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NAVAL OPERATIONS IN THE THIRD WORLD

BY

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A paper submitted to the faculty of the Naval War College in partial satisfaction of the requirements of the Operations Department.

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.

Signature

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# Naval Operations in the Third World

**Abstract:**

The United States Navy is not prepared to operate effectively in the Third World in threat conditions short of open conflict. In a hot war or open conflict, the U.S. Navy possesses the combat power to overwhelm any Third World country. In operations short of war, however, operating conditions and political considerations leave even major warships vulnerable to attack from lethal Third World weapons. U.S. Navy tactics and employment are predictable, thus exploitable. Weapons and detection systems are inadequate for this threat. Training is not realistic, stressful, or effective. Recommendations to improve readiness for this type of operations are provided, but major effort is needed to focus action.
ABSTRACT

The United States Navy is not prepared to operate effectively in the third world in threat conditions short of open conflict. In a hot war or open conflict the U.S. Navy possesses the combat power to overwhelm any third world country. In operations short of war however, operating conditions and political considerations leave even major warships vulnerable to attack from lethal third world weapons. U.S. Navy tactics and employment are predictable, thus exploitable. Weapons and detection systems are inadequate for this threat. Training is not realistic, stressful or effective. Recommendations to improve readiness for third world operations are provided but major effort is needed to focus action.
PREFACE

Many of the observations made in this paper are personal ones which I cite without other reference or source. They are based on operational experience and may properly be classified as personal opinion. I am sure that not all readers will agree with them.

I have had a long term personal interest in this topic. As a junior officer I served as Officer in Charge of a "Nasty" class Fast Patrol Boat (PTF). In simulating attacks on fleet units in 1970-71 I noted the threat presented by small combatants when operated close to land, islands, or in areas of heavy background shipping. I was frustrated by what I perceived as lack of official recognition or concern with this threat. True, small combatants were ineffective against fleet units in the open sea, and critically vulnerable to aircraft. However, when allowed the opportunity to select time and place of attack, they were a significant threat to fleet units!

The United States Navy is principally a blue water, open ocean navy. For years this has been the area in which we faced our only real challenge. My observations on coastal small combatant operations were never formally articulated. In 1987-88 as Commanding Officer of USS CHANDLER (DDG-996) in the Persian Gulf, my assessment of the small boat threat to major fleet units had not changed much, nor had our means of
countering it. What had changed was the lethality and spread of the threat. Facing this threat and dealing with it had now become a major task for the Navy. Additionally, the threat was now not limited to my earlier focus on small combatants.

Upon completion of CHANDLER's service in the Persian Gulf I submitted a number of observations as lessons learned to the Commander Joint Task Force Mideast (CJTFME). These lessons learned were classified and as such their distribution was limited. In writing this paper I have expanded considerably on these lessons learned and endeavored to keep the paper unclassified. I have omitted specific weapons and sensor system limitations which while they concretely illustrate several points, they are not essential to the understanding of the operational points described.

I cannot individually cite each person who has contributed to my views on coastal and third world operations developed over the years. I would however like to recognize the contribution of many crewmembers in CHANDLER. Commodore Bill Kelley (then COMDESRON 23) was also a valuable sounding board and source of information. I discussed many of these issues with him while he was Persian Gulf escort commander embarked in CHANDLER.
I have discussed a number of my views with other former ship Commanding Officers and they have shared their views with me. My observations are not unique, others share them, and may have articulated them at some time or another. I know of no other attempt however to tie all aspects of third world operations together and express them from the viewpoint of a ship's Commanding Officer.
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CHAPTER I
INTRODUCTION

Naval operations in the third world pose significant risks due to the proliferation of lethal weapons in these areas. The importance and challenge of third world operations in the years ahead has been recognized by American naval leaders. In a recent United States Naval Institute Proceedings article, 'The Way Ahead', the Secretary of the Navy, Chief of Naval Operations, and Commandant of the Marine Corps repeatedly stated the importance of third world operations in the coming years and recognized the threat of the lethal weapons now possessed by many third world nations.

The position of this paper is that the United States Navy is not yet prepared to operate effectively in the third world in threat conditions short of open conflict.

- Operating conditions and political considerations constrain defensive action.

- U.S. Navy Tactics and employment are predictable thus exploitable.

- Weapons and detection systems are inadequate.
- Training is not realistic, demanding, stressful, or effective.

The U.S. Navy is structured, trained and oriented to counter the Soviet threat in an open ocean environment, and it needs to be. The Soviet Navy is the only one with the capability to threaten our sea lines of communication and ability to control the sea. Third world countries can inflict serious damage and casualties upon major naval combatants, but they cannot cut our sea lines of communications or prevent our control of the sea.

Until Persian Gulf operations during the Iran-Iraq war, the U.S. Navy was aware of, but had not really focused major effort on dealing with the third world threat. Our tactics, training and systems were all optimized to meet the Soviet threat. Recently the Navy has recognized the lessened Soviet threat and more probable scenario of involvement in third world contingencies. In the just mentioned United States Naval Institute Proceedings article, it was stated: "We must reshape naval force structure, strategy, tactics, and operating patterns that are wedded too closely to the concept of an Armageddon at sea with the Soviet Union." It will take time and insight to prepare to meet the third world threat effectively. Unfortunately we do not have that time.
The third world threat is now! A review of third world littoral states, their geographic locations and potential conflicts reveals the scope of the problem. Many of these countries are in key strategic areas which could affect U.S. interests. Recognizing this, President Bush outlined on 2 August 1990 a future U.S. defense policy based upon; Deterrence, Forward Presence, Crisis Response, and Force Reconstitution. It is the major task of Forward Presence that will fall primarily to the Navy, and which we need to quickly address. Quoting our naval leaders again, "In a time of decreasing availability of overseas bases for U.S. land and air forces, the presence of capable naval forces near areas of potential crisis remains a key element of National Security. It is this forward presence in the third world that we must better prepare for on a most urgent basis. Not all third world operations are as difficult as others. However, presence operations in threat conditions short of war or open conflict are among the most difficult possible.

In the unlikely event of a war or major conflict with a third world country, the United States possesses today the power and capability to gain, sea and air control, and project power ashore anywhere in the third world. As in the case of Iraq, we have the capability to amass overwhelming force against any conceivable third world threat, attack and eliminate the opposing force. A situation warranting this and
the political decision necessary to fully employ our forces in this way is unlikely however. Except in cases of the most extreme aggression or threat to U.S. vital interests (e.g. Iraq), it is much more probable that U.S. forces will be employed to achieve limited objectives in what have been characterized as low intensity conflicts. Limited objectives and peacetime constraints do not permit the employment of unlimited force to accomplish forward presence missions. Individual U.S. forces operating in third world threat areas will be at risk and constrained in their actions. Objectives may be limited, but conflict will not be low intensity to a unit damaged or sunk! We emphasize to our Commanding Officers their inherent right of self defense and that they need not receive the first shot before taking defensive action. Unfortunately, the tactical situation in a third world scenario may be so unclear, and warning so short, that this guidance can be of little use and even have tragic results as in the cases of the USS STARK and USS VINCENNES.\textsuperscript{5}

The operational risks of some third world tasking may outweigh the benefit of the mission. "Simple" presence operations, without significant risk, may no longer be possible when operating in an area vulnerable to third world threat weapons or even terrorists:\textsuperscript{1}
This paper focuses on third world operations in conditions short of open conflict involving the United States. Its purpose is to highlight the changes necessary to meet the challenge our naval leaders have already recognized. Chapter II discusses third world threats and how we might expect to see them employed. Chapter III discusses U.S. Navy operating constraints. Chapter IV discusses employment risks; not just the potential for damage and casualties but operational and political risks. Chapter V discusses employment planning: those actions that could improve our ability to effectively operate in the third world. Chapter VI discusses the decision process and weighing of force capabilities versus the threat, risk, and anticipated mission benefit. Chapter VII is the conclusion.
CHAPTER II

THE THIRD WORLD THREAT

The threat is divided into four major areas: surface, sub-surface, air and mines. The dividing lines between these areas are not distinct. For example, a missile boat or submarine could launch a missile which then becomes an air threat. Almost any platform can lay a mine.

In each major area addressed above, the principal threat faced by the U.S. Navy will be outlined and illustrations provided as to how this threat might pose a challenge to U.S. Naval Operations. The purpose of illustrating possible employment scenarios is to show the difficulty of today's third world operations in threat conditions short of war. These illustrations will build a case to support later conclusions and recommendations.

SURFACE

Cruise missiles give small surface combatants a lethal weapon to strike, disable, or even sink much larger combatants. It is the spread of these deadly missiles that has so changed the complexion of naval operations in the third world. In a statement before the seapower subcommittee of the House Armed Services Committee, RADM T.A. Brooks, the Director
of Naval Intelligence (DNI) outlined the situation. "Besides the superpowers, some 68 countries worldwide now deploy sea and land based antiship cruise missile systems." He further stated that, "Antiship cruise missiles are found on ships of all sizes, as well as submarines and aircraft, but are generally installed on light, fast boats in smaller navies." The enormous proliferation of missile carrying surface craft is the most obvious and likely threat to the U.S. Navy when operating in the third world.

The effectiveness of this threat however lies almost entirely in how it is employed. When engaged on our terms, at time and place of our choosing, missile boats can be rendered almost ineffective, but never totally harmless. Surface missile boats are vulnerable to our longer range weapons and they are generally without any effective anti-air warfare (AAW) or antiship cruise missile (ASCM) defense. In a hot war or open conflict they can be preemptively swept from the sea, prevented from getting underway or even destroyed inport. Sea areas can be sanitized before major surface units enter. Aircraft in general, decisively counter small missile boats when used effectively against them. However, when surface units do not have tactical air support, or when poor weather conditions preclude the effective use of aircraft, missile boats can be used with great effect against major warships. When the missile boat is allowed to pick the time, place, and
scenario of attack, even our most sophisticated ships can be vulnerable. The following shows how missile boats might be employed to challenge major naval units.

Attacking boats will likely wait in choke points, drift close to the shoreline, in fishing fleets or in heavily trafficked areas. The target will be allowed to come to the attacker. Since a small contact closing at high speed alerts the target and allows it to attain maximum defensive readiness, speed will be used to reposition or escape after an attack. Boats can shut down all emitters and receive targeting data from other sources including aircraft, fishing boats or even land spotters. The unit attacked may never be able to precisely locate, identify, and target the firing platform.

Not addressed in considering the 68 countries now employing antiship cruise missiles (ASCM) is the threat posed by terrorists. Although not likely to be armed with ASCM's, terrorist boats carrying smaller rocket launchers or explosives can be a threat to larger combatants under the conditions described above. Whether these terrorist boats be manned, remote controlled, or suicidal, how do we counter them? Particularly, how are they countered if they wait within a fishing fleet or heavy traffic, accelerating and turning to the attack only when very close aboard?
These are simple but effective small boat employment tactics that could give us fits! Defense is possible of course, but only at significant risk to innocent background traffic. Using current systems and tactics, how does the U.S. Navy, or any other for that matter, defend against this threat without the political risks and humanitarian concerns of collateral damage to civilian shipping and small boats in the same area?

SUBSURFACE.

The number of small quiet diesel submarines in the third world continues to grow although not as rapidly as the number of small combatants. In his testimony before the House Armed Services seapower subcommittee, RADM Brooks (DNI) cited the ability of third world countries to produce or purchase modern submarines. Other than the U.S./U.S.S.R he cited that 41 countries collectively possess more than 400 operational submarines. Sixteen different countries produced submarines in the last decade and there are potentially additional producers. It is likely that the market for small exportable diesel submarines will grow and so will the worldwide threat to our forces. RADM Fitzgerald and MR John Benedict published an excellent article on third world anti-submarine warfare in U.S. Naval Institute Proceedings. In this article the authors outline in great detail the third world submarine threat. Building upon a couple of points in this article, the affect
of submarines on U.S. operations in the third world will be discussed in the next several paragraphs. The discussion is not centered on shallow water anti-submarine warfare but on the larger operational impact these submarines might have.

The number of small submarines is not growing as rapidly as the number of small combatants for two reasons. First, submarines are expensive, and second, they are more difficult to operate. Like the threat of missile carrying small combatants, the effectiveness of these submarines against the U.S. Navy lies almost entirely in how they are employed, and what we do to counter them. They are not an insurmountable threat.

In a hot war or major conflict with a country possessing these submarines we can counter the threat if our operations against them are unrestricted. They can be preemptively destroyed, or prevented from getting underway (by mining their ports or destruction in port.) An area can be swept and sanitized with aircraft prior to the entry of major surface units. Since expense will probably keep the submarine order of battle small for most third world countries, relatively few submarines would have to be accounted for to render an area safe.
The problem of locating and destroying small quiet diesel submarines is much more difficult however than that of destroying small missile boats. As in operations against small boats, aviation is the key. Aircraft are not as quickly decisive however against submarines as they are against small surface combatants. Time becomes a critical factor. How much time is available before surface combatants, amphibious forces, mine countermeasures units and logistics ships must enter the area? If we are not able to locate and destroy all a country's submarines we must accept either delay in our mission or risk major naval units to the submarine threat.

As in the case of small boats, in a hot war or open conflict, U.S. naval forces will eventually prevail against the third world submarine threat. Returning to the focus of this paper however, in threat conditions short of open conflict, major naval units are at significant risk in third world areas.

Many of the countries who possess or who are obtaining these small diesel submarines have little experience in operating them. They will learn, and could learn quickly! Lack of operational expertise cannot be used as rationale to dismiss this threat. It is believed that a great deal of operational expertise is not necessary to operate these submarines in shallow coastal waters. Almost all of the simple
tactics which can be used by a small combatant can also be
used by a small diesel submarine operating on the surface at
night. During World War II, U.S. and German submarines
frequently operated and attacked while surfaced. Surfed
attacks could be conducted with direct visual targeting or
even (ASCM) targeting from third parties. There is no need for
sophisticated sonar tracking or submerged positioning for
attack if the submarine picks the right time, place and
scenario for attack. The only crucial thing the submarine must
know how to do correctly is to compute a torpedo or missile
fire control solution and effectively fire the weapon.

These views of third world submarine capabilities may be
overly simplistic and too pessimistic. Perhaps submarine
operations are more difficult and major surface units are not
yet at significant risk. Operationally however the detection,
identification, and defense against a small submarine
operating on the surface within a large merchant ship
anchorage at night would be extremely difficult. Without
entering foreign sea or airspace the submarine cannot
effectively be sorted out from the background shipping. In a
near war threat condition the surface unit could lose the
critical battle for the first shot! Operating conditions and
political constraints in many third world littoral areas make
even surfaced submarine targeting and identification
difficult.
The point of this discussion is to illustrate the difference between the two third world anti-submarine warfare scenarios. In the first (and least likely scenario), the U.S. Navy can deal with third world submarines in a hot war or open conflict situation. Albeit that it will take time and this needs to be factored into our operational planning. In the second (and more probable) scenario, units operating in third world areas in threat conditions short of open conflict and short of the breakout of hostilities are at great risk. In sustaining forward presence operations the threat and tactical situation must be recognized before sending units to operate in third world waters. As Fitzgerald and Benedict state, 'In contingency and limited objective operations, no navy may be able politically to afford even a single point failure in ASW.' My point is that in contingency and limited objective operations the possibility of such a single point failure is high, particularly given the capabilities of our systems, training, and typical employment patterns. Presence operations are high risk. Is a lost AEGIS cruiser and numerous American casualties justified by the mission benefit that placed the ship in such an exposed and constrained tactical position?

The above question is not to propose that the United States withdraw from all third world threat areas. The purpose of framing this problem is to address what needs to be done to
enhance survivability and effectiveness in third world operations. Employment must weigh mission benefit and be such that, as much as possible, any fight is on our terms, not the submarine's. Barring some truly startling ASW breakthrough it is extremely unlikely that surface units in an ASW threat area upon the outbreak of hostilities will do anything except fight on the submarine's terms. Subsequent chapters of this paper address survivability enhancement under these conditions.

AIR

The air threat to warships operating in the third world is primarily from cruise missiles. These may be launched from aircraft, surface combatants, submarines or shore sites. An order of battle depicting present numbers of third world countries assessing anti-ship cruise missiles (ASCM) will not be presented. There are a lot.

There is also an air threat in the third world from attack aircraft delivering weapons other than ASCMs. Additionally, remote controlled or suicidal terrorist aircraft are threats to be addressed. Regardless of weapon or delivery platform there are unique anti-air warfare constraints in third world operations. The technical capabilities of threat weapons will not be discussed here. Threat and unique constraints will be discussed in order to address tactics and employment in subsequent chapters.
Regardless of the platform from which they are fired, cruise missiles represent the most significant threat to surface ships in the third world. David can slay Goliath with a single stone that seldom misses. The training, tactics and systems to deflect this stone are topics for subsequent chapters. In order to frame the problem for those not familiar with shipboard anti-air warfare (AAW) systems the discussion in the following paragraph is provided.

All shipboard AAW systems are affected in some way by the radar horizon. How greatly affected depends upon the specific ship and system. At some point any ship cannot see with radar over the curvature of the earth. An attack from very low altitude may be launched from beyond this radar horizon of the ship. The oft stated goal of shooting the archer before he launches his arrows may not be feasible. Additionally, the ability of a radar system to detect a target is dependent upon the size of the target, expressed as the 'radar cross section', and the ability of that particular system to detect a small target in varying conditions of sea and land clutter. Atmospheric conditions also have significant influence. Some radar systems are extraordinarily better than others for the same target in similar conditions. The first indication a warship may receive of an incoming missile is the late visual detection of a inbound low flyer. In fact this is what the Commanding Officer of the USS STARK reported was his first
indication of the inbound Iraqi Exocet that hit his ship. On a different day, under different conditions, detection might have been from another source, earlier and in time to take defensive action. The purpose here is not to critique STARK but to illustrate that AAW is not a video game where you have all information and all information is valid.

Given that all hardware works perfectly, atmospherics are favorable to detection, and all engagement procedures are executed flawlessly under great pressure, there is still the human decision element. Man may not have the time to assimilate and assess all information and make the correct decision when the time from initial detection, to minimum range engagement is measured in seconds! This is called "Time Line Stress". Decisions may be flawed in two directions. Conservative-- reaction is too slow, own ship takes a hit. Aggressive-- reaction is too fast, a non-hostile contact is shot down. Tragic results in either case. (Actually, because of unique speed and flight profile an ASCM can often be recognized as such and chances of inadvertent downing of a non-hostile contact are less. However with an ASCM, detect to engage decision time can be phenomenally short!)

Subsequent chapters will address employment planning considerations, tactics, systems improvements and training to
better enable ships in third world areas to address the threats and conditions outlined above.

MINES

Mines can prevent naval operations in a particular area, hazard our ships, and force the conduct of difficult and time consuming mine clearance operations. There are many different types of mines and methods of laying them. These details are beyond the scope of this paper but employment considerations to minimize the threat to ships in the third world will be presented.

In a hot war or major conflict we can muster our (albeit limited) mine clearance forces and those of our allies if available, purposefully come into an area, and slowly clear the mines. In operational planning time must be allowed to do this. It may be necessary to gain air and sea control in the area to protect MCM forces. Eventually the task can be accomplished. Again, the same situation as with each other threat. The U.S. Navy can effectively deal with mines in a hot war or open conflict, given the time! The mine threat that is much more difficult to deal with is that in the third world in threat conditions short of war.
THREAT SUMMATION

Summarizing the third world threat, it appears that in every principal warfare area the threat can be divided into two broad categories. (1) Hot war/open conflict, and (2) threat conditions short of war. The Navy can handle the first category of operations effectively. Although little noted in Operation Desert Storm/Shield, the critical navy mission of maintaining open sea lines of communication to Saudi Arabia and allowing the vast majority of our military force to be delivered was accomplished without incident. Had the Navy been unable to insure the free flow of equipment and supplies through the Persian Gulf there may never have been an Army, Marine, Allied charge into Iraq. When all forces are brought to bear unconstrained, effective third world operations are possible. Due to operating constraints however the second category of third world operations are more difficult and the Navy is not yet ready to operate effectively in the third world in threat conditions short of war. Of course we can operate there and are doing so today, but, when challenged or attacked our ability to defend ourselves and effectively carry out our mission is problematic.

Damage to major units and casualties could be sustained that are politically and operationally unacceptable. Improvements in systems, tactics and employment however can
enable us to stay ahead in the third world and operate effectively there. Operating effectively is defined as maintaining tactical control of the situation: choosing when and where to fight, avoiding damage/casualties, and negating chances of uncontrolled escalation of hostilities, while accomplishing our mission. These issues will be addressed in the next chapters.
CHAPTER III
U.S.NAVY OPERATING CONSTRAINTS

Naval units frequently are constrained in their ability to operate freely and make full use of their systems capabilities. No where is this more true than in the third world.

Operating constraints can be divided into two general areas; operating conditions and political considerations. These natural and imposed constraints can exacerbate systems limitations, degrade operational effectiveness, and restrict defensive ability. It is essential that the interaction of operating conditions, systems limitations, and the threat be fully understood. Only then can political considerations, risk assessment and employment planning be properly balanced. In the third world, when operating in threat conditions short of war, operating constraints are much more significant and restrictive than anywhere else.

OPERATING CONDITIONS

Natural constraints in the third world are considerable. Geography -- operations are frequently close to land and can be in narrow straits, choke points, or restricted waters. Hydrography -- operations can be in very shallow water. Major combatants may be constrained by draft in maneuvering and patrolling. This could affect unmasking batteries, avoiding
incoming weapons, pursuing or avoiding attackers. Warships may not be able to approach small boat haven areas and be forced to operate in predictable waters. There are well known difficulties with shallow water ASW. Shipping density -- large amounts of background shipping enable a potential adversary to get lost in the crowd. Weather and the environment -- darkness degrades our ability to identify contacts even when detected. How do we identify and target the potential adversary?

Third world operations frequently are in areas where all these natural constraints are present. In order to have significant influence through presence operations it is necessary for naval forces to operate close to potentially hostile shores, in shallow water, and in heavy background shipping. (The Persian Gulf immediately comes to mind.) Transits of international straits, archipelagos, freedom of navigation operations, and presence operations all require naval units to operate under conditions favorable to surprise attack by small combatants, diesel submarines, or even terrorists. Open ocean defense in depth, and extended (minutes vice seconds) detection/decision time is not feasible.

POLITICAL CONSIDERATIONS
Political considerations are many and may include restrictions on foreign sea and airspace, international law, sensitivities of allies and friends, and the desire to avoid
damage and escalation. Avoiding collateral damage to merchants, fishing vessels, and civilian property may be as important politically as avoiding damage and casualties to U.S. Navy units.

Operations are governed by rules of engagement (ROE) which are designed to allow self defense while maintaining control of the situation and level of hostilities. Generally units can take defensive action upon the identification of a hostile act or hostile intent. They need not receive the first shot. Unfortunately, hostile intent is not always clear. Many of today’s lethal weapons give no indication of imminent firing. Under the operating conditions just described in the section above, the threat described in the last chapter may not even be positively identified much less hostile intent ascertained.

We cannot establish effective defensive standoff zones around our ships in third world areas. The sensitivities of allies and friends are important, as well as the need to avoid threatening innocent civilians, causing them possible damage or casualties. This inability to reasonably enforce standoff distances in the third world lead to the death of an innocent fisherman in the Persian Gulf in 1987. The U.S. warship felt threatened by a closing high speed surface contact that it was unable to positively identify, and reacted in self defense.
The U.S. Navy cannot sit in the southern Persian Gulf, off Abu Musa island, in the Dubai International Airport landing pattern, and attempt to enforce a defensive standoff zone for all aircraft. Yet a potential attacker may be in a commercial air corridor or landing pattern attempting to look like commercial traffic. Neither can the Navy operate in close proximity to commercial shipping lanes or fishing grounds and insist all vessels stand off. Even if the negative international effects of such a presence were put aside, it is not certain the ship could effectively enforce a standoff defensive zone particularly in the case of smaller boats. Many third world small craft do not have radios, speak English, or read notices to mariners. They sail wherever they want to, often without regard for nationality, as they have for centuries. Dependent upon wind, sea, and darkness, small caliber warning shots may be totally unnoticed. These boats, which remembering the threat could also be small combatants or terrorists, could well be close aboard before positive identification. Under reaction endangers own ship. Over reaction can have tragic consequences.

The goal of this paper is to depict the unique nature and difficulty of third world operations in threat conditions short of war. In order to effectively do this it is important for the reader to recall the threat, and possible tactics, in light of the operating and political constraints so far.
outlined. These factors must be considered within the capabilities of our current weapons and sensor systems. Only then is it possible to fully appreciate third world operations in threat conditions short of war. Then it is possible to go on to examine employment planning, risk assessment, tactics and training. Some systems improvements will be addressed within the context of these issues but that is not the focus of this paper.

SYSTEMS LIMITATIONS

First, and almost of paramount importance, the U.S. Navy cannot see at night! Ships rely almost totally on radar and visual, available light, detection and identification. The U.S. Army boasted in Operation Desert Storm that the night belongs to them, and that is when they wanted to fight. The night belongs to the Army because they have superb infrared equipment. Navy ships do not. Although efforts have been made since the Persian Gulf tanker war to equipment navy ships with infrared equipment, with one exception, the Navy is still far behind the Army in capability. Many navy ships, including combatants, have no illumination capability at all beyond the range of a M-79 grenade launcher! By the time a target is within M-79 range it is within minimum range of many systems and there is no defensive reaction time left. Additionally, close in illumination often illuminates own unit as much as the contact of interest. Without effective infrared equipment
ships have no means of identifying and targeting threat platforms from within other background traffic. Recent attempts to adapt army equipment to navy ships in the form of the Mast Mounted Sight have been very successful. The distribution of this equipment is still quite limited however. No ship should be employed in the third world without advanced infrared equipment as least as capable as the Mast Mounted Sight. Although the principle purpose of this equipment is surface recognition, it also has the potential for non cooperative target recognition (NCTR) of aircraft, the lack of which is another critical systems deficiency that complicates third world operations.

Other systems limitations which must be examined in understanding how to employ ships in third world operations are missile and gun systems. Different systems have different maximum and more importantly minimum ranges. The shorter the minimum range and the quicker the reaction time of the system, the more time the ship will have for decision and to respond to a sudden threat. Radar systems have differing capabilities in nearland/overland detection and reaction. Different systems have differing probabilities of kill against certain threats. Non cooperative air target recognition (NCTR) systems exist on some aircraft and some have been tested on surface ship missile fire control radars. Few if any surface ships however have operational NCTR systems. A detailed technical discussion
of system capabilities would be both classified and beyond the scope of this paper. Such an effort would be worthwhile however to identify the specific systems improvements necessary to enhance third world operations. What is important here to understand is that not every ship has the same capability as others in a third world threat area. The specific systems capability of each particular ship class needs to be assessed in determining third world operational employment.

Chapter II presented the threat. This chapter has outlined the operating constraints likely to be found in the third world and how they may affect us. The next chapter will discuss employment risks faced in operating under these conditions.
CHAPTER IV
EMPLOYMENT RISKS

Recognizing the threat facing naval units when operating in third world areas it is now appropriate to examine employment risks. American lives lost, damage to ships and aircraft are the most obvious risks, but there are important political and operational risks that must also be weighed. Among them are; the need for retribution, possibility of uncontrolled escalation, conflict with allies and friends, conflict with the Soviet Union, accidental death of civilians/damage to civilian shipping, and national embarrassment.

The threat of major retribution by the United States contributes to the safety of naval units operating in the third world. It may be possible for a small country, possessing the lethal and sophisticated weapons available today, to overwhelm a single U.S. warship. That country however may not be able to, or want to sustain the damage they might receive as a consequence of their attack. The 18 April 1988 engagements between Iran and the United States are a good example of retribution. Operation 'Praying Mantis' was initiated in retribution for the mining of the USS Samuel B. ROBERTS. When Iranian forces responded during 'Praying Mantis' by firing a missile at a US warship, the immediate U.S. response was overwhelming, destroying or heavily damaging
several major Iranian units. Such action in retribution for attacks on U.S. forces is a deterrent in preventing such attacks.

In his work on naval rules of engagement Brad Hayes cites a number of significant points in regard to reprisals and retribution. He states that "Although reprisals are generally considered illegal under current international law, a growing body of opinion supports the notion that certain reprisals should gain legal acceptance." Hayes goes on to say, quoting this time from an article by Richard Halloran in the New York Times: President Reagan declared in 1981 "Let terrorists be aware that when the rules of international behavior are violated, our policy will be one of swift and effective retribution." Hayes further discusses Secretary of State George Schultz' expansion of this theme, this time quoting Secretary Schultz from Guy B. Roberts work; "We must reach a consensus in this country that our responses should go beyond passive defense to consider a means of active prevention, preemption, and retaliation."

U.S. actions in recent years have demonstrated that the United States will preemptively strike a threatening country, and will retaliate for any attack on our forces. A powerful and necessary message to send to the world if we are going to effectively operate forces in third world threat areas. Prior
to the commitment of forces to third world areas however, it is necessary to postulate what might be the outcome of this commitment. If necessary are we prepared to retaliate, and in what form will that retaliation be? It is important to recall that in the third world responsible governments do not always have complete control over their armed forces or terrorists that may operate from their territory. Even responsible governments may take actions we might think irrational. Prior to committing any forces to the third world these issues should be examined. Is there a potential that retribution may be required and how would the United States respond? There should be no ambiguity on this issue in the minds of the third world country we are operating near, terrorists, or our own commanders. Ambiguity leads to mistakes, miscalculations, and armed conflict. (There is some advantage in ambiguity in exactly what the U.S. response would be, but there should be no question of the fact that major armed retaliation is an option.)

Following from the need for retribution is the possibility of uncontrolled escalation. If a U.S. ship is attacked and we retaliate, the possibility exists of retaliation by the other side for our retaliation upon them. This can spiral uncontrollably to a major conflict that might even involve superpowers. Once the decision is made to commit forces to the third world the door to this path has been
opened. Maintaining control of the situation is a primary concern for military and political leaders. Rules of engagement (ROE) are designed to prevent uncontrolled escalation and their crafting is critically important. Although lawyers have a role in ROE development it is extremely important that operators, particularly those who are familiar with the units being employed, play a major role in writing ROE. There is always the potential situation which ROE does not cover. Brad Hayes has an excellent analysis of this. A naval commander who is in a situation in which time constraints prevent development of specific rules of engagement: (1) May overreact, thus escalating a crisis before political authorities have time to establish civilian control of the situation; (2) Hesitate (underreact), thus losing the initiative and risking the loss of both political and military objectives since military options will be reduced; or (3) apply the 'Nelson Touch' and respond appropriately to the situation, preserving the best available military and diplomatic options. Without adequate ROE, political leaders, in effect, 'Pay their money and take their chances.'

In addition to considering the impact of possible retribution and controlling escalation we also need to consider the effect these actions will have on our friends and allies in the region and worldwide. These are political considerations and I will not discuss them in depth, only
point out two crucial factors. First, is the benefit of the naval mission in the third world worth the risk of conflict and disagreement with our friends and allies if it escalates? What realistically is the possibility of escalation and do our friends and allies in the region who desire our support recognize the possibility? Secondly, U.S. naval vessels firing warning shots, issuing standoff warnings on bridge to bridge radios or international air warning circuits, may not be well received politically. The perception (right or wrong), that U.S. Naval presence is endangering civilian commerce is not the impression we want to make, quite the opposite. This factor is worth some attention. "Perception may be the only reality."

The final issue in this chapter is the most obvious. Naval Operations in third world threat areas carry with them the possibility of damage or loss of a U.S. warship, as well as the loss of American lives. Likewise there is the possibility of accidental civilian deaths and damage. Persian Gulf tanker war incidents with USS STARK, USS SAMUEL B. ROBERTS, and USS VINCENNES illustrate these possibilities. Politically, how would the American people, world community, and even the Iranians have reacted to more such incidents such as these? The fact that more incidents did not occur attests to the planning, ROE, capability and restraint shown by our on scene naval commanders and national leaders. The friction
between the United States and Iran during the Iran-Iraq war could have lead to more serious conflict within the region with worldwide implications. This is not to say that U.S. naval operations were unwarranted, but that they were conducted very well given circumstances which were probably not ever fully understood by the public.

There is no such thing as risk free naval employment in third world threat areas today. The last three chapters have depicted the threat, operating constraints, and employment risks. Next, it will be examined how these factors can be reduced in employment planning. Ideally, the threat can be lessened, operating constraints reduced and employment risks minimized. Our naval forces can be placed in the best position to respond to any anticipated contingency. When the situation is not covered by ROE our leaders can be in the situation of being able to apply the "Nelson Touch", referred to by Brad Hayes, and respond appropriately to the situation, preserving the best available military and diplomatic options.\(^{19}\)
CHAPTER V
EMPLOYMENT PLANNING

The threat to our forces operating in the third world in threat conditions short of war can be reduced. Once again, it is essential to recall the distinction between third world operations in threat conditions short of war and third world operations in a hot war or open conflict. The two types of operations are significantly different as previously emphasized.

Operations in threat areas in conditions short of war may be more stressful and demanding than during open conflict. During Desert Storm our force was overwhelming and tactical decisions as clear as they ever get. During the tanker war however, identification and tracking of potential hostiles and determination of hostile intent, or needed defensive response, was much more difficult. The challenge of third world operations in conditions short of war is threefold: First, reduce the threat to our forces; Second, speed and ease the decision making process; and Third, prepare and train our personnel for these stressful conditions.

REDUCE THE THREAT - CHANGE TACTICS AND EMPLOYMENT

U.S. naval operations in the third world are often quite predictable and thus exploitable. Ships are frequently stationed in operating boxes that seldom change. Day after
day, night after night, the warship steams slowly in a specific area. This makes it easy to target shore launched ASCMs. Easy for diesel submarines or small combatants to position for attack. Easy for almost any platform to lay mines in the predicted track. Presence operations cannot be allowed to become predictable or ships become ducks in a shooting gallery where the bullets seldom miss. Every effort must be made to offer no predictable pattern of operations. Patrol areas should be broad and movement within them random and unrestricted. Assign a mission or tasks, allow widest latitude of geographic location unless the mission or tasks demands a specific unit location. It is appreciated that this is difficult in some locations. If possible the ship should not return to the same location for several days, if at all, or unexpectedly be there two days in a row. Unpredictability makes it unlikely that a submarine or small boat will expend the time or have the patience to wait in an unproductive location.

Another employment tactic is to operate close to major shipping lanes. This minimizes the possibility of minefields being laid specifically to target a patrolling U.S. ship. In conditions short of war it is unlikely that a country will lay mines in an area that could disrupt its own commerce. Heavy merchant traffic increases the possibility that one of them will "sweep" the mine before a U.S. warship encounters it.
This is no guarantee of protection of course but it seems logical. Merchant ships certainly would not like being perceived as minesweepers for U.S. warships but they are in the area because trade and commerce dictate. Shipping avoidance of an area could have significant economic impact on a third world country. In short, it is unlikely that a country would mine shipping lanes near their own shores prior to the start of hostilities. If however a warship stands off from major shipping lanes, and repeatedly frequents an area not routinely trafficked by other ships, it may be setting itself up as a mine target. There are no guarantees the irrational player will not mine the shipping lanes, but the probability would seem less. Recall that operating in areas of heavy shipping traffic makes it difficult to sort out potential hostiles from background traffic. If operations are random however to preclude a staged attack, this risk is preferable when gaged against the mine threat for which a surface unit has no real defense.

Since we speculate that many third world countries may not yet be proficient in submarine operations, zig-zag steaming in potential submarine threat areas may be appropriate if maneuvering room exists. This would complicate torpedo fire control solution problems and take advantage of the perceived inexperience of many third world countries in submarine operations.
Above all, in third world operations it is essential that we not be predictable. Do not allow a potential enemy to pick the time and place of attack. Losing the battle of the first shot with today's lethal weapons may mean losing the battle and your ship.

SYSTEMS IMPROVEMENTS - SPEED AND EASE DECISION MAKING

There are weapons systems and sensor limitations when operating in the third world. In threat conditions short of war a hostile threat may be extremely close aboard before detection, identification, and determination of hostile intent. We must provide our commanders with the equipment to make early detection and identification of the threat and kill it quickly if hostile action or intent is noted. Only by doing this can we give the commander the decision time necessary to protect his unit and avoid pressured decisions resulting in possible accidental deaths or damage/casualties to his own unit. Without improved equipment, employment risks and operational planning are vastly more complicated. Many of the needed systems improvements are available now, they simply are not available in large enough numbers or installed on all ships we routinely deploy into third world threat areas.

Systems improvements needed can be categorized into three simple but broad areas:

(1) Sure Detection - Systems must reliably detect all
contacts under all conditions. This includes both radar and electronic radiation detection equipment. All units operating in the third world, both air and surface require advanced infrared equipment.

(2) Positive Identification - Systems must be able to provide quick positive identification. Non cooperative target recognition systems are needed. Advanced infrared systems can contribute in this area also.

(3) Quick Kill - Ships operating in third world threat areas should all be equipped with automatic, quick reaction AAW systems capable of sure killing a target not engaged until close aboard. All electronic support equipment should be capable of initiating automatic "soft-kill" measures when a threat is detected and all ships should have this equipment. Ships must have anti-surface systems that can hit, overwhelm and quickly kill a target that may be engaged extremely close aboard, possibly inside the minimum range of major weapons.

In addition to the broad areas outlined above three other points must be mentioned:

(1) Deceptive Lighting - A perfectly darkened warship is as difficult to see and identify at night as a small boat. The configuration of warship navigation running lights however is quite distinctive. Warships often attempt to rig deceptive lighting to protect themselves from identification and
targeting. Ships operating in third world areas should have realistic permanently installed deceptive lighting systems which can be activated as required.

(2) Shipboard Helicopters - Helicopters are a vital part of a ship's weapons and sensors. In order to operate effectively in third world threat areas shipboard helicopters need infrared and night vision equipment as effective as that installed in U.S. Army helicopters. They also require an air to surface missile capability. (To address all aspects of helicopter operations in the third world would be a lengthy separate discussion topic.)

(3) Mine Detection Devices - Equipment is needed to allow combatants to detect the presence of submerged mines. The purpose of this is not to hunt or clear mines, but to detect their presence so the ship may safely clear the area.

TRAINING - PREPARE OUR PERSONNEL

There has been considerable improvement in training for third world operations since the STARK incident in 1987. Training is still not realistic or stressful enough however. Missile and gun firing exercises are often conducted in simple non stressful scenarios. The need for peacetime safety is acknowledged but surface ship training simply isn't demanding enough.
Missile firing exercise drone presentations are often easy engagements for advanced missile ships. Gunnery exercises are most frequently in daylight against a target sled towed slowly astern of a tug in a safe area with no other contacts. In neither case is the shipboard decision process or the human factor stressed or trained. Training generally consists of procedural exercises on the basic steps of target acquisition, designation and weapons firing. Not included are the key steps of identification, determination of hostile intent, or hostile action, all under the stress of severe time constraints. In these scenarios shipboard crews are typically at general quarters and prepared for a scheduled evolution. There is no quick reaction, rapid assimilation of information and decision on defensive response. It is acknowledged that the exercises being described are basic training exercises which are needed, but we do not get beyond them as frequently as we should.

Training must stress quick reaction to bring watchstanders to peak readiness in seconds. Only constant, repetitive, unannounced drills can do this. In third world threat conditions short of war ships may operate for weeks in close proximity to deadly threat. Even with systems partially manned in modified battle stations, the crew cannot be effectively maintained on the edge,"in the blocks", indefinitely.
Ships must conduct endless, unannounced, short notice, "detect to engage" (DTE) sequences against real and simulated air targets. Navy tests against several different ship systems indicated that reaction time to the first attack was always slower (as might be expected) than to immediate subsequent reattacks. Repetition and practice improved reaction time and effectiveness.

Since 1987 tailored Middle East Force exercises (MEFEXS) have provided better training in preparing ships for deployment to the Persian Gulf. Training in boarding and search, rules of engagement, nearland/overland anti-air warfare and very short time line detect to engage sequences have all been provided. More training is still needed at the "edge of the envelope" however, under severe time stress. More no warning air attack exercises; can the attacking aircraft succeed in marking on top the ship without shipboard gun and missile launchers being trained, fire control locked on, and a valid firing solution?

Of course there needs to be some safety restrictions, but far more innovative and aggressive training is needed. Simulators have never been really successful in duplicating the conditions and procedural systems employment steps necessary to effectively and stressfully train, although efforts continue. The use of actual own ship combat systems
equipment is important to insure that procedural operator errors are not made under stress. Feedback from U.S. Army students and instructors at the Naval War College indicates that the Army's National Training Center exercises are demanding, realistic and stressful, working the human decision process under stress. The navy should examine this training and see if similar naval shipboard training is feasible.

Although equipment improvements previously outlined would help the decision and reaction problems that commanders face, most of our equipment is good even if not optimum for the threat. The most difficult test in the third world is the human decision process. Equipment upgrades can ease it but won't change it.

RULES OF ENGAGEMENT

Good rules of engagement (ROE) are vital in third world threat operations short of war. ROE will not be discussed here in a great deal of depth. The focus of this paper is to address the many factors that must be considered in third world operations and tie them all together in a comprehensive picture. Much has already been written on rules of engagement. Mr Hayes work on rules of engagement, previously cited, hits
the essence of ROE superbly. A couple of personal observations on ROE are necessary however and are outlined in the next paragraphs.

Operators with knowledge of specific system limitations and capabilities, as well as the operating environment, must participate in ROE development. It does no good for lawyers, politicians, academics, or even military planners to develop or critique ROE without specific systems and operating environment knowledge. If systems limitations and constraints in the operating environment do not allow adequate self protection or unduly endanger civilians in the context of prescribed ROE, then ROE may be flawed and inadequate. Perfect ROE are almost impossible to achieve because they cannot anticipate every possible situation. The effectiveness of ROE lie in their application. Self protection is always being balanced versus overreaction.

Today's lethal weapons may mandate that 'proportional response' equate to total destruction, or at least certain mission kill wherein the target is unable to fire it's weapons. A difficult judgement to make. In dealing with combatants, a policy of not training weapons or firing warning

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1. As a former ship Commanding Officer in the Persian Gulf, I find Mr. Hayes work the best I have ever seen on ROE in the third world. Page 1-36 of his work is required reading at the Naval War College.
shots at all seems appropriate to avoid any possibility of misperception. If however the firing of weapons becomes necessary, then all action is proportional. Modern weapons mandate quick kill before any possibility of additional fire or return fire. Even one modern weapon hit can disable or sink today's unarmored warships. Warships must have the systems to detect, identify, and quick kill to give commanders the confidence to wait and sort out the picture. If the commander feels threatened, uncertain, or even afraid, he may react in self defense before all facts are clear. The reader may consider Mr. Hayes discussion of "other factors influencing the decision to use force", but the fact remains that not one sailor should ever be killed because his commanders response was insufficient or untimely.
CHAPTER VI
THE DECISION PROCESS

The decision on when, where, and how to employ naval forces in the third world requires the consideration of the many factors outlined in the previous chapters.

THE THREAT - What is the likely threat to U.S. forces.

OPERATING CONSTRAINTS - Includes the environment, geography, systems limitations, and political considerations.

EMPLOYMENT RISKS - Includes the possibility of uncontrolled escalation, need for retribution, international reaction, national embarrassment, casualties (American and civilian), damage, ship loss.

EMPLOYMENT PLANNING - How effective are our specific forces to be assigned, against the threat expected, in the operating conditions present, with anticipated ROE and political constraints.

Once all of these factors are considered they must be weighed against mission benefit.

MISSION BENEFIT - Given the foregoing, what is the benefit of the mission and does it warrant the risk. Could the
mission be accomplished as effectively using other forces or with a different mix of forces? Does the mission benefit justify drawing off more capable forces from other requirements? Must the mission be accomplished at all to support U.S. national interests? Can the mission be postponed until more capable forces are available?

Nothing in the foregoing is intended to engender timidity. We must pick the right force for the right mission. Plan to accomplish the mission! Inadequate forces, or unprepared forces should not knowingly be placed in harm's way not capable of effectively accomplishing the mission assigned. Only by going through the entire process outlined in this paper, with knowledgeable and experienced staff personnel can we be sure that the correct forces have been assigned and are properly employed. The Commander’s Estimate, although a somewhat mechanical process, provides a good framework for this type of decision analysis provided the staff officer is experienced in the issues involved in this type of naval operations.

The decision to undertake a naval presence mission in today's world must be made with as much care and deliberation as the commitment of forces to a contingency or combat.
CHAPTER VII
CONCLUSION

The discussion presented in this paper has been intentionally broad. Articles have been written on the third world threat, rules of engagement, weapons systems, and the operating environment. To the best of my knowledge there has been no major effort to tie all of them together, examine their interaction and propose overreaching changes in tactics, training, employment and systems. This is needed to achieve the goal articulated by our naval leaders. The goal of reshaping force structure, strategy, tactics and operating patterns.

This paper has concentrated on third world threat operations in conditions short of war. Current forces, tactics, equipment and operational employment can effectively deal with third world threats in an open conflict, albeit may require some time.

There have been numerous articles written on third world naval operations, coastal operations, small boats, diesel submarines, etc. These articles however have narrowly focused on specific aspects of what I believe to be a bigger picture. The bigger picture is extended presence operations in third world threat areas.
One of the better articles on what needs to be done was written by a submariner shortly after the STARK incident.

Unfortunately the author apparently had little operational experience in the third world, made several specious observations, and wrote in an inflammatory style that was not well received by those who should have been listening. Capt Byron was correct however in his observations regarding training and procedures. He also perceived the big picture well. 'We ask far too much of the surface ship commanding officer in the current system, expecting him (like the STARK’s Commanding Officer) to somehow solve at sea, at night, under attack, the major problems that have been too hard to solve ashore.' Byron further suggested that we get together representatives of the fleet establishment, training establishment, material establishment and CNO staff to address surface warfare readiness. He had the right idea but missed the mark on the target, which should have been third world operations not surface warfare readiness. Today, we still need to get the same people together and address third world operations.

An examination of all aspects of third world operations is needed under the oversight of a principle navy flag sponsor. There are a great many experienced Persian Gulf operators with valuable lessons learned to contribute. There
is a lot of information to collect, analyze and draw conclusions from. Tactical guidance must be updated. Training must be updated, upgraded, and made more successful. Naval and political leaders should be well aware of what is involved in third world presence operations short of war.

The major challenge facing the U.S. Navy today remains the Soviet Navy. Only the Soviet Navy is capable of seriously threatening our sea lines of communication which are essential to maintaining our commerce and national interests abroad. The probability of facing this threat is low however. Third world naval operations while less threatening to U.S. national interests are far more probable. Failure in these operations can have serious implications. Poor planning, preparation, or execution of third world presence operations can sink American warships, kill American sailors and innocent civilians. Failure to operate effectively in the third world can impact our national interests. The United States Navy today is not prepared to operate effectively in the third world in threat conditions short of open conflict. The fact that the U.S. Navy is doing so is a testament to the ability of the American sailor, not the astute preparations of the naval establishment to conduct these operations. Third World presence operations today require at least as much focus and effort as anti-submarine warfare against the Soviets.
NOTES

Chapter I


2. Ibid., pg 36.


Chapter II


7. Ibid.

8. Ibid.


10. Ibid. pg 63.


Chapter III

Chapter IV


15. Ibid. pg 20.

16. Ibid. pg 20.

17. Ibid. pg 21.

18. Ibid. pg 30.

19. Ibid. pg 30.

Chapter V


Chapter VII


23. Ibid. pg 40.

24. Ibid. pg 40.
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