AN ANALYSIS OF THE US MISSILE DEFENCE PLANS

PROS AND CONS OF STRIVING FOR INVULNERABILITY

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Table of contents

Foreword

I Missile defence: back in the spotlight 7

I.1 Missile defence: an old cure for a new ailment? 7
I.2 Clinton's 'National Missile Defence' 8
I.3 Consultations with and responses from Allies; the position of Russia and China 9
I.4 Bush's 'Missile Defence' 10

II A closer look at the threat 14

II.1 The development of the threat from the US point of view 14
II.2 What missiles do the various countries have? 17
II.3 Comments on and questions about the American conclusions 19
II.4 Summary 24

III Missile defence and the Allies 26

III.1 A threat analysis for the entire Alliance 26
III.2 MD activities in the NATO context; as yet limited to TMD 30
III.3 National activities / the Netherlands 31
III.4 Summary 33

IV Missile defence from a multilateral point of view: strategic relations and arms control 35

IV.1 A new relationship between the US and Russia without the ABM Treaty? 35
IV.2 At what point do the Russian and Chinese deterrents come into play? 38
IV.3 Arms control and non-proliferation 40
IV.4 Disarmament and non-proliferation: the framework and its shortcomings 41
IV.5 A strategic framework: from bilateral to multilateral agreements 45
IV.6 Summary 49

V Conclusions and recommendations 51

V.1 Ballistic Missile Defence (BMD) 51
V.2 BMD and NATO 53
V.3 Theatre Missile Defence (TMD) 54
V.4 BMD, arms control, non-proliferation and stability 55
V.5 Recommendations 56

Annexe I Request for advice
Annexe II Possible Architecture for a Layered Missile Defence System
Annexe III Description of missile programmes
Annexe IV List of abbreviations

Foreword

On 8 October 2001, the government asked the Advisory Council on International Affairs (AIV) for its advice on the consequences of ongoing proliferation of weapons of mass destruction for the European Allies and the Netherlands, on the US plans for Missile Defence and on the envisaged new 'strategic framework'. The issues put to the AIV are the assessment of the threat of ballistic missiles and the strategic consequences thereof for the security interests of Europe and NATO. Should this be seen as a reason to strive for an overall strategic review of the allied security policy following the American example? To what extent does the threat to Europe differ from the threat to the US? Is there reason to consider additional measures to protect the European territory from ballistic missiles and should such measures be sought in the context of missile defence? The request for advice also asks about the shortcomings in the existing system of arms control and non-proliferation. Is there reason to seek a new course of action? And what requirements would the new strategic framework, to be agreed upon by Russia and the United States, need to meet, in particular from the European point of view?

A large number of developments relevant to the issues listed above have taken place since 8 October 2001, namely the war against terrorism in Afghanistan after the terrorist attacks in the US on 11 September 2001, the withdrawal from the ABM Treaty by the US and the publication in the United States of policy documents such as the Quadrennial Defence Review and the Nuclear Posture Review. Also of great importance are the agreement between the US and the Russian Federation on nuclear reductions and the signing of a declaration on the new cooperation between Russia and the US, as well as the establishment of the NATO-Russia Council, all of which took place in May 2002, and the withdrawal from START II by Russia in June 2002. Naturally, these recent developments have been included in the advice.

In accordance with procedures established in July 2002, the advice was laid down by the AIV on 17 July 2002. The preparation of the advice was assigned to the Peace and Security Committee of the AIV, consisting of the following members. A.L. ter Beek* (chairman), Prof. *Jonkheer* Dr G. van Benthem van den Bergh* (vice-chairman), Dr A. Bloed, Dr Ph.P. Everts*, Prof. F.J.M. Feldbrugge (*mr.*)*, Lieutenant General G.J. Folmer (rtd)*, J.G.N. de Hoop Scheffer (*mr.*)*, A.P.R. Jacobovits de Szeged (*mr.*)*, Prof. Dr K. Koch*, Dr M. van Leeuwen*, D.A. Leurdijk (*drs.*), Rear Admiral R.M. Lutje Schipholt (rtd)*, L. Sprangers (drs.), Prof. B.A.G.M. Tromp (*drs.*)*, General A.K. van der Vlis (rtd)* and E.P. Wellenstein (drs.)*. The members whose names are marked with an asterisk participated in the working group which prepared the advice, under the chairmanship of Lieutenant General G.J. Folmer (rtd). The activities were supported by the official advisors of the Peace and Security Committee, H.G. Scheltema (*mr.*) and P.C. Potman (*drs.*) (Ministry of Foreign Affairs), S.J.G. Reyn (*mr.*), B.W. Bargerbos (*drs.*) and Commodore J.G.A. Brandt (Ministry of Defence). The secretariat was in the hands of P.J. Genee (*drs.*) (Secretary of the Peace and Security Committee), with the support of interns Jan-Willem van der Veer, Robert-Jaap Scheffer and Niels Hansen. The text was translated into English by the Army Staff Translation Service of the Royal Netherlands Army.

In preparing the advice, the members of the working group took part in the Missile Defence conference organised by Wilton Park in January 2001. They also visited the NATO headquarters in Brussels, and Washington. In addition, the working group was given briefings on a number of aspects by representatives of the Military Intelligence and Security Service, the Royal Netherlands Navy and the Royal Netherlands Air Force. The AIV is grateful to the individuals and authorities it consulted for their input and would like to express its appreciation for the support received from the Dutch Permanent Representation to NATO and the Embassy of the Kingdom of the Netherlands in Washington in carrying out these fact-finding visits.

The advice is structured as follows. Chapter I outlines the events preceding the renewed US interest in missile defence. Chapter II deals with the threat analysis that underlies the US policy. Chapter III looks at the issue from the point of view of the NATO Alliance and also discusses national TMD efforts. Chapter IV describes missile defence from the point of view of arms control and strategic relations. Chapter V contains a summary and a number of policy recommendations.

I Missile defence: back in the spotlight

Since the Bush administration took office, the issue of missile defence has returned to the spotlight. This chapter gives a brief outline of the history of US policy with regard to missile defence. During the Cold War there already were various initiatives for the development of defence against intercontinental ballistic missiles (strategic missile defence). After the Cold War, the focus was mainly on defence against short-range missiles (theatre missile defence, or TMD). With the publication of the report by the Rumsfeld Commission on 15 July 1998, however, strategic missile defence became the subject of renewed attention. The present Bush administration envisages a broad layered system comprising both elements, intended to protect both the US and its 'friends and allies' from missiles of any range. The concept of missile defence initially met with considerable resistance. By now, however, the resistance appears to have abated considerably, at least in the public eye.

I.1 Missile defence: an old cure for a new ailment?

US plans for missile defence date back to long before the Clinton and Bush Jr administrations. In that sense, missile defence is a legacy of the Cold War, when it was the subject of considerable rivalry between the US and the Soviet Union.[1] In the late 1960s the United States spoke for the first time of the concept of developing systems that could defend the country against the strategic nuclear arms of the Soviet Union, such as Nixon's plans for the Sentinel and Safeguard systems.[2] In the 1980s, President Ronald Reagan – an avowed opponent of Mutual Assured Destruction (MAD) – launched the Strategic Defence Initiative (SDI) and in the early 1990s, during the presidency of Bush Sr, there was talk of Global Protection Against Limited Strikes (GPALS). None of these designs was actually put into practice owing to recurrent technical problems, high costs and uncertainty regarding the consequences for international relations.

Despite the differences in size and effect, these system designs were primarily focused on the threat of strategic missiles from the Soviet Union. This was even still the case to a large extent for the GPALS system (1991). As a result of the end of the Soviet threat and experiences during the Gulf War, however, defence against short-range missiles (theatre missile defence) was given increasing attention.[3] [4] In the years that followed, the Clinton administration put strategic missile defence on the back

1 In March 1961, the Soviet Union carried out a successful test with a V-1000 anti-missile missile. In June 1967, President Johnson tried to persuade his Soviet counterpart Kosygin to abandon the idea of missile defence, to which Kosygin's answer was: 'defence is moral, offence is immoral'. In 1972, Nixon managed to persuade Brezhnev to sign the ABM Treaty, which put strict limitations on territorial missile defence.

2 Strategic missiles, or ICBMs, have a range of 5,500 - 10,000 kilometres and further. 'Safeguard' was abandoned by order of Congress due to technical limitations and the restrictions of the ABM Treaty.

3 Short-range missiles have a range of up to 1,100 kilometres.

4 In 1991, President Bush Sr announced that the focus of the SDI programme was to change. In addition to research into a land-based defence system to protect the US mainland from strategic missiles, more attention would be given to the development of mobile defence systems against short-range missiles.

burner. The Strategic Defence Organisation's name was therefore no longer appropriate and was changed to Ballistic Missile Defence Organisation (BMDO). The priorities were shifted towards the development of Theatre Missile Defence systems (TMD) which was made very clear by the allocation of budgets to the various projects by the BMDO. The strategic part (National Missile Defence, NMD) continued to exist in a very limited form.

However, strategic missile defence had not been forgotten. From 1995 onwards, the Republican majority in Congress took a number of initiatives that succeeded in putting strategic missile defence more prominently on the agenda of the Clinton administration.[5] The debate was given important renewed impetus in 1998 when, at the request of Congress, the then Senator Rumsfeld – the current Defence Secretary – produced a report on 'the nature and extent of the existing and increasing threat of ballistic missiles to the United States' as chairman of a broadly-selected Senate committee.[6] This so-called Rumsfeld report served to a significant extent as a second opinion for what some people considered to be the unsatisfactory findings of the National Intelligence Estimate (NIE) of 1995, in which according to many the missile threat was not taken seriously enough. More will follow on this subject in Chapter II.

The report of the Rumsfeld Commission concluded that there is a growing threat to the US from attempts by countries that are hostile towards the US to develop missile programmes. This could result in a real threat to the US five years after the country in question had made a definite decision to develop ballistic missiles.
A month after the publication of the report by the Rumsfeld Commission, a test launch of a North Korean Taepo-Dong missile was carried out over Japanese territory. This was seen as a clear confirmation of the conclusions of the Rumsfeld report, namely that non-friendly countries such as North Korea aimed to possess long-range and intercontinental missiles. On 6 January 1999, the National Missile Defence Act was adopted in the United States, with the aim of installing a national missile defence system (NMD). This returned the subject of the strategic version of missile defence to the political agenda, some ten years after the dissolution of the Soviet threat.

I.2 Clinton's National Missile Defence

In January 1999, after the adoption of the National Missile Defence Act, the Clinton administration set aside 7 billion US dollars for a period of six years for the development of a limited NMD system. They also began to assess the possibility of an amend-

5 From 1996 to 1998, three bills were unsuccessfully submitted regarding Strategic Missile Defence: the Defend America Bill (1996), the Defend the United States of America Bill (1997) and the American Missile Protection Bill (1998). All three were rejected. The latter was submitted a second time – after the North Korean Taepo-Dong launch – but was outvoted by one vote. Not until 1999 did a majority vote accept the National Missile Defence Bill as a final compromise. The National Missile Defence Bill obtained an overwhelming majority of 97 to 3. The bill determined that national policy was 'to deploy as soon as technologically possible an effective National Missile System capable of defending the territory of the United States against limited ballistic missile attack'. Incidentally, it also stated that a simultaneous aim was to be to continue to reduce the Russian nuclear arms arsenals by means of negotiation. In May 2002, the US and Russia signed a bilateral agreement in which the strategic arms reductions (to a level of 1,700–2,200) announced by President Bush in December 2001 and by President Putin in January 2002 are laid down.

6 *Report of the Commission to Assess the Ballistic Missile Threat to the United States*, 15 July 1998.

ment to the ABM Treaty, which would make the development and stationing of the proposed system possible under international law.[7] The Clinton administration aimed to stay within the margins of the (possibly amended) ABM Treaty during the research and testing programme and when actually installing the system.

The Clinton administration wanted a limited missile defence system, which was referred to as the 'three plus three' system.[8] It was to consist of 20 land-based interceptor missiles, to be increased later to 100, and an advanced radar in Alaska, replacements for the five early-warning radar systems (one of which was to be situated in the UK and one in Greenland) and a combination of satellites. A battle management system would coordinate the activities of the various elements. This system would be able to defend the US against dozens of missiles from North Korea and the Middle East. The first stationing was to take place in around 2007 and the costs were estimated at 30 billion US dollars. The system could be expanded at a later date to include larger numbers of interceptor missiles, extra radar and a new infrared satellite system to be sent into space (known as the SBIRS Low system). This would provide more extensive protection against an attack from the Middle East. The costs of such an extensive system were estimated at the time to amount to 50 or 60 billion US dollars.[9]

I.3 Consultations with and responses from Allies; the position of Russia and China

In the period 1999-2000, the Clinton administration discussed the above-mentioned plans with international partners, namely the NATO Allies, Russia and China. It became clear that there was considerable unease among the NATO Allies regarding the American plans. They were taken by surprise by these plans and in most cases did not agree with the threat analysis. In addition, they were concerned about possible side effects, in particular those with regard to strategic relations, geopolitical stability and the risk of a new arms race.

In the first place, there was concern about possible destabilisation and disruption of strategic relations as a result of a possible Russian response to NMD. Not only Russia, but also China would want to ensure the effectiveness of its own deterrents. This could be done by, for instance, installing more nuclear warheads or by equipping existing weapons with advanced decoy weapons. If China increased its nuclear weapons arsenal, Pakistan would follow suit, possibly with other (potential) nuclear states in its wake. This could start a chain reaction resulting in a new arms race and greater instability.
A second concern of the Allies was the possibility of the decoupling of the Euro-Atlantic security within NATO. If the Allies on one side of the Atlantic remained vulnerable, whilst the other side was certain of being protected, this could have a negative effect on the idea of shared risks and responsibilities within the Alliance. Thirdly, following

7 The Anti-Ballistic Missile Treaty (1972) set limits regarding the numbers, types and locations of interceptor missiles in the US and the Soviet Union. On 13 December 2001, President Bush announced that the US would withdraw from the treaty, which means that the treaty ceased to exist as of 13 June 2002.

8 In the 'three plus three' system' the first stationing would take place in the three years following three years of research.

9 The Military Balance 2000-2001, IISS, Oxford.

from the second point, the Allies feared a decrease in the American involvement in Europe and a devaluation of America's nuclear deterrent guarantee for Europe. Fourthly, there was a general concern that unilateral withdrawal from or violation of the ABM Treaty in favour of NMD was part of a general and growing American indifference towards the international system of rules and regulations, particularly with regard to disarmament and non-proliferation. In the fifth place, there was doubt as to the technological feasibility. Better to have no protection than to waste money on a 'false sense of security' as a result of a system that may not work and has instability as a side effect, was the general opinion.

In the first instance, Russia and China showed themselves in their public statements to be fiercely opposed to the American plans. Both countries set great store by the ABM Treaty as the 'cornerstone of strategic stability'. In reply to the Russian and Chinese response, the Clinton administration emphasised that NMD was specifically designed to defend the US against a limited attack by 'states of concern' and that the ABM Treaty would remain intact, possibly in an amended form. NMD was not aimed against Russia or China, the US assured them, because the system would not be able to withstand the large number of missiles – possibly supported by an array of advanced countermeasures (decoys) – of the established nuclear states. Thus the NMD would have no consequences for the strategic balance and international stability. Nonetheless, in consultations with the US, European Allies continued to emphasise the great importance they attached to reaching an agreement with Russia regarding NMD and the ABM Treaty. The Chinese objections were also to a great extent aimed at the possibility of interceptor missiles being stationed in space in the long run.

In September 2000, after only partly successful test launches, President Clinton decided to defer the decision on the development of NMD and leave it up to his successor.[10] By the end of his term of office, too many questions, including technological ones, had remained unanswered.[11]

I.4 Bush's Missile Defence

When President Bush took office in January 2001, a fervent supporter of missile defence took over at the helm. Bush's speech to the Defence University in May 2001 left no doubt about that.[12] In the course of his first year in office, it became clear how Bush intended to interpret missile defence. In domestic politics he initially met with considerable opposition, mostly from Democrats. After the events of 11 September 2001 this domestic criticism mostly died down. Contrary to what some people expected, 11 September was a stimulus to Bush's policy on missile defence. The attacks added to the general feeling of vulnerability. Defence against every possible threat, no matter how improbable, was felt to be an urgent matter. Criticism of government policy aimed at strengthening defence met with no response from either politicians or society.

10 The main reason for the deferment was 'a lack of information regarding the technical readiness and operational effectiveness of the entire NMD system'.

11 Clinton had formulated three assessment criteria: the effectiveness of the system had to be sufficient, there had to be clarity with regard to the costs and clarity with regard to strategic relations.

12 *Remarks by the President to Students at National Defence University*, 1 May 2001 (www.whitehouse.gov/news/releases/2001/05).

In the aftermath of 11 September considerable progress was made with the missile defence policy, regarding both domestic politics and budgeting.[13] As part of a substantial increase in the defence budget, the necessary funds were reserved for research and test programmes.

Internationally, the aftermath of 11 September and the surprising success of the American campaign in Afghanistan provided the US with a suitable opportunity to announce its withdrawal from the ABM Treaty on 13 December 2001. With the termination of the ABM Treaty - a decision that is part of a broader US agenda, as will be explained in Chapter IV - the US is of the opinion that as of 13 June 2002, under international law it is free in its choice of missile defence.

There are a number of important differences between Clinton's NMD and Bush's MD.

Whereas Clinton had left the broader strategic context mostly unchanged, under Bush missile defence was given a prominent place in an overall review of US defence policy. This was reflected in the Quadrennial Defence Review (QDR) of October 2001 and in the Nuclear Posture Review (NPR) of January 2002. Both policy documents provide for adjustment of the strategic doctrine and the military system to the changed security situation as perceived by the US after the Cold War.

Contrary to the Cold War situation, there is less emphasis on 'the enemy' – after all, it is no longer clear who and where the enemy is – and more on the way in which potential enemies could be able to make use of possible weaknesses in the US defence. This leads, as is apparent from the NPR, a smaller role for strategic nuclear weapons and a larger role for technically advanced conventional arms. The US army must transform in such a way that the US can maintain superiority over a potential enemy in all possible areas (escalation dominance). This is not limited to the familiar areas, but includes relatively new fields such as the information war and space dominance. The priorities are in the areas of homeland defence, preparation for surprise attacks, the fight against asymmetrical threats and the development of a new deterrence concept.

Additionally, Clinton's limited and nationally-oriented system forms only one part of the 'robust' system advocated by Bush.[14] Bush does not yet have a specific architecture in mind, but wants research in all possible areas of missile defence. The decision to opt for certain systems will not be made until the technology has proved itself. In this 'layered architecture' there can be room for interception methods for enemy missiles of all ranges, in all phases of flight, from land, from the sea, from the air and from space.[15] All options remain open. It must be said, however, that at present the development of

13 On the other hand, it is said that the attacks proved that MD should not be the main priority. However, this is not the prevailing view in the US, as has become clear, for instance, to the AIV. In a letter to NATO Allies dated 24 September 2001, the US stated that the countries that support terrorism are the same countries that are developing ballistic missiles.

14 In a Record of Decision of the BMDO, this part is now referred to as the 'Alaska portion of a Missile Defence System (MDS)' or the 'Ground-Based Midcourse Element (GBME) of the MDS'.

15 How this universal approach relates to the simultaneous statement that it only concerns protection against a handful of missiles, is as yet unclear.

none of the parts, with the exception of a few TMD systems, has progressed beyond the research phase.
Furthermore, the previous distinction between Theatre Missile Defence and Strategic Missile Defence no longer plays a part in the setting up of the research and testing programme. With the termination of the ABM Treaty, the basis in international law for this distinction has also ceased to exist.

The predicate 'national' has also been removed from the name of the system. It now concerns Missile Defence (MD) that is to provide protection to the United States and to 'allies and friends'. The question as to how this inclusion of allies in the range of protection is to take shape remains unanswered as yet.[16]

Finally, the executive organisation was streamlined according to the new policy and given the necessary funds. BMDO (Ballistic Missile Defence Organisation) was renamed MDA (Missile Defence Agency). The budget for missile defence, announced in February 2002, amounts to 7.8 billion US dollars for 2003, rising to 11.8 billion in 2007.[17]

During the Bush administration, so far there has hardly been any actual consultation with Allies. Mostly it was a case of the US providing the Allies with information on the content of its intentions. There were hardly any actual mutual exchanges of viewpoints and common assessments were not pursued during the NATO consultation sessions on missile defence. Nor did the Allies insist on this taking place.

The overt criticism of the plans by European Allies has also abated. This has to do with the measured response from the Russians, with the European Allies' wish to avoid putting transatlantic relations under pressure unnecessarily at this stage and also with the fact that the Americans have indicated that they are willing to include allies and friends in the range of protection. This does not, however, provide a solution to the previously mentioned problematic aspects that the Allies consider to be involved in Missile Defence. Most questions remain unanswered.

The 'system of systems' is therefore mostly still on the drawing board. At the moment, there is basically only an extensive research and testing programme aimed at all imaginable technical possibilities. This means that in the years to come there will be no operational missile defence system, with the exception of a few TMD systems. This will not change in the years to come, owing partly to the fact that at this stage there are serious doubts as to the technological feasibility of the plans as a whole, especially in the near future. Of the tests carried out so far, only a few have been successful and at least as many have been unsuccessful. Of the successful tests, there is dispute as to whether they were carried out realistically. Moreover, an opponent could fairly easily take measures to frustrate the interception of missiles, for instance projectiles that lead the interceptor missile away from the actual target.

As regards the rest of the advice, it is important that this 'embryonic stage' of the project be kept in mind. Public statements sometimes create the - erroneous - impression

16 As will become apparent in Chapter IV, the US held tentative discussions on this issue with Allies in July 2002.

17 According to the Centre for Defence Information, the costs will turn out higher (10.5 billion) because not all programmes are included in the MDA's budget.

that missile defence almost exists, but in this respect rhetoric and reality must be kept apart.

Nonetheless, the Bush administration is determined to develop the MD policy further, the main motives being of a political nature. However, economic and technological factors also play a part. The American technological-industrial complex will benefit in the long run from the US government's sizeable investments in missile defence research. In addition, this research will contribute to continuing US superiority, including technological superiority.

II A closer look at the threat

This chapter describes how the American debate on the threat of ballistic missiles has developed, what developments are foreseen by the United States and what conclusions it subsequently draws. The present actual capabilities of 'states of concern' are subsequently described, followed by a number of comments on and questions about the American conclusions.

II.1 The development of the threat from the US point of view

The increasing attention paid by the US to the threat of ballistic missiles is to be seen in the context of the general strategic changes at the end of the Cold War. In the course of the 1990s, the certainty of the bipolar opposition made way for a complex and multipolar situation full of new uncertainties. With the dissolution of the threat from the Soviet Union, regional powers were given renewed attention in US defence policy. This has already been discussed extensively in the AIV advice entitled 'From unsafe security to unsecured safety', on the developments in the international security situation in the 1990s.[18]

The Gulf War (1991) was a turning point. The war fought under US leadership against Iraq after the unexpected Iraqi invasion of Kuwait raised the question as to whether much less powerful countries would be able to threaten the US in the future with weapons of mass destruction, and what the consequences would be for US policy.

It was known that Iraq had chemical and biological weapons at its disposal. Iraq had used chemical agents in attacks against Kurds in Halabja in 1987. US and coalition troops were therefore given protection on a grand scale against the effects of biological and chemical weapons, which incidentally were never used. After the Gulf War, the UN Security Council established a verification commission (UNSCOM), with extensive powers, that was to assess the Iraqi arms programme and then eliminate it. These UNSCOM inspections showed the extent to which Iraq had made progress with the development of weapons of mass destruction and means of delivery. Especially the largely hidden nuclear programme gave cause for concern. At the time of the Gulf War, Iraq apparently was some three years away from developing a nuclear weapon.

Consequently, the question arose increasingly as to whether the US would be (or would have been) able to deter or defeat a regional power such as Iraq armed with weapons of mass destruction.[19] Some experts are pessimistic in this respect. In their opinion, an Iraq armed with nuclear weapons would have been able to oppose coalition-forming by the US, or undermine the effectiveness of an intervention by contaminating or destroying ports.[20] Others say that such an occurrence would be *exactly* what would

18 AIV advice number 10, *Developments in the international security situation in the 1990s — from unsafe security to unsecured safety*, September 1999.

19 *National Missile Defence, what does it all mean?* Centre for Defence Information (www.cdi.org/missile-defense/archive.cfm).

20 Posen, B.R. (2000), US Security Policy in a nuclear armed world, or what if Iraq had had nuclear weapons?, in: *The Coming Crisis* – Victor Utgoff (ed.). (Cambridge, MIT Press).

make the US take action because they would be left with no choice. If they let themselves be deterred it would set a unique precedent with vast consequences for global relations and international stability.[21]

Nonetheless, the possibility that actors – not only states, but non-state groups as well – in a regional conflict would gain access to weapons that could complicate American decision-making on regional interventions has focused the attention of military planners over the past years, particularly in the US, increasingly on the possibilities of military defence against 'states of concern' such as Iraq.
Thus regional powers with programmes for weapons of mass destruction, called 'rogue states' by the US, were increasingly seen as the most significant threat to international peace and security.[22] These states, located in regions where US national interests are at stake, apparently were not only striving to possess weapons of mass destruction, but would also not hesitate to violate international standards (such as Iraq in the case of the Non-Proliferation Treaty) or would even resort to aggression.[23] Cuba, Syria, North Korea, Iran, Iraq, Libya and even China were considered to fit this description. Concern over the proliferation of ballistic missiles in Asia, the Middle East and North Africa continued to grow in the US during the 1990s. Support in the Security Council for the USCOM inspections conducted in Iraq after the Gulf War and for the UN sanctions diminished in the course of the years and from 1999 onwards weapons inspectors were no longer allowed into Iraq. The prospect of states of concern such as Iraq having long-range missiles in the future which, armed with weapons of mass destruction, would be able to threaten American cities became a new spectre, all the more because such countries would not be susceptible to the traditional deterrents that existed during the Cold War. These were 'irrational' regimes that would be prepared to commit suicide. Fear of nuclear retaliation would not stop these countries from using weapons of mass destruction.[24] In this perception, an operational system of missile defence would not only provide protection from a missile attack, but would also make the enemy abandon their plan of attack at an earlier stage. As American policy makers described the perspective of the attacker to be deterred: *'An attack on the US should not only be fatal, but also futile'.*

21 Rosen, S.P. (2000), Nuclear Proliferation and Alliance Relations, in: The Coming Crisis - Victor Utgoff (ed.). (Cambridge, MIT Press).

22 The term 'states of concern' will be used in this advice.

23 *Rogue States and US Foreign Policy*, Richard Lutwak.

24 On 1 May 2001, President Bush for the first time officially set out his vision on the new strategic reality, the threat emanating from states of concern and the insusceptibility to deterrence in a speech at the National Defence University. Some quotes from that speech:
'Today's most urgent threat stems not from thousands of ballistic missiles in Soviet hands, but from a small number of missiles in the hands of these states, states for whom terror and blackmail are a way of life' (...) Today, we must seek security based on more than the grim premise that we can destroy those who seek to destroy us (...) for some of today's tyrants are gripped by an implacable hatred of the United States, they hate our friends, they hate our values, democracy, freedom and individual liberty, and many care little for the lives of their own people. In such a world, cold war deterrence is no longer enough. Deterrence can no longer be based solely on the threat of nuclear retaliation'.

The precise extent of the threat of ballistic missiles to the US has been the subject of debate in the US itself for a long time and to a certain extent still is.

The US intelligence services concluded in 1995 in a National Intelligence Estimate (NIE) that besides the five recognised nuclear powers (the United States, Russia, China, the United Kingdom and France), no other country would acquire a ballistic missile within 15 years that would be capable of threatening the United States (with the exception of Alaska and Hawaii) or Canada. The certainty of these conclusions came as a surprise, particularly to the Republicans, because an NIE published two years previously had drawn less clear conclusions and had been, moreover, accompanied by a general statement that it was impossible to make long-term predictions. It was also surprising that Alaska and Hawaii had been left out. Republicans in favour of missile defence accused opponents of politically influencing the NIE of 1995. An investigation led by Robert Gates, director of the CIA during the Bush Sr administration, was unable to underpin these accusations, but was critical of the methods used by the analysts.

It is against this background that the US Senate established the Rumsfeld Commission in 1998. The conclusions in the report of the Rumsfeld Commission were different in many respects from those of the NIE of 1995, for instance regarding the central question as to whether 30-year-old Scud technology (the basis of North Korea's No-Dong missile) would be able to serve as the basis for the development of a long-range missile. The commission concluded after consulting Lockheed Martin that with external assistance a country would be able within five years to develop a long-range missile, up to and including intercontinental range, on the basis of its well-developed missile technology based on Scud technology. The commission was also of the opinion that the risk of countries such as Russia and China sharing high-grade technology necessary for the development of a long-range missile was grossly underestimated in the NIE of 1995. Furthermore, missile programmes in states of concern were apparently able to develop much more rapidly than was assumed on the basis of own experience. In states of concern, missile programmes would not need to progress through all the assumed necessary stages of development, because they were less interested in the precision of the missile and did not always carry out extensive testing. The US could therefore not presume that there would be a period of five years between a first test and the actual stationing of a missile, as assumed by the NIE in 1995. It was therefore unclear whether there would be sufficient warning for the US. In addition, it was becoming easier to conceal (parts of) the missile programmes.[25]

The Rumsfeld Commission concluded, in brief, that there is a growing threat to the US from missile proliferation and efforts by countries that are hostile towards the US to develop missile programmes. Five years after the country in question had decided to develop ballistic missiles, this could lead to an actual threat to the US. This approach was largely adopted in the present US government policy initiated under President Bush. It has become apparent to the AIV that at present there is widespread agreement, among both Democrats and Republicans, on the assessment that over the next 5 to 10 years, a threat to the US will develop from North Korea, from Iran in the following 5 years and from Iraq in the subsequent 5 years.

25 Graham, B. (2001), Hit to Kill – The new battle over shielding America from missile attack (New York, Public Affairs Press).

The US mainly bases this on a possible development. The probability of that development is largely disregarded. It is assumed that possible capabilities will actually become a reality. The intentions of the countries involved are hardly taken into account in the analysis at all, nor is there any analysis of circumstances under which such countries would be prepared to use their weapons. The US also assumes that the resources that become available will at some time actually be used, which justifies missile defence.[26]

II.2 What missiles do the various countries have?

What weapon systems are currently in the possession of what 'states of concern'? For a detailed overview, please refer to Annex 2. The following is a brief outline, largely based on American sources, because there is mainly American information available on the subject. Despite the fact that more countries than the five mentioned are expanding their missile potential (for instance India and Pakistan) this advice adopts the American focus on the missile programmes of the five countries that are considered to be a possible threat (North Korea, Iran, Iraq, Syria and Libya).[27] It not only takes account of the means of delivery, but also of the weapons of mass destruction,[28] as the military effect of a (ballistic) missile with a conventional payload is relatively minor.[29]
It is also assumed that the missiles will be launched from the country in question's own territory. No account is therefore taken of the possibility that missiles could be launched from the territory of another country. If, for instance, Iran were to be enabled to install medium-range missiles in Libya, it would become considerably easier to threaten targets in Europe. Launching at sea has a comparable effect. After all, the missile range required to reach the target is decreased significantly (but the hit precision may be less as due the fact that position determination from a moving launch platform is less accurate).

26 In this regard, the Dutch Government stated in a letter to the Lower House of the States-General on 5 July 2001: 'to what extent this availability of capabilities will lead to an actual threat depends partly on the intentions and the credibility of the proliferator in question and the probability of his deploying these capabilities'. Parliamentary Document 2000-2001, 27857, no.1, Lower House of the States-General.

27 In their letter to the Lower House of the States-General of July 2001, the Dutch Ministers of Defence and Foreign Affairs stated in this respect that North Korea, Iran, Iraq, Libya and Syria, as well as Israel, China, Pakistan and India are currently expanding their missile potential. With regard to these countries the letter used the term 'states of concern'.
Besides the five countries mentioned above, Algeria, Armenia, Azerbaijan, Belarus, Bulgaria, the Democratic Republic of Congo, the Czech Republic, Egypt, Georgia, Hungary, India, Israel, Kazakhstan, South Korea, Pakistan, Poland, Romania, Saudi Arabia, Slovakia, Taiwan, Turkmenistan, Ukraine, the United Arab Emirates, Vietnam, Yemen and the Federal Republic of Yugoslavia have an operational short-range ballistic missile capability (See Wilkening, D.A. (2000), Ballistic Missile Defence and Strategic Stability, in: *Adelphi Paper*, no. 334 (New York, Oxford University Press).

28 With the qualification that weapons of mass destruction can be delivered in many ways other than with ballistic missiles. The delivery of CW and BW using ballistic missiles is extremely complicated.

29 Incidentally, there is an interesting dissident opinion, namely that of the WEU Assembly, which says in a report from June 2001 that 'it is a cause for concern that Europe does not realise that a country can launch a massive conventional attack with ballistic missiles and that an improvement of the precision of the tactical-range missiles, in particular in the short term, cannot be ruled out.'

North Korea has a fairly large arsenal of short-range missiles and launchers, namely short-range Scuds with a maximum range of 500 kilometres. It would appear that they have 700 missiles and 30 launchers. The entire demilitarised zone, South Korea and the Chinese border region lie within range of the North Korean missiles.

It appears that North Korea also has one or two operational No-Dong missiles, with a range of 1,300 kilometres, but not all experts agree with the Americans that this missile is operational. If the No-Dong missile is indeed operational, almost all of Japan would lie within its range, plus parts of China, Mongolia and Russia.

In 1998 a test launch of a Taepo-Dong missile was carried out. This missile, developed on the basis of the No-Dong missile, is supposed to have a range of 1,500 kilometres. Much is unclear with regard to the launch, for instance the question as to whether it was a test launch of a missile or the launch of a satellite.

According to American sources, the Taepo-Dong's successor (Taepo-Dong II), with a range of 4,000–6,000 kilometres, has been ready for testing for some time. North Korea has, however, declared a testing moratorium and the test has not yet been carried out. This missile would bring Hawaii and Alaska within Korean range, as well as all of China and a large part of Russia. Europe would remain out of range. According to American sources, North Korea has enough plutonium to produce one nuclear warhead and has the infrastructure to develop biological and chemical weapons. The latter are even in stock and ready for use, according to the Americans.

Iran also has Scud missiles with a range of 150–500 kilometres. These missiles cover parts of (neighbouring) countries such as Turkey, Syria, Iraq, Saudi Arabia, Oman, Pakistan, Afghanistan, Uzbekistan, Georgia and Russia. In 1998, 2000 and 2002 Iran tested the Shahab-3 missile, which has a range of 1,300 kilometres and is assumed to be operational. The Shahab-3 brings parts of China, India and the entire Middle East, including Israel, within range of Iranian missiles.

Iran is also supposed to be working on the Shahab-4 and 5 with longer ranges, and possibly even on an intercontinental missile. Successors to Shahab-3 would also be able to reach parts of Europe; reaching the US requires an intercontinental missile. That is still a number of steps away from becoming a reality, but according to American views, Iran is indeed striving towards an intercontinental missile, although Iran has recently denied this.[30] [31]
Iran possesses chemical weapons and has used them against Iraq in the past. Iran also has the infrastructure for a biological weapons programme and is also supposed to have a nuclear weapons programme.

Iraq has Scud missiles with a range of 150 kilometres. More than that is prohibited by UN Security Council Resolution 687. With its current missiles, Iraq is able to reach part

30 'Statements suggest that Iran may intend to develop and deploy a longer range ballistic missile capability' according to a report by the US Department of Defence. *Proliferation: threat and response,* January 2001.

31 Minister of Defence Ali Shamkani announced on 28 May 2002 that 'the successful test should not be seen as a sign of a start to production or as an attempt to increase the missile's range. (Source: www.nti.org/d_newswire/issues/2002/5/28/11s.html)

of neighbouring countries Syria, Jordan, Saudi Arabia, Iran and Turkey.
The US is of the opinion that after sanctions are lifted, Iraq will soon have missiles with a range of 650 kilometres, which it also had during the Gulf War. Such missiles would also be able to reach Israel and all of South East Turkey.
The UNSCOM inspections have also shown that Iraq had chemical warheads and a biological weapons programme and was three years away from developing a nuclear warhead. At present it cannot be said for certain what the state of the Iraqi nuclear weapons programme is, because there have been no UNSCOM inspections since 1999. Iraq as yet refuses to cooperate on this matter.

Syria has a few hundred Scud-B and C missiles with a range of 75 – 500 kilometres. According to American sources, Syria does not aim to acquire long-range missiles. It has chemical warheads with which it can reach Turkey and all of Israel.

Libya has small numbers of very outdated Scud missiles with a range of 300 kilometres. In the past, Libya had a production facility for chemical and biological weapons, but it no longer appears to be active. The Libyan missiles are only able to reach the neighbouring countries. According to experts, the arsenal is also so outdated that at present it poses no threat whatsoever.

In general it can therefore be said that none of these so-called 'states of concern' is at present able to reach the US. On the other hand, a part of the territory of NATO Ally Turkey is within range of short-range missiles from Syria, Iraq and Iran. Israel is within range of Syrian missiles and probably also Iranian ones (the Shahab-3).

It can also be said that none of the 'states of concern' mentioned has a nuclear capability at present. The most progress has been made with regard to biological and chemical weapons. These weapons are present in the five countries mentioned, or the countries have the production capability to make them.

II.3 Comments on and questions about the American conclusions

Both within and, in particular, outside the US the American conclusions have given rise to comments and questions. These are of a technical and financial nature, but the extent to which foreign assistance is assumed to be available and how the political context is gauged also play a part.[32]

The following comments can be made on the US plans for missile defence:

A (ballistic) missile is not the only way in which weapons of mass destruction can be delivered. Other means of delivery are equally as effective (or more effective), easier to manufacture and much cheaper, for instance cruise missiles. Moreover, they are more difficult, or impossible, to detect for a missile defence system, which by its very nature only responds to a missile attack. Chemical and biological weapons seem particularly suited to means of delivery other than missiles. Besides cruise missiles, these could be unmanned aircraft, or any other means of delivery that can serve to take chemical or biological weapons to their targets. The proverbial suitcase bomb of the Cold War has now changed into an actual threat from attacks or assaults via test tubes. This

32 Sagan, S.D. (2000), Rethinking the Causes of Nuclear Proliferation: Three models in search of a bomb, in: *The Coming Crisis* – Victor Utgoff (ed.). (Cambridge, MIT Press).

observation is of particular importance, because, as has been said previously, none of the states of concern mentioned has nuclear weapons, but they do have chemical and/or biological weapons or the production facilities to make them.

The trade in parts for means of delivery other than missiles has hardly, if at all, been restricted by legislation and export control regimes, whereas this is the case for ballistic missiles. Many of these parts also have civil uses. The threat posed by cruise missiles and unmanned aircraft is as yet not being taken seriously enough. This lack of interest has partly to do with the fact that the threat from ballistic missiles appeals to the imagination and is therefore overexposed. It is more likely, especially in the case of terrorist organisations, that other means of delivery would be used.[33] Means of delivery that are technologically even less advanced, such as sea containers, which can easily be brought into a destination port, are more readily available, effective and precise. Additionally, to an increasing extent the identity of a state or organisation carrying out an attack does not become known. Although there have as yet not been any of these 'anonimised' attacks involving weapons of mass destruction, it does not seem too far-fetched to suppose that it would be the perpetrators of attacks with weapons of mass destruction in particular who would wish to keep their identity unknown in order to minimise the risk of retaliation.

Modern infrastructure renders today's Western societies vulnerable. This general threat must be taken into account in analyses. The attacks of 11 September compel us to do so. The most recent US review of defence policy is also based on such a general threat. Terrorism is particularly hard to grasp. There are terror groups who aim to cause as many casualties as possible, or who are at least indifferent to loss of life on a massive scale. If terrorist organisations were to have weapons of mass destruction at their disposal, it must be assumed that they would indeed use them and that they would not be deterred from doing so by the weapons of mass destruction of their opponents. The recent attacks in New York and Washington, whereby a non-state party appeared to be capable of dealing a heavy blow to the United States - without ballistic missiles - point in this direction. A missile defence system does not provide a solution to such a threat.

According to the American line of reasoning, in the relationship between a state with an invulnerable retaliation capability - such as the US - and a state with a primitive arsenal of weapons of mass destruction (consisting, for instance, of one or more vulnerable ICBMs with a rudimentary command and control system), the significance of weapons of mass destruction is fundamentally different than was the case between the US and the then Soviet Union. At the time, the risk of total nuclear destruction forced both nuclear powers to adopt a position of great restraint. Conversely, Washington is presently discussing the pros and cons of preventive action against weapons of mass destruction of a 'state of concern' (pre-emption).

If a state of concern were to attack the US with weapons of mass destruction, it would have to bear in mind that its attack would be responded to with a much more extensive counterattack. The question is not even one of whether the US will retaliate, but whether a possible attacker – regardless of the means of delivery – can ever be certain that the US will not retaliate. This uncertainty is typical of a relationship of deterrence; the attacker risks retaliation. If there was ever any doubt about that, it was taken away

33 Gormley, D.M. (June 2001), Dealing with the threat of cruise missiles, in: *Adelphi Paper,* no. 339 (Oxford University Press).

after 11 September 2001. Political leaders would thus appear to sacrifice their own power bases and societies (including their own families). This makes such an attack with weapons of mass destruction rather unlikely. It is certainly not very likely that the leader of a state of concern would deploy a weapon of mass destruction against the US out of the blue.

However, the view is also expressed that specific circumstances are conceivable in which the leader of a state of concern would be tempted to use weapons of mass destruction against the US, for instance in the event of US involvement in a regional conflict, if the state of concern in question has nothing more to lose. In this view, the possession of weapons of mass destruction capable of reaching the US could form significant insurance against military intervention in the national vital interests by the one remaining superpower. Whether the possession of a very limited number of weapons of mass destruction, or just one, would indeed deter the US, is questionable. States of concern appear to work on this assumption, but the arguments that form the basis of this view are strongly speculative.

Viewed in this way, Missile Defence is not only an American response to a threat analysis, but also extra insurance for American foreign policy to maintain the freedom to act in regional matters.

There are also comments of a more political nature to be made on the American view. What do North Korea, Iran and Iraq actually want? Why do these countries pursue weapons of mass destruction? With what aim would they be prepared to deploy a nuclear weapon against the US, or to threaten to do so? Are the intentions of these countries such that they compel the US to design a missile shield to defend itself?

According to observers, *North Korea* sees its missile potential as an insurance policy against military intervention, as a crowbar to be used in international negotiations, as a means of acquiring status, as a regional show of strength and as merchandise in an economy on the edge of a precipice.
North Korea uses the missile issue as, for instance, a means of enforcing its arguments in negotiations in the 'Agreed Framework' context, whereby North Korea acquires light-water reactors in return for putting a stop to its nuclear programme.[34] North Korea has coupled progress in this respect to the possible continuation of the self-imposed moratorium on missile testing after 2003.[35] This moratorium is in fact the only concession made by Pyongyang so far with regard to non-proliferation. Furthermore, North Korea has suggested that it would be willing to abandon its entire missile production if, in exchange, other countries were to launch satellites for Pyongyang. This proposal was

34 In 1991 North and South Korea signed a declaration on the denuclearisation of the Korean peninsula. In the same year, the US withdrew its nuclear weapons from South Korea. In 1992 North Korea signed a safeguards agreement with the IAEA, but a year later announced its withdrawal from the Non-Proliferation Treaty. After a subsequent crisis lasting eighteen months, in 1994 the US and North Korea signed the Agreed Framework, whereby North Korea's graphite reactors will be replaced by light-water reactors. The Korean Peninsula Energy Development Organisation (KEDO) is tasked with carrying out this process, which besides the US also involves South Korea, Japan and the EU.

35 In May 2001 North Korea extended the voluntary moratorium to 2003, under the condition that negotiations with the US make progress.

put forward recently by the North Korean leadership to both Russian President Putin and an EU delegation.[36] As there is no insight into the reasons behind this proposal, no proper assessment can be made of how realistic it is.

As regards *Iran*, many experts also consider it highly unlikely that it would take the risk and initiate an attack with weapons of mass destruction on the US.
Iran's aspiration would appear not to be aimed at domination of its neighbouring countries and support for conventional aggression. Iran wants respect for what it considers to be its superior culture, influence in the Gulf region (which would mean the Americans leaving the region) and, according to this analysis, it wants to protect itself from potential enemies, Iraq in particular. Iran has indeed used chemical weapons in the past, but that was during the war with Iraq, in a regional situation.[37]

Considering the experiences of the Gulf War and the detailed knowledge of UNSCOM, *Iraq* is an exceptional case. It has already shown that it is prepared to play for high stakes. Whereas with Iran and North Korea there is 'circumstantial evidence' of their intentions, in Iraq's case there already is a history of aggressive behaviour (the invasion of Kuwait) and the willingness to escalate (during the Gulf War Iraq fired Scud missiles at Israel and Saudi Arabia). It is true that the payload of these missiles was conventional; in this case Iraq either was deterred from using a weapon of mass destruction or was not capable of doing so in the first place. The United States considers Iraq to be the greatest threat in the future. Iraq, however, at present does not have the means to pose an actual threat.

The US government takes the position that it is impossible to assess intentions. Intentions, after all, are not measurable and are subject to change. Therefore, a threat analysis must primarily focus on existing capabilities and weapons programmes. At first glance, this approach appears to clarify the matter, but it nonetheless leaves many questions unanswered, for instance with regard to what in the American view is the greatest threat, coming from Iraq. This country, however, does not have the means to pose an actual threat to the US, whereas a country such as Syria has an extensive missile potential, aimed at Israel and armed with chemical weapons, to which hardly any attention is being paid. It is said of leaders such as Saddam Hussein and Kim Jong Il that they are 'irrational', prepared to take great risks and insusceptible to the prospect of nuclear deterrence, whilst for instance Pakistan - which, like India, has a much more extensive missile potential, as well as nuclear weapons - is not included in this consideration because it is considered to be an ally in the war against terrorism, despite the fact that Pakistan carried out a test with a Ghauri missile as recently as May 2002. The assessment of the threat from states of concern, therefore, also includes a political component.

A comment that can be made on the technical side of things is the general question as to whether the missiles based on Scud technology are able to serve as a basis for the development of medium to long-range missiles. In the American analyses, it is assumed that this is indeed possible. There are experts, however, who dispute this, including

36 Foster-Carter, A. (May 2002), A rogue by any other name: North Korea's many causes for concern, in: *Asia Times Online* (www.atimes.com).

37 Ziemke, C.F. (2000), The national Myth and strategic personality of Iran: a counterproliferation perspective, in: *The Coming Crisis* – Victor Utgoff (ed.). (Cambridge, MIT Press).

Russians, as Russia itself did not succeed in the 1960s in 'upgrading' Scuds. In their view, a missile potential based on Scuds, without assistance from countries which have long-range technology (P-5), will not go far. In this respect, particular reference is made to the fact that invulnerable long-range missiles, unlike Scuds, require solid-fuel technology. The technology required for the operating system of the missile, which ensures that the missile hits the intended spot as closely as possible, is also very complex.

The pursuit of solid-fuel technology (observed in Iran, for instance) is seen by the US as proof that long-distance or intercontinental missiles are being developed. It can, however, have other reasons. Solid-fuel technology also has advantages when used in shorter-range missiles because it can be stored for longer periods and because the ignition time is shorter. This means that missiles using solid fuel can be used for longer, are less vulnerable and can be deployed better for a surprise attack. A missile powered by liquid fuel takes a long time to load. Such missiles are vulnerable because during that time they can be detected and eliminated.

As mentioned, the American analyses also state that missile programmes in the states of concern do not need to progress through the same stages of development as is the case in the US and Russia. Effective 'terror weapons' can be developed even with poor precision and guidance technology. Indeed, very high precision (circular error probability = CEP)[38] is not necessary for a terror weapon, but the technology required to ensure that a missile lands reasonably close to its target is extremely complex. At the same time damage to the launching country or friendly neighbouring countries must be avoided.

The question is also relevant as to the extent to which Russia and China will serve as suppliers of sensitive material and expertise to the states of concern. In the US there is a fear that, with assistance from China and Russia, states of concern will reach a breakthrough which will make the development of a long-range missile possible. During preparatory talks before the Russia-US summit in May 2002, the Russian cooperation with Iran with regard to nuclear technology and missile technology was a particular bone of contention.[39] However, many experts see no pattern pointing to the Russian and Chinese governments being prepared to provide that assistance. There is cooperation in progress, but it is only very gradual. It appears mainly to be the result of not wanting to ignore the requests for assistance completely, wanting to capitalise politically on the situation and at the same time prevent a breakthrough from being reached. In this view there apparently is relatively 'responsible' cooperation and supplying. Russia and China would appear to realise that a breakthrough in the missile programmes of the states of concern cannot be in their own interests either. It must, however, be said that government control is not always adequate.

It must be admitted and emphasised that it is impossible for the AIV, and not only for the AIV, to give a conclusive assessment of the development of missile proliferation in the future. The above-mentioned considerations, however, do lead to the conclusion that a missile defence system is not the top-priority measure. Missile defence is a response to the many dangers that result from the vulnerability of the home territory. It

38 For the missiles of the countries assessed, the CEP (circular error probability – the diameter of the circle within which half of the launched missiles land) varies between 1,000 metres and 3 kilometres.

39 *US, Russia Divided over Iran after Talks*, Washington Post, 20 February 2002.

is a technical response, part of a long tradition. In any case it is an American response to what in the American view is a growing problem. Whether or not it can stand the comparison with other threats in a cost-benefit analysis remains to be seen.

II.4 Summary

The growing interest in ballistic missiles in US politics is to be seen in the context of the strategic changes in the post-Cold War era. The Gulf War in 1991 was an important turning point, after which the key question in the US was whether Iraq, had it been equipped with weapons of mass destruction, would have been able to deter US military intervention, or at least hamper it to a great extent.

After several differences of opinion and various studies during the final years of the twentieth century, there is widespread agreement in the US on the perspective that in the next 5 to 10 years, a threat to the US could develop from North Korea, from Iran in the following 5 years and in the subsequent 5 years from Iraq. It is agreed that a form of missile defence is necessary in order to be able to frustrate an attack in the future.

The states of concern identified by the US at present have short-range missiles and none of them is able to reach the US. Southern parts of NATO territory (Turkey) do lie within range of Syria, Iraq and Iran. Israel lies within the range of missiles deployed from Syria and probably also from Iran (the Shahab-3). None of the states of concern at present has nuclear weapons. The most progress has been made with regard to biological and chemical weapons and in some cases they have even been used in the past (by Iran, Iraq and Libya).

The following nuances should be added to the American conclusions, however. They are of a technical, political and general nature.

A ballistic missile is not the only way in which a weapon of mass destruction can be delivered. Other means of delivery are equally as effective and much more accessible. For a state or terrorist organisation which aims to cause large numbers of civilian casualties within the territory of a Western country (or to threaten to do so), a ballistic missile as a means of delivery is not the most likely solution. There are possibilities at its disposal that are technically much more simple, such as cruise missiles, unmanned aircraft or, even more simple, sea containers. With these means of delivery the attacker can remain anonymous for longer and the risk of retaliation is minimised. A missile defence system does not provide a solution for such a threat.

In normal circumstances, a state of concern would be considered to be susceptible to the possibility of nuclear retaliation. The American analysis that states of concern are 'irrational' and insusceptible to (nuclear) deterrence, it is said, only holds true if the country or regime in question has nothing left to lose. From this point of view, missile defence is not only an American response to a threat analysis, but also an extra insurance for the US foreign policy of maintaining the freedom to act in regional matters.

With regard to politics, it must be said that insufficient light is often shed on the intentions of states of concern to develop ballistic missiles. For instance, ballistic missiles play an important role as symbols of status and modernity, a role as a means of enforcing arguments in negotiations, and are more often aimed regionally than at the West. At the same time, US military superiority results in smaller countries seeing ballistic missiles as deterrents against military intervention by the US and its allies.

On the technical side, experts point out that it is not possible to develop a long-range potential on the basis of the existing arsenal based on Scud technology. Furthermore, there is no pattern to suggest that the countries which possess such crucial long-range technology (P-5) would be willing to share it with states of concern.

Although it is impossible for the AIV, and not only for the AIV, to give a conclusive assessment of the development of missile proliferation in the future, the above-mentioned considerations do lead to the conclusion that a missile defence system is not the top-priority measure. Missile Defence is a response to the many dangers that result from the vulnerability of the home territory. It is a technical response, part of a long tradition. In any case it is an American response to what in the American view is a growing problem. Whether or not it can stand the comparison with other threats in a cost-benefit analysis, remains to be seen.

III Missile defence and the Allies

This chapter looks at the issue of missile defence in the context of the development of Allied Atlantic relations. The missile defence issue touches the wider debate on the future and role of NATO, also in the light of the new NATO-Russian relationship. This is one of the challenges facing NATO in the coming years, particularly because the assessments of the nature and extent of the threat appear to differ.

If in the eyes of the Allies NATO is still the forum in which to discuss Allied security problems, it will be necessary to discuss the threat and the possible solution (missile defence) within NATO. An analysis of the threat posed by ballistic missiles must also be carried out for the European NATO territory.

III.1 A threat analysis for the entire Alliance

The US government holds strong views on the significance of the development of the threat and what conclusion should be drawn from it. For a long time, the views of the European member states of the Alliance were more divergent. European countries assess the threat to their territory as a result of the development of missile programmes differently.

Chapter II observed that parts of European NATO territory lie within range of missiles from states of concern, whereas the US does not. The logical conclusion is that a threat to Europe is more likely to manifest itself than a threat to the US. In Europe, however, this has not led to the same responses and policy plans as in the US. So far, European NATO Allies have not considered the necessity for a European missile defence system to be urgent (or do not want to see it as such). Chapter II adds a number of nuances to the American assessment of the threat.

Although the US described missile defence as being 'for allies and friends', it long remained unclear as to how such an inclusion could take shape, and whether or not European Allies wanted to be included. The US did not press for discussion of the threat or for possible NATO measures (and neither did the European Allies). The US appeared not to be too concerned about the European situation and the ensuing possibility of a threat against European Allies being used to blackmail the US. So far, no Allied analysis of the threat to the entire NATO territory has been made within NATO.

Missile proliferation, however, can have important consequences for Allied security. For instance, the question arises as to whether European NATO partners would be willing to take part in NATO 'out of area' operations or US-led 'coalitions of the willing' if their cities lie within range of ballistic missiles whilst the US remains out of range or protected. The interdependence in these Allied scenarios is not compatible with lack of agreement among the Allies with regard to the threat or approach on such a basis. Another question is that of the possibility of blackmail. At first glance, it would appear unlikely that Europe, which is hardly capable of threatening the existence of states of concern single-handedly, would be threatened directly by those countries. The solidarity between the US and Europe, however, does not rule out the possibility. Europe is just as likely to be a target as the US, especially if European Allies are involved in military opera-

tions.[40] If the US wishes NATO to operate globally, for instance in the fight against terrorism, this possibility of blackmail should be a cause of great concern to the US.[41]

In this light it is of great importance that both the analysis of the threat and the issue of missile defence are discussed in the appropriate place, i.e. within NATO. This is necessary, at least if the Allies, and particularly the US, agree that NATO is still a an essential platform on which to tackle problems regarding security in Europe and the US. If this is indeed true, a combined Allied analysis of the threat with regard to ballistic missiles must be carried out that includes the European part of NATO territory. Such an analysis must also include the consequences this threat may have for cohesion within NATO. It must then consider a practical approach to the problems indicated. This includes the US being prepared to consult NATO seriously on its plans for missile defence.

As regards the threat from states of concern, in the opinion of the AIV, an interpretation needs to be given to the transatlantic security relationship, mentioned in Article 4 of the NATO Treaty: *'The Parties will consult together whenever, in the opinion of any of them, the territorial integrity, political independence or security of any of the Parties is threatened.'*[42] No matter which spokesperson is talking, in words, both sides of the Alliance recognise emphatically the interdependence with regard to security, and both emphasise that it is advisable to maintain this situation.

Missile defence has been back on the NATO agenda since June 2002, when US Defence Secretary Rumsfeld presented a proposal on the subject to NATO Allies: as part of renewed efforts to update NATO's military capability, NATO Allies should study the possibilities for a 'missile defence system to protect NATO territory and population centres against any possible missile threats'. In their joint statement of 6 June 2002, the NATO ministers agreed that the Alliance must indeed 'examine options for addressing this increasing threat in an effective and efficient way through an appropriate mix of political and defence efforts'. The statement says that efforts in this regard should be 'consistent with the indivisibility of Allied security'.[43] In July 2002, a US delegation visited European capitals and NATO headquarters to discuss the possibility of cooperation with regard to missile defence. They submitted proposals for missile defence cooperation to NATO Allies, suggesting participation at various levels in accordance with the 'JSF model'.

40 Valasek, T. (2001), Europe's Missile Defence Options, in: *Defence Monitor*, 2001 issue 3 (www.cdi.org/dm/2001/issue3/emd.html).

41 In the various statements by the NATO Foreign and Defence Ministers of 28 May and 6 June 2002 it is stated explicitly that NATO must be able to operate far beyond its own borders in the future (source: www.nato.int).

42 At the Washington Summit (23 and 24 April 1999), when NATO's Strategic Concept was updated for the second time since the end of the Cold War, Article 4 was again underlined: *'to serve, as provided for in article 4, as a transatlantic forum for Allied consultations on any issues that affect their vital interests, including possible developments posing risks for members' security'*. The importance of Article 4 is also emphasised in the new Strategic Concept with regard to new threats and possible responses.

43 Statement on capabilities by the NATO Ministers of Defence, 6 June 2002 (www.nato.int).

The AIV would like to emphasise that setting up such forms of cooperation for the development of missile defence must be preceded by an Allied threat analysis which as yet has not been undertaken.
The AIV would prefer such discussions to include Russia, in the new NATO-Russia Council. Not only because the main subject of the new cooperation with Russia concerns proliferation, but particularly because, owing to their geographic proximity, Europe and Russia are faced with similar problems. This presents opportunities for cooperation between NATO and Russia that can be elaborated.

This means that new life can be breathed into earlier Russian proposals. In 2000 Russia proposed a combined threat analysis with NATO, followed by a review of how and with what defensive weapons it could be responded to. Finally there would then be a combined decision on what systems to procure. At the time these proposals were not treated particularly seriously. They were seen as a possibly divisive element within NATO and as a vehicle for Russian technology. TMD was, however, considered to be an issue for the new NATO-Russia Council. In the declaration of 28 May 2002 on the occasion of the establishment of the NATO-Russia Council, the subject of TMD was mentioned as one of the issues to be discussed. This could be a first step towards wider consultations, such as Russia once wanted and the AIV advocates.

Such consultations could run parallel to the research programmes that have been started in the US and could benefit from the results of the research. Actual decisions with regard to the necessity and possible procurement of elements for a missile defence system are not to be expected earlier than the medium to long term, by which time, for instance, there should be better insight into the technological possibilities.

Should NATO decide that Europe at some time will also require a form of territorial missile defence, there are various options – assuming the technology would be available and ready. Apart from deploying American systems, European countries could develop a system of their own. A recent French study calculated the costs of an independent and limited missile defence architecture for Europe. Such a system, based on the Aster missile and providing protection for 20 European countries against medium-range missiles, would cost 11.7 billion euros, according to the study.[44] This calculation does not take into account the fact that Europe as yet does not have its own satellite capability, although the recent decision-making regarding Galileo is a start, albeit for civilian purposes. Europe could also become part of an American system, by taking part (financially) in an American system or the development thereof, or by allowing interceptor missiles to be stationed on European territory. Europe could also accept the Russian suggestion of cooperation with Russia, possibly in a NATO context, albeit that cooperation with Russia has so far mainly focused on TMD.
In all of these scenarios we must bear in mind the fact that none of these technologies has as yet progressed beyond the drawing board.

44 The report referred to also stated that conceptual objections with regard to missile defence (such as the frequently heard argument that 'deterrence does not tolerate the introduction of defence'), are more or less misused to obscure objections of a financial nature. The report recommends overtly recognising the fact that Europe does not (yet) want to discuss missile defence for financial reasons, and not hiding behind other arguments. *La France et les bombes. Le défis de la prolifération des armes de destruction.* Documents d'Information de l'Assemblée Générale No. 2788, Paris 2000.

As always, there is the financial aspect, which can be decisive. Should NATO conclude that a form of missile defence is required for the entire NATO territory, on the assumption that the technology for such a system is or can indeed become available, there would be far-reaching financial consequences. Financial resources are scarce. A future decision on the procurement of a missile defence system would have to compete financially with other measures to strengthen NATO. After all, there are many other requirements that for years now have had to be met by the diminishing defence budgets of the European Allies. During combined operations in the past years, many shortcomings have come to light with regard to conventional capabilities. This concerns, for instance, strategic transport capability, special forces, precision ammunition and intelligence. In 1999 the NATO Council approved the Defence Capabilities Initiative (DCI) under which action on some 50 urgent issues was to bring the European conventional capability back up to an acceptable level. TMD was one of them, but was not given high priority. Progress with regard to the implementation of the DCI has been only very gradual, which is why a US senator recently referred to the European Allies as military pygmies.

Since the attacks of 11 September, the efforts to better equip the European NATO Allies for the new strategic situation have become more urgent. On 6 June 2002, during a meeting of NATO defence ministers, the need was established to have larger numbers of troops and supporting assets available for operations outside NATO territory. This has given renewed impetus to the DCI. The upcoming NATO summit in Prague (November 2002) is to shorten the original long list of priorities of the DCI and focus on those issues that are most essential for future wars. Measures with regard to attacks involving weapons of mass destruction are also part of the new initiative. After the conclusion of the TMD feasibility study, the Allies must consider in what way TMD-capabilities can be expanded further, in view of the fact that a growing threat could be posed to Allied territory and population centres by missile proliferation.[45]
Bringing the conventional capabilities up to par will thus require a considerable financial effort from Allies in the short and medium term. That much is indeed explicitly recognised in the statement of 6 June 2002. This is in addition to the commitment regarding the European Security and Defence Policy (ESDP), in which the decision was made to establish a European intervention force of 60,000 personnel.[46]

In the short to medium term, therefore, the European Allies' priorities lie with strengthening the military capabilities in the areas mentioned above and adjusting operational concepts. Missile defence must not form an obstacle for these existing European efforts to increase conventional capabilities in the DCI and ESDP context. There will be little financial scope for TMD, not to mention MD, in the short to medium term. However, as has been said, NATO consultations regarding the missile threat to NATO territory must begin soon. The financial consequences should not be felt until the longer term.[47]

45 Source: Statement on capabilities issued at the meeting of the North Atlantic Council in Defence Ministers Session, 6 June 2002 (www.nato.int).

46 Incidentally, TMD is also on the list of priorities of the Helsinki goals. The Netherlands has a leading role in developing this issue. The AIV has observed, however, that the EU does not appear to give very high priority to TMD. This partly has to do with the ongoing debate on the scope of the Petersberg tasks.

47 It is possible that in the near future the European industrial complex will exert increasing pressure on European governments to invest in missile defense. On 24 July 2002 the American concern Boeing and the European EADS announced their future cooperation in the sphere of missile defense. ▸ cont. on p. 30

In a more general sense, NATO Allies must realise, as argued in Chapter II, that missile defence may be more than just an American response to a perceived threat. The US policy regarding missile defence is often seen as extra insurance against the risks of future military operations. European countries are not so inclined to see the necessity and expediency, because they do not always see the same strategic interests as the US. The US has military commitments all over the world, for instance in the form of security guarantees, whereas the European countries do not. In any case the emphasis is different when it comes to deploying military assets. This striking difference in strategic environment can contribute to the difference in the European and American assessments of the threat and of the necessity for defence.

The issue of missile defence thus brings a number of underlying problems to the surface that plague the transatlantic Alliance at present. Firstly, with regard to missile defence, NATO has as yet not functioned as the platform for dealing effectively with the practical security problems of Europe and the US. Secondly, a gap is growing between the US and Europe owing to the lead the US has in technology. Finally, Europe and the US do not always have the same views as to how to deal with the urgent problems of the world.[48] So long as there is not even a hint of a common solution to these underlying problems, it would seem difficult to develop a coherent Allied policy with regard to missile defence.

III.2 MD activities in the NATO context: as yet limited to TMD

Whereas the Allied debate on territorial missile defence is still in the initial stages, there is already a considerable amount of activity with regard to theatre missile defence (TMD). In the American plans, existing TMD systems are part of the 'layered' system of missile defence.

NATO has been seen to be concerned since the early 1990s about the threat posed by weapons of mass destruction and their means of delivery. For this purpose, two new NATO discussion forums were set up in 1994. The discussions in these forums led to NATO's formulating specific force goals for the development of theatre missile defence. Since 1998, NATO has been considering in what way TMD can be included as part of the NATO air defence command and control system. As part of the Defence Capabilities Initiative (1999), NATO decided in January 2000 to have a TMD feasibility study carried out. This study, being conducted by two consortiums since 1 July 2001, is funded from common NATO resources and includes the technical feasibility, costs and timescale for a possible NATO-wide TMD system to protect 'troops deployed on NATO

▸ cont. from page 29

47 In the words of the two companies' CEOs, the cooperation 'will show unity of purpose and appreciation of a common global threat (…) adding a new dimension to transatlantic cooperation'. The memorandum of understanding signed by the two parties on that occasion provides a framework for the relationship between the two companies in the area of global missile defence to protect the US and its allies (www.eads.nl).

48 Ham, P. van (April 2002), *Europa en de Pax Americana – het transatlantisch bondgenootschap in de schaduw van morgen* [Europe and the Pax Americana - the transatlantic alliance in the shadow of tomorrow], The Hague: Netherlands Institute of International Relations Clingendael.

missions'.[49] The results of this study are expected at the end of 2002. The study is of a technical nature and serves as groundwork for later political decision-making. The study will consider all possible available TMD options, be they ground-based, based at sea or airborne. After the study is concluded, NATO will have to make a political decision regarding procurement of NATO TMD systems.

The NATO activities with regard to missile defence (including the above-mentioned study) focus on missile defence for advanced units as part of NATO's extended air defence and not on territorial missile defence for Europe. In the American plans, however, TMD systems are part of the intended 'layered missile defence' and it cannot be ruled out that the debate on NATO TMD could serve as a prelude to a wider debate, as the study focuses on 'layered TMD' - i.e. interception both in and beyond the atmosphere - possibly with wider territorial applications.

III.3 National activities / the Netherlands

A number of European Allies (the Netherlands, Germany, Italy and France) are already undertaking TMD (theatre missile defence) activities. These activities are also mainly still in the research phase. Germany and Italy are working with the US on the Medium Extended Air Defence System (MEADS), a ground-based system that can intercept short-range missiles. The US is covering 55% of the costs, Germany 28% and Italy 17%. Germany and the Netherlands have Patriot missiles and are working on modernising to PAC-III level. There is also intensive missile defence cooperation between the Netherlands and Germany on the one hand and the US on the other.
Until 1995, France was also active in MEADS, but withdrew due to what, in the French opinion, was too much American dominance in the project. France, Italy and the UK are working together on systems that are designed to defend against cruise missiles and aircraft, but which in a modernised version would be able to intercept short-range missiles. Whether or not such a modernisation process should take place is currently the subject of study. The UK Ministry of Defence is carrying out a study together with four British contractors that will make an assessment of the threat and look at a possible response.[50]

The various Allies' national activities have as yet not been incorporated in a common NATO TMD concept. Nor is it clear as to what extent the national activities will fit into a NATO concept. It is assumed that some of the components required for NATO TMD are already being prepared by individual member states and that these national components would be logically combined in a single NATO effort.[51]

Both the Royal Netherlands Air Force and the Royal Netherlands Navy are involved in TMD. The Royal Netherlands Air Force is in the procurement phase with regard to the PAC-III system; the Royal Netherlands Navy is in the study phase with regard to the possibility of equipping frigates with interceptor missiles.

49 This concerns two consortiums, led by Science Applications International Corporation (SAIC) and Lockheed Martin, respectively. The costs per study amount to 13.5 million US dollars.

50 Bromley, M. (May 2001), European Missile Defence: New Emphasis, New Roles, in: Basic Paper no. 36, ISSN 13530402.

51 Statement on feasibility studies on layered TMD; see www.nato.int.

The Netherlands decided in 1997 to upgrade the existing Patriot air defence system from PAC-II to PAC-III.[52] This also meant the implementation of one of NATO's force goals. This will give the Netherlands an interception capability in the lower tier of the atmosphere for ballistic missiles with a limited range in the final phase of their flight. In addition, PAC-III can also be used to carry out other air defence tasks, similar to those of PAC-II. Procurement of the PAC-III missiles is an expensive project. The project is currently in the procurement phase. The present situation would mean the planned purchase being more expensive than anticipated in the original project budget.[53]

In addition, the Royal Netherlands Navy (together with Germany) is in the process of researching the technical possibilities for equipping frigates with a TMD capability in the future. This study is being carried out together with the US and Germany. An initial feasibility study was concluded in November 2000. The study is now in the validation phase, which will run till May 2003. Then a decision will have to be made as to whether the findings of the study are to be put into practice. The study has been halted for some time, because the US suddenly put a stop to the development of the interceptor missile in December 2001 for budgetary reasons. At present, the US is searching for alternatives, in consultation with the Netherlands. At the time this report was laid down, the activities had not yet been resumed.

The following comment can be made on the Dutch activities.

As a result of the NATO discussions mentioned before, the national TMD activities are based on the expectation that troops deployed abroad must be protected against a threat from short- and medium-range missiles – although, as has been said, PAC-III can also be used to carry out other air defence tasks.[54] In view of the proliferation of

52 This concerns two sets of 64 interceptor missiles and 8 launchers. See statement of the requirement for Patriot missiles and launchers, letter to the Lower House of the States-General from the State Secretary for Defence, dated 3 September 1997, Parliamentary Document 25000 X no. 99.

53 It is unclear whether the original budget for the first procurement of 64 missiles (128 million euros) would be sufficient for the procurement of the first set of 64 missiles. At the present price of 4 million US dollars per missile this seems not to be the case. A considerable amount has already been spent (64 million euros) to upgrade radar and command vehicles.

54 In his letter to the Lower House of the States-General in 1997, in which the State Secretary for Defence provided information on the statement of the requirement for PAC-III, it is stated that (…) *the growing threat as a consequence of the proliferation of TBMs (…) and possible defence against them have been discussed within NATO over the past year (in the Senior Defence Group on Proliferation). This led to a series of recommendations on the improvement of the Allied defence against these weapons with regard to intelligence, command and control, interception, neutralisation and limitation of the effects of an attack. In most cases existing policy and capabilities can be used as the foundation. The Netherlands wishes to provide a representative contribution that can also be sustained in the long run. Therefore we will aim to expand the deployment possibilities of existing systems.(…) NATO research into the effectiveness of a surface-to-air defence system against ballistic missiles shows that a combination of ground-based systems and systems based at sea produces the best results. (…) The Royal Netherlands Navy is researching the possibilities with regard to the air defence systems of the air defence frigates. For the Patriot system, which is already in use with the Royal Netherlands Army, the US has developed the PAC-III upgrade programme for this purpose.*
Source: Statement of the requirement for Patriot missiles and launchers, 3 September 1997.

these missiles (see Chapter II), this is only the case in a limited number of areas. Expectations are that this will only pose a threat in the case of operations in the 'higher spectrum of force', particularly if this occurs, for instance, without the consent of the countries in question, as was the case in Afghanistan and Iraq. It is the type of peace-enforcing operations that involves great risks and cannot always count on the participation of Dutch troops. *This raises the question of to what extent it is logical and consistent that the Netherlands, as one of a few NATO Allies, has decided to specialise in a defence capability that is mainly relevant to such expeditionary scenarios, and to consider procuring not only the ground-based version, but also the version based at sea. Further consideration of the major investments required for the procurement of both systems is advisable, as part of an overall reassessment of the entire spectrum of priorities within NATO and the CFDP.*

As the full justification for the capabilities such as PAC-III is found in Allied scenarios, it is necessary for the national activities to be given a common Allied concept as soon as possible. It is therefore commendable that NATO is working on such a concept, albeit in a limited form.

Whether the systems the Netherlands intends to procure (PAC-III) and is researching (Royal Netherlands Navy) can also play a part in a form of territorial defence of Europe in the future is debatable. Technology being as it is at present, they have a considerable number of limitations in this respect. The area that can be defended by the system is small. The PAC-III system was designed to intercept short-range missiles, and the possibilities regarding interception of longer-range missiles are not entirely clear. In general, lower-tier systems such as PAC-III have their limitations if they were to be deployed for territorial defence in a broad, layered system. This is entirely in line with national policy, according to which it is important that in the first instance the measures focus on the protection of units deployed abroad.[55] According to experts, other interception systems (which are active in the upper tier of the atmosphere) could possibly be part of a territorial defence system.

III.4 Summary

The US is the only NATO Ally that has a strong view on the threat from (ballistic) missiles and the consequences thereof. Within NATO there is as yet no common analysis of the threat for the entire NATO territory. In particular, there is no threat analysis for the European territory.

A threat to Europe or the US from missiles can have implications for the entire NATO territory and, in the long run, far-reaching consequences for NATO's cohesion. If NATO Allies actually see NATO as the exclusive forum for issues that concern common transatlantic security, a common threat analysis, in which Russia must also participate, must be carried out for the entire territory. NATO Allies must recognise the consequences of such an analysis. The US must be prepared to discuss missile defence and the threat analysis within NATO, and the Allies must be prepared to make a serious contribution in this respect.

The AIV is of the opinion that a follow-up to the current limited NATO TMD studies is necessary in the form of a study in a wider context. NATO at present is not focusing on

55 Source: Statement of the requirement for Patriot missiles and launchers, 3 September 1997.

the question of whether territorial defence is necessary; the NATO TMD study that is to be completed in 2002 is limited to TMD, focusing on the protection of units deployed abroad. In a necessary follow-up study, an answer must also be found to the more technical question of whether - and if so which - TMD systems, for instance present in the Netherlands, could play a part in a possible future layered system.

The Dutch TMD efforts have not as yet been incorporated in a NATO or European defence concept. The Netherlands' national TMD activities must be incorporated in an Allied concept.

The major investments necessary for the Netherlands to be able to procure both systems require further consideration, as part of a more overall (NATO) common effort in the area of missile defence, and more generally as part of the entire spectrum of priorities within NATO and the CFDP.

The issue of missile defence brings a number of underlying problems to the surface that plague the transatlantic Alliance at present. Firstly, with regard to missile defence, NATO has as yet not functioned as the platform for dealing effectively with the practical security problems of Europe and the US. Secondly, a gap is growing between the US and Europe owing to the lead the US has in technology. Finally, Europe and the US do not always have the same views as to how to deal with the urgent problems of the world. So long as there is not even a hint of a common solution to these underlying problems, it would seem difficult to develop a coherent Allied policy with regard to missile defence.

IV Missile defence from a multilateral point of view: strategic relations and arms control

This chapter looks at the consequences missile defence may have for global strategic stability. This primarily concerns the relationship between the US and Russia, but the relationship between the US and China is equally important. What does the termination of the ABM Treaty mean in this respect? Is the agreement of 24 May 2002 between the US and Russia a sufficient replacement as a new strategic framework? What future is there for multilateral arms control and are there shortcomings that need to be addressed?

IV.1 A new relationship between the US and Russia without the ABM Treaty?

> *'The United States and Russia are ridding themselves of the last vestiges of Cold War confrontation. We have moved beyond an ABM Treaty that prevented us from defending our people and our friends. Some warned that moving beyond the ABM Treaty would cause an arms race. Instead, President Putin and I are about to sign the most dramatic nuclear arms reduction in history. Old arms agreements sought to manage hostility and to maintain a balance of terror.'*
>
> *President Bush addressing the German Parliament, 23 May 2002*

On 13 December 2001 the US announced it would unilaterally withdraw from the ABM Treaty as of 13 June 2002.[56] Russia, which commended the treaty as being the 'cornerstone of strategic stability', called the American decision 'a great mistake', even at the time of the signing of the bilateral Moscow Treaty on 24 May 2002. European NATO Allies and China also set great store by the treaty from the point of view of strategic stability. After all, since 1972 it had provided a firm basis for the relationship between the US and the Soviet Union. This protest abated, however, after the measured Russian response to the American unilateral withdrawal.

What was the significance of the ABM Treaty and what does its termination mean? The ABM Treaty was an integral part of the relationship of deterrence between the two nuclear adversaries who, in order to ensure self-preservation, had no choice but to maintain the status quo. The reticence displayed by the two rivals since the Cuban missile crisis was to many the result of the stabilising effect of the strategic nuclear arsenals. With its prohibition of territorial defence, the ABM Treaty codified the fact that both rivals had the invulnerable capability to inflict unacceptable damage on the other.[57] This was

56 The ABM Treaty was signed on 26 May 1972 and entered into force on 3 October 1972.

57 Originally, the stationing of missile defence systems was permitted at two locations, but in 1974 this was limited to just one. The Soviet Union opted for the stationing of a system around Moscow and the US chose deployment at the ICBM storage facilities in Grand Forks, North Dakota. They were allowed to change their minds about these locations once.
The number of interceptor missiles and launchers was not allowed to exceed 100. Launchers that were able to fire more than one interceptor missile at once, or could be reloaded quickly, were prohibited. The same applied to interceptor missiles with more than one warhead. Limits were also set regarding the types of radar that were allowed to be used. In addition, Article IX stated that ABM systems were not allowed to be transferred to third-party countries.

known as Mutual Assured Destruction (MAD). Maintaining mutual striking power was considered to be of decisive significance for a stable relationship of deterrence during the Cold War.[58] The ABM Treaty avoided further complication of the sums by limiting them to a comparison of the size of the offensive nuclear arsenals.[59] In the interests of both parties the offensive arms race was limited and a defensive one was prevented.

The stabilising role of this 'relationship of deterrence' is now widely recognised. The nuclear powers were forced to display reticence in a development that had started with the Cuban missile crisis. There was, however, a feeling of unease about the lack of protection for the civilian population. Claims were soon heard in the US that the ABM Treaty was 'immoral'.[60] The Bush Jr administration expressly wanted to put an end to this 'Cold War logic' that had held both countries firmly in its grasp. Russia and the US were to switch to a relationship of cooperation, without the ABM Treaty, no longer based on mutual deterrence. The treaty had to be terminated in order to facilitate an amicable relationship with Russia. In its place, there is now a declaration which reflects the framework for cooperation between the US and Russia.

The AIV also agrees with the notion that the relationship between the US and Russia should gradually change from a relationship based on MAD to one based on new forms of cooperation. Not to agree with this notion would after all be surprising, ten years after the collapse of the Soviet Union. However, the unilateralism of the US in its withdrawal from the ABM Treaty remains regrettable. A transition towards a new relationship should take place with the approval of the former rival, preferably in the form of new or amended agreements.

58 Known as second-strike capability: the capability of a nuclear state to survive a nuclear attack and carry out a retaliatory attack that would inflict unacceptable damage on the enemy. Compare first-strike capability: the capability to carry out a disarming first attack on the enemy. Such an attack should be able to eliminate all strategic weapons (bombers operating from land, sea or the air) and thus deny the enemy a second-strike capability.

59 The ABM Treaty was part of the Strategic Arms Limitations Talks. The talks also had an offensive aspect; limits were set on numbers of launchers and means of delivery. In the five-year period between SALT I and SALT II, however, the number of nuclear warheads and the combined explosive force increased significantly: in the US from 6,300 to 9,000, in the USSR from 2,300 to 5,000. There were no reductions until the START treaties.

60 The explicit approval of missile defence against short and medium-range missiles that was included in an amendment in 1996 was, from such a viewpoint, obviously not enough. In 1992, after the collapse of the Soviet Union, a process of amendment was initiated for the ABM Treaty that ultimately was to explicitly allow TMD (defence against short to medium-range missiles). In 1992, Presidents Bush Sr and Jeltsin agreed in a joint statement that Russia and the US were to assess whether they could work together with regard to defence against a limited ballistic missile attack in a so-called Global Protection System. In 1996 and 1997, agreements were reached that made theatre missile defence, defence against missiles with a shorter range, possible. The boundary between what was allowed and what was not was set at defence against missiles with a range of 3,500 kilometres. During testing, interceptor missiles were not allowed to exceed 3 kilometres per second, and the target missile had to stay below 5 kilometres per second. In 1997 a system of notification was agreed. The ban on territorial defence, however, remained intact and this was always explicitly mentioned in all statements regarding TMD.

MAD is, however, an existing situation which cannot just be 'abolished' by withdrawing from the ABM Treaty, which is what American statements have suggested. The large numbers of nuclear weapons and their deterrent effects are still present. Neither Russia nor the US has ceased to strive for the maintenance of the second-strike capability.

Contrary to the American view, the AIV is of the opinion that the ABM Treaty - amended if necessary - did not have to stand in the way of forming a new relationship between the US and Russia at all. The treaty could even have continued to play a useful role in the new relationship, particularly with regard to reticence on the part of the nuclear powers. The withdrawal from the ABM Treaty is a symptom of a more general tendency in US policy, namely one of increasing unilateralism, decreased reticence in and greater focus on military solutions. There is a fear that this tendency could sow the seeds for a period of renewed rivalry between the two nuclear powers.

Ultimately, Russia's response to the unilateral US decision to withdraw from the ABM Treaty was extremely measured. The European concern that this would have a destabilising effect was, at least in the short term, unfounded. Russia will not engage in a new arms race in the short term, witness the reduction in the strategic arsenals agreed in the Moscow Treaty of 24 May 2002.[61] The reductions recently agreed upon leave the ratio between the US and Russia more or less intact.

Russia will not want to lose its striking power in relation to the US in the long term either and a missile defence system could jeopardise that striking power. If the US were to develop a missile defence system which, from the Russian point of view, detracted from the deterrence, it may feel compelled to take countermeasures, for instance by equipping missiles with different warheads (MIRV technology). In that respect, the Russian statement of 14 June 2002 is significant, in which it is said that Russia no longer considers itself bound by START II. This cancels out the limitations on MIRV technology, i.e. the equipping of missiles with more than one warhead each. It is an indication that Russia also wants to maintain considerable flexibility in keeping its striking power in relation to the US up to standard.

There is no MAD between the US on the one side and the other nuclear powers (including the new ones) on the other. The recently agreed reductions in Russian and US arsenals are of hardly any influence in that respect, if at all, because the difference in nuclear armament between the US and the Russian Federation and other 'small' nuclear powers remains an unbridgeable gap. The termination of the ABM Treaty and the possibility this provides for the US to develop missile defence is of immediate practical significance to the other nuclear powers, unlike the Russian Federation. The absence of missile defence made these powers' small numbers of nuclear weapons significant to the US and the Russian Federation.

In this respect, China is of particular importance. The limitations of the ABM Treaty made it possible for China to consider itself to have a second-strike capability with just

61 The unilateral reductions announced by both sides were laid down in a bilateral agreement on 24 May 2002.

a small number of intercontinental nuclear weapons.[62] On such a limited deterrence potential, any form of defence has a detracting effect (and therefore means a weakening of what is a significant means of influencing US involvement in Taiwan).[63] Apart from that, China feels vulnerable because its ICBMs use liquid fuel and are therefore relatively easy to detect. The US has never recognised China as a strategic discussion partner. It is therefore unclear how the relationship between the US and China will develop in this respect over the coming years.

IV.2 At what point do the Russian and Chinese deterrents come into play?

The extent to which missile defence could pose a threat to the strategic deterrents of Russia on the one hand and China on the other, depend on a number factors, such as the number of interceptor missiles and their effectiveness, and the area covered by the defence.

In this respect Russia has formulated requirements to be met by a missile defence system from the point of view of strategic stability. China as yet does not seem to have a clear view of the requirements it would have a missile defence system meet. Apart from the US plans for missile defence, China is in the process of modernising its nuclear arsenal, but it is likely that missile defence will be of some influence on the Chinese nuclear policy. The extent to which that will be the case will be determined by the extent of the coverage of an MD system.

The AIV is of the opinion that it is important to prevent China from entering into a race with the US, on the one hand because such a race is undesirable in itself, on the other hand because a Chinese 'arms race' with the United States could affect India and Pakistan (and Iran in the future), who could feel compelled to take countermeasures.

What influence missile defence would have cannot be said with certainty. We can certainly assume that Russia and China will both continue to try to maintain their second-strike capability in relation to the US. There are conceivable mathematical scenarios that show at what point the Russian and Chinese deterrents would come into play.[64]

62 The exact number of Chinese ICBMs is not given in open sources such as 'the Military Balance', although they are regularly estimated to number around 20.
See for instance Wilkening, D.A. (2000), Ballistic Missile Defence and Strategic Stability, in: *Adelphi Paper*, no. 334 (New York, Oxford University Press), and recently in an article in Jane's Defence Weekly. China is at present in the process of modernising its strategic arsenal and the future size of that arsenal is therefore unclear.

63 China's greatest concern is the stationing of TMD systems in countries nearby, such as Japan and of course Taiwan. Although it is called theatre defence, some of these systems could provide a national defence for these countries. Some systems could also eventually play a part in the interception of strategic missiles aimed at the US.

64 The various scenarios described by Dean Wilkening use numbers of strategic nuclear missiles varying between 1,150 and 1,800, with or without the use of MIRVs (intercontinental SS-27 missile with or without three MIRVs). In addition, the assumption is made that a degradation of the retaliation potential of more than 20% is unacceptable, that the interceptor missiles of the missile defence system are very effective (90%) and that the Russians require a minimum of 240 nuclear warheads for a retaliatory attack.

For Russia, this basically means that a US strategic missile defence system with no more than 100 interceptor missiles does not pose a realistic threat to Russian retaliation, so long as Russia has a minimum of 1,200 weapons. If the system were to be expanded to 200 interceptor missiles, Russia would have to increase its number of strategic missiles to 1,800 to retain a second-strike capability. With a system of 400 to 850 interceptor missiles, Russia loses its second-strike capability. Whatever the merit of these mathematical scenarios, no account has been taken of the fact that the Russian arsenals are in a poor state of repair. If this aspect of quality is included in the equation, the consequences for the Russian second-strike capability would be more severe and countermeasures would be necessary sooner in order to maintain the Russian retaliation capability. In addition, there is a tendency to 'over-insure' in order to maintain the strategic stability, which could lead to countermeasures sooner than is strictly necessary.

China is a different case. Chinese retaliation against the US – consisting of a small strategic arsenal – would already be jeopardised by a missile defence system of 20 interceptor missiles (which equals the initial development of the system as planned during the Clinton administration).[65]

Other forms of interception, such as interception of missiles in the first phase of flight from an aircraft equipped with a laser, pose no threat to the Russian second-strike capability and hardly any to that of the Chinese.[66] Their arsenals are stationed too far inland. Laser interceptors stationed in space (which were banned under the ABM Treaty) could pose a threat, however.

TMD systems that are active in the lower tier of the atmosphere, such as the Patriot PAC-III, are of no influence on the strategic armed forces of Russia and China as they are not effective against them. TMD systems that are active in the upper tier (outside the atmosphere), however, could be of influence, for instance if the interceptor missiles were able to make use of more advanced radar and satellite data than that which is generated by the system itself. Stationing these TMD systems with large numbers of interceptor missiles could cause deterioration of the Russian retaliation capability.[67] In China's case, a small number of interceptor missiles in such a TMD system would be enough to pose a threat.

65 It is assumed that China aims to expand as part of the modernisation programme. The future extent of the Chinese arsenal is unknown but it is estimated that between 2010 and 2015 China could possibly have 100 – 200 intercontinental missiles at its disposal, in which case 12 to 25 interceptor missiles would decrease the Chinese retaliation by as much as 20%. (source: D. Wilkening, *Ballistic missile defence and strategic stability*).

66 It would, however, affect Chinese tactical missiles, which in view of the Taiwanese situation would be a cause for concern to China.

67 With regard to Navy Theatre-Wide, according to Wilkening, the current NTW programme with 650 interceptor missiles could pose a threat to Russia (if Russia has less than 1,700 nuclear missiles). If both systems are deployed and a combined command and control system could provide their interceptors with information, a configuration of 400 THAAD interceptors and 300 NTW interceptors would be enough to pose a threat to Russia.

The US is keeping all its options open for a missile defence architecture. It is even unclear when, and even *whether*, there will be a missile defence system. The technology is still a long way from becoming available. The above-mentioned analyses are based on the assumption that there will be a system.

The above shows us that, if the US were to be entirely unwilling to subject its envisaged system to any limitations whatsoever, Russia and China would have to reconsider their second-strike capability in the medium term. Possible countermeasures could then be the expansion of the number of strategic bombers, more emphasis on mobile systems, increasing the number of nuclear submarines, the development of projectiles to mislead the interceptor missiles or the application of MIRV technology. START II banned such 'MIRVed' missiles, but never entered into force.[68] The Russian statement of 14 June 2002, in which the Russian Federation confirmed that it no longer considers itself bound by the stipulations of START II, is therefore significant in this respect.[69]

Whether missile defence will have an effect on the strategic arsenals of Russia and China, and if so, what that effect will be, depends on the architecture of the system and the numbers of interceptor missiles. All that can be said in this respect at present is that the US wishes to keep all its options open.
Limiting the number of interceptor missiles for both strategic missile defence and tactical upper-tier missile defence could be required in the future in order to prevent the Chinese and Russian retaliation capabilities from being jeopardised to the extent that the result will be a new arms race. It can reasonably be expected that Russia and China will wish to maintain their strategic potential in the medium term and that they will therefore take countermeasures to neutralise the effects of US missile defence.

IV.3 Arms control and non-proliferation

Despite international agreements, the proliferation of weapons of mass destruction and means of delivery continues, according to the US. This incapability to combat proliferation through international agreements underlies the American change of course, with less emphasis on non-proliferation and more on unilateral measures such as sanctions, pre-emption and the deployment of technically advanced weapon systems, as advocated in the NPR and the QDR. Progress in terms of arms control and multilateral disarmament has all but come to a standstill over the past years.[70]

68 Wilkening, D.A. (2000), Ballistic Missile Defence and Strategic Stability, in: Adelphi Paper, no. 334 (New York, Oxford University Press).

69 '(…) the Russian Federation notes the absence of any prerequisites for the entry into force of the START II Treaty, and does not consider itself bound any longer by the obligation under international law to refrain from any actions which could deprive this Treaty of its object and goal.' (Statement by Russia's Ministry of Foreign Affairs on the legal status of START II, 14 June 2002. See www.ln.mid.ru).

70 START II did not enter into force and negotiations on START III were slow to get started. The US Congress ratified the Chemical Weapons Convention in 1998, but very reluctantly, and in December 1998 it refused to ratify the Comprehensive Nuclear-Test-Ban Treaty. The US government did, however, maintain the moratorium on nuclear testing. The negotiations on the verification protocol for the Biological Weapons Convention, begun in 1995, were hardly progressing any longer by 1998 (and in the present form they were more or less written off after the US announced its withdrawal in Geneva).

The withdrawal from the ABM Treaty is in keeping with this change of course and many regard the agreement signed by the US and Russia on 24 May 2002, in which further reductions in the strategic arsenals were agreed, with some scepticism. Both sides will reduce their arsenals to 1,700 - 2,200 nuclear weapons by 2012 at the latest. Nothing has been agreed in terms of verification as yet, but the declaration does say that further agreements can be reached in the future and that the verification provisions in START I will serve as an example. There is no obligation to destroy the reduced nuclear warheads. The US has indicated that the removed warheads will be held in reserve as part of a 'responsive infrastructure' - stocks for repairs or replacements.
In addition, there are reports in the media about 'secret elements' of the recently published Nuclear Posture Review, according to which the US wishes to retain the possibility in the future of resuming underground nuclear testing sooner (which contravenes the moratorium that has been in force since 1992). It is also alleged that the development of nuclear weapons as battlefield weapons, the so-called 'bunker busters', is being considered. This would lower the nuclear threshold, which does not do any favours to the aim of non-proliferation of nuclear weapons.[71] Recently, statements have been reiterated which cast doubts on the status of the negative security guarantees – the notion that nuclear weapons will not be used against non-nuclear-weapon state-parties to the Non-Proliferation Treaty – in favour of 'strategic ambiguity' in this respect.[72]

IV.4 Disarmament and non-proliferation: the framework and its shortcomings

With regard to nuclear weapons, there is the 1968 Treaty on the Non-Proliferation of Nuclear Weapons (NPT) which imposes non-proliferation obligations on the five recognised nuclear weapon states and forbids non-nuclear weapon states to develop nuclear weapons programmes. This treaty was extended indefinitely in 1995. The NPT limits the number of 'haves' in the world of nuclear weapons to five *de iure.* On the other hand, there is the obligation to disarm, in Article VI. The status of the NPT is not undisputed; in the eyes of countries such as India, it is a *discriminatory* non-proliferation treaty. India refuses to be party to the treaty and also refuses to sign the Comprehensive Nuclear-Test-Ban Treaty (CTBT).
The Nuclear Suppliers Group (NSG) supports the objectives of the treaty by setting limits on the export of nuclear materials, equipment and technology. The Comprehensive Nuclear-Test-Ban Treaty, signed in 1996, prohibits test explosions (which are essential to the final phase of the development of a nuclear weapon). The IAEA and the CTBT organisation monitor compliance. India also refused to sign the CTBT and the US

71 At present, a Bill is in preparation, as part of the US Defence Appropriations Act, which bans the development of these small nuclear weapons for earth penetration missions and aims to withhold 812 million US dollars from the budget for missile defence, which amounts to 7.8 billion US dollars, for this reason.

72 On 22 February 2002, the spokesperson for the US State Department said in this respect: *'The United States reaffirms that it will not use nuclear weapons against non-nuclear-weapon state-parties to the Treaty on the Nonproliferation of Nuclear Weapons, except in the case of an invasion or any other attack on the United States, its territories, its armed forces or other troops, its allies, or on a state toward which it has a security commitment carried out, or sustained by such a non-nuclear weapon state in association or alliance with a nuclear weapon state. (…) Furthermore, the policy says that we will do whatever is necessary to deter the use of weapons of mass destruction against the United States, its allies, and its interests. If a weapon of mass destruction is used against the United States or its allies, we will not rule out any specific type of military response.'*
(www.armscontrol.org/factsheets/negsec.asp).

Congress voted against ratification of this treaty in 1999.

With regard to biological and chemical weapons, there is the Biological Weapons Convention (1972), which prohibits the development, production and possession of biological weapons.[73] As yet there are still no verification measures in place and negotiations in that respect have been halted for the time being by the US. The Chemical Weapons Convention, which prohibits the use, development, production and possession of chemical weapons, does include verification measures. The Australia Group has been monitoring exports of chemicals and equipment suitable for both military and civilian use since 1985.

With regard to means of delivery, there is the Missile Technology Control Regime (MTCR), which limits the export of missile technology. The MTCR, established by the G-7 in 1987, aims to combat the development and proliferation of missiles with a range of over 300 kilometres that can deliver weapons of mass destruction.[74] This concerns politically-binding agreements implemented by the 33 member states through their national export legislation. The practical execution of these agreements is the subject of regular discussions among the participating states.

Although there is criticism of the nuclear non-proliferation regime (the US says it works insufficiently; India says it is discriminatory), it must be said that the expectations expressed some 30 years ago – i.e. that by the year 2000 there would be around 35 nuclear weapon states – have not become a reality. At present, in 2002, there are less than 5 'threshold states' and it cannot be denied that the non-proliferation regime has seen successes. By setting limits on the export of and trade in technology and materials, proliferation has ceased or decelerated in some cases. The Non-Proliferation Treaty was extended indefinitely in 1995 and the number of non-NPT-members in the global community fell to four.[75] Ukraine, Belarus and Kazakhstan gave up their nuclear weapons status in 1991 and joined the NPT, as did Argentina, China, France and South Africa. Subsequently, agreement was reached on stronger verification protocols in the context of the IAEA and in 1997 the Comprehensive Nuclear-Test-Ban Treaty was submitted for signing.
In addition, as of 21 June 2002, 145 states are party to the Chemical Weapons Convention, which includes an extensive verification mechanism. The same number of states is party to the Biological Weapons Convention, but, as has been said, that convention as yet does not have any verification measures in place.

73 Contrary to the Chemical Weapons Convention, the Biological Weapons Convention does not explicitly prohibit the use of biological weapons. This is laid down in the Geneva Protocol (1925).

74 The guidelines prohibit the export of category-I technology, i.e. ballistic missile systems or cruise missiles with a range 300 kilometres or more, that can carry a payload of 500 kilogrammes or more. The export of space launch vehicles (SLVs) can be exempt if the end use can be guaranteed. This immediately poses a problem; every SLV has dual-use potential. The export of production capacities for the above-mentioned capabilities is prohibited in all cases. Membership of the MTCR for developing countries requires a further guarantee that the country will not develop a ballistic missile capability. The above-mentioned exception for space launch vehicles has been made for Brazil, which has a bilateral agreement with Russia on this matter.

75 Israel, Cuba, Pakistan and India have as yet not signed the NPT. Cuba is, however, bound to nuclear non-proliferation by the Tlatelolco Treaty.

The fact that the proliferation of weapons of mass destruction and means of delivery has not ceased entirely is reason enough for the US to declare the system 'bankrupt', particularly with regard to biological and chemical weapons, and to place its trust increasingly in unilateral measures such as incentives, sanctions and pre-emption. However, none of these measures has proved fully effective in the past either.[76]

In general it must be said that the non-proliferation regime has contributed to the fact that the 'problems' are concentrated in just five countries. It would therefore be going too far for the AIV to conclude that the non-proliferation regime has failed. The American aversion to treaties is a fact at present. There are, however, shortcomings to be identified in the current system of arms control and non-proliferation. These need to be dealt with in order to ensure the credibility and effectiveness of the system.

In the first place, codification and reality are no longer in keeping with one another. With regard to nuclear weapons, a comprehensive system was designed. However, as yet there is no place in it for de facto nuclear weapon states such as India, Pakistan and Israel. The NPT excludes these countries. *The AIV is of the opinion that 32 years after the entry into force of the NPT, the majority of the parties to the treaty cannot continue to deny this fact, without detracting from the credibility and effectiveness of the treaty.* Although the NSG has cautiously begun discussions on how non-NPT-members can be included in the NSG guidelines, the risk of 'recognising' their status remains a very sensitive stumbling block. Again, the codification is not in line with reality, which results in further proliferation risks. This is also the case with the MTCR, where there are indications that there are an increasing number of suppliers who operate outside of the MTCR (North Korea, Iran, India, Pakistan). This is detrimental to the effectiveness of the MTCR regime.

The second issue is the absence of accepted standards with regard to missiles. For chemical, biological and nuclear weapons there are treaties with prohibition stipulations (accepted standards) and export control regimes that guarantee compliance. With regard to means of delivery, however, there is only an export control regime, the MTCR, but no accepted standards. In its original structure, the MTCR was not meant to halt missile proliferation, but to slow it down until a more comprehensive regime was put in place.[77] Besides limits to the supply side, such a comprehensive regime would also contain a common universal standard, as well as measures to promote transparency and the exchange of information, in addition to confidence-building measures.[78] The MTCR tried to fill this gap by drawing up an International Code of Conduct (ICOC). The code of conduct, elaborated by the MTCR, provides a number of general rules, confidence-building measures and incentives to promote transparency with regard to missile programmes. The ultimate goal is to reach multilateral agreements that must be open to all countries, including those that are not party to the MTCR or the NPT. Each country that has endorsed the code of conduct must give a specification of its national

76 Rubin, U. (January 2002), *From incentives to pre-emption: adjusting options to deal with different states of concern,* presentation paper for the Wilton Park Conference, January 2002.

77 Tayler, T. (1996), The arms control process: the international context, in: *Arms Control towards the 21st century* - Larsen and Rattray (eds.), (London, Lynne Rienner).

78 Smith, M. (February 2001), The MTCR and the future of Ballistic Missile Non-proliferation, in: *Disarmament Diplomacy*, no. 54.

policy regarding ballistic missiles and space launches, including civilian ones. At present a start is being made on the promotion of this code of conduct outside the MTCR. States of concern should be involved as well. Their support will come at a price though, as they could have a negative influence on the final result at the negotiating table. It is unclear whether such a trade-off is feasible or desirable at present. The US in particular is unwilling to compromise where countries are concerned that it has recently labelled as the 'axis of evil'.

Other proposals besides the ICOC have also been put forward with regard to the control of ballistic missiles. One of these, the Global Control System (GCS), comes from the Russians. It aims to promote international transparency by means of a system of notification for missile launches, with verification by means of data exchange. The GCS proposal also includes incentives for countries that decide not to acquire ballistic missiles, such as access to satellite launch facilities. North Korea has apparently understood the opportunities involved in such a deal and announced to a European delegation in early 2002 that it was willing to abandon its missile programme if in turn the European Union would launch North Korean satellites. The Global Control System would also be intended to include countries such as Iran and North Korea. *The AIV expressly supports the aim for comprehensive regulations with regard to missiles and missile technology. The AIV sees the ICOC as a first step towards a treaty that will also introduce an international standard for missiles.*

Thirdly, control and verification are underdeveloped, particularly with regard to means of delivery. There is a certain amount of bilateral cooperation between the US and Russia in terms of 'early warning'. In 1998, they agreed to share data with regard to the launching of ballistic missiles in the 'Joint Command Centre' near Moscow. The objective is to prevent an unforeseen missile attack and to promote predictability and trust by exchanging data and work relations. This initiative is part of the Strategic Stability Cooperation Initiative of 1998. The Command Centre provides a more or less real-time exchange of information on Russian and US missile launches and space launches, using a network of radar, infrared systems and sensors in space. The project serves as a means of reducing the mutual threat. MTCR members such as the UK, France and Canada have spoken in favour of multilateralising these measures. In early 2001 the US Ambassador to the OSCE said that in time other countries will be invited to participate. *The AIV would urge that progress be made with such multilateralisation, as the information can be useful to the ICOC or its successor in terms of verification measures.*

In the fourth place there are technological developments that require the MTCR regulations to be adapted to the current developments, such as cruise missiles and UAVs. Chapter II addressed the fact that other forms of threat such as that of cruise missiles are underestimated and are given too little attention. We are at the beginning of a new development. The available technology is 'dual-use' and has only recently become available on the open market. This market is as yet insufficiently controlled. *Export control regimes such as MTCR should be expanded to remedy this shortcoming.*

79 On 7 and 8 February 2002 a meeting took place in Paris that was intended to serve as a first step in the process of universalisation of the code of conduct. Of the relevant states of concern, China, India, Pakistan, Iran, Israel, Egypt and Libya were present. North Korea and Syria did not attend. Iraq was not invited.

Even if reinforcing the arms control regime in accordance with the above-mentioned suggestions is successful, the regime will never be completely watertight. One of the particular problem areas is that of biological weapons. As has been said, there is no prospect even of an inspection and verification system for the prohibition of the possession and development of these weapons. Comprehensive verification of compliance with the prohibition on the possession of biological weapons, and chemical weapons as well, is particularly difficult because it usually involves goods and substances that are also used in countless civilian applications. The AIV has established that for international policy makers this insight has led to the question as to whether, and if so how, besides the necessary efforts to reinforce the arms control regime, the risks in this area can be limited by preventive policies. According to this line of reasoning, the political authority of the UN Security Council could be used, by confronting potential troublemakers in advance with the consequences of any aggressive intentions on their part by underlining what responses and punishment would result from their actions. With due regard for the right to self-defence expressed in Article 51 of the UN Charter, the Security Council could formally establish in advance that the Council would support the severest punishment if the occasion arises, or deal with it itself, inviting all UN member states to support this policy by putting their signatures to the text in question. *The AIV does not consider it appropriate in this early conceptual stage to produce its own draft for such a text (resolution or otherwise) now, but considers the notion of such a strong political signal from the nations to be of sufficient importance to recommend further elaboration in this respect.*

It will be clear that progress on the above-mentioned points requires leadership from the US and the other P-5 countries in particular. The Netherlands is already active with regard to the ICOC and this is supported by the AIV. On the same note, progress must be made with the expansion of the verification system, which can support the setting of standards by the ICOC. In the MTCR context, the Netherlands must continue to call for shortcomings in areas such as cruise missiles to be addressed. With regard to the NPT it is time that non-recognised nuclear weapon states such as India and Pakistan were involved more closely with the non-proliferation system. Attention should also be paid to the possibilities for deterring countries from the use of, for instance, biological weapons and if necessary punishing them.

IV.5 A strategic framework: from bilateral to multilateral agreements?

During the summit meeting between Presidents Bush and Putin in Moscow (23 - 26 May 2002) the new ‘strategic framework’ that had been mentioned over the previous months as the ‘replacement’ for the ABM Treaty began to take shape somewhat. In May 2002, two documents were signed, the Treaty on Strategic Offensive Reductions and the Joint Declaration on the New Strategic Relationship.

The treaty lays down the reductions previously announced unilaterally on either side. In addition to the treaty, a joint declaration was also issued on the new strategic relationship. It includes explicit recognition of the fact that the two countries are now partners and that they are no longer opponents. It advocates cooperation in, for instance, the areas of politics and economics. It also recognises that the mutual strategic relations have changed and that this should be reflected militarily.

Both the treaty and the declaration include reference to the joint statement by Bush and Putin on Upcoming Consultations on Strategic Issues of 22 July 2001 in Genoa. That statement speaks in general terms of ‘interrelated offensive and defensive sys-

tems' and the necessity to discuss this matter. The wish of the Russians, however, to set limits on missile defence in the treaty was not granted. With a view to the termination of the ABM Treaty, the Russian negotiators wanted to include a connection between offensive and defensive systems in the treaty. The declaration states in this respect that both countries will strive for transparency with regard to missile defence, for instance through the exchange of information. It also states the intention to jointly examine the possibilities for missile defence cooperation.[80] All other missile defence issues are referred to the new NATO-Russia Council by the declaration. In that Council, both countries will 'explore opportunities for intensified practical cooperation on missile defence for Europe', according to the declaration.[81]

The declaration can be seen as the beginning of a new strategic framework. The bilateral treaty regarding offensive reductions is part of that framework, as are the yet to be elaborated intentions with regard to missile defence in the new NATO-Russia Council. The declaration announces cooperation, mainly bilateral, but in the future possibly also multilateral (NATO).

The Netherlands and Europe do not have a seat at the negotiating table where the strategic framework between the Russian Federation and the United States is discussed and where it will be elaborated on in the future. Outside NATO there is no channel through which a Dutch or European view can be put forward to this bilateral discussion. Here it will suffice to establish that Europe is unable to actually influence matters of global importance. It would be going too far to suggest solutions in this advice for this - wider - problem, which is also connected to a lack of unity and effectiveness within the CFSP and a lack of European influence within NATO. The way in which the framework will be given further shape is, however, of influence in respect of global relations, and therefore on the Netherlands and Europe. It is therefore relevant to identify elements that could be included in the framework in the future.

The fact that Russia and the US have agreed in a declaration on a framework for their new relationship and the fact that the unilaterally announced reductions are now part of a legally binding treaty is positive. As has been said, this is a bilateral matter, but it is of global interest, also in view of obligations pursuant to Article 6 of the NPT. The US does, however, retain a considerable amount of flexibility because the treaty leaves open the option of keeping 'reduced' nuclear warheads in stock. The US wanted to keep this option open with the argument that the US lacks the capability to produce nuclear weapons quickly if the occasion should require it, whereas the Russian Federation apparently does have such a capability. *This built-in flexibility is in conflict with the principle of irreversibility of the reductions, which is so important to arms control.* Russia could also make use of this kind of flexibility in certain circumstances, for instance if strategic and economic circumstances change or in response to the introduction of a

80 *'possible areas for missile defence cooperation, including the expansion of joint exercises related to missile defence, and the exploration of potential programmes for the joint research and development of missile defence technologies, bearing in mind the importance of the mutual protection of classified information and the safeguarding of intellectual property rights'*. (Joint Declaration on the New Strategic Relationship)

81 *'The United States and Russia will, within the framework of the NATO-Russia Council, explore opportunities for intensified practical cooperation on missile defence for Europe'* (Joint Declaration on the New Strategic Relationship).

missile defence system that is considered to be too robust.

The absence of any regulations for verification is also a weak point in the treaty. The ongoing uncertainty as to the status of the tactical nuclear weapons, particularly on the Russian side, shows the shortcomings of a treaty without verification.[82] *The AIV therefore welcomes the reports that, following the bilateral agreement, there will be talks on possible verification procedures, using START I as an example.*

So far, the US has not been willing to meet the Russians' wish to limit missile defence. The US has always assured them that MD is 'not aimed against Russia' and the credibility of this assurance depends, as has been described above, on the number of interceptor missiles and the actual architecture of a missile defence system. Russia wants to set an upper limit on the number of interceptor missiles in the American system and wants to set limitations for interception from space. The termination of the ABM Treaty has removed existing international legal restrictions on interceptor missiles stationed in space that could be part of a missile defence system. A shield that, from space, could bring down missiles during the boost phase or the midcourse phase of flight could jeopardise the Russian deterrence, according to Russian analyses.[83] For many countries, including others besides Russia and China, a missile defence system that uses interceptor missiles stationed in space would be crossing a sensitive line. *With a view to stability in the long term, it is desirable for the US to show willingness to come to agreements on the architecture of their missile defence and therefore to subject it to limitations*. On the same note, it would promote stability further if in time the US could lend its cooperation to discussions on limiting the military use of space.

In May 2002, during the Conference on Disarmament, Russia and China put forward a new proposal for negotiations on limiting the military use of space. Previous efforts to negotiate had always been halted by an American refusal. The American refusal is seen to be linked to the policy reports published over the past years, such as 'Vision 2020' in which the aim for American supremacy in space is mentioned as one of the objectives.[84]

Besides the above-mentioned points, a bilateral strategic framework should be focused more on the transition from a hostile relationship to a new relationship based on cooperation.[85] Given the fact that large weapons arsenals and strategic parity will

82 In 1991 Presidents Gorbatchev and Bush made statements on the reduction of tactical nuclear weapons in Europe. A problem with this Presidential Nuclear Initiative was that no verification was agreed on and that there is still disagreement to date regarding the fulfilment of the obligations agreed at the time, particularly on the part of the Russians.

83 Comments made by Sergei Rogov (director USA and Canada Institute of the Russian Academy of Sciences) on the desirable direction of US-Russian nuclear relations and potential content of new arms control agreements, November 2000. See: Treyger, E. (November 2000), Nuclear Arms Reduction and Defence Reform in Russia (summary of Sergei Rogov's comments), in: *Carnegie Endowment for International Peace Issue Brief Vol. 2 No. 12* (www.ransac.org/new-web-site/pub/nuclearnews/12.04.00.html#3).

84 America's Air Force Vision 2020 (www.af.mil/vision).

85 Daalder, I. and Lindsay, J. (January 2002), A new agenda for nuclear weapons, in: *Brookings Institution Working Paper.*

continue to play a role, the inclusion of elements such as targeting and alert stages would be a welcome addition.[86]

It would also be beneficial to stability if the informal agreements on the Russian arsenal of tactical nuclear weapons (TNWs), dating from the time of the Bush Sr administration, were to be updated and formalised. Although the Presidential Nuclear Initiatives of 1991 and 1992 resulted in extensive reductions, thousands of TNWs are still in place, mainly in the Russian arsenal. TNWs are relatively small, easy to transport and the risk of theft, and therefore the risk of terrorist use, is greater.[87]

In the light of the recent rapprochement between the US/NATO and Russia, it is not illogical to reassess the role of these weapons arsenals. The joint declaration by Russia and the US of 28 May 2002, however, does not mention the tactical nuclear weapons and the NATO statement of 6 June 2002 says that NATO's tactical weapons, which have been reduced by 85% since 1991, are now at the required minimum level. The nuclear weapons stationed in Europe retain their value as an important political and military link between Europe and North America, according to the statement. NATO has reduced its numbers of tactical nuclear weapons to the minimum. Given the poor state of the Russian conventional armed forces, it is not very likely that Russia would be willing at present to further reduce its tactical nuclear weapons. The chances of reduction are therefore not very great at the moment, but it is in the interests of Europe that the issue remain on the agenda; this can be called for in the NATO-Russia Council.
The existing cooperative threat reduction (CTR) is a positive example in this respect. CTR was paid a great deal of attention immediately after the Cold War and has made great progress in the past ten years.[88] The transition to a relationship based on cooperation has in fact been taking shape for years in the form of CTR programmes. According to the joint declaration, the individual programmes will be continued. This is important for the security of the weapons arsenals. Non-proliferation is also addressed in the declaration. Russia suggested several times during the negotiations that it could capitalise on the termination of Article IX of the Treaty by exporting missile technology for long-range missiles. It is therefore significant that non-proliferation has been included in the declaration, and the issue should be elaborated on.[89] In that respect the recent statement by the leaders of the G-8 countries (July 2002) is also of importance, in which an initiative has been taken against the proliferation of weapons of mass destruction, particularly from Russia.[90]

86 Krepon, M. (2001), Moving away from MAD, in: *Survival*, summer 2001, pp. 81-95.

87 Millar, A. and Alexander, B. (November 2001), Uncovered Nukes – arms control and the challenge of tactical nuclear weapons, in: *Policy Brief Series* (www.fourthfreedomforum.org).

88 CTR programmes have resulted in the deactivation of 5,014 nuclear warheads, the destruction of 407 ICBMs and 366 ICBM silos, 68 strategic bombers, 256 launchers on sea-going vessels, 17 submarines with ballistic missiles, 204 long-range cruise missiles and the sealing of 194 underground test sites in the former Soviet Union. Source: Krepon, *Moving away from MAD*.

89 As an MTCR member, Russia is also bound by the limiting directives of the MTCR.

90 The statement of 2 July on the 'G-8 Global partnership against the spread of weapons and materials of mass destruction' says in this respect: *'we will support specific cooperation projects,* ▸ cont. on p. 49

The strategic reality has, however, become increasingly multipolar. China will therefore at some point have to be included in the strategic framework. The US is as yet paying too little attention to the Chinese factor. The situation must be avoided in which China would feel compelled to modernise its nuclear capability to the extent that it would start a chain reaction, with India and then Pakistan following suit (and later perhaps Iran).

It is therefore important that the other nuclear weapon states are also given a role in a strategic framework, as is the case in the non-proliferation mechanism described earlier. Timely multilateralisation could help prevent a new arms race.
In the long run, a strategic framework cannot be limited to the relationship between the US and Russia. The multilateral nuclear balance must also be given shape at some point, although it is much more complicated than the bilateral one.

In the summer of 2001, President Putin already put forward a proposal in this regard. It entailed setting an upper limit of 4,000 strategic nuclear weapons for the five recognised nuclear weapon states together. The US and Russia together would have 3,000; the other three states would have the remaining 1,000. China indicated that it would study the proposal, the US was dismissive in the first instance. It is, however, important that the overall strategic balance be put on the agenda. Such an initiative could revive the non-proliferation regime and arms control mechanisms.

IV.6 Summary

The termination of the ABM Treaty does not mean that MAD has ceased to exist between the US and Russia.

Strategic parity will continue to be the actual basis for the relationship between the two former rivals for years to come, even if it is encompassed in an amicable relationship. The termination of the ABM Treaty detracts nothing from this, regardless of the American rhetoric.
Russia disapproves of the American decision to withdraw from the ABM Treaty, but will not resort to countermeasures, at least not in the short term. In the longer term, however, if it were to become clearer what form missile defence will take, the possibility cannot be ruled out that this would have a destabilising effect.
In this respect, China, whose strategic position could be jeopardised by even the smallest of missile defence systems, is also of particular importance. This could lead to the Chinese taking countermeasures and ending up in a 'catch-up race' with the US. This in turn could have consequences for India and Pakistan.
It is therefore of the utmost importance that in time the US show itself to be willing to subject its missile defence system to limitations. If it does not, the remedy could turn out to be worse than the disease in the long run, owing to its possible destabilising effects.

▸ cont. from p. 48

90 *initially in Russia, to address non-proliferation, disarmament, counter-terrorism, and nuclear safety issues. Among our priority concerns are the destruction of chemical weapons, the dismantlement of decommissioned nuclear submarines, the disposition of fissile materials and the employment of former weapons scientists. We will commit to raise up to $ 20 million to support such projects over the next ten years* (…). See www.ln.mid.ru for this statement.

It cannot be denied that the system of international measures to combat proliferation has had some success. By setting limitations for the export of and trade in technology and materials, they have in some cases halted or decelerated proliferation. The problem countries have remained few in number.

The aim must be focused on ensuring that the existing system of arms control and disarmament does not deteriorate, but is reinforced.

In this respect the AIV supports the Dutch efforts with regard to, among others, the ICOC. It is also important that loopholes be closed, as is the case for cruise missiles, and that progress be made with regard to early-warning information on missile launches.
The credibility of the system would in time benefit from the recognition of the fact that there are countries that have independent capabilities, but remain outside the official system. For the sake of combating proliferation, India and Pakistan must be involved more closely with the system, however sensitive the issue may be.

At the same time account must be taken of the fact that it has not been possible to prevent proliferation completely. Particularly with regard to biological and chemical weapons, the possibilities for prevention and verification are insufficient. The notion of having the UN send out a strong political signal, at the initiative of the Security Council, that in advance confronts possible troublemakers with the certain prospect of the severest punishment merits further attention and elaboration.

The bilateral Russian-American agreement on strategic reductions and the joint declaration are a step in the right direction towards a new strategic framework to replace the ABM Treaty, but are by no means the final point. The treaty should be elaborated with verification measures, and in time the US should also be willing to subject its missile defence to limitations.

The reduction in Russian tactical nuclear weapons should in time also be put back on the agenda, even though the chances are not considered to be great at present that rapid progress will be made in this area.

In time, other countries should also be involved in the framework, otherwise the reticence shown since the Cuban missile crisis will be in danger of coming to an end. To prevent destabilising effects as much as possible, this should include the US lending its cooperation to an agreement on limiting the military use of space.

V Conclusions and recommendations

Shortly after the terrorist attacks in New York and Washington on September 11, the government asked the AIV in its letter of 8 October 2001 for an analysis of the consequences for the European Allies and the Netherlands of ongoing proliferation of weapons of mass destruction, various aspects of the US Missile Defence plans and the new 'strategic framework'. Since then, there have been a considerable number of developments, in particular the war against terrorism in Afghanistan, the US withdrawal from the ABM Treaty and the publication in the United States of policy documents such as the Quadrennial Defence Review and the Nuclear Posture Review. Also of great importance are the agreement between the US and the Russian Federation on nuclear reductions and the signing of a declaration on the new cooperation between Russia and the US, as well as the establishment of a NATO-Russia Council, all of which took place in May 2002, and the withdrawal from START II by Russia in June 2002. In July 2002 the US approached NATO Allies with specific proposals for cooperation between the US and individual Allies with regard to missile defence. These recent developments have of course been taken into account as much as possible in this advice.

The issues put to the AIV by the government concern the assessment of the threat from ballistic missiles and the strategic consequences thereof for the security interests of Europe and NATO. Should this be seen as a pretext to strive for a complete strategic review of the Allied security policy following the American example? To what extent does the threat to Europe differ from the threat to the US? Is there reason to consider additional measures to protect the European territory from ballistic missiles and should such measures be sought in the context of missile defence? The request for advice also asks about the shortcomings in the present system of arms control and non-proliferation. Is there reason to seek a new course of action? And what requirements would the new strategic framework, to be agreed upon by Russia and the United States, need to meet, in particular from the European point of view?

V.1 Ballistic Missile Defence (BMD)

When he took office, President Bush Jr presented missile defence as one of the spearheads of his policy and gave plenty of financial and political leeway to the research and testing programme. The budget for missile defence was increased considerably in 2002 and the withdrawal from the ABM Treaty (December 2001) cleared the last legal stumbling blocks. After the attacks of 11 September, hardly any resistance was encountered in domestic politics on this matter. Bush decided to let go of the limited focus of the 'Clinton system' and have research done into a multitude of possible systems. A decision on the actual architecture of a missile defence system has expressly not been taken yet. All options remain open.

Bush made missile defence part of a wide transformation of security policy in the light of the changed post-Cold-War strategic circumstances, which mainly featured uncertainty. It is unclear who and where the enemy is and in what way that enemy can pose a threat. The new security policy as put forward in the Quadrennial Defence Review (October 2001) and the Nuclear Posture Review (January 2002) therefore places great emphasis on the necessity for flexibility in the Defence organisation; missile defence is one of the components. The growing interest in this respect for ballistic missiles and weapons of mass destruction in US politics is based on the strategic changes of the

post-Cold-War era. Particularly after the Gulf War in 1991 the question was raised in the US as to whether a regional opponent armed with nuclear weapons would be able to deter the US from military intervention in a regional conflict. In any case, an opponent armed in this way would be able to complicate a US intervention considerably.

In addition there is the historical background of Missile Defence. The aim to protect the civilian population has been the *leitmotiv* of Republican policy for decades. Moreover, not inconsiderable interests in the technological/industrial spheres also play a part.

What, then, is the extent of the threat from ballistic missiles? In order to answer this question this advice first looks at the American perception of the threat. In view of the importance of the American point of view in this respect, and in the absence of other source material, many American sources have been consulted, although the necessary comments on and questions about these sources have been included.

Current US policy is based on the threat that, in the eyes of the Americans, is posed by the ongoing increase in proliferation of missile programmes and weapons of mass destruction in 'states of concern' such as North Korea, Iran, Iraq, Syria and Libya. Particularly the report by the Rumsfeld Commission (1998) lent political urgency to this threat. At present there is widespread agreement in the US that over the coming decades a threat will arise involving intercontinental missiles from one or several of the states of concern (North Korea, Iran, Iraq, Libya and Syria). In this light, some form of missile defence system will be required. Both Republicans and Democrats agree on this matter. What form this missile defence will take is as yet unclear; there is no agreement on this point at present.

The American assessment is that over the next five to ten years, North Korea will pose a threat, followed by Iran, followed in turn by Iraq. The countries in question at present all have short-range missiles and none of them is at present able to threaten the United States. Parts of NATO territory (Turkey) and Israel do fall within range of some of their short-range missiles. The states of concern do have chemical and biological weapons at their disposal, or have the capability to manufacture them.

The AIV is not able to give an independent forecast of the situation with regard to proliferation in 10 years' time and cannot answer the question of whether in 10 or 15 years' time the states of concern will be able to threaten the US and the whole of Europe with long-range missiles. **The American threat analysis has, however, given rise to a number of comments and questions on the part of the AIV.**

In the first place a long-range missile is not the most likely means of delivery for weapons of mass destruction such as biological or chemical weapons. For a country or organisation that wants to strike the US with a weapon of mass destruction, there is more logic in the use of other, technologically less advanced and therefore more accessible, means of delivery, such as unmanned aircraft or sea containers. **A missile defence system does not provide protection against attacks with weapons of mass destruction using other means of delivery.**

It is hard to imagine that a 'state of concern' would, out of the blue, attack the US with missiles armed with weapons of mass destruction, as it would have to count on a devastating counterattack. **Deterrence will in general also work in relation to a state of concern.** However, in extreme circumstances, if a country has nothing left to lose, the

situation could be different, it is argued. In this view, the issue also concerns the freedom of action in terms of a US foreign and security policy. **In that perspective, missile defence is not only a response to a threat, but also an extra guarantee in a US foreign policy that wishes to safeguard its freedom of action in regional affairs: 'missile defence is not only about defence, but also about offence'.**

The threat scenario against which missile defence is meant to provide protection could become reality in 10 years, but then again it may not. This depends on a number of important questions of a technical nature and on the extent to which the countries that have the technology for long-range missiles will share it with states of concern. On the one hand, there are signs that Chinese and Russian authorities, out of understandable self-interest, are more cautious in this respect than the US supposes. On the other hand, the controls on technology-sharing by governments are not always watertight. The American analysis hardly addresses the circumstances in which a 'state of concern' might be prepared to actually deploy its missile potential against the US.

V.2 BMD and NATO

What are the implications of the above for the Atlantic Alliance?

Whereas there is a consensus in the US with regard to the development of a ballistic threat in the course of the next two decades, there is no such consensus among the European NATO Allies, although it can be reasonably expected that the threat perceived by the US will become a reality for Europe sooner than for the US, albeit with shorter-range missiles. For a long time, the US appeared not to be too concerned about the possibility of being put under pressure – or even blackmailed – if European countries were actually to come under threat. Bush was willing to expand the coverage of a future missile defence system to include the European NATO Allies, but as yet it has remained unclear as to how this would take shape. The threat analysis has as yet not been put on the NATO agenda.

The question has arisen of to what extent there are Allied policy consultations with regard to missile defence in the sense of Article 4 of the North Atlantic Treaty. From the point of view of cohesion within NATO it is an alarming fact that the two sides of the transatlantic Alliance have fundamentally different ideas about an issue which, in the eyes of the most important Ally, in time will pose a serious threat to its own security and territorial inviolability.

European countries as yet prefer to avoid the issue of missile defence (and its possibly considerable financial consequences); not all of them were convinced by the American analysis. Thus far, the US has also preferred to chart its own course in policy-making for missile defence, without having to take into account the opinions of European Allies (which most likely would entail self-restraint).

If both sides wish to continue to work seriously at the transatlantic policy consultations, this attitude is untenable. If NATO is still the most important forum for the discussion of transatlantic security issues – as both sides of the Alliance have stated – the issue of missile threats and the solution to this problem as intended by the US missile defence must be put on the NATO agenda and preferably also on that of the NATO-Russia Council established in May 2002. This issue is perfectly suited to the NATO-Russia Council and goes beyond the present agenda of this new forum, which only deals with TMD, but does also address proliferation in general. As suggested by

Russia in January 2000, but at the time mainly ignored, this forum would need to make a common analysis of the threat to the entire transatlantic territory, including Russia, and acknowledge the consequences thereof. As yet there has been no such analysis carried out for the European NATO territory.

The proposals put to NATO by US Defence Secretary Rumsfeld in June 2002 to 'examine the options for the development of missile defence against all possible missile threats' in a NATO context appeared to open up an option. This was reflected in the statement of the NATO Defence Council of 6 June 2002, which announced that 'Alliance territory and population centres may also face an increasing missile threat (...) and therefore the Alliance needs to examine options for addressing this increasing threat in an efficient way through an appropriate mix of political and defence efforts'. In July 2002 the US put forward proposals to NATO Allies on the way in which cooperation between individual Allies and the US with regard to missile defence could take shape. **The AIV emphasises that the question of whether NATO requires missile defence must be answered jointly, based on a joint threat analysis of the extent and nature of the 'growing threat'.**[91] The American proposals and the decision by the ministers necessitate a joint threat analysis.

V.3 Theatre Missile Defence

NATO has been concerned with missile proliferation since the early 1990s. So far these activities have focused on the short and medium-range threat to units deployed abroad. By the same token, NATO is at present carrying out a feasibility study on 'layered TMD', which will be completed in late 2002. Then NATO will consider how TMD can be incorporated into the NATO air defence command and control system. TMD is not as controversial as strategic missile defence. Individual Allies, including the Netherlands, are already active in this area.

The AIV welcomes the fact that a common Allied concept is being sought for the individual national TMD activities of, inter alia, the Netherlands, by means of activities such as a feasibility study, which will be completed in late 2002.

The AIV recommends that the result of this feasibility study be seen as a prelude to the wider analysis advocated above of the nature and extent of the threat from ballistic missiles to the entire NATO territory and the way in which NATO should defend itself against it

The Dutch TMD efforts are partly based on a generic requirement for TMD systems, recognised within NATO since the 1990s, but they are in anticipation of a NATO concept yet to be developed. It is therefore advisable to examine the extensive future investments involved in procuring the interceptor missiles for both systems more closely, as part of an overall review of the entire spectrum of priorities within NATO and the CFSP.

Furthermore, in the coming years the Netherlands will face the question of whether, following on from TMD activities already undertaken, it should become active in the field of BMD. An Allied analysis of the threat is essential to the answering of this question. Additionally, clarity is necessary in respect of the technical question of whether systems such as PAC-III could play a role as part of a layered BMD system.

91 Source: Statement on capabilities by NATO Defence Ministers, 6 June 2002 (www.nato.int).

V.4 BMD, arms control, non-proliferation and stability

The US has not progressed beyond a comprehensive research programme into various systems that should be capable of intercepting missiles of any range, during any phase of flight, from either land, sea or the air, and even from space.
As it will probably not become clear before 2004 which of the diversity of technologies are eligible for development, the US government for the time being is keeping 'all options open'. The technology has yet to prove itself and for the greater part, with the exception of a number of short-range systems, is still on the drawing board.

Owing to the embryonic stage missile defence is in – in stark contrast to the policy rhetoric – it is difficult, if not impossible, for other countries to respond in a structured and well-founded manner to the American intentions so soon. On the other hand it means that there is still room for input from Allies. This input should particularly concern the perspective of arms control and international stability.

The fact that the (small) number of countries that have short and medium-range missiles in turn can contribute to further proliferation of missiles and missile technology is indeed worrying. However, the American conclusion that this means that the non-proliferation system has failed is not shared by the AIV. On the contrary, the successes of the non-proliferation regime should be pointed out; the number of problem countries has been limited to a minimum, contrary to earlier expectations. In this light, the tendency of the US to reject treaties and international agreements with regard to arms control when they are inconvenient in the short term is a cause for grave concern.

In the view of the AIV, there is no reason to reject the non-proliferation regime as such; on the contrary. The system must be prevented from deteriorating. Important shortcomings must also be recognised so that the system can be updated and reinforced. These shortcomings are mentioned in Chapter IV. The European Allies should make a case for reinforcing what is an effective non-proliferation regime and propagate this view consistently in negotiations, including those with the US.

This does not alter the fact that there is ongoing proliferation, however. Comprehensive verification of the existing prohibition of the development of biological weapons is extremely difficult, as is the case with chemical weapons. It must be recognised that it has not been possible to prevent proliferation entirely. The notion of having the UN send out a strong political signal, at the initiative of the Security Council, that in advance confronts possible troublemakers with the certain prospect of the severest punishment, therefore merits further attention and elaboration.

With regard to strategic relations, it is emphasised that in the medium term large-scale MD plans can have a destabilising effect, particularly if no account, or insufficient account, is taken of the security perceptions of other involved states. In that case missile defence can be perceived as part of a more general unilateral course being taken by the US. The uncertainty this entails for other countries could in time lead to responses in Russia, China and possibly India and Pakistan.**It is important that the US take these medium-term risks into account. European Allies must continue to call for this matter to be addressed.**

In itself the American willingness to lay down the announced strategic reductions in a treaty with the Russian Federation is positive. The declaration accompanying the treaty contains positive elements for the future. **It would be beneficial to stability if the US**

would also be willing to accept limitations being set on the missile defence system it chooses. This could, for instance, entail yet to be specified limitations on the stationing of systems in space and limits on the number of interceptor missiles.

In this context, there is not enough attention being paid as yet to China. **It is therefore recommended that a framework on strategic stability in time be expanded to include China, or that at least a policy be developed to ensure that such a framework will not lead to a reaction from China.**

The new amicable relationship between the US and Russia should also make it possible for the large numbers of Russian tactical nuclear weapons still in place to be included in the reductions. **The European Allies should press for this within NATO.**

The Netherlands, together with other Allies, need not hesitate to make these considerations clear to the US.

Finally, there was the question from the government as to whether the nature of the international security situation has changed to such an extent that a complete review of the Allied security policy is required, possibly following the example of the security policy advocated by the US government. This question goes beyond the scope of the MD issue. Within that wider scope, there have already been a number of initiatives, particularly as a result of 11 September, witness the most recent conclusions by the NATO ministerial meetings in Reykjavik in May 2002 and in Brussels in June 2002. Highlighting the DCI policy, greater focus on flexibility and preventive strategies, streamlining the various NATO headquarters and putting the limitation on the 'Euro-Atlantic area' from the 1999 Strategic Concept into perspective are all part of the process and should to lead to definitive decisions at the NATO summit in Prague in November 2002. The question put forward in the request for advice on a possible review of security policy has therefore already been answered by actual developments.

As regards the issue of BMD, the decision-making stage is still a long way off. The implementation of a new NATO-wide TMD approach and the formulation of a possible NATO-wide MD concept both first require, as has been explained above, thorough Allied analyses and consultations before common policy conclusions may be drawn. All the more because the US itself does not yet have a clear-cut concept for the stationing of missile defence.

V.5 Recommendations

The elements in the preceding analysis lead to the following policy recommendations:

1. A number of comments can be made regarding the American threat analysis and the conclusion based thereon that in time a missile defence system will be necessary. The AIV recommends that these comments, of a technological and political nature, be addressed within the NATO consultations advocated in this advice.
2. The AIV recommends that the Dutch government contribute to the nature, extent and significance of the missile threat being discussed within NATO as a main item as soon as possible. A common analysis must be made of the nature, extent and significance of the missile threat to the entire NATO territory, in accordance with Article 4 of the North Atlantic Treaty.
3. Such an analysis should be carried out in close consultation with Russia, preferably in the NATO-Russia Council established in May 2002.

4. The AIV emphasises that such an analysis is a precondition for the next step, i.e. combined research into the way in which NATO should deal with the threat (as announced by NATO's Defence Ministers in June 2002). A missile defence system could be one of the options, but other measures should also be considered, such as non-proliferation measures.
5. The AIV recommends that the feasibility study regarding NATO-wide TMD, to be completed in late 2002, be used as part of the basis for elaboration in this matter.
6. The AIV recommends that the national Dutch efforts with regard to TMD become part of a common NATO TMD concept as soon as possible. The Dutch TMD efforts should also be given a place in the prioritisation that will be discussed as part of the preparations for the NATO summit in Prague (November 2002).
7. The threat to NATO territory from ICBMs and long-range ballistic missiles (with a range of over 3,500 kilometres) is a threat that is not as yet realistic, but that could manifest itself in the future. Therefore, the AIV recommends to the government that, within the efforts to bring NATO's conventional capability up to standard, it not give territorial missile defence the highest priority at present. Other NATO efforts should currently be given priority.
8. A(n) (terrorist) organisation that wishes to use weapons of mass destruction such as biological or chemical weapons has technically more simple means of delivery at its disposal than a missile. Missile defence does not provide protection against such an attack. At present the (terrorist) threat from use of weapons of mass destruction with relatively simple means of delivery is more urgent than the threat from long-range missiles.
9. The AIV wishes to emphasise that non-proliferation and arms control remain essential elements in the fight against the further proliferation of weapons of mass destruction. The non-proliferation regime has proved its worth. The regime must, however, be reinforced and adapted to current developments, both technological and political. This includes the worrying observation that it has not been possible to prevent proliferation entirely. Particularly with regard to biological and also chemical weapons, there are insufficient means of prevention and verification. Therefore, the notion of having the UN send out a strong political signal, at the initiative of the Security Council, that in advance confronts possible troublemakers with the certain prospect of the severest punishment, therefore merits further attention and elaboration.
10. The AIV emphasises the fact that missile defence in certain configurations may have negative consequences for strategic relations and stability and could thus work as a catalyst for a new arms race. In this light, limits on the number of interceptor missiles could be required, as well as limits on the stationing of interceptors in space. The AIV recommends that the Netherlands, together with European Allies, press the US to adopt an attitude such as will limit the negative effects in this respect to a minimum.
11. The AIV sees the recently agreed cooperation between Russia and the US as the start of a new strategic framework between the two countries. The agreements on offensive reductions are part of this framework. In the future, the treaty should be elaborated to include, among others, verification provisions. The strategic framework should be expanded to include other countries, in particular China. The Netherlands, together with European Allies, should press for this.
12. The new amicable relationship between the US and Russia should also make it possible for the large numbers of Russian tactical nuclear weapons still in place to be included in the reductions. The European Allies should press for this within NATO.

Annexe I

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Date 8 October 2001
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Page 1/6
Encl.
Re Proliferation, missile defence and the new strategic framework
Cc

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Dear Professor Andriessen,

The proliferation of weapons of mass destruction, and their delivery systems, are assuming an ever more important place on the international agenda. The Advisory Council referred to this problem as long ago as September 1999, in its advisory report on developments in the international security situation in the 1990s. That opinion included the following statement: "... it is hardly surprising that many countries have decided to prioritise the development of an adequate defence system for defending themselves against ballistic missile attack." Developments in the United States are the most potent example of this.

The new American administration has let there be no doubt about its determination to protect the United States against the possible future threat of long-range missile attacks by states of concern, whether or not the missiles are carrying weapons of mass destruction. It has also said that American plans in this area are also intended to offer protection to allies and, in this connection, has alluded to possibilities for practical cooperation. The issue of missile defence against ballistic missiles ("missile defence") has expressly been raised within the framework of a broad strategic review, designed to lead to a new concept of deterrence. This review extends to an analysis of the future threat, the consequences of this for deterrence, and the role of nuclear weapons in this context, as well as the place of missile defence in this new concept.

In connection with this strategic review, the United States has drawn attention to the fact that its relationship with the Russian Federation is very different from that with the Soviet Union during the Cold War. American security policy should take more account of this fact. Within the context of talks on a "new strategic framework", discussions have taken place on missile defence, reductions in strategic weapons and non-proliferation, all of which should, according to the United States, lead to a new strategic balance between the Russian Federation and the United States, one which is no longer based on mutual deterrence. In its letter to the House of Representatives of 5 July 2001, the Government analysed various aspects of missile defence, and formulated a number of guidelines to govern the development of policy in this area. However, there is a need for a deeper analysis of the consequences for the European allies, and for the Netherlands, of the continuing proliferation of weapons of mass destruction, of various aspects of the question of missile defence and of

the new strategic framework. Your further advice on future policy, against the background outlined above, would be appreciated.

1. A new deterrent

The Government of the United States takes the view that security risks have undergone a fundamental change. The most striking development is the disappearance of a single, predictable enemy, and the emergence instead of a group of less predictable and more recklessly inclined countries. Some of these countries are seeking to acquire weapons of mass destruction and, increasingly, ballistic missiles, as instruments of regional power politics and diplomatic pressure, and probably also as a deterrent against the United States and its allies.

The states of greatest concern are, according to the United States, less predictable and more inclined to take risks than the former Soviet Union, given the nature of their regimes. Attention is also drawn to the fact that classical nuclear deterrence – based on (massive) retaliation with offensive weapons – operated within a context of strategic balance, which cannot be said of any possible future confrontation with states of concern. The United States thus doubts the effectiveness of traditional nuclear deterrence with respect to these states, and this is why the American administration takes the view that a contemporary policy of deterrence must include an offensive nuclear capability, alongside defensive systems against missiles which might be carrying weapons of mass destruction. Since these defensive systems deny states of concern the possibility of hitting the United States (and possibly its allies) with missiles, such systems would constitute a significant addition to existing nuclear deterrence. Moreover, the United States argues that whenever it has the technological capacity to develop defensive systems against such threats, it has a moral obligation to do so.

The place of missile defence in American strategy should be viewed against this background. The United States emphasises that a future missile defence system will be designed to counter the threat from the states of concern, not the Russian Federation or China. A missile defence system should also offer protection to allies, and in that connection the United States is working towards cooperative arrangements, with the Russian Federation among others.

2. The strategic relationship

The introduction of a missile defence system against strategic missiles without an agreement with Russia on the amendment or replacement of the ABM Treaty could have a negative effect on the American-Russian relationship, and could possibly lead to a new arms race. Even if the United States reached agreement with the Russian Federation on a new strategic framework, it would still be difficult to reach an understanding with China on missile defence, given that even a limited missile defence system could possibly undermine the Chinese nuclear deterrent. There are those who take the view that Russia is no longer able to remain the nuclear equal of the United States, and that the consequences will not be too unfavourable, especially if the introduction of missile defence is linked to substantial strategic reductions by both the Americans and the Russians. Others think that Russia should not be underestimated on this point.

This issue is inseparably linked to the matching question of the nuclear relationship. The United States wishes to proceed to a new framework that more accurately reflects the “new cooperative relationship” with Russia – in any case, Russia is no longer an enemy. What

such a framework would look like in practice is still unclear. The Russian Federation has indeed welcomed the American willingness to make far-reaching reductions, and has stated that it is itself also prepared to go a long way. The United States has a preference for unilateral strategic reductions, while Russia wishes to adhere to the START framework, under the umbrella of the ABM Treaty.

Russia does endorse the view that there is a growing – regional – threat emanating from the proliferation of weapons of mass destruction and short and medium-range ballistic missiles, but denies the existence of a threat, now or in the foreseeable future, from intercontinental missiles from the states in question. Russia also agrees that part of the answer to these threats must be found in defensive systems. It has therefore made proposals to NATO for the development of a Pan-European Theatre Missile Defence system.

3. Arms control

The United States emphasises the importance of non-proliferation and export control regimes, but at the same time argues that these regimes display too may leaks (not least because of Russian sales to states of concern). The American administration also feels that a number of new treaties and multilateral initiatives in the field of non-proliferation and arms control are defective, to the extent that their value is seriously reduced. The benefits that these treaties and initiatives were supposed to produce in the field of non-proliferation and arms control do not counterbalance the limitations they would impose on American security policy, and the risks to the interests of American industry. In addition, there is a big risk of the further spread of weapons of mass destruction, through secondary proliferation.

The Netherlands and the European allies are firmly committed to multilateral arms control and non-proliferation, as well as to negotiated and verifiable arms control treaties. Europe will therefore have to find effective and convincing answers to American criticisms. The United States will have to be able to make it clear that the proposed new strategic framework does not affect the strategic balance between the most important nuclear weapons states, and that it advances international efforts in the field of arms control and non-proliferation.

Questions

Against this background, and against the background of the detailed analysis contained in the letter to the House of Representatives of 5 July 2001, we are submitting a number of questions to the Advisory Council:

- What are the strategic consequences of the continuing proliferation of ballistic missiles and weapons of mass destruction for European and NATO security interests? Has the international security situation changed to such an extent that a total revision of alliance security policy is necessary, whether or not this follows the example of the security policy announced by the new American administration? In that connection, how should one assess the proposed American move from a classic policy of deterrence, based exclusively on offensive weapons, to a policy of deterrence based on a combination of offensive and defensive weapons?
- To what extent is the threat to Europe different from the threat to the United States? Are there grounds for supplementary measures to protect European territory from ballistic missiles from states of concern, whether or not these missiles are carrying weapons

of mass destruction? If so, to what extent should such measures be in the area of missile defence, and should the European allies aim at practical cooperation with the United States and/or Russia on this issue? What security, strategic or defence industry considerations should play a role in all this?

- What conditions should a new strategic framework have to meet with respect to European and alliance security interests? How should the new American administration's preference for unilateral nuclear weapons reductions be assessed, as compared with the treaty approach maintained so far? What is the Advisory Council's view on the chances for a reduction in the number of tactical nuclear weapons, given, among other things, the still very substantial arsenal of tactical nuclear weapons held by the Russians?

- What are the consequences of a possible new strategic framework for the future strategic relationship between the various "established" nuclear weapons states, both among themselves and with regard to the "newcomers"?

- Do the deficiencies in the current international system of arms control and non-proliferation, and the changing strategic relationship, mean that new paths should be followed in the field of arms control and non-proliferation?

The terrorist attacks on the United States

The recent terrorist attacks in New York and Washington, D.C., have cruelly exposed the vulnerability of modern Western societies. It is conceivable that these terrorist attacks will have consequences for policy with respect to missile defence in the United States, and elsewhere. However, any statements made on this at the present time would be mere speculation. For this reason, we would prefer to submit this request for an advisory opinion to the Council now, while noting that it is not impossible that we will submit some supplementary questions at a later stage. In any case, the Council is itself at liberty, certainly in the current exceptional circumstances, to take account of political or other developments as they happen, in drawing up its advisory report.

Yours sincerely,

J.J. van Aartsen
Minister of Foreign Affairs

F.H.G. de Grave
Minister of Defence

Possible Architecture of a Layered Missile Defence System

'Active Missile Defence' is at present described, mainly by the US, as a layered system of various interception possibilities that must be able to intercept and destroy enemy (ballistic) missiles of every range and at every phase of flight. The 'National Missile Defence' architecture envisaged during the Clinton administration, consisting of some 20 interceptor missiles for the interception of intercontinental missiles, was to be part of that system. Almost all interception systems that could become part of the envisaged 'layered architecture' are still in the research and development stage (with the exception of a few systems for the interception of enemy short to medium-range missiles). This also applies to the NMD part, which has progressed the furthest of all systems.

The envisaged layered system should provide the possibility of detecting ballistic missiles of any range in any phase of flight and intercepting them with interceptor missiles based on land, at sea or in the air or space.
The missile interception could take place during the following phases.

– *'Boost Phase'*
Various possibilities for the interception of enemy missiles in this phase are being studied, for instance by means of a laser installed on an aircraft. This possibility is in the research phase; a first test (interception of a missile by means of a laser from an aircraft) is expected in the second half of 2004. Other possibilities being researched are interception carried out from unmanned aircraft, or by means of a laser positioned in space. There are as yet no concrete plans in these areas.

– *'Midcourse Phase'*
One possibility being studied in this area is the interception of intercontinental missiles using ground-based interceptor missiles. This concerns President Clinton's original National Missile Defence plan, which has now been renamed Ground-Based Missile Defence (GBMD). This part of the possible architecture has progressed the furthest. On 15 June 2002 the construction of silos for the interceptor missiles began in Alaska as part of a test programme that is to be completed in 2004. Another possibility under scrutiny is interception in the midcourse phase from sea.

– *'Terminal Phase'*
This means that the enemy missile is intercepted during the final phase of its flight. Examples are the Patriot system and its successor PAC-III, MEADS, Arrow (Israel), Aster (France) for the interception in this phase of short to medium-range missiles and the Russian S-300 and S-400 systems for the interception of intercontinental missiles.
The Israeli Arrow, PAC-II (US, Germany and the Netherlands) and the S-300 (Russia) are operational.

Besides interceptor missiles, the envisaged system also requires observation satellites and radar systems for detection and target guidance. As yet only the US and Russia have these. Also required are search and tracking satellites (SBIRS Low), warning radar - long-distance (four are stationed in the US, one at Thule, Greenland and one at Fylingdales, UK) and search and tracking radar (X-Band), for instance the radar on Kwajalein Island.

Costs. The costs for the development of a system that would use all of the elements mentioned above would amount, according to various estimates, to at least 184 billion US dollars (over 10 years), not including the required SBIRS Low system. On 1 February 2002 the Congressional Budget Office published a report in which the costs were estimated

to be considerably higher. According to the calculations the bill could run as high as 238 billion US dollars for the development and operation (15-25 years) of a ground-based system (costs between 26 and 74 billion US dollars), a sea-based system (costs between 50 and 64 billion US dollars) and a laser system stationed in space (costs between 82 and 100 billion US dollars). Not all parts of the envisaged 'layered architecture' were included in this calculation. The sea-based elements and the lasers operating from aircraft were not included. In other words, these too are very rough estimates for a system of which it is not yet clear what elements it will encompass exactly.

Schematic representation of possible elements of a layered missile defence system

BMDS SEGMENT	Ballistic Missile Defence System (BMDS) architecture			
	LAND-BASED ELEMENT	SEA-BASED ELEMENT	AIRBORNE ELEMENT	SPACE-BASED ELEMENT
Interception in the boost phase	no known projects	no known projects	Airborne laser (ABL)	1. Space-based laser (SBL) 2. Space-based interceptors No actual projects known
Interception in the midcourse phase	1. Ground-based interceptors for midcourse interception (NMD or GBMD) 2. THAAD[1]	1. Navy Theatre Wide (NTW) 2. AEGIS	–	Space-based interceptors? No known projects
Interception in the terminal phase	1. PAC-III 2. ARROW 3. MEADS 4. THAAD[1]	Navy Area-Wide (NAW)	–	–
'Sensors segment' for information for the detection of enemy missile and guidance of the interceptor missile	1. X-Band radar 2. Early-warning radars	Sea-based X-Band	–	1 SBIRS High satellites 2. SBIRS Low satellites 3. Defence Support Programme (DSP) 4. Space-based radar

BMDS SEGMENT	Range of target missile			
	SHORT RANGE (SRBM) **0–1,100 KM**	**MEDIUM RANGE** (MRBM) **1,100–2,750 KM**	**INTERMEDIATE RANGE** (IRBM) **2,750–5,500 KM**	**LONG RANGE** (ICBM) INTERCONTINENTAAL **5,500–10,000 KM AND MORE**
Boost phase	Ground-based boost – no known projects Sea-based boost – no known projects Airborne laser (ABL) Space-Based Laser (SBL)			
Midcourse phase	THAAD[1]	1. AEGIS 2. THAAD 3. Navy Theatre Wide (NTW)#	–	Ground-based midcourse interceptor (NMD – GBME)
Terminal phase	1. PAC-III 2. ARROW 3. MEADS 4. THAAD[1] 5. Navy Area-Wide (NAW)	Navy Area-Wide (NAW) PAC-III? MEADS?	–	–

SRBM	Short Range Ballistic Missile	0 – 1,100 km
MRBM	Medium Range Ballistic Missile	1,100 – 2,750 km
IRBM	Intermediate Ballistic Missile	2,750 – 5,500 km
ICBM	Intercontintal Ballistic Missile	5,500 – 10,000 km and more

\# project has been halted temporarily by the Pentagon.

1 THAAD is mentioned in both the midcourse and the terminal defence segments.
The THAAD system can intercept ballistic missiles flying both within and outside the atmosphere.

Space-based interceptors are not included in this table owing to lack of information.

Description of missile programmes

The following overview is mainly based on American sources and covers the missile programmes in 5 countries identified by the US as 'states of concern', i.e. North Korea, Iran, Iraq, Syria and Libya.[92] Despite the fact that more countries are expanding their missile potential than just the five countries mentioned, (such as India and Pakistan), this advice focuses on the five countries in question (North Korea, Iran, Iraq, Syria and Libya).
The following overview also addresses mass destruction potential.

North Korea

Missiles. North Korea has an extensive arsenal of ballistic missiles and launchers. It would appear to have some 700 missiles at present and over 30 launchers. This concerns short-range missiles (with a range of up to 600 kilometres). According to American sources, the Nodong missile (1,300 kilometres) is operational. The missiles are based on Scud technology and use liquid fuel. According to experts, the development of long-range missiles that pose a threat requires solid-fuel technology, a technique that is very complex and has only been mastered by the P-5 countries.

A particular cause for concern is the Taepo-Dong missile, developed on the basis of the Nodong missiles (1,300 kilometres) and Hwasong-6 (range 600 kilometres, successor to Hwasong-5 with a range of 500 kilometres). On 31 August 1998 the launch of a Taepo-Dong 1 (range approximately 1,500 kilometres) over Japanese territory made the headlines worldwide. Although the launch was not entirely successful, owing to a technical failure in the third stage, to the US intelligence agencies it was still a surprising event of great significance. There is still uncertainty as to whether the launch involved a missile or a satellite.

According to US estimates, North Korea will probably be the first state of concern that - within 10 to 15 years - will have acquired an intercontinental missile. A successor (the Taepo-Dong 2), according to the 2001 NIE, is apparently in principle ready for testing at present. This missile, with a range of 4,000-6,000 kilometres, would be able to reach parts of Hawaii and Alaska. Given a third stage, the missile would be able to obtain a range of 10,000 kilometres and thus reach the rest of the United States.[93]

However, analysts point out that the Taepo-Dong 1 missile is not operational and that the successors only exist on paper. Without outside help (for instance with regard to solid-fuel technology) the dreaded three-stage version capable of hitting the target would not progress

92 In their letter to the Lower House of the States-General of July 2001, the Ministers of Defence and Foreign Affairs stated in this respect that North Korea, Iran, Iraq, Libya and Syria, as well as Israel, China, Pakistan and India are currently expanding their missile potential. With regard to these countries the letter used the term 'states of concern'.
Besides the five countries mentioned above, Algeria, Armenia, Azerbaijan, Belarus, Bulgaria, the Democratic Republic of Congo, the Czech Republic, Egypt, Georgia, Hungary, India, Israel, Kazakhstan, South Korea, Pakistan, Poland, Romania, Saudi Arabia, Slovakia, Taiwan, Turkmenistan, Ukraine, the United Arab Emirates, Vietnam, Yemen and the Federal Republic of Yugoslavia have an operational short-range ballistic missile capability (See Wilkening, D.A. (2000), Ballistic Missile Defence and Strategic Stability, in: *Adelphi Paper*, no. 334 (New York, Oxford University Press).

93 Homan, K. and Kreemers, B. (May 2000), NMD: de Amerikaanse Waterlinie [NMD, the American Water Line], *Clingendael A4 publication* (The Hague, Netherlands Institute of International Relations Clingendael).

beyond the drawing board. From this point of view, North Korea has no more than one or two long-range missiles and the Russian and Chinese aid to North Korea is currently drying up. North Korea itself is not considered to be able to develop an intercontinental missile without outside help, owing to the deplorable state of its economy.[94]

Nuclear, Chemical and Biological Potential. North Korea's nuclear ambitions date back to the 1950s when the Soviet Union and North Korea established a joint nuclear research facility in Yongbyon. The US assumes that before 1991, enough plutonium was being produced in North Korea for the development of at least one nuclear weapon. Despite Pyongyang's denial, most experts are of the opinion that North Korea sought to develop a nuclear weapon and some think it still does, despite the Agreed Framework, under which the facility in Yongbyon is being dismantled.

North Korea has the infrastructure necessary for the development of biological weapons; the US does not rule out the possibility of it having biological weapons ready for use. According to US sources, North Korea has large stockpiles of chemical weapons and precursors.[95]

Iran

Missiles. Iran has had ballistic missiles since the 1980s. First it had the Oghab missile, an artillery missile manufactured in China, with a range of 40 kilometres (and a high degree of inaccuracy). In the mid-1980s Iran acquired the Russian Scud missile. The Scud-B missile was deployed in 1988 against Baghdad. After the Iran-Iraq war, Iran continued to develop the programme, benefiting from contacts with North Korea, Russia and China. On this basis it worked on the development of the Shahab-3, a medium-range missile with, according to US sources, a range of 1,300 kilometres, and carried out test launches in 1998 and 2000. This missile is operational. In addition, Iran acquired missile components that, combined with parts and technology from the Scud missile, could lead to a longer range, bringing targets in Europe and the US within range.[96] With the current Scud-C Iran can already reach South East Turkey. The 2001 US National Intelligence Estimate stated that Iran could possibly carry out a test with a long-range missile in around 2005, but that this will most likely not take place until 2010 or even beyond 2015.[97]

According to experts, Iran is clearly seeking technology that goes beyond that of the current Scud technology and is researching solid-fuel technology. Those same experts add the qualification that aiming to acquire solid-fuel technology does not necessarily mean aiming to acquire long-range potential. The longer shelf life of solid fuel is also a great advantage for short-range missiles. Moreover, the aim to acquire a longer-range missile is not necessarily aimed at the US; it can also be intended to reach a greater strategic depth through

94 *North Korea's Missile Programme: Reality Versus the Myth,* Stratfor Special Report 2001 (www.stratfor.com).

95 *Proliferation:* Threat and Response, Office of the Secretary of Defence, 2001.

96 Homan, K. and Kreemers, B. (May 2000), NMD: de Amerikaanse Waterlinie [NMD: the American Water Line], *Clingendael A4 publication* (The Hague, Netherlands Institute of International Relations Clingendael).

97 *Unclassified summary of the report on Foreign Missile developments and the Ballistic Missile Threat through 2015,* January 2002.

stationing further inland. Another advantage of solid fuel is the shorter ignition time, which decreases the invulnerability caused by possible early detection.

Nuclear, Biological and Chemical Potential. Iran is apparently working on a nuclear power station near Bushehr, with the help of the Russians. To this end, Iran is trying to acquire nuclear fuel from predominantly Russian sources and China has apparently promised its cooperation for the project. According to China and Russia, however, the cooperation is for purely peaceful purposes. According to experts, Iran's nuclear capability does not amount to much.

During the war against Iraq, Iran deployed a limited number of chemical weapons against Iraqi troops. According to US sources it is in possession of 'weaponised' chemical agents.[98]
Iran has the necessary infrastructure and expertise for a BW programme and is attempting, mainly in Russia, to acquire dual-use equipment and technology. According to US sources, Iran has pursued an offensive BW programme in the past. The possibility cannot be ruled out that at present it still has usable agents for biological warfare.

Iraq
Missiles. At the beginning of the Gulf War, out of the five countries mentioned Iraq had progressed the furthest with its missile programme based on Scud technology. The Iraqi Scuds had a range of 600 kilometres. UN Security Council resolutions limited the permitted range of Iraqi missiles to 150 kilometres.

Based on the Scud-B missile acquired from the Soviet Union in 1974, Iraq tested its first Al-Hussein missile in August 1987 (range 500, later versions 600 kilometres).[99] In February 1988, Iraq fired 189 of these at Iran and in 1991 it deployed a total of 86 missiles against Israel and Saudi Arabia. These had conventional payloads.

During UNSCOM inspections after the Gulf War it was established that the Al-Hussein missile could be armed with both conventional and chemical payloads and that it was also suitable for nuclear payloads. After the invasion of Kuwait, Iraq had set up an intensive nuclear programme for that purpose. The UNSCOM inspections resulted in the dismantling of the research and production facilities. The acquired knowledge and expertise must, however, be assumed to be still present.

According to US sources, it must be possible for Iraq to develop a new missile potential with a range of 300 - 600 kilometres within a timescale of 10 years. If Iraq continues to refuse further weapons inspections, development of a missile with a range of 2,000 - 4,000 kilometres could be possible on the basis of the legacy of the 1980s. This would put Europe within reach of Iraq. According to the 2001 NIE, with substantial help form abroad and unhindered by sanctions and inspections, Iraq could possibly test an ICBM in 2010, but it is unlikely that this would occur before 2015. According to US sources, Iraq is aiming to acquire an ICBM and has a small arsenal of Scud missiles with a range of around

98 *Proliferation: Threat and Response,* Office of the Secretary of Defence, 2001.

99 Homan and Kremers also point out in *de Amerikaanse waterlinie* that this first Al-Hussein missile was not used in the war against Iran until February 1988, which fuelled doubts about the reliability of the missile. The CEP (circular error probability – diameter of the circle within which half of the missiles launched land) of the Al-Hussein is between 1 and 3 kilometres.

300 kilometres. Experts say, however, that the Scuds retained by Iraq will by now no longer be usable due to the limited shelf life of a missile powered by liquid fuel. Furthermore, the main source of Iraqi missiles before the Gulf War (France, Germany, US) has by now dried up. At present there are no countries assumed to be sharing technology with Iraq.

Nuclear, Biological and Chemical Potential. Despite ratification of the NPT, Iraq had a considerable nuclear weapons programme before Desert Storm, which has been documented in great detail by UNSCOM. The infrastructure has since then largely been dismantled. The expertise is assumed still to be present. According to US sources, with help from abroad Iraq would be able to rebuild the programme in five years and even sooner if sufficient nuclear fuel could be obtained illegally. Due to the absence of weapons inspections since 1999, the current status of the Iraqi nuclear programme is unclear.
Before Desert Storm, Iraq developed biological weapons and admitted this during UNSCOM inspections in 1995. During inspections UNSCOM also found traces of the nerve gas VX on warheads. Iraq has always maintained, however, that it did not have 'weaponised' chemical weapons.
Given the absence of UNSCOM inspectors since 1999 the possibility cannot be ruled out that the Iraqi CW and BW programmes have been resumed.[100]

During the war against Iran, Iraq used CW and BW against its own Kurdish population in Halabja, Northern Iraq in March 1988.[101]

Syria
Syria has a few hundred Scud-B and Scud-C missiles, which are able to reach part of Turkey and all of Israel. Syria is attempting to expand its arsenal. According to US sources, it does not aim to acquire long-range missiles or nuclear weapons. Syria is able to develop the nerve gas VX and has a sufficient biotechnological infrastructure to develop a biological weapons programme. It can produce chemical warheads unaided.

According to analysts, Syria is the only one of the five countries that has its Scud-B and Scud-C missiles fully operational. The missiles are aimed at Israel.

Libya
Libya has (very outdated) Scud missiles. Experts point out that the Libyan missile potential poses no threat whatsoever at present.

American analyses, however, highlight the possibility of Libya buying off-the-shelf North Korean No-Dong missiles (1,300 km), which would bring parts of Southern Europe (Spanish east coast, French south coast, almost all of Italy, Greece) and South West Turkey within missile range. During a brief period in 2000 there were rumours that such a purchase was imminent. The Libyan missile programme is at present very limited. Libya has also made little progress in its endeavours to acquire a nuclear weapon. The possibility cannot be

100 *Non-Proliferation: Threat and Response*, Office of the Secretary of Defence, 2001.

101 During the attacks civilians were exposed to nerve and mustard gases, including sarin, tabun and cyanide. It is not clear whether other agents, of which it was established during UNSCOM inspections that Iraq was developing them, such as VX, anthrax and mycotoxin were also used, because the victims of Halabja were never examined by international observers.

ruled out, however, that it is able to produce small amounts of biological agents. In 1987 it used chemical weapons against Chad. Nerve gases and blistering agents were produced in Rabta in the 1980s and in Tarhunah efforts were made to develop an underground chemical weapons production facility. According to US sources, neither of these facilities is active at present.[102]

102 *Non-Proliferation: Threat and Response,* Office of the Secretary of Defence, 2001.

List of Abbreviations

ABM	Anti Ballistic Missile
ABM Treaty	Anti Ballistic Missile Treaty
AIV	Advisory Council on International Affairs
BMDO	Ballistic Missile Defence Organisation
BW	Biological Weapons
CBM	Confidence-Building Measure
CIA	Central Intelligence Agency
CTBT	Comprehensive Nuclear-Test-Ban Treaty
CTR	Cooperative Threat Reduction
CVSE/OVSE	Conference/Organisation for Security and Cooperation in Europe
CW	Chemical Weapons
DCI	Defence Capabilities Initiative
EU	European Union
ESDP	European Security and Defence Policy
G-7	The 7 largest industrial countries: Canada, Germany, France, Italy, Japan, the United Kingdom and the United States (now G-8, including the Russian Federation)
CFSP	Common Foreign and Security Policy
GCS	Global Control System
GPALS	Global Protection Against Limited Strikes
IAEA	International Atomic Energy Agency
ICBM	Intercontinental Ballistic Missile
ICOC	International Code of Conduct
INF Treaty	Intermediate Nuclear Forces Treaty
JDEC	Joint Data Exchange Centre (Joint Command Centre in Moscow)
KEDO	Korean Peninsula Energy Development Organisation
MAD	Mutual Assured Destruction
MD	Missile Defence
MDA	Missile Defence Agency (previously BMDO)
MEADS	Medium Extended Air Defence System
MIRV	Multiple Independent Re-entry Vehicle
MTCR	Missile Technology Control Regime
NATO	North Atlantic Treaty Organisation
NIE	National Intelligence Estimate
NMD	National Missile Defence
NPR	Nuclear Posture Review

NPT	Non-Proliferation Treaty
NSG	Nuclear Suppliers Group
P-5	Permanent members of the UN Security Council (China, France, Russia, the United Kingdom and the United States)
PAC-III	Patriot Advanced Capability III
QDR	Quadrennial Defence Review
RF	Russian Federation
SALT	Strategic Arms Limitation Talks
SBIRS	Space-Based Infra-Red System
SDI	Strategic Defence Initiative
SDO	Strategic Defence Organisation
SLV	Space Launch Vehicle
START I/II/III	Strategic Arms Reduction Talks I/II/III
THAAD	Theatre High-Altitude Area Defence
TMD	Theatre Missile Defence
UAE	United Arab Emirates
UAV	Unmanned Aerial Vehicle
UNSCOM	United Nations Special Commission
UK	United Kingdom
UN	United Nations
US	United States
WMD	Weapons of Mass Destruction

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