

Fool's Gold or Credible Defense?

Written by Harry Kazianis

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HARRY KAZIANIS, OCT 4 2010

Executive Summary

The creation of nuclear weapons at the end of World War II has created a conundrum for military planners and policy makers around the globe. How do you construct a model for defense against nuclear weapons? Beginning in the early 1960's until the present day, policymakers around the globe have crafted a number of missile defense systems to attempt to counter nuclear weapons deployments. The results have been mixed. In 1972, the ABM treaty banned the creation of most missile defense systems between the US and USSR. In 1983, President Ronald Reagan began SDI, or the Strategic Defense Initiative, to build a comprehensive missile shield around the United States. Work began that year and has continued in a limited fashion sense the end of the Cold War. Current policy under the Obama Administration is to build a small missile defense system to defeat incoming missiles from Iran, North Korea, or any small missile attack. This policy brief will argue for a limited sea based missile defense with a clear posture to all major nuclear powers such a defense will not alter deterrence. This is the so called "Aegis" system which has great potential. Land based missile defense is a truly unproven technology with the possibility of straining relations with Russia and others. I would argue for the scrapping of expensive and unproven land based systems. The United States instead of deploying land based defensive weapons systems that are not fully proven and could lead to instability, has other options. This brief also argues for the United States to work with nations around the world to lessen the amount of nuclear weapons around the world as one possible "defense" against them. One does not need a defense against a threat that does not exist. US strategic forces are still based on models of Cold War strategy and could be reduced greatly as a safety and confidence building measure. Also, the readiness status of nuclear weapons should be lessened greatly among all nuclear states. In short, we must have multiple "defensive" strategies besides a small and limited missile defense. All should be pursued.

Importance of Missile Defense Issue

Missile defense has been an important but controversial issue since its initial proposal. The concept of missile defense is seemingly simple. A missile defense would protect a nation from an incoming ballistic missile attack that is armed with nuclear, biological or chemical weapons. In its simplest form, the defending nation would be saved massive casualties and be able to retaliate against the launching nation. In practice, the calculus of such a theory is extremely complex.

In actuality, the concept of missile defense is nothing but controversial because of its massive complexity. In order to deploy a credible missile defense, one must launch a massive research and development project to create a credible and functioning missile defense system. Next, the creating nation must decide the scope of the defense; meaning how layered of a defense the nation wishes to create. There is threats from land based missiles, cruise missiles, sea based missiles, ICBM and long range missiles, MIRV'd (multiple reentry vehicles') missiles, and long range bombers with missiles they can launch. In the past, the United States under SDI, the goal was to defend against all of the above in a massive undertaking. Since the end of the cold war, missile defense has been rebranded to defend against so called "Rogue Nations". These would include the nations of Iran and North Korea or any nation that could launch a small amount of nuclear tipped missiles at US allies or the US homeland.

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The true importance of missile defense under today's security threats is the cost of such a defense, the possible success rate of such a defense, and its possible destabilizing effects if deployed.

The cost of missile defense since 2002 according to the GAO (general accounting office) totaled fifty six billion dollars from 2002 to 2009 (Drew, 2009). This is the total of the actual money spent by the US Missile Defense Agency. This does not count the actually funds spent on SDI and defense initiatives under President GH Bush and President Clinton. If one factors the total costs of SDI and the efforts of previous other administrations, many billions of dollars have been spent on missile defense.

The possible rate of success has been criticized greatly in the press, by scientists working on various missile defense projects, and the general public as a whole. In 1986, a group of scientists concerned about the technological capabilities of SDI came forward and wrote a collection of essays against the project which was combined into a book called Empty Promise. This work concluded that from a technological standpoint of 1980's technology, SDI would fail. "The tangled network of command and control for Star Wars (SDI) demonstrates vividly the complexity and vulnerabilities that proceeding with SDI will inevitably entail. Because the system may prove not only unreliable, but an inadvertent catalyst, it shows again that SDI risks a serious erosion of crisis stability (Tirman, 1986)." The various authors of this work showed time and time again that SDI was failing in the lab and test after test would fail with technology that was difficult to make work even in the safety of a laboratory environment. Current testing of smaller missile defense systems under President GW Bush and the Obama administration had met with very mixed results (Cimbala, 2008). Sea based missile systems under the "Aries" naval platform have given a high degree of success under limited testing conditions and warrant more testing in battlefield scenarios.

The possible destabilizing effects of missile defense are evident today in newspaper front pages around the globe. Missile defense implies its wording, a defense against an aggressive missile strike from a potential enemy. The problem with missile defense is that one must decide on the level of defense and the potential foe or foes you wish to deter with that defense. Also, careful consideration must be given to major nuclear powers with your defenses posture that you are not trying to defend against a larger strike of their missiles now and in the future. A working missile defense must be credible to defend against missiles from nations like Iran, North Korea or other "rogue states." It must not make states like Russia or China feel you are deploying a much more advanced system that can be scaled to defeat their deterrent. This fear could lead states to increase their nuclear capabilities to overwhelm such a system to make their first strike capability more credible. This would increase the amount of nuclear weapons and lead to less security, the opposite of the defense's goals. We must be very clear with our objectives of such said defense.

Background/History of the Issue

The concept of missile defense or more specifically, the idea to defend against a nuclear strike is as old as the idea of nuclear weapons itself. With the revolutionary nature of nuclear weapons, political scientists and military planners have looked for ways to guard against the destructive power of nuclear weapons on multiple levels.

The USA and USSR both had early concepts of missile defense. As early as the V-1 and V-2 rockets damaged London during World War II, scientists and military planners began planning scenarios as it was evident long range missiles could cause great damage. With later tipping missiles with nuclear warheads, a new much more dangerous dynamic entered the equation.

The first ABM'S (Anti-Ballistic Missile) systems were crude and used interceptor style missiles that were also armed with nuclear weapons to destroy an incoming warhead. From the 1950's to the 1960's, these systems consisted of laboratory research and were not close to full deployment (Durch, 1988). There were also questions as to their effectiveness. The defense would essentially be launching an interceptor until it was close to the offending missile and detonate a nuclear weapon, destroying the aggressor's missile. This would result in large scale fallout and casualties. There was also a focus on the US side to defend against the large number of Soviet strategic bombers that were being deployed at this time (Durch, 1988).

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ABM's would suffer a setback in their research and development with the creation of Multiple Independent Re-Entry Vehicles or "MIRV" for short. A MIRV'd missile is an ICBM that is fired from a land based silo into space and has multiple warheads that separate from the missile. They are able to attack multiple targets independently. This concept allows a missile that had one warhead to have as many as sixteen separate warheads and attack sixteen possible targets all at once (Buchonnet, 1976).

MIRV'd ICBM's are very difficult for an ABM to produce a credible defense against to this day. A MIRV'd missile can attack many different targets. A deployed ABM would need to attack its target before it launches its MIRV package, which is almost impossible or be able to destroy all the various warheads that were deployed by the missile. By the time Soviet and USA planners began to start deploying MIRV'd missiles, both nations began to see the foolishness of deploying an ABM.

In 1972, the USSR and USA signed the Anti-Ballistic Missile Treaty. Both nations agreed against deploying a large scale ABM system. There was a loophole that both sides could defend one facility or target each as both nations had been working on very limited ABM capabilities at this time (Durch, 1988). However, no further deployment would be allowed. The treaty demonstrated that MIRV'd missiles would be very hard to defend against with the current technology of the time. Even if such a system was deployed, it might be considered destabilizing if one side had ABM and the other did not.

ABM technology would still be pursued on a very small level in the 1970's and early 1980's. Research would turn away from using a nuclear tipped interceptor missile. New technology was developed with the idea of "kinetics" in mind. A new ABM system, if deployed, would use projectiles that would ram its target (Lambeth, 1988). This would have much less fallout then if a nuclear tipped interceptor was used. Suddenly, with new technology on the horizon and the possibility of little to no nuclear fallout, the idea of ABM became more credible.

In the 1980's, the idea of ABM began to resurface with the election of President Ronald Reagan in 1980. In March 1983, Ronald Reagan would give an address from the Oval Office to explain his vision of an ABM system. "What if free people could live secure in the knowledge that their security did not rest upon the threat of instant U.S. retaliation to deter a Soviet attack, that we could intercept and destroy strategic ballistic missiles before they reached our own soil or that of our allies (Tirman, 1986)?" Thus SDI or the Strategic Defense Initiative was born. SDI, sometimes called "Star Wars" based on the 1977 Sci-Fi movie, was a full-fledged ABM system with the goal of defeating a massive multi-pronged Soviet nuclear weapons attack. The system would be multi-tiered to defend against all current nuclear weapons systems. It would use space based lasers, kinetic weapons to slam into Soviet ICBM's and various technologies not even invented to defeat a Soviet attack (Yost, 1988).

SDI was extremely controversial during the 1980's. In the same speech that President Reagan introduced the world to SDI, he admitted that it may take a long period of time to deploy such a system. Critiques slammed the massive cost of the system and the fact that the technology to create SDI was in large part not in existence. Many military planners would give examples how it would be easy for the Soviets to modify their MIRV'd ICBM's to deploy "chaff" or dummy warheads upon launching an attack (Yost, 1988). This scenario would have SDI attacking the dummy warheads instead of the real warheads and allowing SDI to be defeated. The Soviets could deploy such technology easily and with little cost (Yost, 1988).

While there were many critiques of SDI, the Soviet Union began to place SDI into their strategic planning. Burdened by having to spend 40% of their GDP on national defense and military spending, they found the idea of having to compete with Americans on an expensive missile defense system problematic at best (Yost, 1988). The problem was of enough importance that in 1986 at the Reykjavik summit in Iceland, Soviet Premier Mikhail Gorbachev proposed to President Reagan the near elimination of all nuclear weapons. His price for this, America's SDI program would need to stay in a research phase and never be deployed. President Reagan balked at the proposal. He countered with offering the Soviet premier the chance to have the technology to protect his own country. President Gorbachev countered to President Reagan, "Excuse me, Mr. President, but I do not take your idea of sharing SDI seriously. You don't want to share even petroleum equipment, automatic machine tools or equipment for dairies." Needless to say, President Reagan went forward with his vision of SDI. Many feel the idea of America's superior technological edge

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demonstrated in SDI pushed the Soviets to spend too much of their GDP on defense and was one of the reasons for Soviet collapse later in the 1980's (Peoples, 2010).

As the Cold War would be fading and President Reagan would leave office in 1989, Presidents Bush and Clinton would put their own stamp on the concepts of SDI and missile defense.

President GH Bush would begin to shift the ideas of SDI to a "theater of operations" defensive system. This means that instead of defending the whole United States against a Soviet threat that was diminishing and would disappear in late 1991, the US would defend itself against missile and nuclear threats against smaller nations. President Bush would advocate for a much smaller version of a space based SDI. It would provide "protection against limited ballistic missile strikes-whatever their source (Samson, 2010)." The systems specs called for a defense against up to 200 ballistic missiles and attack an ICBM in the boost launch phase and limit its capability to deploy a MIRV'd payload (Samson, 2010). This was a much more scaled down version of SDI while utilizing current SDI research.

Priorities would change for the administration in 1991 as the Gulf War would change US thinking in regards to missile defense. The Patriot anti-aircraft system was quickly turned into a missile defense system against Iraqi SCUD missiles being launched at Israel and US forces in the area. This system had a very limited capability due to its nature of not being a true missile defense system, and many reports of the missiles success rate were highly exaggerated (Samson, 2010). SDI technology could not be deployed as it was years away from leaving the lab.

Significant changes in missile defense policy would come during the years of the Clinton administration. The SDIO, the government organization in charge of missile defense was reorganized. The Clinton administration scaled down the project in terms of funding and capabilities. The administration shifted the goal of missile defense to destroy short range missile threats from nations like Iran, Iraq and North Korea. Long term goals would be destroying ICBM's. The Clinton administration in 1996 announced a "three plus three" program. Missile defense would have three more years to develop. At that time, the missile defense system would have three more years to be deployed. In September 2000, President Clinton decided to not go ahead with a missile defense deployment. "I simply cannot conclude with the information I have today that we have enough confidence in the technology and the operational effectiveness of the system to go forward (Samson, 2010). Clinton felt missile defense was not technologically ready, cost too much, did not stop any viable missile threat and could adversely affect national security if large nuclear powers felt threatened (Samson, 2010).

Current missile defense policy truly begins with the policy changes implemented during the two terms of President George W. Bush. "To protect our friends and allies, we must deploy effective missile defenses (Samson, 2010)." In December, 2001 the United States notified Russia that it intended to withdraw from the ABM treaty. The reason that was given was that the US had come far enough in its development that the treaty restricted further research and deployment. This is completely contradictory to the previous administrations assessment.

President GW Bush would lay out a very complex and expensive concept of missile defense. There would be the exploration of multiple different types of missile defense systems. There would be various attempts at land; sea and possibly space based defensive systems. By 2009, the idea of what systems would work and the framework of such a system were being finalized, albeit highly controversial and with many disagreeing if it would even work. In the 2009 federal budget, the idea of missile defense deployment would be done in a series of "blocks" (Peoples, 2010). Block 1 would defend the US from a North Korea long Range missile. This process would lead all the way to Block 5 which could defend two theatres of warfare from all types of ballistic missiles (Peoples, 2010).

President Bush's missile defense plan could truly be covered in a major scholarly work of considerable volume. To summarize such work, one would explain his missile defense strategy was less grand than SDI and had much more faith than President Clinton. President GW Bush envisioned the US protected from ballistic missiles in "theater of war" fighting operations with a defense of the US homeland against a single or dozen crude non-MIRVed ICBM's (Samson, 2010). It did not intend to defend against a massive nuclear strike from Russia or other major powers.

Missile defense would be deployed under the GW Bush Administration. The US would deploy by 2009 a sea based

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system on naval warships, the "Aegis" system. The US would deploy the Aegis system using the SM-3 Missile on several US cruiser and destroyers. In all, the US has 30 warships with anti-ballistic missile capability (Samson, 2010). They have the ability to destroy short and long range missiles from a rogue nation like Iran and North Korea. They also have limited Anti-Satellite capability as well. A land based interceptor program was also launched with 10 interceptors ready to take down similar targets as the sea based system in 2005 (Samson, 2010). This is based in Alaska

Current US Missile Defense Policy

President Obama's missile defense policy largely agrees with the Bush Administration that a missile defense system is needed to protect the US and its allies from a missile launched from a rogue nation. The basis on the policy is to use the Aegis SM-3 sea based missile defense system to largely protect the US and its allies from a missile attack from nations like North Korea and Iran. President Obama has called the system "proven and effective" (Broad, 2010). Many dispute the actual testing of these missiles and argue the opposite of the president's statement. Many critics feel that much of the testing was flawed, done in ideal situations, and claim some of the results were forged (Broad, 2010). As recent as a New York Times article dated May 10, 2010 asserted many of these claims (Broad, 2010). The US military has since denied these claims.

President Obama has also made some of his own changes to missile defense policy that differs from the previous administration. In September 2009, President Obama decided to scrap a missile defense site that was to be built in Poland (Baker, 2009). This greatly angered the Poles who were very optimistic this would lead to greater ties with the US and Europe. They hoped this would culminate in strengthening its relationships in NATO which it is a member of. President Obama decided to scrap a proposed US/Polish missile defense station as research was presented to him that it would be better to place land based interceptors in the Balkans or Turkey. The administration was also more in favor of the Aegis based system as it is mobile and has a much more proven track record. In the end, the administration would shift policy again and deploy missile defense batteries in 2018, much later than the original agreement (CBCNEWS, 2010). This has angered Russia who is opposed to any missile defense near or on old Warsaw pact members. The US counters this argument that the 10 planned missile interceptors could not stop a massive Russian missile strike and would be overwhelmed easily.

Critique of Current Policy

President Obama's missile defense strategy in many ways builds on the previous administrations policy of a limited land based defense and an extensive sea based system to counter threats from nations such as Iran and North Korea. The President also has called for the eventual elimination of all nuclear weapons as the only true defense against such weapons (Obama, 2009). Until such time that all nations can eliminate nuclear weapons, the president purposes we defend our allies and homeland with a limited missile defense.

This strategy I would argue has some fundamental flaws. There is much evidence to site that land based missile defense systems have been flawed since their attempted creation in the 1960's. Testing of such defensive systems last decade up until the present have very mixed track records and can't be considered credible (Peoples, 2010). Also, stationing such defensive systems near Russia in a former Warsaw Pact member naturally makes the Russians very nervous. Many Russians feel the system will eventually be expanded to stop a Russian nuclear strike. Deploying a land based system that is deeply flawed that is causing a large nuclear power feel insecure only makes world politics more unstable. This is the exact opposite of the intended goal.

The Aegis sea based system makes sense on multiple levels. It has an 84% percent success rate which makes the system credible according to DOD (Broad, 2010). Being a sea based system it is mobile and can be moved very close to Iran and North Korea giving it an even better deterrent capability. We also have presently 30 ships that have deployed such a system, giving the system many chances to take down a nuclear tipped ballistic missile. With the advantages of such a sea based system, one does not need to create less stability by creating a land based system near Russia's old sphere of influence and creating international tension.

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Proposed Changes to the Current Policy

Missile defense in the current international climate is presumed to be needed based on several factors. The United States wishes to protect its homeland and allies from a long range nuclear tipped missile from Iran. The United States also wishes to protect its homeland and allies from a long range nuclear tipped missile from North Korea. Both items could be accomplished by a sea based Aegis defense system. The US should scrap ideas to expand its land based systems. Such a concept is very costly and time and time again has proven to be a failure and will cause unneeded tension with Russia.

The US must make it very clear to all major nuclear powers that any missile defense system is very limited. It must ensure to all parties that no deployable system now and in the future is aimed towards their missiles. Missile defense is aimed at "rogue nations", not nations with massive stockpiles of nuclear weapons. Missile defense cannot weaken deterrence among major nuclear nations. I would argue that the US scrap its missile defense arrangements with Poland as we do not wish to have Russia believe such interceptors are aimed at their strategic rocket forces. Doing this will create confidence that our SM-3 missile defense system and limited land based force in Alaska are only to stop North Korean and Iranian missiles. We do not wish to damage the concept of MAD and/or deterrence. For if the US begins to alter such concepts and makes nations feels less secure that the US could create a large defensive capability against ICBM's and MIRV'd missiles, a new arms race is not entirely out of the question. It would be a shame to have Russia and China attempt to deploy new rocket forces or countermeasures to a system that is not designed to defend against their nuclear weapons. We must be very clear to all interested parties that this is not our goal and not US policy. I would again encourage cancelling any land based system if this was to create a better level of trust and security. If the US has a stated goal of defending itself and its allies from North Korea and Iran, this can be done effectively from the oceans around those nations with the SM-3 platform.

The United States must also take steps to create a much more secure environment in regards to nuclear weapons as a whole. The US must begin to dismantle the legacies of the cold war and being to massively cut back its nuclear umbrella. We do not need the nuclear deterrent we had during the cold war. While such weapons have been cut back greatly, further cuts are needed to show we are serious about President Obama's vision to eliminate nuclear weapon in the future. In the 2010 Nuclear Policy Review, the administration detailed a broad outline of steps to reduce nuclear weapons. One such step was to "de MIRV" all US ICBM's, a move I applaud (DOD, 2010). Another step could be to retire the old B-52 long range bomber platform. Created in 1952, it is true relic of the cold war. Many have argued it is old and replaceable with the B-2 Spirit stealth bomber and B-1 bomber. Another possibility would be the US and other nuclear powers to take all nuclear missiles off ready status and separate nuclear weapons from their launching missiles. SLBM platforms would be excluded but would also be cut massively. This would create a much safer environment. No one would have to totally give up their nuclear weapons and there would be one more step to give nations pause before a possible launch.

US missile defense must be part of a broader strategy of eventual nuclear elimination as nations feel more secure as time passes. I feel all nations realize that danger of nuclear weapons. Missile defense must be part of an overall strategy to make the US secure from a strike from a "rogue nation". It must not make major nuclear powers question our intent that the US wishes to gain an advantage in nuclear brinkmanships. We must be very clear to all nations our goals and objectives. This is why I argue for a limited sea based platform, the scraping of a land based platform if needed to create confidence among nations, with cutting strategic arms massively on the way to their eventual elimination in the future.

Summary

The United States has spent billions of dollars over the last twenty plus years on the idea that a missile defense system is possible to defend against a nuclear strike. While this challenge has been met with a great deal of failure at

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a great financial cost, we do have a deployable yet imperfect defensive system. The US needs to make clear to nations like Russia and China that we will never deploy such a system aimed at making their strategic missiles less of a threat. The US does not wish to alter the balance of power or MAD with any major nuclear powers. Current US missile defense is only being deployed in a very limited scope to defend against nations like North Korea and Iran.

The US has a long history of theorizing, ruling out, then researching and deploying missile defense in a limited fashion. We have spent billions of dollars on this effort and now have something to show for it. The US must begin to dismantle the military weapons of the cold war and remove most of its nuclear forces. These forces are more of a security threat than a defensive weapon. The US must implement this and encourage other nations like Russia and China to lower the amount of offensive weapons to a bare minimum to guarantee deterrence only. We must also work with other nations to separate warheads from missiles as to lessen the chances of nuclear conflict among major powers. With this combination of steps being taken and a very limited missile defense, the US will be much more secure when it comes to threats from nuclear tipped ballistic missiles. A combination of these factors is the best approach. The US cannot rely on missile defense alone to safeguard itself from a nuclear strike. Such policy is folly and is not technologically, military nor fiscally viable.

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