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## Evaluating Iran's missile threat

The proposed European missile defense system is intended to guard against a missile attack originating from Iran—yet Iran's missile capabilities are relatively limited.

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BY RICHARD L. GARWIN

**T**HE TRADITIONAL CONCERN ABOUT Iran's capability to deliver a nuclear weapon involves a ballistic missile that could reach the United States from Iran. The current state of Iran's ballistic missile program and the expected time frame within which it could achieve intercontinental capabilities can be drawn from recent statements by U.S. government officials, the unclassified portion of the 2007 Iran National Intelligence Estimate (NIE), and data from an April 2006 interview with the head of Iran's Atomic Energy Organization.

In his speech to the National Defense University on October 23, 2007, President George W. Bush made clear his intention to deploy ballistic missile defense in Europe: "Our intelligence community assesses that, with continued foreign assistance, Iran could develop an intercontinental ballistic missile [ICBM] capable of reaching the United States and all of Europe before 2015, if it chooses to do so, and the international community does not take steps to prevent it, it is possible Iran could have this capability. And

we may need to take it seriously—now." Further, he termed the radar in the Czech Republic and the interceptors to be deployed in Poland as "limited in scope." He added: "[The system] is not designed to defend against an attack from Russia. The missile defenses we can employ would be easily overwhelmed by Russia's nuclear arsenal."

The speech was carefully crafted, and the words of Defense Secretary Robert Gates were also carefully chosen when he spoke the same day as Bush during a press conference with Czech Prime Minister Mirek Topolánek: "We would consider tying together the activation of the sites in Poland and the Czech Republic with definitive proof of the threat; in other words, Iranian missile testing and so on. We have not fully developed this proposal, but the idea was we would go forward with the negotiations—we would complete the negotiations, we would develop the sites, build the sites, but perhaps would delay activating them until there was concrete proof of the threat from Iran." Note that the

deployment will go ahead, but "perhaps" we would delay their activation. As for the imminence and certainty of the Iranian threat, nothing could support it less than Bush's rather imprecise characterization. "Could," "it is possible," and "may" do not demand urgency in deploying missile defenses in Europe.

In 1998, I served on the nine-person Commission to Assess the Ballistic Missile Threat to the United States (better known as the "Rumsfeld Commission"); it had a strikingly similar characterization of the Iranian threat: "We judge that Iran now has the technical capability and resources to demonstrate an ICBM-range ballistic missile, similar to the TD-2 [the North Korean Taepodong-2 missile, which is based on scaled-up Scud technology] within five years of a decision to proceed—whether that decision has already been made or is yet to be made." Our report was issued on July 15, 1998, and its unclassified executive summary contains all the important observations and recommendations of the highly classified report.

According to our commission, which, by law, had access to all U.S. intelligence, if Iran wanted an ICBM, such a missile could have been operational in 2003. Not only did Iran not achieve this capability in 2003, but with the same assumptions, according to current intelligence assessments, it could only achieve this capability by 2015 at the earliest. Iran's only ballistic missiles with a range exceeding 1,000 kilometers (620 miles) are an estimated 25–100 Shahab-3 missiles, which are similar to the North Korean No Dong and the Pakistani Ghauri. A missile's range can be traded for payload, and analyst Charles P. Vick estimates, for instance, that the Shahab-3 would have a range of 1,600 kilometers (about 1,000 miles) with a 550-kilogram warhead, and a range of 1,350 kilometers (840 miles) with a 1,158-kilogram warhead.

So why the urgency to deploy the radar in the Czech Republic and 10 interceptors in Poland? And what is the credibility of the commitment to deploy only 10 interceptors in Poland? President Bill Clinton decided to be ready to deploy a ballistic missile defense against rogue states,

initially with 20 interceptors total, to defend the United States against missiles that might come from North Korea, Iran, or perhaps Iraq. But in October 1999, after criticism from Republicans that even the loathsome 1972 Anti-Ballistic Missile Treaty permitted 100 nuclear-armed interceptors, and without even arguing that the threat had increased, the Clinton administration upped the initial deployment to 100 interceptors, with potential growth to 200 or 250.

Many articles, going back to my March 1968 *Scientific American* piece with Hans Bethe (“Anti-Ballistic Missile Systems”), explain the ineffectiveness of midcourse intercept of ICBMs—the kind of defensive system now planned for deployment in Poland. The argument is simple. Radar systems cannot distinguish between light aluminum-foil clad balloons and real warheads, especially when the warheads are enclosed by similar balloons, and it is simple for a missile to deploy many such balloons as soon as it leaves the atmosphere and the rocket engines stop firing. To counter this threat, a missile defense system must deploy vastly more interceptors than the number of target missiles, or it must consider the defense ineffective unless it modifies the defensive system in order to handle them. A 1999 NIE judged, “Many countries, such as North Korea, Iran, and Iraq probably would rely initially on readily available technology...to develop penetration aids and countermeasures. These countries could develop countermeasures based on these technologies by the time they flight-test their missiles.”

When Donald Rumsfeld and I appeared on the *NewsHour with Jim Lehrer* in 1998, we were questioned about the advisability of defenses against the missile threat. We both responded that our commission had not discussed defenses. Rumsfeld volunteered that he hadn’t studied the problem, but his uninformed personal view was to favor the deployment of such a defense because we had no protection against missiles. In contrast, I had long studied the issue for the U.S. government, and I indicated that a defense that did not take simple countermeasures into account would be worse than no defense at all. Furthermore, I

stated, the Rumsfeld Commission was quite clear that any of the countries that might pose a threat to the United States with nuclear weapons or biological weapons on ICBMs could far sooner pose a greater threat by firing short-range ballistic missiles or cruise missiles from ships within 100 miles or so of U.S. shores. The shorter-range missiles have more payload capacity and are tried-and-true, although some might have to be adapted to shipboard launch. We had then—and we have now—no defense against such short-range missiles attacking U.S. cities; nor do we have a program to deploy such a defense.

Bush’s observation that hundreds of Russian missiles and thousands of Russian warheads could easily overwhelm the European defense is certainly true. But neither Russia nor the United States wants to be denied the option of using a few ICBMs. Last summer, the U.S. Missile Defense Agency (MDA) made a sweeping argument that the interceptors in Poland were incapable of intercepting even one Russian ICBM. In its enthusiasm to prove it, the agency’s illustration built in an inexplicable delay of 250–300 seconds between the firing of a Russian ICBM and the launch of an interceptor, despite authoritative studies (e.g., one by the American Physical Society) that

Iran is determined to build nuclear weapons.” But the 2005 NIE thought it unlikely that Iran could produce enough highly enriched uranium for a bomb before “early to mid-next decade.” On this point, John Negroponte, the former director of U.S. national intelligence, stated in a 2006 BBC interview, “We don’t have clear-cut knowledge. But the estimate that we have made is that sometime between the beginning of the next decade and the middle of the next decade, Iran might be in a position to have a nuclear weapon.”

So how relevant to U.S. national security is national missile defense against long-range missiles? Seven years after the publication of the 2000 independent report “Countermeasures: A Technical Evaluation of the Operational Effectiveness of the Planned U.S. Missile Defense System,” MDA Director Trey Obering addressed the decoy question in a *Defense News* article: “The multiple kill-vehicle system is a generational upgrade to the land- and sea-based mid-course interceptors that will allow us to handle decoys and countermeasures.” Obering suggested that the multiple kill vehicles will be available in 2014 or 2015, a time frame that is compatible with my claim that by the time Iran or North Korea deploys a long-range missile, they

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took seriously systems in which the interceptor was fired 50 or 100 seconds after missile launch.

As for Iran’s nuclear weapon capability, in a still-secret August 2005 NIE, the U.S. intelligence community is reported to have judged, “Left to its own devices,

will have effective balloon decoys that cannot be discriminated and, apparently, must all be intercepted.

Many missile defense supporters, who have uncritically accepted the administration’s claims that it is deploying a system that will be effective against early

models of the Iranian or North Korean ICBMs, will find it surprising that the MDA is belatedly accepting that the system that they have been buying (and selling to Congress and the public) for many years will not work without an upgrade that is only now in conceptual form. And there is no guarantee that defensive technology can catch up with that of decoys and other countermeasures. The United States should put its primary effort into making sure that deterrence by promise of retaliation is effective as it tries to persuade Iran not to acquire nuclear weapons or missiles of intercontinental range.

Taken together, these factors show how the potential Iranian threat of nuclear weapon delivery against the continental United States should not be viewed through the distorted lens of the Bush administration's priority to deploy a so-called defense against ICBMs. Iran could far sooner deliver a nuclear weapon against U.S. coastal cities by using short-range ballistic or cruise missiles fired from a ship near U.S. shores, or by detonating a nuclear explosive on a ship in a U.S. harbor. Additionally, U.S. officials and the public must recognize that none of the current missile defense programs will defend against ICBMs loaded with biological weapons deployed in dozens or hundreds of independent bomblets, each fitted with its own reentry heat shield. ■

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## LIVING IN THE SHADOW OF MISSILE DEFENSE

In the realm of war and its technologies, the Marshall Islands have been anything but peripheral. Japan used Kwajalein Atoll, a place of unusual bounty in the cosmology of its people, to stage the Pearl Harbor attack, while the United States used the atoll as a base of operations for nuclear tests it conducted elsewhere in the Marshall Islands from 1946 to 1958. These tests irradiated and displaced communities, vaporizing whole islands.

After the Soviet Union launched Sputnik in 1957, the atoll became a proving ground for U.S. missile defense technology and the Nike Zeus system. By 1961, *Time* noted that Kwajalein resembled a science fiction movie set as a giant antenna rotated on a beach, sending pulses to space in search of offending missiles. Mock warheads were sent from Vandenberg Air Force Base in California, nearly 5,000 miles (8,050 kilometers) away, in the hope they might be intercepted over Kwajalein lagoon.

Today much of Kwajalein, the world's largest coral atoll, located halfway between Hawaii and Australia, is known as U.S. Army Kwajalein Atoll (USAKA), part of the Army Space and Missile Defense Command in Huntsville, Alabama. The \$4 billion facility bustles with military personnel, government civilians, support contractors, and engineers from MIT's Lincoln Laboratory conducting missile tests, space surveillance, and science experiments for the Defense Department, Energy Department, and NASA.

The bilateral relationship between the Republic of the Marshall Islands (RMI) and the United States is based upon an exchange of benefits and rights established in the 1986 Compact of Free Association. (The United States also paid \$150 million for damages accrued during nuclear testing, a sum still being contested.) For the United States, the compact guaranteed

military rights including the use of Kwajalein through 2016 and strategic denial—the prerogative to keep other nations from using the RMI for military purposes, currently most relevant to China. For the RMI, it provided sovereignty and roughly \$22 million in annual economic assistance, military protection, and special immigration rights. The compact, which by many accounts fostered staggering dependency, was renewed in 2003 after its original 15-year term expired. The RMI will receive roughly \$40 million in grants and trust contributions annually through 2023. While few Americans have heard of the compact, during its renegotiation outer islanders without electricity or running water gathered around transistor radios to follow the national drama.

A complex “friendship” has grown across 60 years of weapons testing. USAKA is a major source of jobs in the islands; 1,200 Marshallese work there as maids, cooks, groundskeepers, and machine operators. Most live a few miles away in Ebeye, the RMI's second-largest urban center and home to many whose islands are being used for missile testing on the atoll. Ebeye was nearly unpopulated until after World War II, when it became a camp for Marshallese working on U.S. military projects who were soon joined by those exiled from their homes by nuclear testing.

Unfairly labeled “the slum of the Pacific” due to its high population density and perceived squalor, Ebeye embodies a Marshallese ethos and the qualities of mythical small-town America. Daily life is infused with a culture valuing resource sharing and respect for traditional leaders; there is no homelessness, everyone belongs to a church, and thieves take care not to break windows during robberies. Only a handful of HIV/AIDS cases have been reported, and taxis playing upbeat Marshallese

pop music charge a flat fare of 50 cents to circle the island's main road—often flooded with sewage in heavy rain.

Especially among those whose trust has worn thin over nuclear issues, there is anxiety about radiation and other environmental dangers. Some expect sicknesses when there are missile tests, while others tell stories of unlucky birds exploding in flight when crossing a laser's path. Conversely, a few Ebeye families have relatives serving in Iraq as members of the U.S. military. Those who view missile defense as a blessing have named their children Reagan, after the former U.S. president and staunch missile defense advocate.

By virtue of the U.S. interest in missile testing on the atoll, Kwajalein has proved a bargaining chip for the RMI as it has sought to build security with limited resources in the aftermath of nuclear testing. But Kwajalein landowners have long refused to extend rental of their atoll beyond 2016; hence the current standoff about USAKA, which has painfully divided the Marshallese. The atoll does not belong to the government, but instead, to the more than 4,000 landowners who inherit land rights matrilineally, including their *irooj* (chiefs); negotiations have thus been triangulated between the landowners, the RMI, and Washington. Receiving rental payments separate from U.S. aid to the RMI, landowners must consent to a Land Use Agreement with the RMI before the government can set a valid lease extension with Washington in a Military Use and Operating Rights Agreement.

Despite the RMI's desire for resolution, Kwajalein landowners have demanded annual rent of \$19 million, a few million more than what has been offered, and assistance for Ebeye. They have also called for an accurate assessment of environmental problems created by USAKA. Environmental impact statements by the U.S. military suggest damages to be minimal, but the presence of contaminants such as perchlorates at other launch and radar facilities has resulted in lawsuits.

Tensions have historically erupted in sail-ins. In 1982, when landowners had not signed off on the arrangement brokered between the RMI and Washington, they declared it invalid. More than 1,000 Kwajalein people resettled their atoll for four months, eating its fish, crabs, and turtles

with great enjoyment even though the United States refused to cease missile tests; the landowners' demand for new rental terms were finally met, ending the resettlement. Twenty-five years later, tensions have intensified once again, as the *Aelon Kein Ad* ("Our Islands") party, which explicitly represents landowner interests, regained power in RMI's 2007 elections.

For the U.S. military's part, late last year the army announced it would reduce its footprint on Kwajalein because of budgetary restraints. Following installation of a fiber optics cable system, many missile range activities are expected to move to Huntsville by 2010. More broadly, since 9/11, missile defense resources have flowed to Alaska and will begin to flow to the Czech Republic and Poland, two vital outposts in the U.S. proposal for missile defense in Europe. Kwajalein radars were relocated to the sea-based X-band radar, a platform larger than a football field intended to float in Alaskan waters. Meanwhile, in spring 2007, Czech Parliament members visited Kwajalein to view the radar they will host.

Downsizing at USAKA will mean a substantial loss of jobs in the RMI. Especially for islanders who do not benefit from Kwajalein's rental or nuclear compensation money, living in the islands will become even more difficult. Some may leave; already, more than one-quarter of RMI's roughly 60,000 citizens reside in the United States. Worse still, its waters are rising faster than the upward growth of land.

The islands' economy of rumor is rich, and there has been speculation about Kwajalein being rented to China after 2016. But the compact prohibits this until 2023, and Washington may not want to relinquish

its strategic denial after that. With the landowners' approval, a new deal between the RMI and the United States could extend Washington's lease, perhaps into an era of further downsizing. Another formerly unthinkable option is also now a possibility, though it would compel the RMI to imagine a new vision of security: The people of Kwajalein could reinhabit their ancestral land into the indefinite future. ■

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A test missile interceptor launches from the Reagan Test Site.