

The debate over missile defence in Europe is likely to remain on the political agenda for the foreseeable future as discussions

MISSILE DEFENCE IN EUROPE

– the political and security dimensions

evolve on both sides of the Atlantic. This policy brief provides basic background information on missile defence and highlights some of the principal political and security aspects associated with missile defence in Europe.

Why missile defence?

In its simplest form, missile defence aims to counter ballistic missiles of varying ranges. Missiles of concern may span from short-range tactical missiles (less than 1,000 kilometres) to intercontinental ballistic missiles (5,500+ kilometres). Of particular concern are missiles that can carry a nuclear payload.

The desire for missile defence is not a new phenomenon. It can be traced back to the late 1950s after the advent of nuclear weapons. An early example of missile defence was the US Safeguard system (1969-1976) built to protect the Minutemen silos housing US intercontinental ballistic missiles (ICBMs). At the same time, the Soviet Union deployed its own system, Galosh, to protect Moscow and its surroundings from incoming ballistic missiles. A modified two-tier system known as the A-135 is still active today. While the interest in missile defence is not new, the justifi-

cation for missile defence changed with the end of the Cold War. During the Cold War, missile defence was pursued by the United States and the Soviet Union to ensure protection against the other's ballistic missiles. Today, beyond the perceived benefits of tactical missile defence in areas of operations, the primary argument – at least on the US side – is to protect against a possible missile launch by a rogue state. Unlike traditional states, rogue states are thought not to be necessarily deterred by the prospect of retaliation, thus requiring other forms of protection such as missile defence. A secondary concern is the possibility that a non-state actor might obtain access to a warhead. With no proper defences, such a group might be able to threaten the US and its allies. Lastly, there are fears of a possible accidental missile launch. For these reasons, many consider a rudimentary missile defence system to be a viable protection mechanism.

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How does missile defence work?

Missile defence can be applied to the three phases of an incoming long-range ballistic missile: boost phase, mid-course phase, and the terminal phase. Each stage offers its own distinct advantages and disadvantages for effective missile defence.

During the boost phase, missile defence can target a missile while it is ascending. Since an ICBM usually reaches a speed of approximately seven kilometres per second within 250 seconds of launch, the targeting window is short – around five minutes at most. The short time-frame available places a premium on detection systems – such as satellite sensor systems – to detect the missile launch as soon as possible. Examples of evolving technologies that may target a missile during its ascent include the Airborne Laser, Kinetic Energy Interceptors, and medium-range air-to-air missiles. The short time span available during the boost phase also places a premium on the decision-making processes needed for the activation of missile defence. An advantage of missile defence during this stage is the avoidance of decoys and multiple warheads (in the event of facing an advanced missile). In addition, if a missile is engaged early on, the probability of falling debris in the target area is averted.

After the boost phase, a missile enters the mid-course phase. The principal advantage for missile defence during this stage is the relatively long time window offered – between 20 to 25 minutes. A variety of sensors, including radars and space tracking/surveillance systems, can be used to guide ground-based interceptors to target the missile(s) of concern. Since the temperature of the missile is cooler during the mid-course phase, effective heat-sensing sensors are essential. The principal challenge for missile defence in this phase is the possible presence of decoys. If the missile of concern releases decoys, such as mylar balloons, it could disorient the interceptor(s). Although technological advances are being developed to differentiate missiles from decoys, the use of advanced decoys could thwart such efforts.

The terminal phase begins when the missile re-enters the earth's atmosphere. Given high missile speeds, this phase may last under one minute – placing an emphasis on tracking and intercepting the missile. In addition, successful terminal defence requires that the system is deployed in the vicinity of the incoming missile. The Patriot Advanced Capability-3 or Standard Missile-3 sea-based interceptors are likely to be employed during terminal defence. The Active Layered Theatre Ballistic Missile Defence (ALTBMD) programme developed under the auspices of NATO is a specific example of a terminal defence system. The main advantage of missile defence in this stage is the absence of decoys, as these disintegrate when the missile re-enters the atmosphere. This facilitates the identification and targeting of the missile of concern.

What are the political aspects of missile defence in Europe?

The US offer to set up a radar system tentatively in the Brdy district of the Czech Republic and a site for ten interceptors near Koszalin (Poland) has sparked an intense debate over missile defence in Europe. The 'third site' initiative is planned to counter rogue (Iranian) long-range ballistic missiles. At least six political issues need to be considered in the light of the current debate.

1. Who is/are the primary stakeholder/s in Europe?

Having a primary interlocutor with the United States is necessary to adequately consider the benefits and costs of missile defence in Europe and ensure adequate political support to the initiative. As such, should a potential European GMD (ground-based midcourse defence) be a bilateral project between the United States and the countries identified to host the missile defence components or should it be a US-European project?

Concerning the 'European level', should it take place under the umbrella of the EU, NATO or both? Those in favour of NATO note that NATO is already pursuing theatre-level missile defence and recently finalised a feasibility study on a system to protect NATO members from long-range ballistic missiles. Those in favour of a US-EU approach emphasise the political dimensions of missile defence, arguing that its political ramifications – including relations with Russia – are addressed most effectively under the banner of the EU.

2. Could the system ensure the same level of protection to the US and all European allies?

Some European policymakers are concerned that the interceptors in Poland might not cover all parts of Europe. A large swathe in the south-eastern part of Europe, including Bulgaria, Greece, Romania, and Turkey, would fall outside its protective umbrella. Some point out that this may not be an insurmountable concern since Iran is too close to south-eastern Europe to threaten it with long-range missiles. These countries would need 'terminal-level' protection – such as that offered by NATO's ALTBMD – to obtain coverage. Nonetheless, a diverging zone of security – whether real or perceived – is not an ideal outcome since it might create unnecessary divisions. It might also impact on the 'unprotected' countries. For example, would those that are not fully covered by a European GMD engage internationally to the same extent as those covered by a European GMD or would they be more careful in fear of potential retribution?

3. How can missile defence be 'sold' to European constituents when public opinion is mostly unfavourable vis-à-vis missile defence?

In a number of European countries, the views of the political elites and public opinion diverge substantially concerning missile defence. In Poland and the Czech Republic, for instance, a majority of public opinion is against the installation of missile defence components on their territory – in spite of the political leadership's support of a European GMD. However, With the election of Mr. Donald Tusk as Prime Minister, Poland has modified its position on missile defence. For example, there are indications that Poland

wants special security assurances from the United States in return for hosting a third site. The cool reception missile defence has received in many parts of Europe suggests that it will face an uphill battle becoming an operational project at the US-European level. Policymakers who see the ramifications of missile defence spanning the entire European continent are particularly concerned by this prospect. Addressing this issue will require additional debates and extensive information campaigns that clearly outline the risks and benefits associated with missile defence.

4. How might missile defence in Europe impact on international treaties? Russia's decision to suspend its adherence to the CFE (Conventional Forces in Europe) Treaty suggests that international treaties can be impacted by a European GMD. It remains to be seen how other treaties, such as the Intermediate-Range Nuclear Forces (INF) Treaty and START I (which is set to expire in 2009), might be affected. In general, as missile defence evolves, it may impact on lesser-known treaties such as the Outer Space Treaty. The treaty calls for the peaceful use of space (article III-IV). Since ballistic missile interceptors can reach low-earth orbit satellites, countries with satellites may take

hearing held in May 2007, Representative Sherman (D-CA) asked why the US government had not asked the 'chief beneficiaries' in Western Europe for a 'single euro'. On 25 May 2007, The Senate Armed Services Committee cut \$85 million of the \$310.4 FY2008 request – targeting money intended for 'site activation and construction work.' The House and Senate Conference Report, released in November 2007, indicates that the \$85 million cut towards the construction of a 'third site' was upheld.

What are the security aspects of missile defence in Europe?

Missile defence in Europe also raises security-related questions. At least four separate issues requiring policymakers' attention are identifiable.

1. Could missile defence in Europe encourage an arms race in other countries – e.g. Russia and China? Recent rhetoric by President Putin and senior Russian officials suggest that Russia may push ahead with some of its missile programmes, including the targeting of European cities, should missile defence efforts in Europe move forward. In



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counter-measures to protect their satellite constellations. Should some of these counter-measures be space-based, the militarisation of space would increase, gradually chipping away at the notion of the peaceful use of space.

5. What is the impact of missile defence on European relations with third countries – especially Russia? Viewpoints here diverge, with some arguing that Russia is using the debate over missile defence to divide US-European and intra-European positions while looking for ways to leverage their displeasure with future concessions in other policy areas. Others are preoccupied by Russia's concern, even if the Russian nuclear deterrent would not be stopped by a basic missile shield. Nonetheless, as some have noted Russia's concern may impact progress in other areas such as the implementation of the Cooperative Threat Reduction Program (Nunn-Lugar) and collaboration within the UN Security Council to stem the Iranian nuclear programme.

6. Who will end up paying for missile defence in Europe? While the US Administration has signalled that the United States will bear the costs of GMD in Europe, there may be calls for a European contribution in the future – adding fuel to the missile defence debate. The US Administration's FY2008 request for the proposed European GMD is \$310.4 million, with the cost estimated at \$4.04 billion by FY2013.¹ The projected cost has already garnered the attention of several Members of Congress. The House Armed Services Committee has signalled that investing in a European site is premature. In a joint

late May 2007, Russia test-fired a new ICBM (RS-24) from a transportable launch pad in north-eastern Russia. While the missile itself is the result of long-term research and development, the timing of the test could be interpreted as a signal of concern from Russia.

In China, the limited number of long-range ICBMs might be perceived as insufficient in light of an evolving missile defence system – especially as the different missile defence components are integrated. To counter the potential effects of an evolving missile defence system, Chinese officials may pursue new long-range missiles to complement existing stocks. Presently, China is deploying the first series of Dong Feng 31 series ICBMs. With a range of approximately 7,000 miles and the possibility to carry a warhead of up to 1 megaton, the DF-31A is China's first nuclear-tipped ICBM that can hit nearly any European or US target.² It remains to be seen whether China will continue to keep a low profile regarding missile defence in Europe.

2. What exactly is the security threat to Europe posed by Iranian/rogue missiles? In essence, would Iranian acquisition of long-range missiles pose a security threat to Europe? Presently, the Iranian ICBM threat is predicted to materialise in 2015, a full two years after the European GMD system reaches a full complement of interceptors. The recently released US National Intelligence Estimate casts additional question marks over Iran's nuclear capabilities, judging with high confidence that Tehran halted its nuclear weapons programme in the autumn of 2003.

¹ Steven Hildreth and Carl Ek, 'Long-Range Ballistic Missile Defense in Europe', CRS Report for Congress, 22 June 2007.

² Wendell Minnick, 'China Speeds ICBM Plans', DefenseNews, vol. 21, no.28, 10 July 2007.



US military officers walk past antennas of the Joint Tactical Ground Station, part of the missile defense initiative. Misawa, Japan 22.01.2008

With respect to intentions, views diverge. Some analysts argue that a rogue missile would never be employed in a first strike or for offensive purposes, making it unlikely that Europe would be targeted. Others disagree, noting that missile defence is needed as an insurance policy regardless of the purpose of Iranian or other missiles. It is thought that the risk posed by a rogue missile is simply too great to be dismissed, even if an attack is unlikely. Further justification for taking protective steps is the possibility that other countries begin procuring or producing their own missile arsenals. Officials frequently note that some two dozen countries possess ballistic missiles of varying ranges today. Over sixty foreign ballistic missiles were launched globally in 2006.³

From a different vantage point, some think that missile defence could be rendered ineffective through asymmetric means. For example, if a nuclear device could be smuggled into the target country (e.g. via ship or land), it would bypass the missile defence system. The interceptors would likewise not be effective against missiles launched from close proximity, placing an emphasis on terminal defence systems.

3. What is the technical effectiveness of missile defence? It is hardly surprising that different statistics are frequently highlighted to gauge the effectiveness of missile defence. For example, at the May 2007 Joint Hearing by the Europe and Terrorism, Nonproliferation and Trade Subcommittees, Representative Wexler (D-FL) quoted a Washington Post article stating that the US missile defence system had 'only one successful test'. Equally worrisome was the fact that all tests were carried out under carefully controlled conditions. In the same joint hearing, Representative Royce (R-CA) pointed out that 'since 2001 the Missile Defence Agency has had 26 successful missile intercepts. Fifteen of the last 16 flight tests have been successful.'

Yet another picture is given by the Congressional Research Service. It estimates that three of six flight tests providing intercept opportunities were successful since 2002. The development tests taking place since 2003 are more difficult to interpret. Two planned intercept flight

tests of the new configuration were unsuccessful in 2004 and 2005. After a technical review, there was a successful intercept in September 2006. Since then, a number of tests have been cancelled due to varying reasons, including the failure of the target missile to take off or reach expected altitudes. Nonetheless, a successful test took place in late September 2007, reviving discussions on the effectiveness of missile defence. With respect to the 'third site', some are questioning the viability of the planned two-stage interceptors since they represent an untested version of the three-stage interceptors deployed in Alaska and California.

Beyond the technical effectiveness of missile defence are other elements that are more difficult to measure. For example, what is the psychological value of missile defence to a population, even if it is rudimentary at best? This dimension is frequently neglected, even though it may be quite significant.

4. What are some of the unintended security consequences of missile defence? Several questions have surfaced over the past few months that highlight the interest and concern raised by missile defence. Examples include:

- What is the likelihood of deadly debris falling over Europe should a missile defence system be implemented?
- Would missile defence increase the likelihood of short-, medium-, and intermediate-range missile attacks (or alternatively would it result in a shift towards greater arsenals of short- to intermediate-range missiles)?
- What would be the command and control arrangements for a European GMD system?
- How would a European GMD system affect NATO's missile defence system plans?

As policymakers on both sides of the Atlantic continue their dialogue over the prospects of a European GMD system, these and related questions concerning missile defence will need to be answered. Some may have to be addressed more than once to dispel potential misperceptions. A failure to do so will make it very difficult to move the debate forward.

³ Missile Defense Agency. www.mda.mil.