Defensible Missile Defense

By Theodore Postol

CAMBRIDGE, Mass.

In his recent letter to President Dmitri Medvedev of Russia, President Obama offered to modify the previous administration’s plans for a missile defense system in Europe. He was right to do so. A continued impasse with Russia might have prevented future arms reductions, created divisions with our European allies, done irreparable harm at the 2010 review of the Nuclear Nonproliferation Treaty and impaired efforts to deal with Iran’s growing potential to become a nuclear weapons state.

President Obama has correctly shown skepticism about the missile defense system promoted by the Bush administration: its performance is unproven, it requires unending additional resources and it faces problems that cannot be solved with existing science. Russia, for its part, has long perceived missile defense as a threat to its security—a concern the administration chose to ignore, worsening tensions with Moscow.

Fortunately, there is a “designer” missile defense that would answer President Obama’s hesitations and allay Russia’s fears. And unlike the Bush missile defense, it would actually be able to deal with the threat of ballistic missile attacks from North Korea and Iran if such a threat ever emerged.

This is a proposal I’ve developed and analyzed with a variety of American and Russian experts and the idea itself is simple. The defense system would shoot down Iranian or North Korean long-range missiles as they slowly accelerate from their launching sites. It would take advantage of the fact that long-range missiles built by Iran or North Korea would be large and cumbersome, have long powered flight times and could take off only from well-known launching sites.

The defense would have fast-accelerating interceptors that could home in on and destroy the large, slow and fragile ICBMs. The interceptors would weigh about a ton and could achieve a top speed of five kilometers per second in tens of seconds. They would be carried by stealthy unmanned airborne vehicles that look like B-2 bombers, but are smaller and carry much smaller, though still substantial, payloads. Such vehicles already exist.

Only two of these armed drones, controlled by remote teams of operators, would be needed to patrol within several hundred kilometers of a launching site. At these ranges, it would be possible to shoot down an ICBM, with its nuclear warhead, so that the debris falls on the territory of the country that launched it. Only five drones would be needed to maintain a continuous patrol for extended periods. But the system would have to operate only when satellites and reconnaissance aircraft indicate that an ICBM is being prepared at the launching site.

Unlike the provocative, unworkable defense planned by the Bush administration—with its two radars of insufficient range in the Czech Republic and Southern Europe and its 10 interceptors in Poland—this alternative defense would be technologically feasible, and could be developed, built and deployed near the areas of concern in a relatively short time. And it would be effective almost immediately on deployment.

This system would provide an extremely intimidating and highly effective defense against Iran and North Korea, but would pose no threat to Russia or China. Their missiles are far too numerous and dispersed over such large areas that the defense would have little or no chance to engage them. In addition, pieces of it could even be developed and operated in tandem with Russia.

A specialized and focused missile defense of this type could also be forged into an international tool to rid the world of nuclear weapons. It could, for instance, be used by the United Nations Security Council to extend the internationally accepted concept of “no flight zones” to include launching areas for long-range ballistic missiles.

The Obama administration should study and consider this concept as a serious alternative to the dangerous and senseless path we have been on.

Theodore Postol is a professor of science, technology and national security policy at M.I.T.