SEACURUS

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Image - Reuters

# MINIMISING PIRACY RISK - what you need to know!

## Welcome

*In this Seacurus Monthly report we examine the range of "risk mitigation" strategies used to counter piracy.*

*The number of vessels statistically hit by pirates is thankfully still comparatively low – hence the reason owners are still able to transfer the financial risks onto insurers. But what creates the divide between attacked ships, those which are hi-jacked and those which sail on without ever encountering pirates?*

*There are in essence four basic elements to minimising the risk posed by pirates – and these can be summed up as:*

- ***Avoid***
- ***Evade***
- ***Deter***
- ***Delay***

*In this month's issue we will assess how these can be applied to merchant vessels, and of how applying Best Management Practice (BMP) really can help to keep seafarers and ships safe.*

*There is also a lot of security equipment on the market today – and we will look at the best, the worst, and of how spending money doesn't always guarantee results.*

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# The 4 Step Programme

The simple steps that can make all the difference:

**Avoiding Pirates**

Perhaps the most useful form of risk mitigation is simply not to ever come across pirates in the first place.

Some say this is based on luck, but with the increasing levels of good intelligence available, it seems that knowing your enemy and how to avoid them can be a key factor. When vessels have to head into high risk areas, then they need to ensure their Masters are aware of the threats, and of the best routes to minimise the risk of being targeted.

For the purposes of the BMP, there is a High Risk Area defined – this is bounded by Suez to the North, 10°S and 78°E. This is a "shifting" battleground though, and pirates are prone to move ever outwards in the hunt for targets. If in doubt, act as if you are in a High Risk Area and don't take chances.

**Evading Pirates**

If ships cannot avoid the high risk areas, then it is important to be able to keep one step ahead. The secret to evading pirates rests on the ability to spot attackers at sufficient distance to be able to react. Effective watchkeeping is vitally important.

If a vessel is capable of sufficient speed, then it can be as simple as full ahead and pulling away from danger. For slower vessels, the problems are little more complex.

Many Masters have honed their ship handling skills over years – however, the techniques they learn are all about minimising contact or damage to other vessels, or making it easier for others coming alongside. When faced with pirates, they have to think differently and apply opposite, new techniques to try and get the ship away from the pirates. It can be challenging using a ship defensively, but can be very effective.

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**Deterring Attackers**

If it becomes apparent that evading attack has failed, then it is imperative that there is some form of defensive measures on and around the vessel to deter attackers attempting to board the vessel.

These can come in many forms, and range from both passive and proactive, we will look more closely at these later – however common passive tools include razor wire.

It is in deterring attackers that the current popularity for armed defence has stemmed from. An increasing number of reports state that pirates have been forced to turn away from vessels when security teams have returned fire. At the moment the armed response is seemingly the most effective deterrent.

**Delaying Attackers**

If the worst happens and pirates board the vessel, all is not quite lost yet. The next phase relies on the crew being able to delay the pirates, while hoping for a rapid response from naval assets.

This is why the citadel approach has become popular (when implemented properly) – as it can buy time for a military response. However the citadel defence is not without its own hazards.

**Best Management Practice**

In order to have the best chance of these measures working, they need to be managed effectively. Experience shows that adherence to BMPs can make a significant difference in protecting vessels.

**Risk Assessment**

Assessing a vessel's risk profile is a vital part of the process. "Slow and low" vessels have been at greater risk than those with a high freeboard and travelling at a higher speed. 18knots appears to be the "magic" number, as no vessels travelling at this speed or above have yet been hijacked.


Image - Reuters

So while the freeboard and speed of passage can make you safer, it is important to perform a full risk assessment to gauge vulnerabilities. Issues such as crew size, weather conditions, and proximity to other attacks also play a part in this assessment.

**Implementing BMP**

In applying best management practises, many companies have begun to invest in security equipment, but sometimes the glossy sales brochures don't tell the whole story.

Ranging from barbed wire to Kevlar vests and anti pirate lasers, this is a huge industry – and one which is evolving constantly. It is littered, however, with the abandoned detritus of equipment which sounded wonderful, but which simply did not deliver in the face of a withering pirate onslaught.

Shipowners/operators are advised to work closely with trusted providers – and to research thoroughly before investing in equipment which is either unsuited to their vessels, their crews, or is plain useless.

The advice is always to buy the best quality basics, such as razor wire – while remaining suitably dubious about the claims of more high-tech equipment until it is possible to either test it or read unbiased reviews.

Some of the more contentious and high profile products include some good, some bad and some yet to prove their mettle:

## The Good:

**Broadband Radar:** In addition to visual watchkeeping it is important to use all available means of detection.

Pirate skiffs are hard to spot using traditional shipboard radars, as they struggle with picking up small, fast, low targets. Broadband radar boasts superior target definition and target separation, enabling watchkeepers to monitor important targets at very close ranges.

**Window protection:** When attacking vessels the Somali pirates often fire repeatedly at the wheelhouse, hoping to force the Master into slowing down or stopping.

While superstructures are surprisingly robust, all too often the windows and port holes are not. As they shatter, they not only have safety implications, but psychological ones too. One sensible answer is to "bullet proof" the windows of the wheelhouse for protection.

A range of solutions exist, from permanent removal of existing glass and replacement with bullet proof pains, through to temporary solutions which fit over the existing glass and can be demounted after use passage.

**Water Cannon:** With high powered water being a good deterrent, the use of remotely operated water hose units has emerged as a solution, using CCTV feeds and a remote joystick. These allow the operators to either pick off individual boarders, or to stream directly out to sea, flooding and sinking pirate skiffs.

## Citadels

Having a citadel for crew to safely retreat into goes onto the "good" list with one caveat – it has to be set up properly, allowing maintained control of the vessel and continued communications. If done wrong, it can become a death-trap.

There have been instances where citadels have helped crews to foil pirates, but the benefits of having a locked down place of refuge are lost if you cannot get all personnel inside or can't communicate or remain inside for any duration.

Reports are emerging that in addition to their usual piracy paraphernalia, pirates are taking plastic explosives and cutting gear on their missions to open up citadels. Some groups have tried to smoke crews out; others have forced water into the spaces. The more enterprising have even used seafarers captured from other ships as bait, a kind of, "come out or your fellow seafarer gets it."

Despite their potential value, citadels should be seen as complementary to other self-protection measures. Delaying the pirates can be useful, but NATO has stressed that the use of a citadel does not guarantee a military response. You could be in there a long time!

Before owners, operators and masters commit to a citadel policy, it is important to understand the criteria that military forces will apply before a boarding to free the ship can be considered:

- 100% of the crew must be secured in the Citadel.
- The Crew of the ship must have self-contained, independent, 2-way external communications. Sole reliance on VHF communications is insufficient.
- The pirates must be denied access to propulsion.

*Image - Reuters*

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The following points should also be taken into consideration when preparing citadels:

- All emergency equipment in the Citadel should be fully and regularly tested for functionality.
- The communications system should have a power supply for a minimum of 3 days, based on a continuous open line
- A full list of emergency contact numbers including UKMTO should be held inside the Citadel.
- At least 3 days of food and water provisions for all the crew should be available.
- Medical supplies, including medication for the treatment of physical trauma, and sanitation should be made available.
- The provision of Breathing Apparatus can assist where pirates have resorted to smoking crews out.

## The Bad

**Long Range Acoustic Device (LRAD)**: This was heralded as a "wonder weapon", supposedly rendering attackers deafened and ineffective. In truth the effect was less certain. In a review of a recent attack one observer stated, "The LRAD, frankly, is the most useless piece of equipment…They are bulky and need several personnel to move them, potentially putting crew in harm's way."


**Fire Hoses**: The "old school" solution – you simply lined your crew up with the hoses charged and hoped for the best. The best was usually not quite good enough once the AK47's rounds began to whistle.

**Blind Hope and Optimism:** Believe it or not this is a real option that some companies rely on – sometimes it can pay off, but in the end the old adage of failing to prepare is preparing to fail will come around.

**Electric Fences:** Back when maritime security was a new concept, the idea of a 9000volt fence around a vessel seemed like a fairly good one. The fact that it wasn't terribly useful for tankers means that the popularity has waned. The company supplying them has fallen silent; the last post (literally) on their website was in 2008, so it seems we have to file with the "bad".

## The Unproven

**Laser Systems:** These systems use high powered lasers to incapacitate pirates by dazzling them.

The non-lethal weapon is reportedly effective against moving targets more than a mile away, and effectively hides the ship in a dazzling beam of bright green light and glare, leaving the pirates unable to aim their weapons accurately.

The system can rapidly fire beams at multiple targets to produce an intensive flickering effect that increases the dazzle effect.

**Propeller Arrestors:** The arresters form a physical barrier of 100 metre lines of buoyant polypropylene rope streamed down the sides and from the stern of the vessel to create, "an impenetrable security perimeter".

In theory any attempt to cross the rope lines by a small vessel (such as a pirate skiff) will supposedly entangle the propeller and cause the engine to stop, ultimately thwarting the pirates' hijack.

The system is designed to remain deployed for the duration of the danger zone transit. Demonstrations of the kit have reportedly given inconclusive results.

**Pepper Spray Protection:** The Shipboard Defence System "SDS" is a defensive on-board system to repel pirates. It consists of a 300 gallon pressurised tank of pepper spray that includes piping installed around the vessel creating a 100 feet defensive zone extending outwards. When activated, the system disperses a high volume shower of pepper spray. The spray causes intense pain and short term loss of vision.

## Human Element

While security equipment is important, companies overlook their own people at their peril. The human element of security, especially in an anti-piracy sense is vital, and knowing the crew can be almost as important as knowing the enemy.

Looking around the battlefield Wellington said of his own troops, "I don't know what effect these men will have upon the enemy, but, by God, they terrify me." Today when one looks at potentially fatigued and under resourced, seafarers, such terror would likely stem from inadequacies rather than ferocity.

It is too simplistic, however, to say that crews are ill-prepared, or that companies are not taking the right action. The reasons underpinning security failings are widespread, and usually involve a breakdown in the need to understand people, the need to ensure adequate preparation and the training which brings it all together.

**Psychology:** Seafarers come from many, many different cultures – and each of these usually have their own inbuilt and engrained attitudes towards risk, violence and pro-active measures. It is imperative that owners/operators and managers understand their own crews.

There have been so many different responses to piracy according to origin. Some nationalities avoid reporting, some constantly report they are in danger whenever fishing boats are spotted, while others simply have no interest and plough on regardless.

The effect of such a wide range of responses has perhaps been responsible for the International Maritime Bureau (IMB) stating they will no longer include suspicious approaches to vessels in their statistics, a move agreed by the US Office of Naval Intelligence. It would appear that too many incidents of vessel masters being "spooked" have begun to skew the statistics.

*Image P A Photos*

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**Preparation:** By knowing and empathising with a crew's attitudes it is possible to prepare them. Spotting likely problems, means remedial action can be taken. Will they be too relaxed, gung-ho, tense, cautious, terrified? By knowing the likely reaction, it is possible to do something about it.

Operating in a pirate hotspot is not a time to get a surprise from the crew – the pirates will be trying hard enough to do that.

**Training:** It is vital to practice a response to piracy attacks before transiting the danger zone. From watchkeeping, deck patrols, preparation of equipment, through to the response ashore as the crisis management swings into action. All need a measured, assured, and well drilled response.

One of the negatives of armed guards appears to be the loss of certain training elements onboard. When unarmed teams were placed onboard, there was a real emphasis on using their military expertise in training and preparing the crew. Now, it seems, when the majority of armed teams are placed onboard, the interaction is kept to a minimum, and there is a lost training opportunity.

## Bringing It All Together

There is so much to consider when keeping vessels safe and secure in such hostile waters. It is not impossible though, and the companies which support their crews are more likely to get through unscathed. No-one can guarantee a safe passage, but by knowing the dangers, by understanding the means to best avoid or escape them and by having well trained alert people onboard, then you have a chance. Or you can just rely on luck.

*Image Reuters/Joseph Okanga*

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