

REPORT DOCUMENTATION PAGE				Form Approved OMB No. 0704-0188	
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1. REPORT DATE (DD-MM-YYYY) 04-05-2009		2. REPORT TYPE FINAL		3. DATES COVERED (From - To)	
4. TITLE AND SUBTITLE The Proliferation Security Initiative: A Means to an End for the Operational Commander.				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S) Larson, Curtis G. LCDR, USN Paper Advisor (if Any): N/A				5d. PROJECT NUMBER	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Joint Military Operations Department Naval War College 686 Cushing Road Newport, RI 02841-1207		8. PERFORMING ORGANIZATION REPORT NUMBER			
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)				10. SPONSOR/MONITOR'S ACRONYM(S)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION / AVAILABILITY STATEMENT Distribution Statement A: Approved for public release; Distribution is unlimited.					
13. SUPPLEMENTARY NOTES A paper submitted to the Naval War College faculty in partial satisfaction of the requirements of the Joint Military Operations Department. The contents of this paper reflect my own personal views and are not necessarily endorsed by the NWC or the Department of the Navy.					
14. ABSTRACT Weapons of Mass Destruction (WMD) proliferation is a serious threat to the security of the United States and the world. For the operational commander supporting national strategy the interdiction of WMD materials is a complex mission that requires the capability to exchange timely information with coalition nations as well as conduct multi-national operations with partners with differing constraints and capacities. Current doctrine does not provide the operational commander the fundamental principles to prepare and plan for these operations in the international security environment. This paper proposes that the operational commander can overcome this challenge by using the ends, ways, means approach. The Proliferation Security Initiative (PSI) can provide the operational commander the means to achieve interdiction objectives. This paper looks at the background of the PSI to provide context. Parallels with the complexities of recent counter-piracy operations are used to illustrate the similar challenges of WMD interdiction operations. Examples of PSI events show how the activity has provided a means. Guidance and existing doctrine for WMD interdiction are examined and evaluated. Finally, this paper proposes the ways (Logical Lines of Operation) the operational commander can use with the means of PSI to achieve the ends.					
15. SUBJECT TERMS Proliferation Security Initiative, WMD Interdiction, Counter-proliferation					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES 29	19a. NAME OF RESPONSIBLE PERSON Chairman, JMO Dept
a. REPORT UNCLASSIFIED	b. ABSTRACT UNCLASSIFIED	c. THIS PAGE UNCLASSIFIED			19b. TELEPHONE NUMBER (include area code) 401-841-3556

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**The Proliferation Security Initiative: A Means to an End for the Operational
Commander.**

by

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**A paper submitted to the Faculty of the Naval War College in partial satisfaction of the
requirements of the Department of Joint Military Operations.**

**The contents of this paper reflect my own personal views and are not necessarily
endorsed by the Naval War College or the Department of the Navy.**

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04 May 2009

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Abstract

The Proliferation Security Initiative: A Means to an End for the Operational Commander.

Weapons of Mass Destruction (WMD) proliferation is a serious threat to the security of the United States and the world. For the operational commander supporting national strategy the interdiction of WMD materials is a complex mission that requires the capability to exchange timely information with coalition nations as well as conduct multi-national operations with partners with differing constraints and capacities. Current doctrine does not provide the operational commander the fundamental principles to prepare and plan for these operations in the international security environment. This paper proposes that the operational commander can overcome this challenge by using the ends, ways, means approach. The Proliferation Security Initiative (PSI) can provide the operational commander the means to achieve interdiction objectives. This paper looks at the background of the PSI to provide context. Parallels with the complexities of recent counter-piracy operations are used to illustrate the similar challenges of WMD interdiction operations. Examples of PSI events show how the activity has provided a means. Guidance and existing doctrine for WMD interdiction are examined and evaluated. Finally, this paper proposes the ways (Logical Lines of Operation) the operational commander can use with the means of PSI to achieve the ends.

INTRODUCTION

“We know the threat we face. We know that our margin of safety is shrinking, not growing. And we know what we must do to counter the risk... We need unity at all levels – nationally, locally, and among people across the globe. There is still time to defend ourselves, if we act with the urgency called for by the nature of the threat that confronts us.”

- “*World at Risk*” Report of the Commission on the Prevention of WMD Proliferation and Terrorism, December 2008.

Weapons of Mass Destruction (WMD) proliferation is a serious threat to the security of the United States and the world. Globalization has made it easier for both state and non-state actors to finance proliferation efforts and transfer WMD related materials and equipment. The increase of dual use technologies and equipment has made the interdiction of proliferation activities more complex. For example, equipment used to manufacture pharmaceuticals can also be used to grow biological pathogens. This increased threat combined with the post-911 security environment led the United States to develop the National Security Strategy for Combating Weapons of Mass Destruction. This document shifted the national strategy on counter-proliferation from passive deterrence to pre-emption.¹

The dramatic shift in WMD counter-proliferation policy raises numerous challenges for the Geographic Combatant Commander’s mission to support National Strategy from the operational level. One challenge is working with coalition partners to conduct WMD interdiction operations. Coalition partners often have national authorities and rules of engagement that are vastly different from the United States. Another challenge faced is the perceptions of coalition partners. Activities the United States perceives as WMD proliferation may be seen as free trade or economic development by a partner nation. Additionally, coalition partners are often not as prepared to conduct WMD interdiction.

¹ U.S. President, *National Strategy to Combat Weapons of Mass Destruction*, (Washington, DC: White House, 2002), 1.

They may not possess the planning expertise, information, or force capability to undertake these complex operations.

The National Military Strategy to Combat Weapons of Mass Destruction, published in 2006, provides Department of Defense (DoD) components a guide for combating WMD to include interdiction. The strategy uses the “ends, ways, means” approach with the ways identified as Military Strategic Objectives and the means identified as “Combatant Commands, Military Departments, and Combat Support Agencies”. This strategy also details Strategic Enablers; intelligence, partnership capacity, and strategic communications. Within the strategic enabler of partnership capacity lies what is arguably the most important interdiction tool available to the operational commander, The Proliferations Security Initiative (PSI).² There is, however, a gap between the Combating WMD strategic guidance and the means available to the operational commander that must be bridged. The Geographic Combatant Commander (GCC) must use the PSI not as a strategic enabler but as a means to combating weapons of mass destruction.

As stated above, the “margin of safety is shrinking.” The risk incurred by WMD proliferation or the occurrence of even a single WMD event is of grave concern to national and global security. Some may argue that the probability of a WMD event is low in comparison to other security threats but the consequences are too high. Due to the potential consequences of WMD proliferation the United States has embarked on a strategy of pre-emption and dedicated significant resources across the whole of government. The Combatant Commanders, as the military operational arm of national power, are required to support this pre-emption strategy and the PSI provides the means.

² Chairman, U.S. Joint Chiefs of Staff, *National Military Strategy to Combat Weapons of Mass Destruction* (Washington, DC: CJCS, 13 February 2006), 4-18.

This paper will demonstrate how the operational commander can use the PSI as a means to support National Strategy. First, it will provide background on the PSI. Parallels with the complexities of recent counter-piracy operations will be used to illustrate similar challenges in the conduct of WMD interdiction operations. Examples from PSI events will show how the activity can provide means. Lastly, guidance and existing doctrine available to the operational commander to prepare for WMD interdiction operations will be examined and evaluated. Conclusions drawn from this analysis will be presented and recommendations proposed. This paper will not examine the complexities of international law but assumes that the Combatant Commander's will work within the existing legal framework.

BACKGROUND

The PSI, a Department of State (DoS) led initiative launched in 2003, is a flexible framework that provides “more robust tools to stop proliferation of WMD around the world, and specifically identifies interdiction as an area where greater focus will be placed”³ It is intended that these tools will be used within the confines of national legal authorities and international law. It is one of over 25 existing non-proliferation/counter-proliferation international measures.⁴ However, The PSI is unique in that it is an activity “with teeth” conducted by international partners and not a formal treaty, international regime, or organization.⁵

The PSI was started with 11 countries and has expanded to involve 93 participating nations. This activity may be considered to exist in three layers, the participating nations, the

³ U.S. Department of State. “Proliferation Security Initiative,” <http://www.state.gov/t/isn/c10390.htm> accessed 22 April 2009.

⁴ The Appendix contains a partial list of existing non-proliferation/counter-proliferation treaties, regimes, and programs.

⁵ Editorial, “The New Multilateralism,” *The Wall Street Journal* 8 January 2004, <http://www.opinionjournal.com/editorial/feature.html?id=110004520> (accessed 20 April 2009).

Operational Experts Group (OEG), and interdiction actions.⁶ Participating nations endorse a Statement of Interdiction Principles, share information, and support interdiction actions when deemed appropriate by national authority. The OEG consists of military, law enforcement, intelligence, legal, and diplomatic experts from twenty participant countries with the purpose to develop operational concepts, organize the PSI exercise program, share information about national legal authorities, and pursue cooperation with key industry sectors.⁷ Interdiction actions may include enforcement of international non-proliferation regimes, export controls, interruption of a proliferator's fiscal resources, or the physical interdiction of illicit materials while in transshipment.

The Statement of Interdiction Principles (SOP) provides the foundation of the PSI and is endorsed by all participant countries. In strategic terms, the purpose of the PSI is to stop proliferation through international cooperation. The PSI SOP calls on all states concerned with this threat to international peace and security to join in similarly committing to:

1. Undertake measures to interdict transfer of WMD, delivery systems, and related items to/from state/non-state actors.
2. Adopt procedures to streamline information exchange.
3. Take specific actions in support of interdiction efforts.
4. Review and work to strengthen national legal authorities.⁸

The first three principles can be leveraged by the operational commander to combat WMD.

Additionally, the DoS has provided three overall goals for the PSI:

⁶ Joseph Benkert, "Testimony," Senate. *Fiscal 2009 Defense Authorization: Nonproliferation Programs: Hearings before the subcommittee on Emerging Threats and Capabilities*. 112th Cong 2008. <http://www.ebscohost.com/> (accessed 09 April 2009).

⁷ U.S. Department of State. "Proliferation Security Initiative Frequently Asked Questions (FAQ)," <http://www.state.gov/t/isn/115491.htm> accessed 22 April 2009

⁸ Ibid

1. Stop shipments of WMD, their delivery systems, and related items to/from states or non state actors of proliferation concern.
2. Make proliferation more costly and more difficult for the proliferators
3. Reveal covert proliferation behavior and networks⁹

These goals can be used by the operational commander as the ends for WMD interdiction.

DISCUSSION

How are WMD interdiction and Counter-piracy Operations Similar?

The challenges faced by the operational commander to conduct WMD interdiction can be illustrated by drawing parallels with the complex problem of ongoing counter-piracy operations. These operations are so similar that one could take the PSI Statement of Interdiction Principles, remove the reference to WMD, and arrive at the same international principles for counter-piracy operations; interdiction, streamline information sharing, support interdiction efforts, strengthen national legal authorities. NATO has even used the term proliferation when referring to the increase in pirate activities off the coast of Somalia.¹⁰

Both WMD interdiction and counter-piracy efforts are conducted by a coalition of the willing, have national limitations to include differing authorities or rules of engagement, require information sharing, and most importantly have similar objectives. Additionally, though the PSI has an air and land component, PSI has focused on the maritime environment. The operational parallels are best addressed by looking at the objectives and the means to meet those objectives. The shared objectives of the PSI and counter-piracy are detection, deterrence, and interdiction.

⁹ “Proliferation Security Initiative (PSI),” PowerPoint, September 2008, Washington, DC: Department of State, Bureau of International Security and Non-proliferation.

¹⁰ North Atlantic Treaty Organization, “The Growing Threat of Piracy to Regional and Global Security” NATO Parliamentary Assembly, 2009 Spring Session. <http://www.nato-pa.int/default.Asp?SHORTCUT=1770> (accessed 24 April 2009)

Interdicting pirates, like interdicting WMD, requires coalition forces operating with the permission of their government. In 2008 a spike in piracy activities in the Horn of Africa region led to an international response. Coalition maritime forces were already in the region under the banner of CTF 150 conducting anti-terrorist operations. However, not all coalition members available to the operational commander had the national authority to conduct counter-piracy operations. To overcome the challenge of national authorities the Coalition Maritime Force Commander (CMFC) established a Maritime Security Patrol Area (MSPA) and CTF 151. CTF 151 brought together military forces from 14 partner nations with the national authority to conduct counter-piracy operations. Those coalition members that do not have the authority to use their military forces to execute counter-piracy operations continue to work with CTF 150.¹¹ The CMFC's decision to designate an MSPA and reorganize his forces to account for national authorities provided unity of effort to counter-piracy operations. As of February 2009 the pirate's success rate of attack had been cut from 64 percent in October 2008 to just 17 percent.¹²

Interdiction and detection of pirates and WMD proliferators both require information. In counter-piracy operations information is the way, or logical line of operation (LLOO) the operational commander uses to identify pirate intent, bases of operations, and conduct interdictions. When conducting counter-piracy operations, the forces providing maritime security must be able to determine intent. Vessels in the region may appear to be pirates but their intent may be innocent passage or fishing. Additionally, analysis of information can be used to understand pirate behavior; where and how they will strike. Understanding the

¹¹ Monique Hilley, "Coalition Forces Work to Deter Piracy in Gulf of Aden" *Navy.Mil*, 17 January 2009, http://www.navy.mil/search/display.asp?story_id=41897 (accessed 25 April 2009).

¹² Samantha Quigley "Piracy on High Seas Begins on Land, Defense Official Says" *Navy.mil*, 3 March 2009, http://www.navy.mil/search/display.asp?story_id=43185 (accessed 22 April 2009).

pirate's behavior and patterns enables the operational commander to be better positioned to deter or interdict attacks. Coalition forces must also be able to obtain and share time critical information of an attack to support counter-force operations.

Similarly, the purpose of information sharing in WMD interdiction is not just to locate the "pirates" but is also used to identify networks (e.g. the A.Q. Khan network), behavior patterns, and intent. As stated previously, the increase in dual use technology has made interdiction efforts even more complex. Knowing equipment or material is in transshipment does not meet the requirement to conduct an interdiction. It must be known that the consignee intends to use the equipment or material to develop WMD.¹³

The establishment of CTF 151 and a Maritime Security Center-Horn of Africa has streamlined information sharing within the MSPA. CTF 151 forces share both time sensitive tactical information as well as information on best practices; tactics, techniques, and procedures (TTP). The Maritime Security Center is a military operation that provides an information nexus between CTF 151 and the shipping industry. The center enables the maritime industry to provide ship positions, pass reports, and most importantly receive "guidance designed to reduce the risk of pirate attacks."¹⁴ Sharing information between both the coalition military forces and the commercial sector has provided a way for the operational commander to better detect and interdict piracy by providing time sensitive information to make decisions as well as improve coalition partner's effectiveness. The PSI can provide the operational commander similar mechanisms for information sharing.

¹³ Andrew Winner. "The Proliferation Security Initiative: The New Face of Interdiction," *The Washington Quarterly* 28-2 (Spring 2005): 139.

¹⁴ North Atlantic Treaty Organization, "The Growing Threat of Piracy to Regional and Global Security" NATO Parliamentary Assembly, 2009 Spring Session. <http://www.nato-pa.int/default.Asp?SHORTCUT=1770> (accessed 24 April 2009)

Counter-piracy operations, like WMD interdiction have a deterrence objective. For both pirates and proliferators, the objective of deterrence is to make it too costly to continue to conduct these illegal activities. This is the modern day equivalent to the cold war deterrence policy of mutually assured destruction. At the operational level, the physical act of interdiction is an offensive deterrence method. A passive method of deterrence is force presence. However, with the immense area of the maritime domain (factor space) involved, force presence is a challenge. VADM Gortney, the CMFC, recently said that experience has shown that no one nation can secure every ocean and waterway around the world.¹⁵ An increase in the international naval presence in the area has supported deterrence of piracy.¹⁶ NATO recently stated “the deterrent effect of current deployments already seems to be producing positive results.”¹⁷ The provision of naval forces by the international community increased force presence has provided the operational commander a way to deter illegal activity in the region.

The international community, through cooperation and commitment, has provided the means to counter-piracy. To counter WMD proliferation the PSI provides a pre-existing framework for similar cooperation and the follow on commitment to stop the illegal proliferation activity. From these means the operational commander can develop the ways.

¹⁵ Samantha Quigley “Piracy on High Seas Begins on Land, Defense Official Says” *Navy.mil*, 3 March 2009, http://www.navy.mil/search/display.asp?story_id=43185 (accessed 22 April 2009).

¹⁶ According to one estimate, some 60 vessels would be necessary to protect the internationally designated shipping lanes alone; yet only some 20 ships were deployed in the area as of the beginning of April. Current levels therefore need to be sustained and other international partners should be encouraged to join the current coalition. North Atlantic Treaty Organization, “The Growing Threat of Piracy to Regional and Global Security” NATO Parliamentary Assembly, 2009 Spring Session. <http://www.nato-pa.int/default.Asp?SHORTCUT=1770> (accessed 24 April 2009)

¹⁷ North Atlantic Treaty Organization, “The Growing Threat of Piracy to Regional and Global Security” NATO Parliamentary Assembly, 2009 Spring Session. <http://www.nato-pa.int/default.Asp?SHORTCUT=1770> (accessed 24 April 2009)

For counter-piracy operations the ways are unity of effort, information sharing, and interoperability.

How is the PSI “executed”?

The PSI is executed through activities or events. As of March 2009 there have been nearly 60 PSI events; conferences, exercises, and interdictions. These events have included 23 OEG conferences or training workshops and 36 practical or table top exercises.¹⁸ Through July 2006, actual PSI interdictions were stated by the Under Secretary for Arms Control to have been over 30.¹⁹ However, the accuracy of this figure cannot be verified, even by the U.S., as it is not required for PSI participants to share information on interdictions with all members or release information to the public.²⁰ Policy guidance to the operational commanders states that they will support PSI activities and events. This support includes participation in scheduled PSI exercises, attending conferences or training events, and through the conduct of Combating WMD interdiction operations.²¹

PSI exercises are focused entirely on WMD interdiction and are conducted as stand-alone events to prepare participant countries to execute interdiction operations. Countries that are not participants in PSI may observe these exercises. Additionally, these events are conducted outside the operational commander’s traditional security cooperation plan and exercise schedule and include participation of the interagency. A robust example of a PSI exercise was “Pacific Shield 07 (PS07).” PS07 was a multinational exercise hosted by Japan

¹⁸ U.S. Department of State. “Proliferation Security Initiative Calendar of Events,” <http://www.state.gov/t/isn/c27700.htm> accessed 01 May 2009

¹⁹ Robert Joseph. “Remarks to the Capitol Hill Club,” (18 July 2006) quoted in U.S. Congressional Research Service. *Proliferation Security Initiative (PSI)*. Washington, DC: CRS 04 February 2008

²⁰ Wade Boese, “Interdiction Initiative Successes Assessed,” *Arms Control Today* 38, Issue 6 (Jul/Aug 2008): 33-34.

²¹ Chairman of the Joint Chiefs of Staff. “Proliferation Security Initiative (PSI) Activity Program.” CJCSI 2502.02A (Washington DC: CJCS, 01 March 07)

with 41 countries participating.²² This number is, however, skewed in that 34 of these 41 countries participated only as observers with only 7 countries actually contributing manpower or assets to the event. The exercise spanned three days and consisted of inspection and interdiction drills on land and at sea. The at sea portion of the exercise included the “search, detection, tracking/boarding” of a vessel suspected of transporting WMD related material.²³

As noted previously, the PSI is not just a series of conferences or exercises. WMD interdictions have been conducted though the results are not always provided to the public. It has been made public that PSI interdictions have included the interruption of export to Iran of missile related equipment, dual use goods, and heavy water equipment.²⁴ One interdiction operation that is often publicly referenced is the interception of the *BBC China*. This vessel was German owned and believed to be carrying Malaysian manufactured centrifuge parts to Libya. The United States, United Kingdom, Italy, Germany, and Malta worked together to detect and track the *BBC China* while transiting the Mediterranean Sea. Through PSI cooperation the participating nations diverted the vessel to a port in Italy where inspection of the cargo confirmed that the ship was transporting uranium enrichment centrifuge parts to Libya. This interdiction operation prevented the delivery of illicit WMD equipment and arguably influenced the country of Libya to give up its WMD ambitions. Although military forces were part of the overall effort it was not required to use force to conduct the interdiction. This interdiction was successful due to the means provided by the PSI. The

²² Defense Threat Reduction Agency. “Proliferation Security Initiative Hosted by Japan Shows Growing Interest in Asia but no Sea Change in Key Outsider States,” *WMD Insights, Issues and Viewpoints in the International Media*. December 2007 – January 2008, 1.

²³ Ibid.

²⁴ Robert Joseph, “Broadening and Deepening Our Proliferation Security Initiative Cooperation,” *DISAM Journal of International Security Assistance Management* 29, Issue. 1 (Feb 2007): 32-36.

ways included information superiority over the proliferators and the commitment of interagency partners and international states applying unity of effort in a time sensitive environment.

What guidance on the PSI exists for the Operational Commander?

As discussed above, WMD interdiction is a complex problem. The operational commander derives guidance to prepare for WMD interdiction from the National Military Strategy to Combat Weapons of Mass Destruction, instructions, and existing doctrine. This guidance, however, adds an additional challenge to the problem. The PSI, as shown by the interdiction of the *BBC China* is a means to the end of stopping shipments of WMD material. However, the PSI is not integrated into joint doctrine. The purpose of joint doctrine is to provide “fundamental principles that guide the employment of US military forces in coordinated and integrated action toward a common objective...It promotes a common perspective from which to plan, train, and conduct military operations.”²⁵ Lacking joint doctrine on the PSI challenges each GCC to determine best how to integrate PSI in preparing for WMD interdiction operations in support of national strategy.

There are CJCS policy documents that address PSI; the National Military Strategy to Combat WMD and a CJCS Instruction. The National Military Strategy to Combat WMD defines PSI as a strategic enabler while limiting guidance to state that:

“Security cooperation efforts should not only, for example, focus on missile defense cooperation or the PSI, but should equally stress passive defense, elimination, and WMD consequence management cooperation, including efforts in multilateral fora.”²⁶

²⁵ *Doctrine for the Armed Forces of the United States*, Joint Publication (JP) 1. (Washington DC: CJCS, 20 March 2009), I-1.

²⁶ Chairman, U.S. Joint Chiefs of Staff, *National Military Strategy to Combat Weapons of Mass Destruction*(Washington, DC: CJCS, 13 February 2006), 4-18.

This guidance implies that the PSI, a proven means with 93 participant countries, is of little significance to Combating WMD efforts and does not address the relationship of the PSI with actual WMD interdiction operations.

The CJCS Instruction, a policy document not doctrine, better defines the PSI. However, the PSI is addressed as a stand-alone activity that will be supported by the GCC. Discussion of the operational commander integrating or leveraging the PSI is limited to the following statement:

“It is recommended that GCCs incorporate PSI exercises scenarios into existing exercises when possible for ease of scheduling and budget considerations.”²⁷

The CJCS policy is that the GCC will support the PSI in stand-alone events and should incorporate the PSI in existing exercises. To date, the only reference to the integration of the PSI into an existing exercise was PANAMAX 07.²⁸ Additionally, this instruction states that the GCC “will be prepared to conduct PSI interdiction operations as required or directed.”²⁹ However, as a policy document it lacks the “fundamental principles” required by the operational commander to prepare for these operations.

Joint Publication 3-40, *Joint Doctrine for Combating Weapons of Mass Destruction*, includes doctrine on WMD interdiction. However, this doctrine, last updated only one year after the PSI was launched, is deficient in addressing how the operational commander should integrate or leverage the PSI. Discussion on PSI is limited to training and states “The scope of the PSI will all but mandate that conventional forces participate in interdiction operations

²⁷ Chairman U.S. Joint Chiefs of Staff. “Proliferation Security Initiative (PSI) Activity Program.” CJCSI 3502.02A, (Washington DC: CJCS, 01 March 07), B-4.

²⁸ Joseph Benkert, “Testimony,” Senate. *Fiscal 2009 Defense Authorization: Nonproliferation Programs: Hearings before the subcommittee on Emerging Threats and Capabilities*. 112th Cong 2008. <http://www.ebscohost.com/> (accessed 09 April 2009).

²⁹ Chairman U.S. Joint Chiefs of Staff. “Proliferation Security Initiative (PSI) Activity Program.” CJCSI 3502.02A, (Washington DC: CJCS, 01 March 07), B-4.

alongside national assets.”³⁰ There is a sidebar in the document that provides the background to the PSI but the discussion remains separate from doctrine. The conclusion to the sidebar does, however, contain a statement about PSI that should be included in the base document, “PSI serves as a means to interdict WMD transshipments on a global scale by leveraging the support of key international partners.”³¹ This key statement implies that, at the operational level, the PSI shifts from a strategic enabler to a means. The JP does address interdiction as a possible operational task in support of both the non-proliferation and counter-proliferation phases of Combating WMD. However, the doctrine is focused on planning recommendations for combat operations and not on WMD interdiction operations in a security environment.

Without doctrine on the integration of the PSI with military operations the operational commanders must develop their own fundamental principles to prepare and plan to conduct WMD interdiction operations. As demonstrated by the interdiction of the *BBC China*, the PSI can be a means to stopping shipments of WMD material. The operational commander can also use the PSI as a means to conduct WMD interdiction.

ANALYTICAL CONCLUSIONS

WMD interdiction, like counter-piracy operations, is a complex problem. Both problems require the operational commander to exchange timely information, and conduct operations with coalition members possessing differing authorities and rules of engagement. Additionally, the operational commander must plan and conduct these operations within the framework of national and international laws. In counter-piracy operations, the surge in international cooperation is the operational commander’s means; the resource to achieve the

³⁰ Chairman US Joint Chief of Staff. *Joint Doctrine for Combating Weapons of Mass Destruction*. Joint Publication (JP) 3-40. (Washington, DC: CJCS, 8 July 2004), V-2.

³¹ Ibid, III-6.

operational objectives. From the means, the operational commander developed the ways, the method of employing the means (see figure 1). In this case international cooperation as a means is employed by the operational commander through unity of effort and information sharing to achieve the objectives; detect, deter and interdict piracy. International cooperation as means has also provided the operational commander with the way to deter and interdict piracy through force presence.

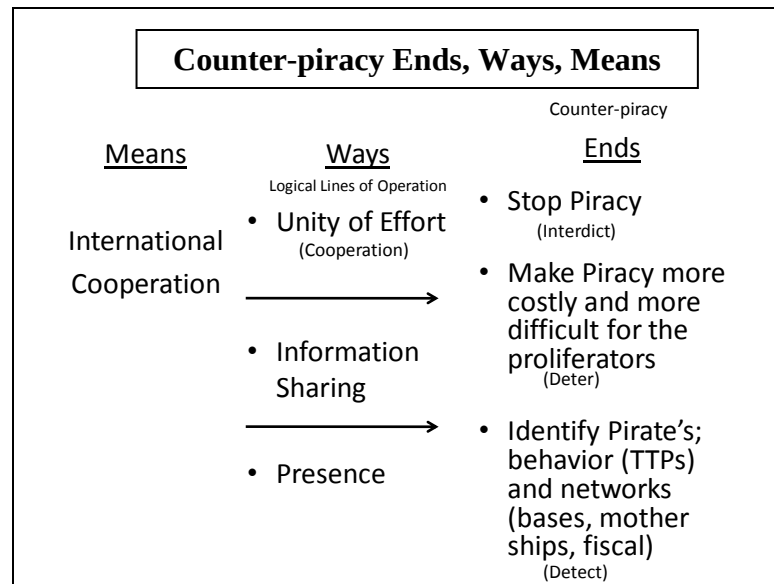


Figure 1

The means and the ends of counter-piracy and WMD interdiction are the same, international cooperation and detect, deter, and interdict respectively. The means required by the operational commander to conduct WMD interdiction operations pre-exist within the PSI. As stated previously, the purpose of PSI is to stop proliferation through international cooperation. Analysis reveals the ways, or logical lines of operation (LLOO), to achieve the ends of WMD interdiction.

Information sharing is a LLOO for both counter-piracy and WMD interdiction operations. Information sharing mechanisms provide critical intelligence the operational

commander can use to achieve the objectives; detect, deter and interdict. Information sharing also leads to the integration of TTPs among coalition forces. This mitigates coalition planning and SOP differences, overcomes the tactical complexities, and provides the operational commander with a more effective force by increasing inter-operability.

The counter-piracy mission is being “normalized” through the daily conduct of CTF 151 operations. Normalization is another LLOO the operational commander can use to overcome the challenges faced to conduct WMD interdiction. Normalization also mitigates coalition planning and SOP differences, overcomes the tactical complexities, and provides the operational commander a better understanding of coalition force capacity. Robert Joseph has observed that “Regular participation... that test capacities and legal authorities is a positive way to maintain our operational readiness against what are creative and clever adversaries.”³² Additionally, the normalizing of operations results in a demand signal from the operational commander to the services that there is requirement to conduct this specific mission set. The Navy has responded to the normalization of counter-piracy operations by including specific training in the inter-deployment training cycle. Normalization of WMD interdiction operations would require the services to respond likewise, thereby providing the operational commander with a more capable force.

Security cooperation is the third LLOO for WMD interdiction. Currently, PSI exercises and events are stand-alone. This segregation of the PSI prevents the normalization of WMD interdiction into operations and limits partnership capacity building efforts. Though policy states that COCOMS should include the PSI in exercises and training there is not much evidence to support that this has occurred. It may be argued that the PSI should not

³² Robert Joseph, “Broadening and Deepening Our Proliferation Security Initiative Cooperation,” *DISAM Journal of International Security Assistance Management* 29, Issue. 1 (Feb 2007): 32-36.

be integrated into existing exercises and that doing so will dilute their value. However, it is only necessary to ask what the credible threat is we are exercising to prevent? For example, is the United States more likely to be prepared to conduct a bi-lateral surface engagement with the Argentinean navy against Country Red or interdict proliferation attempts to FARC, Shining Path, or Hezbollah associated terrorist organizations in South America? The United States military must continue to train how we fight. In the dynamic arena of international security the United States and coalition partners must be prepared to meet proliferation threats.

There is a doctrinal gap between strategic guidance and the means available for the operational commander to conduct WMD interdiction. The PSI provides the means. Therefore the PSI must be included in Combating WMD doctrine. Inclusion of the PSI into doctrine as a means will result in development of the fundamental principles required to prepare and plan WMD interdiction as a non-proliferation and counter-proliferation operational task in the international security environment.

RECOMMENDATIONS

In the absence of doctrinal integration of the PSI with military operations the operational commander's must develop their own approach. Just as the Strategic guidance on Combating WMD uses the "ends, ways, means" approach, the operational commander can also use this approach. For the operational commander conducting WMD interdiction the "ends" are the operational objectives, the "ways" are the logical lines of operations, and the "means" is the PSI. The operational commander must use the PSI as a means to combat weapons of mass destruction. The ways that should be employed are information sharing, normalization, and security cooperation (see figure 2).

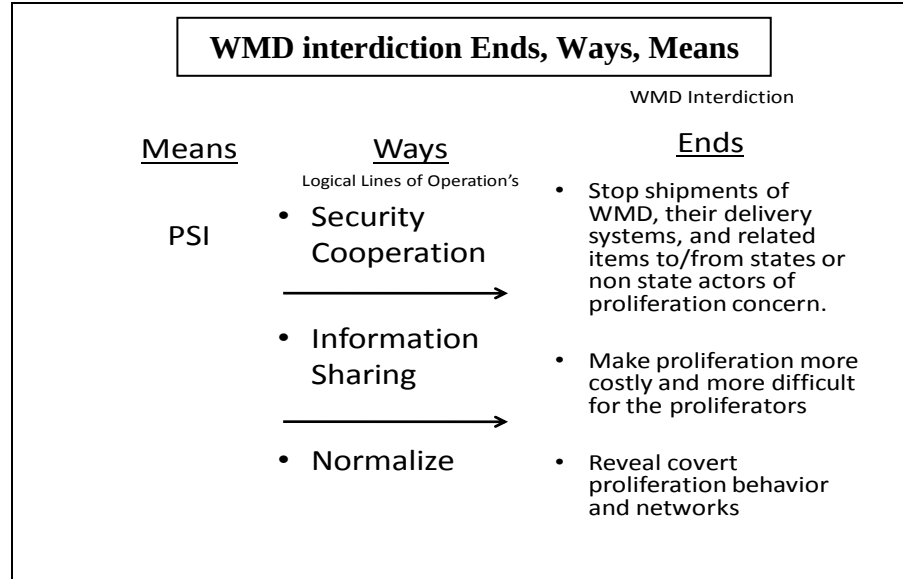


Figure 2

Also, valuable counter-piracy lessons learned on counter-piracy operations are being captured. Based on the similarities of the mission sets, many of these lessons learned such as those concerning overcoming coalition national constraints and ROE differences and the sharing of information are applicable. The operational commander should apply these lessons learned to better plan and prepare to conduct WMD interdiction efforts.

The Combatant Commander should also inject WMD interdiction across the spectrum of TSC events. This will result in the normalizing of WMD interdiction operations as well as increase partnership capacity. These WMD interdiction events should focus not just on the maritime environment but include air interdiction. Land interdiction is more unlikely due to HN sovereignty but can be offered for inclusion at HN request for US support.

Appendix

Existing Non-Proliferation/Counter-Proliferation Treaties, Regimes, and Programs.

The Nuclear Suppliers Group. With 40 member states, the Nuclear Suppliers Group (NSG) is a widely accepted, mature, and effective export-control arrangement, which contributes to the nonproliferation of nuclear weapons through implementation of guidelines for control of nuclear and nuclear-related exports. Members pursue the aims of the NSG through voluntary adherence to the Guidelines which are adopted by consensus and through exchanges of information on developments of nuclear proliferation concern.

Zangger Committee. The purpose of the 35-nation Nuclear Non-Proliferation Treaty (NPT) Exporters (Zangger) Committee (ZC) is to harmonize implementation of the Non-Proliferation Treaty's requirement to apply International Atomic Energy Agency (IAEA) safeguards to nuclear exports. Article III.2 of the Treaty requires parties to ensure that IAEA safeguards are applied to exports to non-nuclear weapon states of (a) source or special fissionable material, or (b) equipment or material especially designed or prepared for the processing, use or production of special fissionable material. The Committee maintains and updates a list of equipment that may only be exported if safeguards are applied to the recipient facility, called the "Trigger List" because such exports trigger the requirement for safeguards.

Missile Technology Control Regime. The MTCR Partners have committed to apply a common export policy (MTCR Guidelines) applied to a common list (MTCR Annex) of controlled items, including virtually all key equipment and technology needed for missile development, production, and operation. The Guidelines and Annex are implemented by each Partner in accordance with its national laws and legislation. The MTCR Guidelines restrict transfers of missiles -- and technology related to missiles -- for the delivery of weapons of mass destruction (WMD). The Regime places particular focus on missiles capable of delivering a payload of at least 500 kg to a distance of at least 300 km -- so-called "Category I" or "MTCR-class" missiles.

Australia Group. The Australia Group (AG) was founded in 1984 in the aftermath of the massive use of chemical weapons during the Iran-Iraq war. The principal impetus for the AG was to ensure that the industries of the participating countries did not assist, either purposefully or inadvertently, states seeking to acquire CBW (chemical and biological weapons) capability. The AG observes and fully supports international treaties and commitments against chemical and biological weapons.

Wassenaar Arrangement on Export Controls for Conventional Arms and Dual-Use Goods and Technologies. The Wassenaar Arrangement (WA) is the first multilateral institution covering both conventional weapons and sensitive dual-use goods and technologies. The WA is designed to prevent destabilizing accumulations of arms and dual-use goods and technologies. The Arrangement encourages transparency, consultation and, where appropriate, national policies of restraint. In doing so, the WA fosters greater responsibility and accountability in transfers of arms and dual use goods and technologies.

The Arrangement also provides a venue in which governments can consider collectively the implications of various transfers on their international and regional security interests. WA members maintain export controls on the WA Munitions and Dual-Use lists. Wassenaar also provides a forum for discussing security and conventional weapons nonproliferation issues that do not fall within one of the other, more established nonproliferation regimes.

The **Treaty on the Non-Proliferation of Nuclear Weapons**, also **Nuclear Non-Proliferation Treaty (NPT or NNPT)** is a treaty to limit the spread of nuclear weapons, opened for signature on July 1, 1968. There are currently 189 countries party to the treaty, five of which have nuclear weapons: the United States, the United Kingdom, France, Russia, and the People's Republic of China (the permanent members of the UN Security Council).

The **International Atomic Energy Agency (IAEA)** is an international organization that seeks to promote the peaceful use of nuclear energy and to inhibit its use for military purposes. Though established independently of the United Nations under its own international treaty (the IAEA Statute), the IAEA reports to both the General Assembly and the Security Council. The IAEA's mission is guided by the interests and needs of Member States, strategic plans and the vision embodied in the IAEA Statute (see below). Three main pillars - or areas of work - underpin the IAEA's mission: Safety and Security; Science and Technology; and Safeguards and Verification.

The **Convention on the Physical Protection of Nuclear Material** provides for certain levels of physical protection during international transport of nuclear material. It also establishes a general framework for cooperation among states in the protection, recovery, and return of stolen nuclear material. Further, the Convention lists certain serious offenses involving nuclear material which state parties are to make punishable and for which offenders shall be subject to a system of extradition or submission for prosecution

The **Global Initiative to Combat Nuclear Terrorism** is an agreement by 75 countries with a Statement of Principles and a Terms of Reference for Implementation and Assessment on 30 - 31, October 2006. The International Atomic Energy Agency is invited to serve as an observer to the Initiative. It is intended to prevent terrorists from sourcing and using a nuclear bomb by employing many measures to protect fissile material and nuclear stockpiles. The **Cooperative Threat Reduction (CTR)** is an initiative housed within the Defense Threat Reduction Agency (DTRA). According to the CTR website, "the purpose of the CTR Program is to secure and dismantle weapons of mass destruction and their associated infrastructure in former Soviet Union states. " In recent years, the CTR program has expanded its mission from WMD at the root source to protecting against WMD "on the move" by enhancing land and maritime border security in the Former Soviet Union

The **Nuclear Smuggling Outreach Initiative (NSOI)** seeks to cooperate with countries where the smuggling threat is greatest to assist them to improve their abilities to **prevent, detect, and respond to** incidents of nuclear smuggling. NSOI engages those countries seen to be at greatest risk of smuggling of nuclear and radioactive materials in or through their territories. The NSOI team works with the government of each such country to jointly assess its strengths and shortcomings in its ability to combat the nuclear smuggling threat. This

assessment focuses particularly on identifying gaps in existing capabilities and priority needs for improvement.

The **Chemical Weapons Convention (CWC)** is an arms control agreement which outlaws the production, stockpiling and use of chemical weapons. Its full name is the **Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on their Destruction**. The current agreement is administered by the Organization for the Prohibition of Chemical Weapons (OPCW), which is an independent organization and often mistaken as being a department within the United Nations.

The **Organisation for the Prohibition of Chemical Weapons (OPCW)** is an international agency, located in The Hague, The Netherlands. Its mission is to promote membership of the Chemical Weapons Convention treaty which entered into force in 1997 and mandated the elimination of "the scourge of chemical weapons forever and to verify the destruction of the declared chemical weapons stockpiles within stipulated deadlines." It organises inspection procedures to verify compliance with the treaty, and provides technical support to countries who have inherited a legacy of chemical weapons stockpiles from previous governments.

The **Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction** (usually referred to as the **Biological Weapons Convention**, abbreviation: **BWC**, or **Biological and Toxin Weapons Convention**, abbreviation: **BTWC**) was the first multilateral disarmament treaty banning the production of an entire category of weapons. It was the result of prolonged efforts by the international community to establish a new instrument that would supplement the 1925 Geneva Protocol. The BWC was opened for signature on April 10, [1972](#) and entered into force March 26, [1975](#) when twenty-two governments had deposited their instruments of ratification. It currently commits the 162 states that are party to it to prohibit the development, production, and stockpiling of biological and toxin weapons. However, the absence of any formal verification regime to monitor compliance has limited the effectiveness of the Convention.

The **International Code of Conduct against Ballistic Missile Proliferation (ICOC)**, also known as the Hague Code of Conduct, was established November 25, 2002 as an arrangement to prevent the proliferation of ballistic missiles. Originally signed by 93 countries, this non-legally binding regime has grown to 130 members (May 2008). The ICOC does not ban ballistic missiles, but it does call for restraint in their production, testing, and export. While the Missile Technology Control Regime (MTCR) has a similar mission, it is an export group with only 34 members.

Weapons of Mass Destruction Proliferation Prevention Initiative (WMD-PPI) The WMD-PPI seeks to bolster non-Russian FSU states ability to prevent proliferation of WMD across their borders. Increased efforts by terrorists to secure WMD and WMD components, materials, and expertise have demonstrated a need to improve the security of the non Russian FSU states' borders, to improve the ability of these states to investigate WMD-related thefts and smuggling, and to secure WMD materials within their borders.

Global Threat Reduction Initiative (GTRI). The mission of the GTRI is to reduce and protect vulnerable nuclear and radiological materials located at civilian sites worldwide. GTRI helps the Department of Energy achieve its Nuclear Security Goal (2.2.44) to prevent the acquisition of nuclear and radiological materials for use in weapons of mass destruction (WMD) and other acts of terrorism. Three key subprograms of GTRI –Convert, Remove, and Protect—provide a comprehensive approach to denying terrorists access to nuclear and radiological materials.

The **Reduced Enrichment for Research and Test Reactors (RERTR) Program** develops technology necessary to enable the conversion of civilian facilities using high enriched uranium (HEU) to low enriched uranium (LEU) fuels and targets. The RERTR Program was initiated by the U.S. Department of Energy in 1978. During the Program's existence, over 40 research reactors have been converted from HEU (= or >20% U-235) to LEU (< 20% U-235) fuels, and processes have been developed for producing radioisotopes with LEU targets. The RERTR Program is managed by the Office of Nuclear Material Threat Reduction in the National Nuclear Security Administration (NNSA).

Russian Research Reactor Fuel Return to the Russian Federation. Beginning December 1999, and continuing to the present, representatives from the United States, the Russian Federation, and the International Atomic Energy Agency (IAEA) have been discussing a program to return to Russia Soviet- or Russian-supplied HEU fuel currently stored at foreign research reactors. Trilateral discussions among the United States, Russia, and the IAEA have identified more than 24 research reactors in 17 countries that have Soviet- or Russian-supplied fuel.

Foreign Research Spent Nuclear Fuel Acceptance Program. The FRRSNF eliminates stockpiles of U.S origin spent nuclear fuel from foreign research reactors through repatriation to the United States.

Radiological Threat Reduction (RTR) Program. The RTR identifies, recovers, and stores, on an interim basis, certain domestic radioactive sealed sources as well as other radiological materials that pose a security risk to the United States and/or world community. The RTR also reduces the international threat posed by radiological materials that could be used in a radiological dispersal device (RDD) or “dirty bomb.”

The **Container Security Initiative (CSI)** was launched in 2002 by the U.S. Bureau of Customs and Border Protection (CBP), an agency of the Department of Homeland Security. Its purpose was to increase security for container cargo shipped to the United States. As the CBP puts it, the intent is to "extend [the] zone of security outward so that American borders are the last line of defense, not the first."

The Transshipment Country Export Control Initiative (TECI). The TECI is a multi-faceted, cooperative initiative that seeks to strengthen the trade compliance and export control systems of those countries and companies that constitute global transshipment hubs. By working to strengthen those systems, the Department of Commerce seeks to enhance security and confidence in international trade flows.

Megaports Initiative. Through the Megaports Initiative, NNSA works collaboratively with foreign partners to equip seaports with radiation detection equipment. Approximately 75 ports worldwide are targeted for implementation of the Megaports Initiative. The Megaports Initiative is a key component of a layered, multi-agency approach designed to prevent terrorists from acquiring, smuggling and using dangerous nuclear materials to develop a weapon of mass destruction or radiological dispersal device in an attack against the United States or its global partners.

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