

U.S. Air Force F-15C practices air interdiction
near Alaska with Russian Tu-95

Aerial Interdiction of WMD Shipments

By J. WESLEY MOORE

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U.S. Air Force

The proliferation of weapons of mass destruction (WMD) by states and nonstate actors is a threat to U.S. interests requiring a multifaceted and integrated response. Presidential policy identifies the breadth of the problem and the range of capabilities needed to ensure that the unthinkable—the actual employment of WMD on U.S. soil—never takes place.

Interdiction is an important aspect of this strategy and aims at preventing the shipment of WMD and related materials to states and organizations of proliferation concern via land, sea, or air. While proliferation by sea represents the greatest danger, it is also the threat most easily addressed through existing authorities and military doctrine. As maritime interdictions succeed, proliferators will likely take to the skies unless an effective aerial interdiction policy is in place.

This article argues that both joint and U.S. Air Force doctrine on combating WMD proliferation are largely outdated, providing little guidance on how interdictions in general, as well as aerial interdictions in particular, will be conducted. The expertise required to perform this mission does not

readily translate from any other training in that such interdictions will largely be conducted in support of law enforcement efforts pursuant to highly constrained rules of engagement. Failure to prepare and train for such an eventuality invites disaster. As the world's premier air and space force, the Air Force must provide leadership in the area of aerial interdiction. Fortunately, it is uniquely up to the challenge. No other organization offers the range of skills and expertise necessary to attack the issue.

The Proliferation Threat

WMD proliferation is one of the gravest threats facing the United States and its allies. As the cast of characters seeking access to catastrophic technologies and the means for employing them expands traditional nation-states, the solutions to those threats could accordingly lie beyond the state-centric regimes that have historically characterized the nonproliferation landscape.¹

The Proliferation Security Initiative (PSI) may be a useful step toward such a solution. Not confined by the strictures of a treaty-based organization, PSI participants are free to seek creative and cooperative ways to bring

about interdiction.² While PSI has borne some fruit in the maritime realm,³ those successes may prove difficult to replicate in the air. Yet without an equally strong strategy for interdicting WMD shipments by air, maritime successes will only channel proliferation to a more accommodating medium.

Two key aspects of PSI are cooperation among nations within the confines of national legal authorities (generally the national law enforcement authorities of participant states) and strengthening those authorities where necessary. The laws may include criminal nonproliferation statutes, customs and immigration regulations, or any other provisions applying to the shipment of goods.⁴ Past experience has shown that exclusive or even predominant reliance on law enforcement as a means for combating terrorism entailed unnecessary risk.⁵ This risk is multiplied in the case of terrorists seeking to acquire and use WMD.⁶ This is not to say that law enforcement (to include the kind of cooperative enforcement envisioned under PSI) cannot play an important role in countering proliferation. Logically, the necessary elements for success are:

- a cooperative network of sufficient breadth to cover potential avenues of proliferation

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- participants with sufficient authority to take effective action
- interfaces and processes that allow for timely collaboration and cooperation
- participants with the means and will to act decisively when circumstances dictate.

Military airpower is uniquely suited to fulfill this fourth criterion, but without the requisite policies and doctrine to train to, efforts will be hampered.

With regard to maritime interdiction, the Navy and Coast Guard have a long history and well-developed doctrine supported by a

Recent history has seen positive developments. Foremost is Libya's renunciation of its nuclear program and decision to cooperate more transparently with the International Atomic Energy Agency in dismantling it.¹¹ To a lesser degree, international pressure on Iran has resulted at least in some gestures of increased cooperation with the agency, although Tehran remains committed to the pursuit of nuclear weapons.¹²

Perhaps the most worrisome nation on the proliferation landscape is North Korea. After using the NPT as cover for its ambitions for years, Pyongyang withdrew from the

strategy is interdiction. As the strategy states, "We must enhance the capabilities of our military, intelligence, technical, and law enforcement communities to prevent the movement of WMD materials, technology, and expertise to hostile states and terrorist organizations."¹³

The PSI Principles. In 2002, President Bush announced the Proliferation Security Initiative as a key for international cooperation in interdicting WMD shipments. The main thrust of PSI, widely described as "an activity, not an organization," is for participant states to cooperate (within the bounds of their national legal authorities and international frameworks) to interdict WMD and related materials to states and organizations of concern by land, sea, or air.

Maritime Interdiction. PSI has borne fruit to date, particularly in maritime interdiction. The most widely touted success involved a combined effort by German, Italian, British, and American authorities to interdict a shipment of centrifuge parts destined for Libya on board the German-owned freighter *BBC China*. This interdiction was credited with ousting the A.Q. Khan proliferation network and solidifying international pressure against Libya to the point that it formally renounced its nuclear program, allowing British and American inspection teams into the country for verification.¹⁴

While the *BBC China* incident demonstrated the viability of cooperation when a ship is in the territorial waters of a PSI nation, other arrangements are being made to deal

experience has shown that predominant reliance on law enforcement for combating terrorism entailed unnecessary risk

body of fairly settled law on the conduct of shipboardings.⁷ Air interdiction does not have the same historical, doctrinal, or legal underpinnings. Since states typically do not have law enforcement aircraft capable of interdiction, it is imperative that operators, lawyers, and policymakers combine efforts to articulate policies and doctrine for conducting aerial interdictions of WMD and WMD-related shipments. The ability to conduct interdictions in support of law enforcement operations will provide national leadership an additional response option that is less passive than traditional diplomatic overtures but less provocative and escalatory than military force.

The Expanding WMD Problem

For years, states with nuclear ambitions, such as Iran, Libya, North Korea, and Syria, have exploited gaps in existing nonproliferation regimes not only to circumvent those regimes, but also to use them as legitimating cover for their nuclear weapons programs. As nonnuclear states party to the Non-Proliferation Treaty (NPT), these governments have disguised their weapons programs as the pursuit of peaceful nuclear power technology.⁸ Meanwhile, terrorist organizations such as al Qaeda have begun to seek WMD for their own purposes.⁹ Finally, a history of lax enforcement of nonproliferation laws provided fertile ground for the evolution of the A.Q. Khan network, a vast nuclear proliferation enterprise that was willing to sell nuclear technology or turn-key nuclear facilities to the highest bidders.¹⁰

treaty in 2003 and announced its intention to pursue nuclear weapons.

In addition to North Korea and Iran, nonstate actors, primarily terrorist organizations, must remain a key focus as proliferators. As the A.Q. Khan network demonstrated on the supply side of the equation, the potential for a nonstate entity to act with virtual impunity within the confines of a weak state is a substantial threat. On the demand side, there can be little doubt that if terrorist organizations can master the technology and obtain the materials, they will not hesitate to use the most destructive weapons as indiscriminately as they have used more traditional ones.

In response to this growing problem, the George W. Bush administration published its *National Strategy to Combat Weapons of Mass Destruction* in December 2002. That strategy, representing a multifaceted response to the WMD problem, rests on three pillars: nonproliferation, counterproliferation, and consequence management. *Nonproliferation* is designed to prevent proliferation activities and includes such diplomatic regimes as the NPT and the Nuclear Suppliers Group. *Counterproliferation* consists of activities intended to interrupt and deter ongoing proliferation efforts and to respond, with force if necessary, to potential WMD employments against the United States. Finally, *consequence management* consists of actions to be taken in the event of a WMD attack. Clearly, the pillar to which military forces could most directly contribute is counterproliferation. An important element of the U.S. counterproliferation

Navy visit, board, search, and seizure team from USS *Porter* prepares to proceed to Bulgarian frigate during maritime interdiction drills



U.S. Navy (Eric Brown)

with shipments on the high seas, where the state of registry has primary jurisdiction. Most significantly, the United States has entered into shipboarding agreements with Liberia, the Marshall Islands, and Panama, three of the biggest “flag of convenience” states for vessels. In addition, up to 20 other agreements are in various stages of negotiation. They will provide a framework whereby a U.S. ship could intercept and board a suspect vessel registered in one of these flag of convenience states. Combined, ships registered to PSI countries and covered by shipboarding agreements constitute over half of the global shipping fleet, representing a significant tool in combating WMD transport by sea.¹⁵

Aerial Challenges. With the increased effectiveness of maritime interdiction tools, proliferators may be more likely to take to the skies. While PSI participants have conducted exercises involving shipments by air, they have yet to post the kind of public success story the BBC *China* interdiction represents in the maritime context. Several factors will make aerial interdiction more challenging.

First, from a legal standpoint, the authorities that would support aerial interdiction are not as steeped in history as law of the sea authorities. While some provisions of the United Nations (UN) Convention on the Law of the Sea apply to aircraft, those relating to the “right of visit,” which is the basis for shipboardings, do not clearly address aircraft. Absent language making a provision applicable to aerial operations, “In case of a particular conflict, claims to the analogous application of other law of the sea provisions have to be examined closely, taking

into account the respective interests of the parties concerned.”¹⁶ Absent a more definitive legal determination, Air Force operators are likely to be more hesitant than their naval counterparts.

Second, from a physical and political standpoint, aerial interdictions are simply more difficult. Movie depictions of commandoes traversing zip-lines from a C-130 notwithstanding, the actual boarding of an aircraft could not be accomplished safely. This situation leaves fewer options short of force, which would be highly provocative and seen as illegal by most nations.

Finally, without established doctrine and the accompanying tactics, techniques, procedures, and training, WMD aerial interdiction support will likely be accomplished on an intermittent, as-needed basis. Department of Defense (DOD) Directive 2060.2 lists interdiction as a subset of counterproliferation, and it tasks the Services and the Chairman of the Joint Chiefs of Staff to develop counterproliferation doctrine.¹⁷ Joint Publication 3-40, *Joint Doctrine for Combating Weapons of Mass Destruction*, mentions PSI and lists interdiction among the counterproliferation tasks under the heading “Conduct Offensive Operations.” But aside from a generic description of interdiction as “operations to track, intercept, search, divert, seize, or stop trafficking of WMD, delivery systems, related materials, technologies, and expertise to/from state and/or nonstate actors of proliferation concern,” no further information is provided about how this mission will be accomplished.

Air Force doctrine provides even less guidance. Air Force Doctrine Document

(AFDD) 2-1.8, *Counter Nuclear, Biological and Chemical Operations*, uses the term *denial operations* under the heading “proliferation prevention,” but the ensuing discussion jumps from treaty verification and monitoring to counterforce operations, indicating that little thought has been given to the role airpower could play in interdictions not involving actual force.¹⁸ For instance, there is no treatment of the part Air Force planes could play in directing a suspect aircraft to an airfield or as a show of force in support of such a direction communicated from appropriate air traffic control authorities.

Policy Evaluation

Current policy recognizes the need to prevent rogue state or terrorist acquisition of WMD through multiple avenues. The interdiction avenue is important and its operations have proven successful in the maritime domain, the medium most conducive to proliferation. That the aerial domain presents more difficult questions or is not as conducive to proliferation activity, however, does not excuse a failure to pursue aerial interdiction.

Addressing the doctrinal shortfall will not only produce its own benefits but will also force progress on the other fronts. The doctrine development process will provide an ideal forum for addressing the logistic and political difficulties of aerial interdiction. Additionally, input from the operational law community will help assure that doctrine comports with legal requirements so commanders can undertake interdictions fully apprised of political or legal risks. These dangers will likely be managed more effectively if addressed in the thoughtful process of doctrine development rather than in the crisis action planning process.

National Interests. When addressing the WMD question, the national interests at stake are among the most vital. Depending on the scope of his program, an adversary could challenge U.S. peace and stability or even national survival. Additionally, by acting thoughtfully in advance of a crisis, the United States has the opportunity to show leadership in the development of the operational, legal, and diplomatic milieu in which future interdictions will take place. An example of such leadership on the legal front is embodied in the unanimously adopted United Nations Security Council Resolution (UNSCR) 1540, calling on all states to take more effective measures to curb WMD proliferation to



C-130 makes drop near Camp Lemonnier, Djibouti

1st Combat Camera (Stacy Pearsall)

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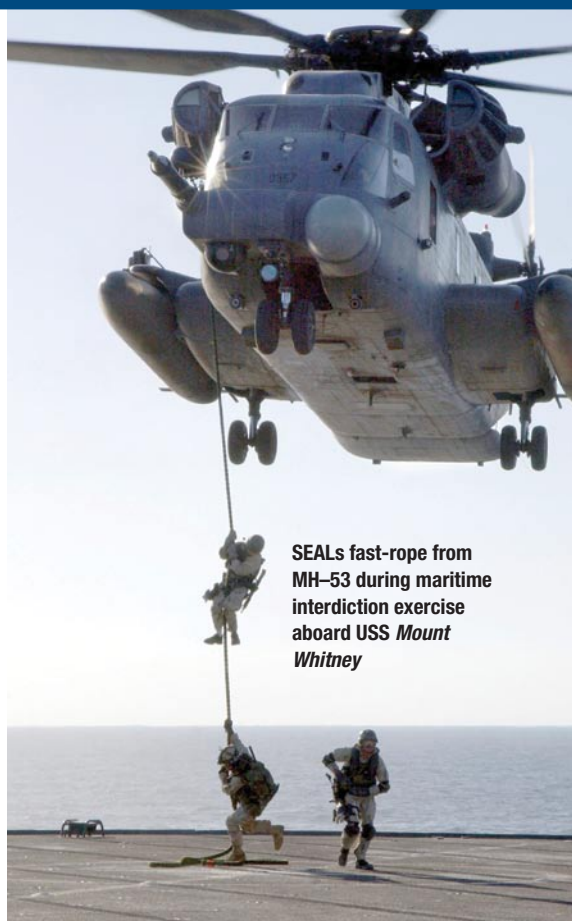
terrorists and nonstate actors. A matching effort on the operational front could lead to similar successes there.

As the sole superpower, the United States is especially vulnerable to asymmetric threats such as WMD. However, a cooperative network of nations dedicated to the principles of nonproliferation is indispensable to obtain the kinds of intelligence needed to identify proliferation networks and bring about interdictions, especially where use of force is not feasible. By developing aerial interdiction doctrine in the open and in dialogue with allies, America will improve its readiness and stimulate international thought by emphasizing that when Washington speaks of aerial interdiction of WMD, it is generally not talking about shooting down aircraft.

By going a step further by having equipped and trained forces ready to perform interdiction operations, the Nation stands to win in two more important respects. First, it will be able, on proper authorization, to provide support to nations that lack indigenous interdiction capabilities. A key center of gravity for terrorist organizations is the absence of a legitimate government capability or willingness to take action to prevent illicit activities. By filling this capability gap, America could enable interdiction where it otherwise would not take place. A nation that refused such assistance could no longer hide behind the excuse of inability, thus exposing itself to increased diplomatic pressure.

The second way the United States would win is by normalizing aerial interdiction operations. Other nations will be more likely to develop their own capabilities if America goes forward prudently. A success story such as the BBC *China* incident could form a precedent that could convince hesitant nations that such operations can succeed within the bounds of the law and with widespread international support.

Costs. The price of developing a more robust aerial interdiction capability is modest. Doctrinal development could take place within the context of the periodic doctrine review process. With proper training, a mix of existing Navy and Air Force aviation assets could execute interdiction missions. Little logistic support would be required, as these interdictions would generally involve making contact with a civilian aircraft and directing it to land. Clearly, the larger cost lies in the



SEALs fast-rope from MH-53 during maritime interdiction exercise aboard USS Mount Whitney

U.S. Navy (George R. Kueper)

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DOD failure to plan and the Services' failure to organize, train, and equip. While Coast Guard air assets could leverage their counternarcotic expertise within U.S. territorial waters, only DOD airpower has the global reach necessary to show the leadership that must be exhibited at the forefront of the global counterproliferation effort. The alternative is to rely on individual nations to take action over their own territorial waters. Since even nations with the capability to reach deep into international airspace might lack political will, this would leave the airspace above the high seas virtually uncontested.

Risks. The most significant risk with which every aspect of national WMD policy must be concerned is that a state or nonstate actor of proliferation concern comes to possess these weapons and employs them against U.S. citizens or vital interests. Inaction with regard to any pillar of the WMD strategy increases the likelihood that this risk will become a reality. The countervailing factor associated with an active interdiction policy is that an interdiction will end in embarrassment or an international incident that could set back future interdiction efforts. This factor is magnified when action is taken on an ad hoc basis or without thoughtful preparation.

Few would argue that the risk of a WMD attack can be prudently accepted; therefore, the true questions are whether an active aerial interdiction policy can be effective in preventing or lessening that larger risk and whether the countervailing risks associated with action can be minimized to an acceptable level.

An active aerial interdiction policy could face its greatest challenge over the high seas. While a state's exclusive sovereignty to act over its own territory and territorial seas is well established, authority for a state other than the nation of registry to act is ambiguous outside of the international crimes of piracy and the slave trade.¹⁹ The tack of seeking advance authorization from the flag of convenience states will not readily transfer to air interdictions because strict domestic licensing requirements have virtually eliminated the possibility of a flag of convenience for aircraft.²⁰ Thus, the possibility of covering a substantial portion of the worldwide aircraft fleet with one or two agreements simply does not exist as it does with maritime shipping.

Another potential source of authority would be to pursue the treatment of WMD proliferation as an international crime like piracy or the slave trade. Progress has been made on this front. While UN Security Council resolutions are generally not regarded as legally binding, UNSCR 1540 could at least provide some legitimacy to an interdiction. This will be greatly enhanced in the maritime realm by the recently adopted amendment to the International Maritime Organization's Convention for the Suppression of Unlawful Acts Against the Safety of Maritime Navigation to include proliferation activity as an offense. While the amendment has not been ratified by enough nations to take effect, it is another positive development toward performing aerial interdictions.

Building on a growing international consensus, prior planning must consider how best to conduct aerial interdictions. While the consent of the state of registry is preferable, consideration should be given to what other type of nexus might be sufficient to justify action. Recent amendments to several WMD-related statutes have expanded the jurisdictional bases, but this development has

not been widely publicized.²¹ The doctrine development process would allow a chance to explore the limits of this new opportunity and would begin to build the public diplomacy themes and messages needed with future interdiction operations.

Recommendations

Air Force counter-WMD doctrine must be revised to reflect the current realities of the threat. Too much has changed since August 2000 for AFDD 2-1.8 to be taken seriously as germane to the present threat. This revision process should be viewed as an opportunity to expand the tools available to national leadership in response to particular proliferation events.

The most significant area for expansion is the part of the force continuum between providing intelligence, surveillance, and reconnaissance to support treaty verification and conducting counterforce operations

recent amendments to WMD statutes may have broadened the jurisdictional reach of the United States, providing an expanded basis for action. Likewise, operational experts could provide the kind of strategic thought that must shape how best to conduct interdictions, and public affairs and strategic communications experts could address the steps needed to communicate U.S. interdiction policy.

Service doctrine could provide the impetus to reassess joint doctrine and strengthen it with more meaningful discussion of the interdiction mission. To the extent lessons learned in developing aerial interdiction doctrine translate to land and maritime interdictions, those benefits can help those communities as well.

In the final analysis, no aspect of the fight against WMD can be prudently neglected. Determined adversaries will exploit any perceived weakness in their dogged pursuit of weapons that will provide the kind of shock value on which terrorists and lawless states thrive.

Unlike interdictions at sea, aerial interdictions will provide little margin for error. Because any misstep could undermine international support for the broader counter-WMD effort, the Air Force effort must function

at a level of detail that assures nearly flawless execution.

As a particularly affected nation, the United States must provide leadership. Keeping WMD out of the hands of rogue states and terrorist groups is one of the few issues on which a broad international consensus exists with regard to overarching principles. Thus, the international political environment is ripe for a prudent move to take necessary action. **JFQ**

NOTES

¹ House Committee on International Relations, Subcommittee on International Terrorism, Nonproliferation, and Human Rights, *Averting Nuclear Terrorism*, 109th Cong., 1st sess., serial 109-40, April 14, 2005, 2.

² House Committee on International Relations, Subcommittee on International Terrorism, Nonproliferation, and Human Rights, *Proliferation Security Initiative: An Early Assessment*, 109th Cong., 1st sess., serial 109-55, June 9, 2005, 2.

³ Jofi Joseph, "The Proliferation Security Initiative: Can Interdiction Stop Proliferation?" *Arms Control Today* 34, no. 5 (June 2004), 6.

⁴ *Proliferation Security Initiative*, 8.

⁵ National Commission on Terrorist Attacks Upon the United States, *The 9/11 Commission Report: Final Report of the National Commission on Terrorist Attacks Upon the United States* (New York: W.W. Norton, 2004), 72.

⁶ *Averting Nuclear Terrorism*, 2.

⁷ Jennifer K. Elsea, "Weapons of Mass Destruction Counterproliferation: Legal Issues for Ships and Aircraft," Congressional Research Service, October 1, 2003, 19.

⁸ Center for the Study of Weapons of Mass Destruction, *Combating WMD: Challenges for the Next 10 Years* (Washington, DC: National Defense University Press, 2005), 9.

⁹ National Commission on Terrorist Attacks, 109.

¹⁰ David Albright and Corey Hinderstein, "Unraveling the A.Q. Khan and Future Proliferation Networks," *Washington Quarterly* 28, no. 2 (Spring 2005), 112.

¹¹ Andrew C. Winner, "The Proliferation Security Initiative: The New Face of Interdiction," *Washington Quarterly* 28, no. 2 (Spring 2005), 138.

¹² Center for the Study of Weapons of Mass Destruction, 29-30.

¹³ The White House, *National Strategy to Combat Weapons of Mass Destruction*, December 2002, 2, available at <www.state.gov/documents/organization/16092.pdf>.

¹⁴ Wade Boese, "Proliferation Security Initiative: A Piece of the Arms Control Puzzle," *Georgetown Journal of International Affairs* 6, no. 1 (Winter 2005), 61.

¹⁵ *Ibid.*, 63.

¹⁶ Kay Hailbronner, "Freedom of the Air and the Convention on the Law of the Sea," *American Journal of International Law* 77, no. 3 (July 1983), 515.

¹⁷ DOD Directive 2060.2, *Department of Defense Counterproliferation (CP) Implementation* (Washington, DC: U.S. Government Printing Office, July 9, 1996), 6, available at <www.dtic.mil/whs/directives/corres/pdf/d20602_070996/d20602p.pdf>.

¹⁸ U.S. Air Force, Air Force Doctrine Document 2-1.8, *Counter Nuclear, Biological and Chemical Operations* (Washington, DC: Secretary of the Air Force, August 16, 2000), 6-8, available at <www.dtic.mil/doctrine/jel/service_pubs/afdd2_1_8.pdf>.

¹⁹ Elsea, 13.

²⁰ Paul Stephen Dempsey, "Turbulence in the 'Open Skies': The Deregulation of International Air Transport," *Transportation Law Journal*, 12 (1982), 308.

²¹ Public Law 108-458, "Intelligence Reform and Terrorism Prevention Act of 2004," 118 Stat. 3638, December 17, 2004.

this mission is more difficult than a pure counterforce operation in that it requires great skill and discretion on the part of the intercepting aircrew

against suspect vessels. Realistically, political considerations will almost always preclude the use of force against civil aircraft with the possible exception of another 9/11, where the aircraft themselves are being used as weapons. Thus, for aerial forces to provide a meaningful contribution to the counterproliferation effort, they must develop an unparalleled capability to communicate and enforce orders to divert or land at a particular airfield.

In many ways, this mission is much more complex and difficult than a pure counterforce operation in that it requires great skill and discretion on the part of the intercepting aircrew. The level of thought that goes into doctrine development and the level of training that follows must reflect this complexity.

The doctrine development process is uniquely suited to addressing the broad array of issues that will face this developing mission area. The inputs of stakeholders from the various disciplines should contribute to a more effective doctrine. For instance, legal experts could review the extent to which