The US Plans for Ballistic Missile Defense:

Impact on International Security and US-Russia Relations

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Introduction

Current debate over the US anti-ballistic missile (ABM) system is only a new phase of a story that has lasted for more than five decades. The development of missile defense systems started in the US and USSR in the early 1950s¹, and despite restrictions under the Treaty on the Limitation of Anti-Ballistic Missile Systems of 1972 (ABM Treaty),² progress has remained consistent. The problem became especially important after the US withdrew from the ABM Treaty in 2002 and declared plans for an integrated, 'layered' ballistic missile defense (BMD) system.³

A direct cause of creating such a system is a growing missile threat from the Democratic People's Republic of Korea (DPRK), Iran, and other states, which are developing longrange missiles that can reach territories of the US allies and potentially the US homeland. Overall the BMD system is seen by the US as an instrument of deterrence and defense, which it can utilize to intercept a hostile missile in all phases of flight. Therefore, the US considers the BMD system vital to international security.

However, when it comes to a detailed analysis of the situation, the picture becomes more ambiguous. First, the level of effectiveness of the system is unclear, and US promotion of the system appears suspicious. Second, there is no agreement that creating the BMD system will deter the missile aspirations of 'rogue states.' Third, China and Russia express concerns over the US plans because deployment of some BMD system elements near their borders raises both privacy and security concerns.

The discussion of these problems is complicated due to the existence of counterbalancing arguments for and against creating the ABM system. Further complicating the matter is the fact that the US characterizes its plans as an 'open-ended program.' An uncertainty about the nature and future of the program gives rise to guesses and distrust making it a question of much more than merely the provision of security. Sides define their positions with regard to the BMD system not only on military calculations but also on the subjective perception of others as allies, disinterested actors, sources of threats, or enemies. Thus, in some sense, an ABM issue plays a role of a litmus paper for current international system.

Russia feels especially vulnerable to the US BMD program both in military and sociopolitical aspects. First, despite numerous statements of the US officials, Russia sees the BMD system as a potential threat to its strategic nuclear deterrent capability. Second, it is dissatisfied with a growing power gap with the US in its sphere, which for a long time was subjected to mutual control. Third, there are worries that the deployment of the US BMD system abroad may correlate with anti-Russian sentiments in former Soviet bloc countries.

So the issue of the ABM system clearly exceeds the military realm, but the extent and meaning of this process are still unclear. The bulk of past analytical literature concentrates mainly on the military specificity of the problem by assessing technical details. However, the literature is largely unable to fully explain the driving logic behind the program and specificity of actors' attitudes. On the contrary, this paper aims at

studying political aspects of the development of the US BMD system with special attention paid to their impact on US-Russia relations. It will logically investigate the historical timeline of the ABM issue, technological capacity of the current US BMD system, possible international consequences of implementation of the US plans, and different scenarios of US-Russia relations with regard to this problem.

History of the ABM Systems

History of development of the ABM systems traces to the early Cold War period, when the US and the USSR intensively developed their strategic offensive potentials and means of defense. However, reaching a strategic parity and failing in attempts to create effective ABM systems, they were faced with the necessity to fix a status quo based on the principle of mutual assured destruction (MAD). The ABM Treaty between the US and the USSR was signed in 1972. According to the treaty and its 1974 revision,⁵ each country was allowed to deploy a single ABM system with only 100 interceptors to protect a single target. Moscow became the USSR's protected zone, while ballistic missile sites at Grand Forks Air Force Base, North Dakota were chosen by the US government.

The role of the ABM Treaty was at least twofold. Firstly, it allowed actors to reallocate resources and save considerable sums of money without being afraid that other side would benefit from it. Secondly, it emphasized the two countries' military and geopolitical equality. Nevertheless, development of the ABM systems continued to be an attractive option that was not completely prohibited by the ABM Treaty. One of the most notable examples is President Ronald Reagan's Strategic Defense Initiative (SDI), a program of research and development in the field of missile defense, initiated in 1983 and aimed at protecting the US from missile attacks by creating a space-based BMD system.⁶ Although these plans remained largely unrealized, they fostered development of military technologies and were used as an instrument of diplomatic and economic pressure on the USSR.

The US began seriously considering withdrawal from the ABM Treaty in the 1990s, in light of development of new technologies, emergence of new threats to national security, and Russia's geopolitical weakening. The Clinton administration discussed the possibility of creating a limited national ABM system, which would have demanded some changes in the ABM Treaty. Russia, on its side, remained passive, expressing its displeasure with the US plans and vaguely suggesting alternative cooperative systems. This part of the story ended in 2002 with the US unilateral withdrawal from the ABM Treaty. In the wake of Russia's rapprochement with the West after the 9/11 attacks, this move was regarded by President Putin as "mistaken but presenting no threat to Russian security."8 However, several years later the geopolitical situation has changed and the issue of the ABM system has become one of the stumbling blocks for US-Russia relations.

The US BMD System at the Current Stage of Development

The idea of a functioning BMD system that can reliably secure territory against missile attacks has always been attractive for military and political leaders. They see in them a contribution to their countries' military might, a great potential for technical development, and a source of geopolitical influence. The practical value of such systems has increased during the last years with the growing number of countries that possess or currently are developing medium-, intermediate-, and intercontinental-range ballistic missiles. The threats from North Korea and Iran are especially disturbing due to their profound anti-Americanism and ability to strike US allies and forces deployed abroad.

To counteract this threat, the US proposed at the beginning of the 2000s an integrated, 'layered' BMD system. As summarized by Vladimir Dvorkin, head of the Moscow-based Center for Strategic Nuclear Forces, the proposed system's overall objective would be "to have an integrated missile defense system that will encompass ground-, sea-, air- and space-based information systems, interceptors for the boost, mid-course and terminal phases of ballistic missiles' trajectory, and combat command and communications systems." The system promises to be global in scope, as the US develops cooperation in this sphere with Western European countries, Poland, Romania, Israel, Japan, and Australia.¹⁰

Being a project rather than a fixed program, the US BMD plans are subjected to revision, depending on assessment of missile threats and political conjuncture. The latest changes were proposed by President Barack Obama in September, 2009, and included refusal from deployment of the BMD system

elements in the Czech Republic and Poland. Instead, the revisions emphasized specific mobile naval components of the system: the Aegis Ballistic Missile Defense System, with a Standard Missile 2 (SM-2) platform focused on the terminal phase of short range missiles, and the SM-3 designed to interdict intermediate range missiles in the middle of their flight pattern.¹¹

The US simultaneously works on a whole spectrum of the BMD system elements. Its ground defense systems are broken into two groups: the Ground Based Interceptor (GBI) and the PATRIOT Advanced Capability 3 (PAC-3) missile. The GBIs engage mediumrange and intercontinental ballistic missiles in the middle of their flight path, while the PAC-3 focuses on ballistic missiles in the terminal phase of flight.¹² The most important airbased part of the system is the Airborne Laser Testbed, which focuses high-intensity lasers on the pressurized section of a ballistic missile, compromising its structural integrity and causing mid-air failure.¹³ Other components in use and under development include more advanced software and algorithms, and more powerful lasers, Unmanned Aerial Vehicles (UAVs), 14 satellite surveillance, and a range of radar systems – the X-band, the S-band, the Cobra Dane, the Upgraded Early Warning, and the Army Navy Transportable Radar Surveillance. 15

However, the BMD system draws constant criticism for the underperformance of its various aspects. Its development demands considerable spending – \$ 6-10 billion per year¹⁶ – but its effectiveness has yet to be proven. For example, field tests have not yielded definitive results, and many critics draw attention to the unrealistic scenarios rehearsed by missile developers. As argued by George N. Lewis and Theodore A. Postol, professors at Cornell and MIT respectively, "when MDA's [Missile Defence Agency of the US Department of Defense description of how the system functions is subjected to a detailed technical analysis, it becomes clear that none of the system's components can work as MDA claims."17 Such a weakness of technical arguments stipulates the necessity to search for substantial driving forces for the BMD program in political sphere.

In fact, this program is significant in simultaneously revealing isolationist sentiments as well as international aspirations of the US.

From one side, creation of the BMD system is a defensive act, aiming at protecting the territory of the US, its forces abroad, and also its allies against a growing missile threat. On the other hand, it turns out to be a perfect opportunity for reassessing the US relations with its allies and mobilizing them for the sake of deterrence of the 'rogue states' and such geopolitical giants as Russia and China, further contributing to prolongation of the US military dominance in the world.

Defense Against Whom? Real and Potential Threats

The development of a global ABM system has such potential to disrupt the current strategic balance that it provokes substantial political controversy. Efforts of the US and its allies to develop the BMD system have raised questions about the interests, identities, and perceptions of its creators.

The US first installed elements of its BMD system on bases in Alaska and California in the mid-2000s. A missile defense base in Fort Greely in Alaska currently has X-band radar and 26 Ground-Based Interceptors (GBIs) installations with the number of GBIs supposed to increase to 40 by 2011. The US also has four GBIs at the Vandenberg Air Force Base in California. Together with the BMD assets deployed in Japan and Aleutian Islands, this part of the US BMD system is capable of intercepting both the DPRK's intermediate-range ballistic missiles (IRBMs) and China's inter-continental ballistic missiles (ICBMs) in all phases of their trajectory. 18

Another missile threat to international security comes from the Middle East, most notably, Iran and Syria. As stated in the latest US Department of Defense's report on ballistic missile defense, "although Iran has not stated an intent to develop ICBMs, it continues to pursue longer-range ballistic missiles. Iran launched its Safir Space Launch Vehicle (SLV) in August 2008 with what it claims was a dummy satellite. Iran used the Safir-2 SLV to place the domestically produced Omid satellite in orbit in February 2009, according to statements made to the press by Iranian officials. Despite continued diplomatic efforts Iran also continues to defy its international obligations on its nuclear program, further reducing international confidence in the nature of its program."19

Currently, Iran possesses an array of short- to intermediate-range ballistic missiles that threaten US personnel and its allies in the Middle East and Europe. For example, Iranian government officials claim that their Shahab-3 MRBM [medium-range ballistic missile] has a range of up to 2,000 kilometers, which means that it is capable of striking targets in the Middle East, southern Russia, and southern Europe.²⁰ As an initial response to this threat, the US suggested placement of 10 interceptor missiles in Poland and a radar station in the Czech Republic. These plans were declared in the mid-2000s and then stubbornly progressed despite controversy. Russia had profound objections to the placement of missiles in Eastern Europe. However, the new US administration opted to continue with development, believing these concerns to be unnecessary. Current US plans for Eastern Europe include an installation of a battery of US Patriot missiles in Poland, 100 kilometers from Russian border, and deployment of several dozens of SM-3 missiles in Romania by 2015.

The DPRK and Iran's missile programs present a clear challenge to international security. However, the method by which the US has gone about developing its BMD system has been extremely harmful. The US response is primarily excessive. As argued by the experts of the EastWest Institute, "There is at present no IRBM/ ICBM threat from Iran and that such a threat even if it were to emerge, is not imminent."21 The prospects of the DPRK's missile program are also quite vague. Secondly, the US plans may not succeed in missile deterrence of the 'rogue states.' As predicted by Vladimir Dvorkin, it is possible that Iran will "start increasing the number of its intermediate-range missiles in order to 'saturate' missile defenses, while equipping its missiles with means to penetrate missile systems to counter the US unilateral deployment of missile defense systems in Central Europe."22 Finally, the US actions may harm US-China and US-Russia relations. Both countries seem to be significantly upset by the unilateral methodology that US has used to pursue its BMD program. In addition, both China and Russia are suspicious that the US is trying to 'encircle' them with elements of the ABM system, while stating that it is directed against other states. Overall, considering it is such a contested issue, the US BMD program needs further revising.

US-Russia Collision

The US BMD program does not deal primarily with Russia. At first glance, the US and its allies are creating the ABM system in order to protect themselves against growing missile threats

from 'rogue states,' something that should theoretically not disrupt a strategic nuclear balance with Russia. Nevertheless, Russia feels that its military, political interests and position within the international arena are infringed upon by these developments. The situation is further complicated by high uncertainty with regard to the future of the program.

Russia's concerns stem from a variety of issues. First among them, as argued by some Russian and US experts, elements of the ABM system, which were intended to be placed in Poland and the Czech Republic, could potentially intercept Russia's ballistic missiles and control space and missile operation activity in the European part of Russia, including the Plesetsk Cosmodrome.²³ The same is true for the SM-3 missiles which will be deployed in Romania in the 2010s. Secondly, deployments near Russia's border are also regarded as a political challenge, strengthened by the fact that the US does not intend to limit its activity in this geopolitical area. According to the US Department of Defense's report on ballistic missile defense, "The United States will continue to engage with Russia's neighbors as fully independent and sovereign states."25 Lastly, the prospects of cooperation with Russia are vague, which is reflected in the evasive statement that the US "looks forward to a peaceful and prosperous Russia that makes contributions to international peace and security as a global partner."26

Other problems with the US BMD system involve issues of identity and selfdetermination. Keeping the ABM Treaty untouched after the collapse of the USSR was in Russia's interests. The existence of such an agreement maintained an illusion of parity with the US despite the fact that the technological and political gap continued to expand. Expiration of the ABM Treaty and missile proliferation reversed this situation. Nowadays, Russia is neither an adversary nor a strategic partner of the US with regard to this issue, and Russia thus lacks a clear vision when responding to US actions. Everything from intensifying the contradictions to cooperation seem to be plausible Russian responses, and this variety of scenarios has created a situation where the issue of the ABM system is being held hostage by political conjuncture and specificity of perception of each other.

Russia does not have enough resources to give a symmetric response to the US

BMD program by creating its own ABM system. However, the country may respond asymmetrically by developing new strategic armaments or withdrawing from the Treaty on the Elimination on the Intermediate-Range and Shorter-Range Missiles of 1987 (INF Treaty). These actions would be significant, albeit self-damaging, responses, capable of compelling the US to reconsider its BMD program while simultaneously creating new problems. Besides negative responses, Russia also has the option to respond positively by cooperating with the US and its allies on the issue of the ABM system. Russia may become a valuable partner because it has previous experience with development of a BMD system and perfect geographical location. Russia's involvement would also strengthen the legitimacy of such a BMD system. As noticed by Vladimir Dvorkin, "Without Russia's cooperation, the American program would not only create a political climate favorable for Iran's countermeasures, but would itself have a number of technical weak points that Tehran would surely take advantage of."27

The current situation is paradoxical: while the US promotes efforts to defend itself from potential missile and nuclear threat from the 'rogue states,' Russia, which is situated closer to Iran and the DPRK, resists these efforts. In fact, Russia would like to play the role of mediator in this situation, even though it lacks proper influence and resources. As a result, the country stalls between an inefficient opposition to the US BMD program and a possibility of cooperation with the US on this issue, which would implicitly mean that Russia agrees to consider Iran a 'rogue state.' Without envisioning a way out of this ambiguity, Russia maintains its anxiety. The looming prospect of being encircled with the US ABM elements and marginalized as a political actor is especially disturbing.

Possible Future Scenarios

Future evolution of the US ABM plans and their impact on US-Russia relations will depend on a number of variables involving domestic and foreign policy. For the US they include success in technological advancement of the program, ability to deter 'rogue states' from developing ballistic missiles and nuclear weapons by other means, scale of military lobbying and public support of the program inside the country, and reaction of other actors

to these plans. Russia, on its side, will respond depending on the way the US BMD program will be implemented, assessment of military consequences of creating the ABM system, the country's foreign policy priorities, and the nature of its political regime. In general, it is possible to outline three future scenarios, namely, US-Russia cooperation on this issue, continuation of debate about it, and substantial deterioration of the situation.

Cooperation will become possible if the sides find an appropriate way to integrate Russia's existing ABM elements into the US BMD system and consider such a move reasonable, for example, in light of the Iran's growing missile capability. It is noteworthy that at the suggestion of Russia, these issues have already been discussed at the highest levels. As observed by Alexei Arbatov, "Proposals made by Russian president in the summer of 2007 could become the basis for an agreement on missile defense. The proposed idea was to use the Gabala early-warning radar station in Azerbaijan to detect and track missile launches from the south... The radar could be linked to the missile launch data exchange center in Moscow, work on which began in accordance with the American-Russian agreement of 1998, but which was subsequently frozen."28

However, realization of these ideas demands more than technological and military analysis. Paving the way to US-Russia and West-Russia rapprochement, this concept of cooperation cannot be effectively carried out without shifts in identity of actors. Creating a common missile shield would mean a decision to not view each other as threats and a commitment to search for common approaches in the international arena. One should not underestimate the role of European countries and Euro-Atlantic institutions, which can create a positive atmosphere of cooperation.²⁹ Based on these assumptions, it is possible to argue that the previous Russian proposals have not been truly considered in practice precisely because they were not identity-driven and merely aimed at becoming an alternative to the US plans for Eastern Europe.

A second scenario implies continuation of 'business as usual' and, frankly speaking, it is the most probable scenario. After President Barack Obama's revision of the ABM program, there is little doubt that the US will continue to move forward with the BMD installations. On its side, Russia can express serious concerns but it will still lack effective mechanisms for deterrence or

symmetrical responses. Given the technological hardships and flexibility of the program, the situation may stall in this 'damage limitation' phase for years.

Marginalization of Russia with regard to this issue is therefore quite a feasible option, which can even seem attractive to different actors. The US and some of its allies may regard the ABM issue as a means to offend Russia, reducing its geopolitical weight. Russia, on its side, may use debate over the BMD system as an opportunity to actualize its post-imperial identity and make its resenting voice heard in the international arena. However, striving for maintenance of this state of affairs would be a serious mistake, bringing actors short-term political benefits at the price of strategic stability and possibilities for partnership in the future.

The risk of realization of the worst scenario has fortunately lowered after declaration of a 'reset' in US-Russia relations and the US revision of the BMD system. However, these developments don't mean that the worst-case scenario has completely vanished from the landscape. Russia has moderately reacted to the US plans for deployment of some BMD system elements in Romania but it can start focusing on this issue in future. The level of conflictedness may also rise if the US insists on further deployments in the Eastern European and Caucasus countries, or in the Black Sea. Russia's possible asymmetrical responses, such as armaments build-up or withdrawal from the INF Treaty, would not prevent the US from continuing its plans but definitely undermine strategic stability.

Nowadays finding new modes of cooperation with regard to the issue of the US BMD program seems critically important. So far, this program has generated collisions in the international arena rather than contributed to global stability. Current challenges lie in moving from insinuations about this issue to multilateral work creating a new, stable ABM regime and an effective BMD system. If the US and Russia are able to work through these challenges, a potentially powerful arena of cooperation will open up. However, the future likely holds more "business as usual," making cooperation a difficult task and possibly widening the political gap between the two countries.

Endnotes

1 Khodarenok, Mikhail. "Tochka otscheta v istorii PRO" ("A

- Reference Point in the History of the ABM Defense"), Vozdushno-Kosmicheskaya Oborona (The Aerospace Defense) 1:50 (2010).
- 2 "Treaty Between the United States of America and the Union of Soviet Socialist Republics on the Limitation of Anti-Ballistic Missile Systems," The Federation of American Scientists (05.04.2010), http://www.fas.org/nuke/control/abmt/text/abm2.htm.
- 3 "The Ballistic Missile Defense System (BMDS)," The Missile Defense Agency (05.04.2010), http://www.mda.mil/system/system.html.
- 4 Arbatov, Alexei. "Missile Defense and the Intermediate Nuclear Forces Treaty," The International Commission on Nuclear Non-Proliferation and Disarmament (March 2009), http://www.icnnd.org/research/Arbatov_INF_Paper.pdf.
- 5 "Protocol to the Treaty Between the United States of America and the Union of Soviet Socialist Republics on the Limitation of Anti-Ballistic Missile Systems," The Federation of American Scientists (05.04.2010), http://www.fas.org/nuke/control/abmt/text/abmprot1.htm.
- 6 "History of US Missile Defense Efforts. 1945 Presence," The Missile Defense Agency (05.04.2010). http://www.mda.mil/news/history_resources.html.
- 7 Wolfsthal, Jon Brook, Crisitna-Astrid Chuen, and Emily Ewell Daugherty, Eds. "Yadernyi doklad" ("Nuclear Status Report"), The Carnegie Moscow Center (December 2002), http://www.carnegie.ru/en/pubs/books/7753Nucl.pdf
- 8 "America Withdraws from ABM Treaty," BBC News (13.12.2001). http://news.bbc.co.uk/2/hi/americas/1707812.stm
- 9 Arbatov, Alexei, and Vladimir Dvorkin. Nuclear Proliferation: New Technologies, Weapons, Treaties (Moscow: The Carnegie Moscow Center: 2009): 135.
- 10 "The Ballistic Missile Defense System (BMDS)," The Missile Defense Agency (05.04.2010), http://www.mda.mil/system/system.html.
- 11 "Fact Sheet on US Missile Defense Policy. A 'Phased, Adaptive Approach' for Missile Defense in Europe," The White House (17.09.2009), http://www.whitehouse.gov/the-press-office/fact-sheet-us-missile-defense-policy-a-phased-adaptive-approach-missile-defense-eur.
- 12 "Elements. PATRIOT Advanced Capability-3 (PAC-3)," The Missile Defense Agency (05.04.2010), http://www.mda.mil/system/altb.html.
- 13 "Elements. Airborne Laser Test Bed (ALTB)," The Missile Defense Agency (05.05.2010), http://www.mda.mil/system/altb.html.
- 14 "Elements. Potential New Technologies," The Missile Defense Agency (05.04.2010), http://www.mda.mil/system/potential_new_technologies.html.
- 15 "Elements. Sensors," The Missile Defense Agency (13.03.2010), http://www.mda.mil/system/sensors.html.
- 16 Holmes, Kim R., James Jay Carafano, Peter Brookes, and Baker Spring. "What Americans Need to Know About Missile Defense: We're Not There Yet," WebMemo

- 2512 (30.06.2009), http://www.heritage.org/research/ballisticmissiledefense/wm2512.cfm.
- 17 Lewis, George N., and Theodore A. Postol. "The European missile defense folly," Bulletin of the Atomic Scientists 2 (64) (2008): 33.
- 18 Smirnov. Sergey. "Protivoraketnaya oborona: dezinformaciya, ugroza ili realnost'?" ("The Anti-Ballistic Missile Defense: Disinormation, Threat, or Reality?"), Indeks Besopasnosti (Security Index) 2 (89) (2009): 70, http://www.pircenter.org/data/publications/sirus2-09/065-072_Smirnov_Analiz.pdf.
- 19 "Ballistic Missile Defense Review Report," The Department of Defense (February 2010): 17,
- http://www.defense.gov/bmdr/BMDR%20as%20of%2026JAN10%200630_for%20web.pdf.
- 20 "Iran's Nuclear and Missile Potential. A Joint Threat Assessment by US and Russian Technical Experts," East West Institute (May 2009): 9, http://docs.ewi.info/JTA.pdf. 21 Ibid. 17.
- 22 Arbatov, Alexei, and Vladimir Dvorkin. Nuclear Proliferation: New Technologies, Weapons, Treaties (Moscow: The Carnegie Moscow Center: 2009): 145.
- 23 "Programma razvitiya elementov peredovogo bazirovaniya PRO SSHA: tekhonologicheskie aspecty i vosmozhnoe reagirovanie" ("The Program of Development of the US Front Line Based Anti-Ballistic Missile Defense: Technological Aspects and Possible Reaction"), Indeks Besopasnosti (Security Index) 1 (88) (2009): 83, http://pircenter.org/data/publications/sirus1-09/Mephi.pdf.
- 24 "Protivorakety SSHA v Rumynii ugrozhayut bezopasnosti Rossii Korotchenko" ("The US Anti-Ballistic Missiles in Romania Threaten Russia's Security Korotchenko"), RIA Novosti (05.02.2010), http://www.rian.ru/defense safety/20100205/207818399.html.
- 25 "Ballistic Missile Defense Review Report,"18. 26 Ibid, 18.
- 27 Arbatov, Alexei, and Vladimir Dvorkin. Nuclear Proliferation: New Technologies, Weapons, Treaties (Moscow: The Carnegie Moscow Center: 2009): 145.
- 28 Arbatov, Alexei. "The Fifth Missile Defense Crisis," Carnegie Moscow Center Briefing issue 4, Vol. 11 (October 2009): 4-5.
- 29 Rasmussen, Anders Fogh. "NATO and Russia Working Together to Enhance Our Shared Security," NATO (27.03.2010), http://andersfogh.info/2010/03/27/nato-and-russia-can-secure-euro-atlantic-area/.