CHAPTER – 2
FROM MISSILES TO MISSILE PROLIFERATION

By the end of the 1980's the United States was in an enviable position. Its prime enemy was under the stewardship of a man whom many considered a visionary, willing to initiate and negotiate a path to peace, rather than confrontation. It was also increasingly obvious that the massive Soviet war machine was a good deal less prepared than it had been popularly supposed, while the internal situation in the Soviet lands was difficult, if not calamitous. Disarmament was at last actually taking place, unlike the earlier 'arms control' era. The Intermediate Nuclear Forces Treaty (INF) which eliminated a whole class of missiles was now history, though it appeared that Americans had reason to be jubilant about the "end of history", it was apparent that all was not well within the Department of Defence and various other bodies. The call for a peace dividend and greater attention to America's "revitalization" was apparent among Congressmen and scholars alike. Paul Kennedy's "The Rise and Fall of Great Powers" published in 1987 argued that the US could not avert an inevitable decay unless it concentrated on the reconstruction of it's domestic infrastructure. This notable book created a far flung debate and it was not long before leading figures like Robert S. McNamara and Lawrence K. Korb Assistant Secretary of Defense in the Reagan Administration began to call for a

significant decrease in military spending (to less than half)\(^2\). While this proved a little extreme for others, many Congressmen were calling for reductions. Among the programmes on a possible cancellation list was the mobile M-X missiles, the B-2 Stealth bomber, and the centrepiece of the Reagan administration, the Strategic Defence Initiative. Senator Sam Nunn, chairman of the powerful Senate Armed Services Committee and an acknowledged ally of the military establishment charged "'The basic assessment of the overall threat to our national security on which the budget is based is tooted in the past' he told fellow senators. If the DOD hopes to obtain Senate approval of its proposed budget (of March 1990) he warned, it would have to fill in the "threat blank " with a more plausible assessment of future security risks\(^3\)."

Faced by such developments, Pentagon planners moved in diverse ways. Some like Secretary of Defence Dick Cheyney continued to identify the Soviet Union as the principal threat, but General Colin Powell, the newly appointed Chairman of the Joint Chiefs of Staff responded by tasking General Butler and his associates in the Joint Chiefs of Staff to devise a new posture that would focus on threats other than that posed by the former Soviet bloc.


\(^3\) Klare.p.14.
Several alternatives lay before the planners. The LIC (Low intensity conflict) threat that threatened access to "vital economic and military resources" was one, but it was unlikely that the high end technology weapons that was favoured by Pentagon planners would be passed by Congress. Another possibility was to characterize the "unknown" and inchoate threats from various quarters – in other words the full spectrum of forces to deal with everything from nuclear war to drug trafficking. This perception is readily apparent in the language of drafters of the NATO Strategic Concept of 1991 and in most documentation of the period 1989-1990.

The possibility of a threat emanating from the Second World – Germany or Japan or both – could not be officially articulated in Congress, though the continuity of the threat is obvious in the statements of senior policy makers. For instance, Walter Slocombe, Under Secretary of Defense for Policy in the Clinton Administration wrote (before he took office) that "A unified Germany would not readily rely indefinitely on a British or French deterrent. The practical issue, therefore, is whether there will be US nuclear weapons in Europe – or German ones." Yost notes the results of a survey of German military and civilian leader in 1995, which addressed the degree of

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4 While this was enunciated by General Larry D. Welch in early 1990 and rejected by General Powell, it is one that has continued to hold security planners in thrall.

interest in a national nuclear weapon capability under various potential security conditions. Interest was low in a scenario that included NATO and a US military and nuclear present in Europe. In the absence of this however, the survey found “a German hesitancy to trust the commitment of French or British guarantees of nuclear protection” in a European led security force. In the lack of any security alliances, where Germany would be alone in providing for its security, a high level of interest in a national nuclear weapons programme was apparent. Non security incentives for acquiring a national capability included the prospect that nuclear weapons could contribute at least indirectly to new feelings of German pride, prestige and sovereignty, as well as being credible instrument for international influence. Both Japan and Germany, undoubtedly had the technological capability to “go nuclear” anytime they wished, while Japan in particular had adequate space capability to translate this into a full fledged arsenal. However justifying a large nuclear and conventional arsenal against a possible German or Japanese threat was a sensitive issue, and would do more to wind down security treaties with each – NATO and the US - Japan Security Treaty, than anything else.

**Evolution of the “Rogue state” doctrine**

Given the lack of threat in the First world, and the complete erosion of threat from the Second, it was logical that attention would turn to the Third.

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The US was hardly a stranger to military intervention in this part of the world. Noted studies on war had tabulated that fact that out of 120 war in the period 1945-1979, the US had been the dominant actor, with Socialist participation found only in 6. This interventionary zeal increased after the Reagan period, when the "Reagan doctrine" was enunciated to fight against Soviet "surrogates" in the Third world. But this again was specifically against the Soviets, and not against the Third World regime in particular. However the trend towards designating some of these as "terrorist states" had already begun, with the bombing of Tripoli as one example. By the 1990's, the communist threat was dropped to be replaced by the inherent "instability" of so called "regional powers" who had amassed considerable military capabilities from one or other of the superpowers, and in the post cold war scenario. That this military capability had been supplied almost entirely by the major arms producing countries (with the US in the lead as the largest arms exporter) was a detail that was not thought necessary to explain. A peripheral area that had been merely a side show to the main fight against the Soviets now assumed importance.

Certainly, many countries in the developing world had emerged with respectable military industrial complexes, and others were bent on acquiring more. Given the vastly better capabilities – in tanks, guns and artillery – that had been gifted to them by one or other superpower, many regions of the world emerged as "hot spots" as one or other over armed country threatened the other. Elsewhere countries were exercising their own capability for
independent decision making, some of these decisions inimical to a widely defined parameter of "US interests".

The third World threat had already been noted by the late 1980's by a landmark report *Discriminate Deterrence* in a January 1988 report by the US Commission on Long Term Integrated Strategy, comprising 13 policy makers (including former Secretary of State Henry Kissinger). Though the thrust of the commission was towards evolving a conventional deterrent in the face of changed realities, the report also noted "The (expanding) arsenals of lesser powers will make it riskier and more difficult for the superpowers to intervene in regional wars. The US ability to support its allies around the world will increasingly be called into question. Where American intervention seems necessary, it will (be necessary to) use our most sophisticated weaponry, even though this could compromise its effectiveness in a US Soviet war." A back up report to this noted that countries like Japan, China, Brazil, India and other future regional powers were neglected by US analysts and urged a more careful attention to the challenge this would pose to US security.

Even more astonishing was the change of nuclear targeting that appears to have begun with the fall of the Berlin Wall. According to the then Commander – in –chief of the Strategic Air command, "as early as October 1989, we abandoned global war with the Soviet Union as the principle

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planning and programming for the US armed forces.” Nuclear war planners now saw that “A new series of threats had begun to emerge on the horizon” and began to shift their attention to potential targets outside Russia and China. The post Cold War target base would consist of “fewer but more widespread targets”\(^8\)

At the same time, the US intelligence community was picking up on the new threat. The 1989 report by the then CIA chief William Webster, stated this perception clearly. Firstly, third world countries were increasingly cooperating among themselves for missile technology, thus diluting the purposes of the MTCR. Secondly, this could lead to many becoming major exporters of missiles in their own right. Thirdly, short and intermediate range missiles had a potential for creating instability since in most of the countries in the Middle East, these had essentially ‘strategic’ capabilities. He noted "It is ironic that at a time when the United States and the Soviet Union have agreed to eliminate a whole class of weapon, Third World nations are building up their own arsenals."\(^9\) According to his assessment there were likely to be at least 15-20 Third World countries building their own ballistic missiles in a little more than a decade. "Missiles" said the report "have now become the acceptable means of waging war in the Third World”\(^10\) In an

\(^8\) Quoted in Hans M. Christensen” Nuclear Future: Proliferation of Weapons of Mass Destruction and US Nuclear Strategy” British American Security Information Council, Research Report No 98.2


\(^10\) Ibid.
environment of a threat of missile use, policy makers and the public would be less likely to want to act decisively against a power armed with WMD. US ability to pull together a coalition or sustain allied help would also be held under ransom from the threat of attack with CBW weapons - a threat which could be carried out - as any vulnerable ally would be quick to calculate - after the US forces leave. Thus the tendency (as in North Korea) would be to prevaricate and negotiate with an acknowledged 'rogue' state. In short, the advantage would, against all the accepted rules of nuclear deterrence, rest with the enemy armed with nothing but a few vintage WMD weapons.

Later (1996) proliferation enthusiasts had included cruise missiles in their arsenal of proliferation. The Annual "Proliferation : Threat and Response" from the Office of the Secretary of Defense of the United States identifies North Korea, Iran, China, Iran, Iraq, Libya, India, Russia and others as states with cruise missile programs or in their inventories. The Director of the Defence Intelligence Agency James Clapper in 1995 informed the Senate Armed Services Committee that there were some 130 cruise missile types through the world possessed by 75 countries, produced in 19 different countries (just who the crucial 19 were was not elucidated). Other estimates pointed out that 70 countries deploy over 75,000 cruise missiles most of which were designed to strike ships at sea. British analysts like

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Duncan Lennox, the Editor of Jane's Strategic Weapons Systems, have also warned that "the cruise missile will become a serious proliferation issue over the next 10 years"\textsuperscript{14}.

These prognostications found an immediate echo in Congress with committees holding extensive hearing on proliferation issues. (see below) However demonizing the new threat was not easy. Many of those on the "list" were friendly states or those with no palpable reason for ever wanting to attack the US. Among these were India, Israel, South Korea and Taiwan. Even those states with questionable motivations (at least in a regional sense) were hardly linked by a common ideology that could be described as being inimical to American values. Officials soon began to invest the leadership of these states with illogical and violence tendencies, and thus the rationale that these countries with possible "WMD" capabilities would not be "deterred" by the same logic that had once underpinned the cold war stand off began to grow.

Out of this debate grew the concept of the "Rogue state" (or what Klare calls the "Rogue doctrine\textsuperscript{15}\) As he notes, this new demonology grew out of the literature generated by "international terrorism" which had seen a rise in the Reagan era. In 1984 the focus had already shifted from terrorist groups to states supporting terrorism, (resulting in the attack on Tripoli). In


\textsuperscript{15} Klare note 2.p.26.
his 1985 speech then, President Reagan identified Cuba, Iran, Libya, Nicaragua and North Korea as the leading members of a "confederation of terrorist states:" arguing that most of the attack on U.S citizens abroad were being controlled by a ore group of "outlaw states". This list ignored Iraq and Syria, both of which were known to be actively hospitable to terrorist groups, and this underlined the essentially political rationale behind the declaration. Nonetheless, soon the slide from outlaw to "rogue" and "renegade" states were apparent in the denunciations of US leaders. Following an extensive policy review, General Powell submitted the new "Regional Defense Strategy" which envisaged the US fighting against not one, but two "paired" enemies simultaneously, (since just one would hardly justify the existence of such large US forces) . This immediately raised the question of better power projection capabilities to fight in new and distant theatres. As noted by a military man the second of August 1990 will be remembered for generations to come as a turning point for the United States in it's conduct of foreign affairs – the day American announced the end of containment and embarked upon a strategy of power projection"16. Oddly enough it was one the same day that Saddam Hussein invaded Kuwait. The "threat blank" identified by Senator Sam Nunn was filled by the conflict, and the issue of missile proliferation was appended to the "new threat:. By 1991, the issue of missile defences to counter third world missiles had come to the centre fold, and by 1994 the new threat was written into military doctrine as a new military

16 General Vuono quoted in Klare p.34.
mission, and in July 1994 was written into NATO as the first ever document on *Policy Framework on Proliferation of Weapons of Mass Destruction*. It is worth noting here that all US policies (with the exception of NMD threat scenarios) are based on threats to "US forces and allies". It further needs to be clarified, that while the NMD involved only the United States, the framework for TMD – the threat, the response and the fall out – involves NATO and the rest of the world.

This chapter looks at the shaping of policies that led to what was to be a doctrinal change in US and NATO policies. The shaping of the debate on missile proliferation outlines the overall consensus on the "rogue" state and the need for some defense for US troops and allies. This change was marked by a realization that export controls alone were not 'working' and more was needed to stop missile proliferation, and ultimately provide US and Allied troops the freedom of action that were denied to them by the acquisition of a few low technology missiles by hostile countries in the developing world.

**Defending Against the Threat**

Policy, as noted earlier had already begun to shape itself to the emerging threat and the US Department of Defense had already reactivated the moribund Proliferation Counter measures Working Groups which began a study of the threat posed by third world Scud upgrades and Scud export
by the USSR\textsuperscript{17}. The Bush Administration embraced the new threat with a certain energy, and in concurrence with a DOD proposal, President Bush in his State of the Union Address on January 29, (1991) announced that the mission of the SDI would be changed to reflect the new realities. In a multipolar world, he noted, regional threats were likely to impinge negatively upon US security concerns. It was more than likely that such regional bullies with aggressive designs would be armed with missiles of the Scud variety, possibly with chemical, biological or nuclear warheads. In the case of aggression against a US ally, the US would be hamstrung on how to wield deterrence against an enemy who had no clear defence policy or was used to the rigid rules of deterrence. Moreover, a dictator would be less likely to be deterred by the possible sacrifice of a section of his population (especially if a religious spin was given to the conflict) and thus his `cost benefit' calculus would be impossible to predict. On the other hand, since the survival of the United States would clearly not be an issue. The mission was thus changed from defense against large scale soviet attack to "providing defense against limited ballistic missile strikes, whatever their source\textsuperscript{18}"

The call for defenses against missiles was backed up by diverse groups, both from within the government and without. One of the most vociferous was a group led by none other than the Director of the SDIO, Lt. Gen Malcolm O'Neil, who called for both a nation wide defense and a global

\textsuperscript{17} Jane's Defence Weekly, 16 November 1991 p.8

Outside the Pentagon, he was supported by the 'proliferation pundits'. The former Director of the SDIO, Henry Cooper warned frequently of the dangers inherent in abandoning the NMD. Keith B. Payne, a well-known analyst, wrote repeatedly of the folly of waiting for a capability as had proved disastrous in the case of Iraq. Dr Kathleen Bailey, previously ACDA Assistant Director (and later with Lawrence Livermore Laboratory) wrote of the dangers attendant to the healthy underground missile market, and the increasing level of technology available in the dual use area. She wrote on the necessity to give the 'highest priority' to missile defenses against a threat which was clearly growing. Among analysts Leonard Spector warned of the destabilizing effects of missile proliferation in the third world (pointing out in 1990 that the Indian Army had ordered the Prithvi for deployment). Lewis Dunn first articulated the thesis that was to so dominate debate on proliferation) that third world countries were inherently incapable of managing the intricacies involved in dealing with nuclear weapons and their carriers. Within the policy making structures were powerful Senators like William Cohen (R-Maine) Richard Lugar (R-Indiana) and John


Warner (Virginia) who criticized the Bush Administration for not seeking changes to the ABM Treaty. Some of the hype surrounding missile proliferation is apparent in an early submission in the Senate by Mr. John Herschel Glenn (D- Ohio) who titled the new spread as the "weapons of hell" quoting a op-ed piece by Mr. Rosenthal from the May 12, 1989 issue of New York Times.²³ Pointing to a poll that showed that fully 76% of those interviewed regarded proliferation as a "extremely" or "very serious threat" to national security, he demanded that the voice of the American people be heard and the President act upon this. Noting that today’s friends could be tomorrow’s enemies, he also pointed out that Pakistan, which had received tens of millions of dollars of aid, had been accused of acquiring US origin tritium and lasers from West Germany, even as it’s Army Chief boasted that his “recently tested surface to surface missiles are extremely accurate systems that can carry a payload of over 500kg” (presumably the M-11 test).

²⁴In the House were also Heads of powerful Committees like Congressman Curt Weldon (R- Pa.) a member of the House Committee on National Security, and chairman of its Military Research and Development Subcommittee, all of whom were favourable to the enunciation of the "rogue state" threat. Yet other powerful patrons were pointed out as being from the military industrial lobby who were shielded effectively by members of the Congress. As John Pike notes “Industrial interest in anti-missile programs is


²⁴ Ibid.
long standing and tens of billions of dollars have poured into corporate coffers (with tens of thousands of dollars recycled into Congressional campaign coffers) over the past dozen years.²⁵ The table below outlines some of these contributions

Table 2.1 Top house recipients of PAC contributions by Ballistic missile Defense contractors
January – June 1995

<table>
<thead>
<tr>
<th>Rank</th>
<th>House Member</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>John P. Murtha (D-Pa)</td>
<td>$16,000</td>
</tr>
<tr>
<td>2</td>
<td>Charles Wilson (D-Texas)</td>
<td>$15,500</td>
</tr>
<tr>
<td>3</td>
<td>Robert L. Livingstone (R-La)</td>
<td>$15,000</td>
</tr>
<tr>
<td>4</td>
<td>Jerry Lewis (R-Calif)</td>
<td>$12,000</td>
</tr>
<tr>
<td>5</td>
<td>Newt Gingrich (R-Ga) Speaker</td>
<td>$10,000</td>
</tr>
<tr>
<td>6</td>
<td>W.G “Bill” Hefner (D-NC)</td>
<td>$9,250</td>
</tr>
<tr>
<td>7</td>
<td>Floyd D. Spence (R-SC) National Security Committee (chr)</td>
<td>$9,000</td>
</tr>
<tr>
<td>7</td>
<td>Norm Dicks (D-Walsh)</td>
<td>$9,000</td>
</tr>
<tr>
<td>8</td>
<td>Robert S. Walker (R-Pa)</td>
<td>$8,500</td>
</tr>
<tr>
<td>9</td>
<td>Duncan Hunter (R-Calif)</td>
<td>$7,500</td>
</tr>
<tr>
<td>9</td>
<td>Jane Harman (D-Calif)</td>
<td>$7,500</td>
</tr>
<tr>
<td>10</td>
<td>Herbert H. Bateeman (R-Va)</td>
<td>$7,000</td>
</tr>
</tbody>
</table>

Those marked in **Bold** denotes National Security Appropriations subcommittee members. Those marked in *Italics* denotes National Security Committee members.


Responding to this debate, the Secretary of Defense commissioned a study on how the SDI cold be restructured to meet these new challenges. The April 1990 "Cooper study" recommended changes based on the threats evolving scope and size. It recommended that US missile defenses should provide worldwide protection against relatively small attacks, whatever the source. Although "concerned with the accidental launch of Soviet missiles" nonetheless it chose to concentrate on the third world threat. Based on this, the SDIO revised its focus to a BMD Architecture that could destroy "with high confidence"\(^{26}\) up to 200 reentry vehicles (RV) using a mix of non nuclear ground based and space based kill vehicles. This architecture was meant to protect US friends, allies and forces abroad, as well as the US homeland.

All this hype surrounding the issue led the Bush administration to submit a budget (FY1992) that would increase SDI funding by 66% almost to 5.2bn. The new scaled back concept was the "GPALS" (Global Protection against Limited Strikes) a variation of a December 1989 proposal put forward by Senator Sam Nunn called the Accidental Launch Protection System – which as the name suggests – had only envisioned a threat from poor command and control over Soviet missiles.

In a strange twist, even as the START Treaty was being signed the Senate passed a bill endorsing a single Treaty compliant ABM site (North

Dakota) and urged immediate renegotiations of the ABM Treaty. In a move described as 'modest' by supporters, the Senate passed its version of the Defense Authorization Act (FY1992) on August 2, 1991 allotting one billion dollars more than the House ($4.6bn). The Missile Defense Act of 1991 authorised the deployment of an ABM system that would include 100 ground based interceptors, and called also for a "highly effective theatre missile defenses (TMD's) to forward deployed and expeditionary elements of the Armed forces of the United States and to friends and allies of the United States". The threat was identified as third world attacks, and accidental and unauthorized launches of ballistic missiles. This marked the first Congressional inputs into a response against the new American propounded rogue state doctrine. It also marked the Congressional desire for a re-negotiation of the ABM Treaty to allow a "broad" understanding. However, this was not one that was to be easily shrugged off, since it remained in the eyes of many, the "cornerstone" of arms control.

27 Washington Post, 2 August, 1991
28 Ibid. In November 1991, Deputy Defense Secretary Donald Atwood ordered the establishment of TMDI under the auspices of SDI in response to pressure from Congress which wanted to see more co-ordination in funding R&D for theatre defences. See for a report Jane's Defence Weekly, February 16, 1991.
Table 2.2
Theatre Missile Defence Programmes

<table>
<thead>
<tr>
<th>US ARMY LOWER TIER</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>PATRIOT PAC-2</td>
<td>Deployed on an emergency basis from 1990 onwards</td>
</tr>
<tr>
<td>Allies operating PAC-2</td>
<td>Netherlands, Germany, Israel, Kuwait, Saudi Arabia and Japan</td>
</tr>
<tr>
<td>Patriot PAC-3</td>
<td>Post Gulf war Quick Reaction Programme (QRP) /Guidance Enhancement improvement (GEM) provide increased lethality and coverage for the defence of large urban areas and large and small military targets against ballistic and possibly cruise missiles. US army in S.Korea may have these</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>UPPER TIER</th>
<th>DESCRIPTION</th>
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</thead>
<tbody>
<tr>
<td>THAAD UOES</td>
<td>The Theatre High Altitude Area Defense (THAAD) User Operational Evaluation Systems (UOES) is a rapidly deployable, air transportable, prototype consisting of four launchers, two ground based radars, two battle management suites. It is slated to intercept ballistic missiles outside and inside the atmosphere and is designed to be capable of taking two shots at attacking ballistic missiles. This capability would also be enable lower tier systems like the Hawk and Patriot) to have this shoot-look-shoot capability. The THAAD missile is a hit to kill missile which is expected to neutralise some or all of the destructive effect of WMD missiles warheads</td>
</tr>
<tr>
<td>THAAD FUE</td>
<td>The First Unit Equipped (FUE), an improved version of the UOES will militarise the UOES Design and upgrade certain components, such as the infrared seeker, the radar and BMC3.</td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th>US marine Corps – lower tier</th>
<th>DESCRIPTION</th>
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</thead>
<tbody>
<tr>
<td>Improved HAWK</td>
<td>Upgrade version of HAWK will provide ATBM capability by Phase 3 improving the radar, the missile and though development of the Air Defense Communications Platform –1. Phase 3 allows for near term defense of amphibious point of disembarkation and other critical theatre targets</td>
</tr>
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<table>
<thead>
<tr>
<th>US navy lower tier</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lower Tier</td>
<td>Consists of Standard missile –2 Block IVA interceptors deployed arborad two Aegis (Navy Area Defense) cruisers. The missile with UOES have a new terminal infrared seeker, fuze, and warhead</td>
</tr>
<tr>
<td>UOES</td>
<td>The Aegis SPY-1 radar will receive upgraded software and weapons and command detection system. Navy Lower Tier will provide a mobile seaborne Patriot like coverage for ports, coastal cities, and airfields</td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th>Upper Tier</th>
<th>DESCRIPTION</th>
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<tbody>
<tr>
<td>Upper Tier</td>
<td>Slated to provide coverage similar to THAAD, and also offers ascent phase interceptability in cases where Aegis ships can be positioned near the launch point and</td>
</tr>
</tbody>
</table>

82
The kill vehicle will possibly be a maneuvering hit to kill warhead called the Lightweight Exoatmospheric Projectile (LEAP).

<table>
<thead>
<tr>
<th><strong>US Air Force</strong></th>
<th></th>
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<tbody>
<tr>
<td>Airborne Laser (ABL)</td>
<td>ABL Boost Phase Intercept system designed to engage enemy TBM's when their rockets are still firing and still over enemy territory. Deployed on a Boeing 636.</td>
</tr>
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<table>
<thead>
<tr>
<th><strong>NATO – Lower tier</strong></th>
<th></th>
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<tbody>
<tr>
<td>Germany - Italy –US Medium</td>
<td>TMD system designed to provide US and NATO maneuver forces Air system Defense (MEADS) with 360 degree protection against cruise, ballistic missiles and UAV's. Transportable on C-130 aircraft, and will be the replacement for Hawk, and will have 3-4 more missiles per launcher than Patriot.</td>
</tr>
</tbody>
</table>

Note:
1. Many of these programmes are legacies of the SDI. For instance the BPI concept has evolved from the Space Based Interceptor system which was selected from demonstration and validation in August 1987. Many have also re-emerged under new names. The new PAC-3 missile was formerly called the ERINT (Extended Range Interceptor).
2. The Improved Hawk –1 is already deployed in over 22 allied countries.


The focus shifts: national to theatre missile defence

Almost all among a cross section of those opposing the move did agree on the need for some protection against missiles, but the lessons that they drew out of the Gulf War led them to point out to the desirability of keeping such a defense limited to the protection of US forces and allies abroad. The then Chairman of the Senate Armed Services Committee Les Aspin preferred the more modest option of TMD, while analysts in the arms control arena formed the backbone of the fight against missile defenses. Stephen Schwartz, Director of the US Nuclear Weapons Cost Study at Brookings, who had consistently opposed the SDI, pointed out that the actual amount spent on SDI and Theater Missile Programs since 1983 was
in the area of $51 billion. He noted “proponents of the latest incarnation of ballistic missile defenses would do well to learn the costly and checkered history of these efforts before calling on taxpayers to finance yet another missile defense program”\(^3^0\). A landmark study on a more conservative note however also pointed in the same direction. The National Academy of Science’s Committee on International Security and Arms Control brought out a report that warned against NMD and its implications for further reductions in the arsenals of the US and Russia. It also pointed out that China had made its opposition known to both any kind of missile defences, and warned that such action could spur China to increase its missile holdings, increasing the threat to the US, Russia and India\(^3^1\). Others against NMD were Gerard Smith, justly remembered as the doyen of the ABM Treaty when in government, and Congressional Research Service experts like Steven Hildreth who declared that no third world country would soon have missiles able to strike the United States, and criticized references by Secretary Cheyney on a possible missile attack against Key West by the Brazilians. He was joined by Peter Zimmerman of the Carnegie Endowment of Peace, who also scorned the idea of continental defenses\(^3^2\).

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\(^3^2\) Arms Control Reporter, 575.E.32.11-91.
Overall therefore, most experts preferred to money spent on Theatre missile systems. Commenting on the scramble to find new enemies, Former Secretary of Defense Harold Brown observed that third world and terrorist weapons were far more likely to be delivered by an aircraft, ships, or in the case of terrorists, in packing crates across American borders.33 Other critics like Les Aspin (Chairman of the powerful House Armed Services Committee) were concerned that the SDIO was concentrating its efforts on technically unproven systems, at the expense of the theater missile program34. This was a criticism that was to resurface with regularity with the debate divided on those who saw military and financial sense in a theater system and those who continued to call for land based systems. More to the point, others noted that the chance of an attack from a third world country being minuscule "...it appears that threat estimates are being slanted for political reasons"35. The debate on the threat was to increase within two years, as the cry for a national missile defense grew more strident and North Korea tested longer range missiles.

These criticisms as well as an additional event shifted the focus firmly to theatre missile defence. In mid 1992, the SDIO suffered a body blow. The Pentagon 'watch dog' body under David Chu, the assistant Secretary of Defense for Program Analyses and Evaluation testified that is order to

33 Ibid.
quicken deployment, the SDIO had planned to skip early tests and deploy prototype hardware, rather than final operational versions. The SDIO plan involved granting contracts to build 40 interceptors before any design work on tests had been completed\textsuperscript{36}. Further shocks were in store for what was already a controversial program. The \textit{Washington Post} of 15 September 1992 quoting a GAO report, said that the SDI had overstated the success of four tests. In a 17 March 1991 test of Brilliant Eyes, the original test goals had been reduced, allowing a 90% successful claim. Other tests like the Exoatmospheric Kill Vehicle interceptors had also not demonstrated the ability to discriminate real warheads from decoys, though the organization claimed it could. By November, the SDIO was being pilloried as a "Strategic Deception Initiative"\textsuperscript{37} as more information about early testing irregularities and outright deception began to filter into the press. Subsequent investigations revealed that the first direct impact intercept of a mock RV had been facilitated by 'preheating' the reentry vehicle to make a better target, and the possible use of a homing beacon on the target to allow better tracking in the initial stages. While the Soviets may or may not have been convinced, it was established that Congress undoubtedly was.

By mid 1992, allocations for SDI had been scaled down, the theater program de-linked from SDIO, and Congress underlined the centrality of the ABM Treaty, thus relegating the National Missile Defence to the background.

\textsuperscript{36} \textit{Arms Control Today}, May 1992.p.18.

\textsuperscript{37} John Pike in \textit{Arms Control Today}, November 1992.p.3.
Funding tilted heavily to TMD, and as the Director of SDIO bitterly remarked, "we would be embarked upon a serious acquisition program to provide defense for our allies, but not to defend America."

One reason for the change in attitudes, apart from the cost overruns and other charges, is ascribed to the Report by CIA Chief Robert Gates on 15 January (1992) that came to the conclusion that the United States faced no immediate threat for a period of at least 10 years. The report raised a howl of protest from the SDIO lobby which pointed to the fact that the intelligence community had failed to adequately assess Iraq’s ability to covertly produce nuclear weapons. But given the soaring deficit, expensive programs were unpopular especially when a new President campaigning on a ticket that promised a turn round of the economy, came to the White House.

The Threat Scenario for TMD

The new Defense Secretary was clearly in favor of TMD, even as he downplayed the long range threat. In the "Report to the President and the Congress" Les Aspin clearly identified WMD, and their delivery systems in the hands of rogue states or a terrorist groups as the new danger to the US.

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and its allies. He formally launched the Counterproliferation Initiative, and
gave the highest priority to the new thrust towards the development of
theatre missile defences (TMD). The report warned of more than 25
countries, many of which were adversaries of the US, who possess or may
be developing NBC weapons. Additionally, today more than 15 countries
have ballistic missiles. It was estimated that by the year 2000 this figure
could rise to twenty. Missile defenses it noted, would a) support broader
efforts to discourage the spread of ballistic missile technologies and
weapons of mass destruction b) reduce incentives for proliferators to
develop, acquire or use ballistic missiles and weapons of mass destruction
by reducing the value to offensive missile systems by destroying attacking
missiles, thus helping to deny realization of a belligerent's objectives. And
most important was c) The ability to extend protection of allies and friends in
a region can have a significant effect toward mitigating their desire to
produce their own offensive WMD system and can encourage their
willingness to act conventionally with the US in any conflict. (italics mine)

The emphasis on the defense for US troops deployed abroad was
underlined in the change of name from SDIO to BMDO (Ballistic Missile
Defence Organization) according to the report.

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42 Ibid.
The rogue state was also the immediate focus of the 'Bottom-Up Review' (BUR) – the landmark report that was to form the basis for the restructuring of US forces for the post-cold war, as well as reevaluating the threats and opportunities that the country faced in the post-cold war era, warning of WMD but shifting the focus more on chemical and biological weapons, especially in areas of potential engagement by US forces, e.g., North Korea, Iraq, and Iran. Given this proliferation of WMD capabilities and their delivery systems, the review called for the development of capabilities to locate and destroy WMD storage, production, and deployment facilities of potential aggressors and defend forward deployed forces from such weapons. Future combat operations were seen to involve the heavy use of precision guided munitions, cruise missiles, both for establishing air superiority and for destruction of hostile missile sites and C3 capabilities.

The Review again tilted the missile defense issue firmly towards theatre missile defense, allocating approximately $18bn with two-thirds going towards TMD. This was a clear shift from NMD to TMD, with the effort clearly trimmed both due to budgetary reasons, as well as in deference to arms control priorities. After a period of almost complete cooperation with Washington, Moscow appeared to be opposed to any changes in the ABM Treaty, - the one vital restraint that held back not only national missile

defenses but also certain programmes of TMD which were thought to have capabilities against the classed "strategic" missiles.

**Negotiating the Expansion of the ABM Treaty**

As noted earlier, the ABM Treaty while restricting NMD disallowed the testing of non-ABM missile launchers or radars capabilities "in an ABM mode". Agreed Statement "D" (taken with Art 2, which defines an ABM system) also noted that "in the event ABM based on other physical principles and including components capable of substituting for ABM interceptor missile, ABM launchers or ABM radar are created in the future, specific limitation on such systems and their components would be subject to discussion" components based on other physical principles (never defined) that are capable of substituting for the traditional components. Neither was the exact terminology of "testing in an ABM mode" defined. This made it clear that any NMD/TMD development would need not only Russian agreement, but also that of the three states of Belarus, Kazakhstan and Ukraine who were successor states of the former Soviet Union.

Early attempts to get the then Soviet Union involved in the GPALS concept had been moderately successful. As Secretary of State James Baker was reported to have noted, the Soviets would like the idea of the

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44 Text of ABM Treaty: http://www.fas.org
GPALS, since they faced a greater threat of missile assault than the US\textsuperscript{45}. President Gorbachev was intent on greater actual cooperation in missile defence, particularly in early warning information\textsuperscript{46}. Though the Washington Post\textsuperscript{47} reported that Soviet Generals were willing to cooperate, experts in the Soviet Defense Ministry noted that this was simply an effort to smuggle in SDI through the backdoor\textsuperscript{48}. Interestingly disarmament however continued, and the US withdrawal of tactical nuclear weapons from Europe was completed in a burst of goodwill, with the Russian media noting the event as a sign of further receding of the danger of nuclear war.

However this goodwill soon changed to suspicion as Congress passed the Missile Defense Act, and debates in the House seemed to be unnecessarily hostile. A national defense was quite different from a "global protection" scenario, and President Yeltsin very early on reaffirmed Russian allegiance to the ABM calling it "an effective constraint on the strategic arms race and an important factor in maintenance of strategic stability". He also called for reciprocal elimination of existing Anti satellite weapons, and a total ban of such weapons\textsuperscript{49}. To most Russians, it seemed strange that the Americans should be going in for a defense at the very time that Russia was

\textsuperscript{45} Fred Barnes in The New Republic 1 April 1991 in Arms Control Reporter 575B.401.idds (c) 5-1991

\textsuperscript{46} Gorbachev proposed development of a joint ABM early warning system in a letter to the G-7. Space News, 7 October 1991.


\textsuperscript{49} Rossiskaya Gazeta, 31 January, 1992.
economically and militarily weak. Foreign Minister Andrei Kozyrev told the Conference on Disarmament for instance that "We firmly advocate the preservation of the Soviet-US ABM Treaty, and non deployment in outer space of weapons of any kind." The idea of a "rogue state" (though publicly subscribed to in Russia) however was not one that went very far in strategic circles. In fact, the arguments both for and against followed almost exactly the same lines as that in the US. Renowned analysts, like Alexei Arbatov, noted that third world threats were more likely to arise from a nuclear weapon carried from an aircraft, ship or mobile operational tactical missiles. He suggested that the vast amounts of money that was scheduled to be spent on ABM research would be better put to use as economic 'stick and carrot' regimes in support of non proliferation, as well and systems (space based included) to monitor the use of nuclear technology and materials. His most telling point (and one which was the backbone of European displeasure with the idea) was what effect a protection system would have on the neighbors and allies who would remain exposed. He warned that the Americans only interest in 'joint action' was limited to a joint revision of the ABM Treaty and nothing more. However prominent analysts like Alexander Savelyev (Moscow Institute of Strategic Studies), argued for the complete scrapping of the ABM, since it reduced the scope for increased

US-Russian cooperation, even while it increased security rather than otherwise\textsuperscript{52}.

In June 1992, at the Washington Summit, the two President's agreed to examine the potential for sharing of early warning information through the establishment of an early warning centre; a high level bilateral group was set up (the so called Ross – Mamedov group) to conduct negotiations and agree upon main elements of the GPS concept, as well as review possible venues for cooperation. Lastly they were to examine the development on a legal basis for 'the possible changes to existing treaties and agreements'\textsuperscript{53}.

Various working groups were set up - one group was to develop an outline, structures, and specific features of a global defense system. Another group would produce joint assessments of trends in the proliferation of WMD and their delivery systems. Sub groups would identify fields of research and cooperation in the fields of early warning and tactical ballistic missile defense\textsuperscript{54}. In practice however, officials remained cautious of sharing information, and beyond sharing information on space launches and exchange of cosmonauts.

However though a joint statement between Bush and Yeltsin noted the "new threats" to international security, including the growing threat to

the world community created by the proliferation of ballistic missiles. Actual resistance to sharing of information or technology was quickly apparent. European countries began to ask whether this sharing would downgrade the effectiveness of their own missiles. By 1992, a marked change became apparent in the State Department and DoD. Defence Secretary Cheyney was noted as being "hesitant" on support for a joint system. After that period, interest in cooperation in this field waned.

As the ABM Treaty talks dragged on domestic pressure in the US on suspending the demarcation talks increased with a majority of Republican senators backing the view held by Senate majority leader Bob Dole that US interests were in effect being held hostage by Russian intransigence (they also resented the Administration tendency to go over the heads of the Senate). As a follow up to discussions with the National Security Advisor Anthony Lake, thirteen Republican senators firmly rejected the 'cold war notion that defenses breed instability' and argued that a) TMD limitations so far were the result of internal government practice and therefore should not


56 A British defense ministry source was quoted as noting that "we do not want the Russian to end up with anything they do not have already which could be damaging to Trident or the French nuclear deterrent." Both UK and France were reported to have informed the US that any cooperation must not include SDI technology. On 25th May 1992, Malcolm Rifkind noted that he would raise the matter at the NATO Nuclear Planning Group meeting in Brussels. Arms Control Reporter 575.B.417.idds 6-92.


form the basis of bilateral negotiations (b) there was little or no risk of a 'breakout' of Russian defence capabilities (d) there was little likelihood that the Administration's position that a clarification now could lock in Russia's future compliance (in the event of an unfriendly regime) (d) Expectations of Russian 'concessions' reflected a dangerous readiness to subject national security interests to a Russian veto. An implicit threat was contained in that - in case of failure by the Administration to go by these findings - all legislative options would be used - in other words alternate 'walking back' proposals would not be funded.

In February 1995, Senator Thurmond introduced the "Ballistic Missile Revitalization Act". In presenting the bill the urgency of this revitalization was underlined as a proper response against the Saudi acquisition of Chinese CSS-2 missiles and the Iranian attempts to acquire nuclear weapons in the "black-market". It accused the Clinton administration of bargaining away not only strategic systems but also the ability of the United States to defend her troops. This was followed by the formalized presentation on April 6, 1995, of the 'Theatre Missile Act of 1995' which prohibited funding for any programme that would apply the ABM Treaty or any limitation or obligation

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59 Text of letter from the office of Senate Majority Leader (signed by 13 Republican Senators) to President Clinton, March 8, 1995. Ibid.

60 Ibid.


62 Congressional Record, Senate 6 April, 1995, page S5494
under the Treaty, to the R&D, to TMD upgrades, or components. Meanwhile the BMDO was funded at roughly $3bn, $600mn more than requested by the Administration, and the NMD received $745.6 (requested amount $370.6mn). Pressure further mounted with calls from various 'cold war warriors' like Henry Kissinger to give notice of US intent to withdraw from the Treaty.

It was not until 1995 that an understanding was reached, where the double restrictions remained, the parameters set by the US were agreed to as a 'demonstrated' interceptor velocity of 3km/sec (the actual SCC document and the parameters agreed upon remains classified). TMD missiles with a velocity higher than 3km/sec would be judged by each side as to its compliance. Various CBM's were also put into the understanding,

- Advance notification of launches of TMD interceptor missiles involving a ballistic missile target, including a test date launch window and test location.
- Observation visits
- Exchange of information on TMD systems, components, programs and other information.

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63 Ibid.
64 Arms control Reporter 603 B. 260, 12-95.
- Notification of all garrison areas for TMD systems within its national territory, including homeport locations for naval TMD, and garrison military installations for other TMD.

- Annual notification for routing deployment areas for TMD systems, including areas outside the national territory.

- Assurances by each side that it will not deploy TMD system in number and locations that could pose a realistic threat to the strategic nuclear forces of another side.

- Annual assessments of missile threats, and description of how the scale of its TMD deployment is consistent with such threats.

- Consultation if each side expressed a security concern regarding unusual military activities of another side regarding its TMD systems, with a view to resolving any related concerns.\(^{66}\)

With this agreement, and the Iranian test of the Shahab-3, Congress passed the "Theatre Missile Defense Improvement Act of 1998" based on the Curt Weldon bill (H.R.2786 with 106 co-sponsors on October 31, 1997)\(^{67}\). This called for an accelerated program of Theatre Defense based on the premise that medium range missile development had progressed far more rapidly than anticipated, serving to offset American conventional superiority. It was felt that these asymmetrical strategies used by these countries would include weapons of mass destruction and large quantities of low cost cruise and ballistic missiles. This could be used to "intimidate US

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\(^{66}\) Text of Agreement in *Arms Control Reporter* 503.B.262, 12-95.

\(^{67}\) Theatre Missile Defense Improvement Act of 1998, Congress 105th, Session 2, House of Representatives, Rept105-468.
friends and allies, diminish US regional influence, or deter US involvement in a theatre conflict. The act included the cost estimate of the Congressional Budget Office and authorized funds for the following programmes:

1. Joint composite tracking network
2. Patriot remote launch capability (remote launch doubles the "footprint" of defended territory)
3. PAC-3 and navy areas defense tests (specifically for the range of the Iranian missiles)
4. Early warning enhancement (integration of the SHEILD system)
5. PAC-3 production rate enhancements
6. Improved interoperability of the Israeli Arrow with US theatre missiles systems
7. Secretary of Defense to explore additional actions to counter these threats
8. Additional cooperative measures between DOD and Israeli MoD to enhance Israeli defensive capability

It noted that US forces and allies would face a period of vulnerability to Iranian and North Korean missiles, since the PAC-3 was not to be available for deployment before later 1999. Clearly the rapid development of Iranian

68 Ibid.
missiles had not been taken into account when the 1998 budget was crafted.

The perception of threat was however to become a contentious question, with the NMD proponents fighting back to regain lost ground. As the funding fluctuated or dropped, intelligence estimates changed with them, with a perceptible rise and fall of the number of actual threats to CONUS (Continental United States). Meanwhile a host of other measures were moving alongside that ensured a continued role for the primary weapons of the US arsenal – the nuclear weapons:

The Offense: The Expansion of the Deterrent

Well before TMD came on to public consciousness, the "rogue state" had already been identified as a potential threat. As noted earlier, nuclear planners had already begun to evolve a new targeting doctrine by 1989. In 1990, The Joint Chiefs of Staff published the Net Military Assessment which pointed to "increasingly capable Third World Threats" as a new justification for maintaining US strategic and non-strategic nuclear weapons. Even as the Soviet Union countries were formally removed from the SIOP (Single Integrated Operational Plan), Secretary of Defense Cheyney in his testimony to the Senate Appropriations Committee first noted the threat from WMD as a formal rationale for keeping US nuclear weapons.69

With the end of the Gulf war, the Defense Secretary issued the top secret "Nuclear Weapons Employment Policy (NUWEP) which formally tasked the military to plan for nuclear operations against nations capable of developing WMD. This resulted in the SIOP-93, the first overall nuclear war plan formally to target Third World WMD targets. This was overtaken by events as Presidents Bush and Yeltsin agreed upon further cuts to nuclear forces, which resulted in the reviewing of the NUWEP and the SIOP.

Meanwhile STRATCOM (Strategic Command) realizing that the US arsenal was unsuited to dealing with this new threat had already studied the problem and concluded that the hard ware and software had been configured for the western hemisphere only." Key target data processing capabilities currently have not capability south of the equator. Nuclear deterrence in the post cold war era demanded changes on a monthly—sometimes weekly—basis. The solution was the creation of a completely new nuclear war planning apparatus based on "adaptive planning: a concept which was then adopted into NATO nuclear planning as well. A special groups tasked with this, set up what is known as the "a living SIOP", a real time nuclear war plan which could receive virtually instantaneous war fighting commands and upgrades. As STRATCOM commander General Butler notes in 1993" Adaptive planning challenges the headquarters to formulate plans very quickly in response to spontaneous threats which are

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70 Ibid.
more likely to emerge in a new international environment unconstrained by the Super Power stand off...To ensure their completeness these options consider the employment of both nuclear and conventional weapons¹¹.

The Nuclear Policy Review (NPR) which followed in October 1993 was to consolidate the process which had already taken place. Though originally tasked to take a re - look and revise the nuclear forces structure and infrastructure, and under the charge of Assistance Secretary Carter, it was assumed that it would follow the path of further cuts. However, after 11 months of work, the eventual report (where not even a final report was submitted) did nothing much in the way of realizing the “peace dividend”. It followed a policy of “lead but hedge” and categorically stated that the threat was from a proliferation of WMD, which required a strong and steady US nuclear arsenal⁷². The efforts of Carter and his special assistant to ensure that nuclear weapons could only deter nuclear use, and perhaps acquisition, was not met. Instead was the key inclusion – that nuclear weapons could be used as a last resort in response to non nuclear attacks remained.⁷³ In refusing to give stronger security guarantees, the US in fact retained 'first use' and in essence allows the use of nuclear weapons against non nuclear states/nuclear armed states/states allied with a nuclear armed state in a


⁷³ Arms Control Today, Nov 1994 p.27.
variety of contingencies. In essence, the understanding of what constituted WMD—which was traditionally taken to be nuclear, was expanded to include chemical, biological and most lately radiological weapons\(^74\) (that is, assuming a state targets the US with nuclear waste). The negative security guarantees that underpins the NPT (Non Proliferation Treaty) has therefore been sidelined—since the NPT only refers to nuclear weapons states. Allied with this is a tendency to see nuclear weapons as a "safe" option to be used only against hardened military targets (like underground chemical complexes or missile sites). Though the NPR noted that the US "has not new nuclear weapons programme" this was not strictly true. At least two new warheads were being prepared for the new mission, while a range of conventional weapons were to be identified in following policy initiatives.

In the sphere of counterproliferation the NPR called for effective TMD, and supported funding for real time detection and characterization of BW\&CW agents, underground structures detection, and destruction of hard underground target including advanced non nuclear weapons\(^75\). The NPR which essentially takes a middle of the road policy provided for the deployment of Tomahawk Cruise missiles armed with nuclear weapons to meet regional threats, and hinted that the single warhead ICBM could also

\(^74\) The definition of WMD in the new JCS document calls it "Weapons that are capable of a higher order of destruction and/or being used in such a manner as to destroy large numbers of people". Joint-Pub.3.12.

\(^75\) Nuclear Policy Review, note 72.
play a crucial role. The Air Force retained a capability to quickly field nuclear weapons, and from the BUR recommendations it appears tactical nuclear weapons as well. These policies went against a series of studies that advised a conventional response to WMD use, and the advisability of using the overwhelming conventional capability as a deterrent. In a climate which saw the high noon of 'conventional deterrence' the NPR - which had been announced by Les Aspin as incorporating revision of policy[and]doctrine - under Secretary William Perry turned into the same well trodden path. These policies were given an added edge with the counterproliferation initiative which may be discussed separately.

Counterproliferation

On December 7, (1993) Les Aspin launched what appears to have been a largely uncoordinated national security initiative what was later to be known as the Defense Counter - proliferation Initiative (DCPI). First outlined at a speech at the National Academy of sciences, Aspin identified a five point counter-proliferation (CP) drive.


77 "We believe ... a limited number of Air Force multi role aircraft must remain capable of delivering theatre weapons" Report on the Bottom Up Review, Office of the Secretary of Defense, US GPO, Washington, DC, Oct 1993.

78 Marc Dean Millot, Roger Molander, Peter A. Wilson "The Day After..., Rand MR-253-AF, 93.

1) recognized CP as a new mission, not the old cold war mission

2) the tailoring of new US weapons for the destruction of WMD

3) re-examine the strategies used against the new kind of threat

4) focusing intelligence efforts on detecting WMD

5) ensuring international cooperation in curtailing the threat of such weapons

"The old nuclear danger we faced was thousand of warheads in the Soviet Union. The new nuclear danger we face is perhaps a handful of nuclear devices in the hands of rogue states or even terrorist groups. The engine of this new danger is proliferation."

As fleshed out in the Report to the President and Congress the DCPI was outlined as measures to

- Improve intelligence for monitoring and responding to the spread of WMD.

- Improve US ability to destroy, seize or disable arsenals of NBC weapons and their delivery systems.

- Develop ballistic missile and cruise missile defences, focussed on the deployment of advanced theatre missile defences to protect forward deployed US forces and provide technical readiness to construct a defense of the US if needed.

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80 Ibid.
- Develop better technology to detect weapons transported covertly into the US and elsewhere for terrorist purposes.

From this broad outline, the initiative was later clarified in May 1994 by Deputy Defense Secretary John Deutch (known hereafter as the Deutch Report). The report defined it as "the activities of the DOD across the full range of US efforts to combat proliferation, including diplomacy, arms control, export controls, intelligence collection and analysis, with particular responsibility for assuring US forces and interests can be protected should they confront an adversary armed with WMD or missiles".82

In May 1994, at the direction of Congress, a Non Proliferation Program Review Committee (NPRC) was constituted. This committee identified several key areas for study. These were intelligence, Battlefield surveillance, passive defence, active defence, counter force capabilities, inspection support, export control support, and counter terrorism. The initiative was, as the administration hurried to explain, was not a "stand alone" program but was designed to give added enhancement and utilization of existing resources. The underlying objective was to make CP one of the matters that was routinely given consideration within the Department's entire activities. Thus everything that the DOD did would be looked at through the CP mirror83.

83 Ibid.
This was further broadened in the same year (1994) with the so-called "Enhanced Proliferation Control initiative" (EPCI) which affected almost all branches of US activity. On 14 November 1994 the President declared a "national emergency" to allow restrictions on not only commercial transactions, but also to allow sanctions against persons or countries\textsuperscript{84}. This was such a broad and all encompassing piece of legislation that it even required that the President declare a "National emergency" by which these initiatives could apply to all department which dealt with dual use products. It also affected policy on Multilateral Bank Assistance as well as Foreign assistance, air transportation and a variety of other measures under the relevant acts\textsuperscript{85}.

The Joint Chiefs of Staff review of the Missions of the CINC's and Functions of the armed forces in support of CP policy, led to the President revising the Unified Command Plan on the basis of these and other recommendations, and assigning the CP mission to US Armed Forces as a military mission. This mission was assigned to the CINC's of those areas where proliferations most immediate impact would be felt. This measure would, according to the DOD, streamline the relationships between the various agencies involved in CP activity. The CINC's list of priorities for the successful completion of CP missions had on the top not

\textsuperscript{84} "Proliferation of Weapons of Mass Destruction" Executive Order #12938, Office of the Press Secretary, The White House, 14 November, 1994.

\textsuperscript{85} Ibid.
only enhanced ability to intercept cruise missiles even as the emphasis on ballistic missiles continued, but also the identification, characterization, and defeat (destruction) of underground targets. STRATCOM would provide ready plans for contingencies relating to threat of use of WMD weapons, and alternative scenarios.

These possible scenarios were clearly spelt out in the when in February 1996, Joint Pub 3-12.1 "the Joint Theatre Nuclear Operations" was released from the JCS. It essentially widens the possible use of nuclear weapons in a wide variety of Counter-proliferation roles. It clearly notes that when a regional commanded engaged in a military confrontation determined that nuclear weapons can achieve a military objective which could not be achieved by conventional means, that commander may request authority to use them. In November 1997 President Clinton issued a Presidential Directive PDD - 60 which gave official sanction to this expansion of the deterrent. According to press reports, the PDD allowed for the use of nuclear weapons against rogue states. Special Assistant Robert Bell clarified later that nuclear weapons could also be used against a chemical or biological weapons attack. In other words the negative security assurances on which the NPT which lay at the heart of the NPT process was completely sidelined. Additionally it appears that the PDD also broadened the scope of target in China to include conventional forces and

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industry— the very categories that had been eliminated from the Russian target pool. It is also reported to have included specific regional contingencies (like Libya, Iran etc.) where US nuclear forces could be directed to respond to attacks by WMD in future.

While there were many separate counter proliferation efforts underway in the Pentagon, none addressed the full spectrum of WMD targets in the context of actual military capabilities. Thus was sought to be rectified by the creation of what were known as Silver Books. The Silver Books\(^87\) are plans for military strikes against WMD facilities in a number of "rogue" states such as Iran, Iraq, Libya, and North Korea. Targets included chemical, biological and command, control and communications installations\(^88\). With this STRATCOM tried to gather to itself the primary CP role, but failed after the Silver book project was abandoned. STRATCOM thereafter reversed into its role of nuclear planning in coordination with regional commanders and their planning staff.

**The Weapons : Nuclear and Conventional Weapons**

*Nuclear*

Adding the Third World to the target pool means upgrading weapons systems. The Navy installed a new SLBM re-targeting systems that will enable Trident submarine to speedily, accurately and reliably

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\(^87\) "Silver" is an abbreviation of Strategic List of Vulnerability Effects and Results. See Kristensen, note 55.

\(^88\) Ibid. p.15.
retarget missiles to targets. In short the living SIOP was being made operational, (this a month before the Berlin Wall fell) Thus the argument often heard that nuclear re-targeting at new threat will take awhile appears to be a facile one. Similarly, the Air Force is reported to be spending more than $4 billion on upgrading its Minuteman III ICBM’s for equipping the missiles with the Rapid Execution and Combat Targeting system which will hold at risk the hardest enemy targets⁸⁹. The B-2 bombers are also being upgraded for CP purposes. Apart from conventional munitions, it will be the designated carrier for the newest nuclear bomb the B61-11. This has enhanced earth penetrating capabilities and is of low yield. The B61-11 was seen as a “replacement of the aging B53 gravity bomb, and had a chequered history since 1993 when it’s development was recommended by the office of the Secretary of Defense/Atomic Energy. After a period when such weapons development were banned by Congress, the B61 was re-energized after this opposition went down, and was approved by NWC in February 1995. A total of 13 full scale drop tests, and certifications flight tests, complete retrofit kits were delivered to the Ai Force in mid December 1996. THE B61-11 may also be delivered in the glide bomb role, if research in Sandia National Laboratories bears fruit⁹⁰. Even before development, it was reported that the potential target had already been announced.- Libya’s underground alleged chemical weapons plant. The

B61-11 was confirmed as the “weapon of choice” by the Secretary of Defense for Nuclear Chemical and Biological Program in April 199691 – this in spite of the fact that Libya is both a signatory to the NOT as well as a member of the African Nuclear Weapons Free Zone, where the US as a signatory has undertaken not to use or threaten to use a nuclear explosive device.

Apart from this, the Energy’s Core Research and Advanced Technology Program Element Plans, scientists are reportedly researching “concept design studies” arising out of the experiences of the Gulf War that indicate potential military utility for types of nuclear weapons not currently in the stockpile. The NPR also provides for the deployment of Tomahawk Cruise missiles armed with nuclear weapons to meet regional threats, and hints that the single warhead ICBM could also play a crucial role 92 The Air Force retains a capability to quickly field nuclear weapons, and from the BUR recommendations it appears tactical nuclear weapons as well.

Conventional weapons

Contradictory to the general assumption, “Desert Storm” saw the use of only two air delivered “fire and forget” missiles – the HARM and ALARM – with most using laser guided glide bombs, and non of the area

91 “Nuclear Weapon only weapon of Choice” Jane’s Defence Weekly, 1 May 1996 p.3.
weapons used had advanced systems to continually update their trajectory for wind errors, or other departures from a given flight trajectory. Therefore it is not surprising that follow n plans opted for PGM’s (precision guided munitions). As a US General noted, “Overall, the Air Force, Army, Navy and Marine Corps now possess four times the precision weapons delivery capability that they had at the end of Desert Storm. In the future 100% of Air force bomb droppers will be precision weapons capable... advanced munitions combined with this fleet of precision capable aircraft will bring about a revolution in the ability of air power to project force on the modern battlefield.” Even if the “revolution” does not take place, it is however clear, that the US will not fight another battle of the same scale with the kind of weaponry used in “Desert Storm”. However on wars of a more limited scale or in cases of intervention the same class of missiles have been used, particularly the range of cruise missiles that are being used as the most popular weapon of “stand off intervention. The Tomahawk variants have been used against Libya (1986) in Iraq (1991 – 1998) in Bosnia (1995) and Afghanistan (1999).

Following are a listing of missiles that are likely to be used in future combat.

- BGM –109 Tomahawk: Mainly used in surface ships or submarines during DS(Desert Storm). It has a range of approx.

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700 Nautical miles, a payload of 1,000 lbs HE and fragmentation warhead or a cluster bomb. Guidance was by digitized scene matching correlation system (DSMAC). IT is the closest to a true all weather missiles, and emits little radiation.

- **Conventional Air Launched Cruise Missiles** These were converted nuclear armed ASCM’s used on the B-52 bomber. In DS is used a blast fragmentation warhead. It used a GPS and Inertial navigation to reach the target.

- **AGM-48E Stand off Land Attack Missiles** were launched from F/A-18’s or Navy A-6E, and was still in developmental stage. It used proximity or impact delayed fuze of the Harpoon, and aspects of the Maverick. A data link allows the missile to be fired by one aircraft and guided by another, positioned more than 60 miles away from the target.

- **AGM-65 Maverick** is a 500 of rocket propelled air to ground missile with a range of upto 15 miles (25km) IT come in four modes, two with elector optical guidance and two with infrared guidance. All must acquire seeker ranges before launch, and then are guided autonomously, and therefore has a launch and leave capability. The AB/C versions have shaped charges against small hard targets, but AGM-65G has a larger kinetic energy penetrator and 400 lbs fragmentation warheads for hardened hangars, bunkers and ships. (Over 5, 255 such missiles were fired by the US navy in DS against tanks and bunkers.)

- **AGM-62 B Walleye** is a glide bomb with a 2.015 warheads. A two way radio frequency data links allows the pilot in the release aircraft or another aircraft to control the weapon.
All these munitions are constantly being upgraded, and the thrust towards a conventional deterrence seems more possible now, given the overwhelming strength of the US in this area, relative to the "threat".

Meanwhile the extent and seriousness of the threat was still shifting, with the initial assessment of CIA chief Robert Gates receiving short shrift in follow on reports. The reception of the considerably scaled down threat – which was undoubtedly hostile from at least a section of Congress, is indicative of the strong biases, and powerful supporters for a new programme that would, in sheer scope and money involved, possibly even go beyond any previous military programme.

**Conflicting intelligence and the Rumsfeld reports**

In December 1996, the annual National Intelligence Estimate (NIE) was put forward for consideration. The NIE's are produced by the National Intelligence Council, an organization composed of 12 National Intelligence Officers who report directly to the Director of Central Intelligence (DCI). 94 In 1995 the NIE Report "Emerging Missile Threats to North America in the next 15 years" (November 1995) noted that "no country, other than the major declared nuclear powers will develop or otherwise acquire a ballistic missile in the next 15 years that could threaten

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94 Organizations participating in an NIC may include the Central Intelligence Agency, Defense Intelligence Agency, National Security Agency, State Departments Bureau of Intelligence and Research Federal Bureau of Investigation, the intelligence organizations and the Departments of Treasury and Energy, and the military services. See for further information see GAO-NSIAD-96-225 National Intelligence Estimates
the contiguous 48 states and Canada," an observation that immediately drew ire from the lobby that in fact declared the threats to be of far greater seriousness than the NIE claimed. In the House, a separate evaluation by the Committee on National Security found such estimates of 100% certainty was overstated, and moreover it did not quantify the certainty level of nearly all of its key judgments. In other words, it used unquantified words or phrases like "unlikely", "probably etc as against bettors odds of percentages) It also challenged its key assumptions:

- The MTCR would continue to significantly limit international transfers of missiles, components and related technology

- No country with ICBM's will sell them

- Three countries (not identified) all of which are assessed as being "high" in both technical ability and economic resources will be interested in developing an ICBM threat that could reach the US or elsewhere.

- A flight test programme lasting about 5 years is essential to the development of an ICBM

- A credible cruise missile threat was "unlikely."

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95 Report to the Chairman, Committee on National Security, House of Representatives, August 1996, GAO, National Security and International Affairs Division, B-274120.

96 Ibid.
The report raised a storm of disagreement in the House, with noted NMD supporters alleging that the report had been "politicized" and was overstated the level of certainty. While the debate itself had much to do with the NMD factor, the debate itself revealed how much the "Foreign missile threat had caught on as a serious issue in Congress. These disagreements led to the setting up of a Commission under the chairmanship of former Defense Secretary Donald H. Rumsfeld which was created by legislation in the FY 1997 National Defense Appropriations Act, and included six members nominated by the Republican leadership in Congress an three by the Democratic leadership. All were then appointed by the Director of Central Intelligence, George H. Tenet. The commission submitted it's 307 page report on July 15 1998 and also a unclassified executive summary which again met with considerable opposition. The brief of the Commission was limited, in that it was not asked to provide responses to the threat it considered – that of ballistic missiles armed with nuclear and biological and chemical warheads \(^97\). Neither did it assess threat to US forces abroad or allies. Thus it was limited to assessing the threat to continental US. The main findings of the Commission was significant however. It noted the following:--

- Concerted efforts by a number of overtly or potentially hostile nations to acquire ballistic missiles with biological or nuclear payloads pose a growing threat to the US. These new threats were in addition to the

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\(^97\) CBW warheads were also considered by was given less weightage. See Rumsfeld Report on Ballistic Missile Threats 17 September, 1998. [http://www.ceip.org/programs/npp/walpole.htm](http://www.ceip.org/programs/npp/walpole.htm)
threats still posed by China and Russia. (which remained in uncertain transition) These newer nations would be able to inflict major destruction on the US within 5 years of a decision to acquire such a capability. (10 in the case of Iraq)

- The threat from the above was more mature and broader than estimated by the intelligence community.

- The intelligence community to provide timely and accurate estimates of ballistic missile threats was eroding due to reasons both within and beyond the intelligence process itself.

- The warning times that the US could expect of new ballistic missile deployments was reduced. This was due to some plausible scenarios – re-basing or transfer of operational missiles, sea and air launch options, shortened development programs that might include testing in another country, or some combination of these 98.

The Commission took into account the additional three years that had passed since the NIE report – years which had seen a greater degree of interaction between North Korea, Iran and Pakistan in the development of ballistic missiles. Clearly these countries firstly, did not need to reinvent the wheel (as in early US and Soviet programmes) Secondly the single flight test of the No dong missile (1993) showed that extensive testing was not required for crude ballistic missiles, and thirdly, and most important, the Commission found that the NIE Reports estimates that foreign assistance was a "wild card" in quick development was pessimistic. The Commission

98 For these estimates see the Rumsfeld Report. Ibid.
concluded that far from being a remote possibility, foreign assistance was a given. Fourth, the Commission also flatly disagreed with the notion that launching ballistic missiles from surface missiles or aircraft was so technically challenging as to be highly unfeasible. However, as one of it's members noted, the Commission had not in any way commented on the need for a NMD. In fact Richard Garwin publicly came out against such development, arguing instead for resources to be allotted to the theatre systems. The value of deterrence was seen to be paramount with the rather unusual conclusion which may be quoted here: "The country engaging in tests of two or three stage missiles would be made the target of US strategic weaponry and the development of plans for a non-nuclear preemptive strike to prevent the launch of such missiles in times of crisis. That country should understand that developing a missile that could strike the United States is not in its security interests."

Clearly at least three inputs that shaped the Commission's enquiry were the Pakistani test of the Ghauri, the Indian and Pakistani nuclear test, the Iranian test of the Shahab 3, and the test by North Korea of a missile or a space launch vehicle that appeared to have traveled between 3,500 to 4000 miles (that is an ICBM class missile that had a third stage). This is indicated by the remarks of Steven Gambone, Staff Director of the


100 The New York Times, 15 September 1998 reported it as having traveled 3500 miles while the Washington Times, 15 September 1998 noted it as 4000 miles.
Commission. However it is worth noting here that the Report of the Commission was submitted on July 14th 1998, and thus though North Korea is continuously cited, the actual perception was shaped heavily by the Indian and Pakistani tests, and the total surprise achieved by India in particular. The chastising of the Intelligence community seems to flow basically from this.

Additionally the Executive Summary notes that the second tier states (Iran, Pakistan, Iraq) were able to co-operate among themselves to an considerable degree to provide technology irrespective of what they received from their Chinese or Russian friends. As the Staff Director notes" It seems the emerging powers know how to adapt technologies, and their attitude seems to be one that what is good enough to get the job done is good enough for them."

Apart from this, an independent panel of experts was commissioned by the DCI to review the NIE. Headed by former DCI Robert Gates, the Panel noted that while the NIE had been politically naïve rather than "politicized" (as accused by detractors) in presenting a report that was bound to be a "political football". While they supported the NIE contention that missile powers could hardly launch an ICBM without extensive testing and

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102 Ibid.

time lag, (citing the case of India which had taken more than 15 years to launch its Polar Launch Vehicle) nonetheless the NIE analytical tools more in line with traditional estimates of Soviet capabilities - in short they had relied on technical capability (which in the Soviet case had been the preponderant factor) rather than motive. For instance a weapon of terror would require quite different characteristics from a weapon that was required to do a militarily useful strike. It also criticized the short shrift given to land attack cruise missiles, (which the NIE had concluded no one would want to do) as well as the similar treatment given to sea based missiles (it noted that technically a Scud derived missile in a mobile launcher could be driven abroad a ship and fired). Most important, it disagreed in the NIE conclusion of the centrality of the MTCR in limiting proliferation. The MTCR in the opinion of many was therefore a failed regime.

The Congressional Budget Office (CBO) meanwhile had been estimating the vexing problem of costs of current TMD programs (estimated to cost $50bn over the next 15 years)\textsuperscript{104} It recommended that cooperation be sought and pursued with allies. As far as Europe was concerned, it was also argued that one plank on which the emerging defense identity of the European Union was that the continent faced dangers that were alien to the US, namely Middle Eastern states armed with medium range missiles and possessing NBC capabilities. Questions

\textsuperscript{104} Defense Week 27 June 1994
on the relevance of NATO and American security guarantees against these new threats were also likely to be damaging to NATO integration and continuation. Moreover, in future regional conflicts, the US would have to continue to rely on European forces as part of a coalition. Europeans were the most experienced and well prepared for NBC and missile warfare, due to their forty years of preparation against a possible Soviet threat. By encouraging the Europeans to take part in a transatlantic initiative against proliferation, European capabilities in these fields would remain honed. Without such a cooperative effort, the burden would fall increasingly on American shoulders. Given these strategies and ideas, it was only a matter of time before the US presented these ideas to noticeably reluctant allies. This will be treated in the following chapter.

To sum up, what is clear is that lacking a clear enemy, "new enemies" have appeared within old "threat frames". The shift from the danger of a nuclear attack from the Soviet Union, to a danger of a nuclear attack from an "irrational" power from the developing world has been made smoothly, helped by an industry looking for continued funding, and political sections with their own axe to grind. Thus cold war programmes like the SDI were sought to be carried on, though under a different label – theatre missile defence - which had always been part of the famed SDI but had not received attention and remained and less publicized.
Nowhere is the dichotomy between actual threat and declared threat more visible than in the assessments of intelligence agencies, which has juggled language to either apparently inflate or deflate a threat. The proponents of national missile defences sought to increase the threat perception to continental USA, while those favouring theatre defense, tried to protect funding for these programmes. But the swing to having some sort of defense – at either or both levels - is one that is contributing to slowly eroding the ABM Treaty - In fact that is little left of it but a shell. As of the time of writing, a further “clarification” had been agreed to with Russia, where a joint statement blandly agreed that “neither side has plans for TMD systems with interceptor missiles faster than 5.5 km/sec for land based and air based systems , or 4.5km /sec for sea based systems. Neither side has plans to test TMD systems against target missiles with MIRVs or against reentry vehicles deployed or planned to be deployed on strategic missiles. In the statement, it was agreed that the velocity of the target missiles will not exceed 5 mk/sec (as against the 3km/sec agreed earlier) and the flight range of the ballistic target missiles with not exceed 3500km. The Presidents also agree that TMD was continuing to “evolve” and thus this did not rule out further such “clarifications”.

In the realm of the offense, while there are a range of weapons now turned to the enunciation of a “conventional deterrent” , there is also

apparent a clear shift to an expansion of the deterrent, and a specific targeting doctrine for situations where missiles might be used defensively by developing states. Since the nuclear weapons remain under the stewardship of the US, it was inevitable that some of this doctrine would naturally seep into NATO. Moreover, after the Gulf War, the fact that Europe was more vulnerable than the US was clear enough, and NATO as a body sought to deal with the threat. European perceptions and military doctrines contributed to the process, even as NATO itself began to adapt to the new international security environment, reassessing and realigning both its mission and its area of operations. The next chapter addresses these and other factors that contributed to a structured response to missile proliferation, and in so doing ensured the continued survival of the largest security organization in the world.