by *Defense News*. This,

⁷⁷ *Nikkei Shimbun*, 25 June, 2001, *Japan Times* 24 June, 2001 and notes by the author.

⁷⁸ *Defense News*, 17-23 December 2001.

⁷⁹ BMDO has been elevated to the status of Agency under the name of the Ballistic Missile Defense Agency (MDA). <http://www.acq.osd.mil/bmdolink/html>, accessed 17 January 2002.

⁸⁰ Inside Missile Defense, <http://www.INSIDEDefense.com>, accessed 26 December 2001.

of course, makes it even more difficult for the Japanese government to handle the project in domestic politics.⁸¹

Space Warfare

According to a fact sheet from the U.S. Ballistic Missile Defense Office, there are three BPI concepts being considered for future acquisition other than possibly providing the NTW with some BPI capability: the Air Force's Airborne Laser (ABL) programme; Space Based Laser (SBL); and Unmanned Aerial Vehicle (UAV).⁸² The UAV is already existent in a co-operation project with Israel and tests are beginning with ABL. Decision about ABL/UAV production can be expected "by the 2003-2006 timeframe".

The Space Based Laser is a more long-term project, aiming at an on-orbit demonstration for the 2010-2012 timeframe. It is estimated that "a constellation consisting of only 12 satellites can negate 95 per cent of all missile threats in most theatre threat scenarios". Thus a system consisting of 20 satellites could provide nearly full threat negation. A 24 satellite constellation, operating at 60 degrees inclination could provide NMD threat negation in addition to full TMD threat negation."⁸³

These plans were already part of President Reagan's Strategic Defense Initiative (SDI). Research was actually carried out and the first test laser intercepts above the earth were completed in 1984. After the end of the Cold War the project has for a time been regarded as excessively futuristic and work was slowed down and refocused on defence against shorter-range missiles. The project now seems to have been quietly accelerated again. The Quadrennial Defense Review only contains a few lines about ensuring the freedom of action in space and denying such freedom of action to adversaries. Increased emphasis is placed "on developing the capabilities to conduct space operations".⁸⁴ At a press conference in Huntsville, Alabama, an official of the U.S. Army's Space and Missile Defense Command gave detailed information about how the SBL would work in combination with other elements of the Family of Systems to make a complete defence against all types of missiles.⁸⁵

This policy is bound to have an impact on Chinese attitudes to the BMD issue. As Michael O'Hanlon points out in a Brookings Policy Brief, Russia and China could feel strategically threatened and respond in ways that might exacerbate weapons proliferation problems. China at present deploys about 20 long-range missile warheads on board ICBMs with a capability to reach the American Continent.⁸⁶

The costliest planned (but not yet decided) NMD system would consist of 250 BMD missiles, capable of defeating 50 single-warhead ICBMs or 20 ICBMs with advanced countermeasures

⁸¹ *Defense News*, 17-23 December 2001.

⁸² Fact Sheet about Unmanned Vehicle Boost Phase Intercept Program, <http://www.acq.osd.mil/bmdolink/html/boost>, accessed 6 December 2001.

⁸³ Fact Sheet about Space Based Laser, <http://www.acq.osd.mil/bmdolink/html/boost>, accessed 6 December, 2001.

⁸⁴ Quadrennial Defense Review Report, p. 45, <http://www.defenselink.mil/news>, accessed 6 December 2001.

⁸⁵ *International Herald Tribune*, 23 July 2001.

⁸⁶ O'Hanlon Michael E. (2001), *Beyond Missile Defense*, Policy Brief, the Brookings Institution, <http://brook.edu> accessed 11 December 2001.

by the year 2015. That capability could easily be saturated with new ICBMs with solid fuel propellant by Chinese expected production rate, already before 2010.⁸⁷ Some experts even believe that China will start an MIRV (Multiple Interdependently Targetable Re-entry vehicle) program and have as much as 1,000 warheads on board 100 ICBMs by 2010.⁸⁸ Therefore the U.S. plans have not been presented as an effort to overwhelm and/or eliminate the potential threat from China, thus giving room for some sort of a “balance” to continue to exist.

There have been diplomatic efforts to convince the leaders of China that they need not fear the limited U.S. BMD programme, especially if that programme would be based on the BPI-type of defence, since it would not be able to reach the inner parts of China, allowing it to keep a second-strike capability and thus a “balance”.

The Chinese leaders have not been impressed by these arguments, and now they see a family of systems appearing (at least in U.S. planning) that is intended to defeat all incoming missiles threatening the American continent, including a space-based system. This could lead to a continuation of intentions that have already previously been hinted at as harboured by the Chinese leadership, namely to counter the BMD initiative by a combination of building a greater number of intercontinental missiles for saturation purpose, developing systems of decoys and developing a capability to defeat American satellites with earth-based laser weapons.

⁸⁷ That number is expected to reach totally 200 by the year 2015, see Green, Michael J. and Dalton, Toby F. (2000) *Asian Reactions to U.S. Missile*, The National Bureau of Asian Research, Washington November 2000 (nbr@nbr.org)

⁸⁸ Möller, Kay (2001), *China und National Missile Defense: Mythen und Fakten*, Stiftung Wissenschaft und Politik (SWP) aktuell No 60/August 2001.

CHAPTER SIX: Conclusions about BMD in East Asia

China embarked upon a strengthening of its nuclear arsenal several years ago, seemingly with the aim to become another superpower and a real challenger to “American hegemonism” in Asia. Taiwan and USA are becoming increasingly troubled by the build up of conventionally armed SRBMs on China’s side of the Strait. The United States is not showing any sign of withdrawing its military forces from the Western Pacific. It rather tries to protect its military presence by the introduction of BMD.

There are so far few signs that **Russia** and China have entered into a real strategic partnership in the face of American BMD. USA does not seem to take the threat of that possibility very seriously. Russia is in a different position when compared with China, since it has a large arsenal of ICBMs, a functioning system of SLBMs (and thus a second strike capability) and a certain BMD capability of its own.

Japan is providing itself with increasingly important technical capabilities in fields related to BMD. The U.S.-Japanese relationship is developing into a more regionally based entity by the introduction of the BMD issue, including South Korea and Taiwan. The South Korean-Japanese relationship is improving fast and becomes of strategic importance, when the BMD issue is introduced.

A theoretically possible reunification of the two **Koreas** would possibly hamper the ambition of USA to create a common BMD defence for the region coordinated with the NMD. South Korea is finding itself drawn into a regional role by the American BMD that does not favour reunification.

Australia is already an important partner to the U.S. BMD system because of the American radar facilities based in the country. It is being drawn into a coordinated defense planning for the Western Pacific.

India’s test firing of the Agni II and its acquisition of a national BMD system may be an indication that a new mutual arms build-up is already going on between China and India. India is trying to get closer to America and is one of the few countries that have taken the step to explicitly endorse the American BMD intentions.

The introduction of BMD in Asia has given new significance to the roles of individual countries in the regional defence pattern. Middle sized countries like Japan and even smaller countries like Taiwan, acquire BMD systems and find themselves becoming more important to the great powers. South Korea, which has not had a defence alliance with any country apart from America, and which is not purchasing any BMD system of its own, finds itself being drawn into a more obviously regional defence pattern by the introduction of BMD. Taiwan, so far without any formal defence alliance, is being drawn into this regional pattern; much by its own will, thereby creating new potential liabilities for the other partners.

USA with many alliance partners is increasing its military strength, while the more lonely military great powers China and Russia find themselves more exposed. A further deterioration of U.S. Chinese relations may begin to develop into a pattern similar to a new Cold War. Being the tool of the richest, American NMD is seen in China as a symbol of this emerging confrontation.

There may be a dawning American insight about the symbolic effect of NMD and the real impact it has on events in Asia. It may have been the reason for a shift in policy, which seems to have appeared lately. It is a shift of focus, away from mentioning the very word “national missile defence” and toward building a system of sub systems in the Western Pacific with other names, both geographically and in a technical sense. Japanese, Korean, Australian and possibly even Taiwanese BMD facilities are being integrated with U.S. forward positioned systems like lower tier, upper tier and possibly even BPI assets into a BMD “architecture” for the defence of the Western Pacific.

This BMD architecture can serve as a forward defence of the U.S. homeland as well as homeland defence of China’s neighbours. This is naturally giving the leaders in Beijing an impression of containment, since Taiwan is regarded as part of China and Taiwan is involved in the U.S. led BMD architecture and will benefit from its protection.

If no major effort is made by USA and China to overcome their problems of mutual distrust, we seem to witness the beginning of a mutual arms build-up around the Western Pacific. It is likely to further increase the tensions between the two major actors in the area and may involve others.

The alternative would seem to create a risk for tensions of another nature, namely if USA would abandon its role as protector of Japan, Taiwan and South Korea and these countries take care of their own defences. That would have a destabilising influence beyond the Western Pacific, in the South China Sea and the Southern Pacific.

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Annex

Some basic facts about the ABM treaty and the TMD-agreements

The ABM treaty originally allowed both countries to build and maintain two ABM systems each. One was built around Moscow with 100 anti ballistic missiles of the Galosh type. Today 32-36 long range Gorgon and 64-68 short-range Gazelle interceptors are deployed. This ABM system is still in operation around Moscow, but it is a matter of speculation whether the Russian Government would actually make use of it, since the interceptor missiles carry nuclear weapons (to destroy the incoming missiles) and would cause damages to the civilian population. It is also so outdated, that it would probably not be effective enough against modern missiles. The American side built one system at an ICBM base in Grand Forks, which was proclaimed operational in 1976. However, it was “moth balled” after only 3 months in operation. In 1974, the treaty was modified to allow only one protected area in each country. A few of the limitations are worth mentioning, because they are a matter of negotiation today, in connection with the American BMD projects.

- Both parties are prohibited to deploy ABM systems covering the whole territory of the nation,
- ABM systems are defined as defending against strategic ballistic missiles in flight trajectory (there is no prohibition against systems defending against non strategic, short range missiles, like the regional, strategic Patriot system,
- Originally two, (later only one) ABM system, which is a regional, strategic anti ballistic missile system, was still permitted for each party, namely around the national capital (of the Soviet Union) and one missile firing range for IBM's (for USA),
- The deployment area of each system should not be more than 150 kilometres in radius,
- Each system was allowed to contain a maximum of 100 launchers and 100 missiles,
- The parties accepted not to develop, test or deploy ABM systems, which are sea borne, air borne, space based or mobile ground based,
- Each one of the parties has the right to cancel the treaty under certain conditions.

The technological development in the direction of low layer BMD made it necessary to create a set of new definitions, which were added as the so-called TMD demarcation agreements. It is a collection of binding and non-binding agreements related to the ABM Treaty. They were signed in New York in 1997. Parties to the agreement were USA, Russia, Belarus, Ukraine and Kazakhstan. The constituting parts of the complex were the following agreements:

- A memorandum of understanding specifying that Russia, Ukraine, Belarus and Kazakhstan shall succeed the Soviet Union as partners to the ABM treaty.
- The agreement about Theatre Defence with interceptor missiles with a speed not exceeding 3 kilometres/second is also called the low speed agreement.
- The second agreement about Theatre Defence Interceptor missiles with a speed higher than 3 kilometres/second, the so-called high-speed agreement.
- An agreement on confidence-building measures.

The agreements are based on the principle in the ABM Treaty, article no VI, prohibiting the parties from giving missiles, launchers or radar a capability against strategic ballistic missiles as well as to test such systems as ABM systems.