

WATERSIDE SECURITY: THE ABATEMENT OF CRIMINALITY AT SEA

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Research and development in WaterSide Security (WSS) are being carried out in many countries around the World. However, the R & D activities are frequently scattered and uncoordinated from country to country. Therefore, there is still a strong need for a better coordination of development of equipment and procedures for WSS and for exchange of most recent research results in order to obtain a world-wide view over the state-of-the-art in technologies and their applications. To meet this need several conferences have been held over the past decade ranging from its early start in Poland and via 3 international conferences on WaterSide Security held in 2008, 2010 and 2012, to the situation of today. This presentation will comprise an exposition on criminality at sea and its abatement today with a concentration on terror and piracy. What have we learned and what can we do.

INTRODUCTION

Criminality at sea includes, apart from acts of terror and piracy, also smuggling of human beings, smuggling of narcotics, dumping of dangerous waste of various types, illegal fishery, transport of prohibited materials etc. Many myths have grown out of fear for terror, and it is our task to reduce the formation of myths through abatement of the terror and its basis. The two major subjects in WaterSide Security are terror and piracy. The international interest in their abatement has been reflected through the early organization of conferences in Poland and in Turkey and from 2008 in the 3 WaterSide Security (WSS) Conferences held in Copenhagen (2008), in Marina di Carrara (2010) and in Singapore (2012), [1 – 3]. The next WSS conference will be held in USA in 2014.

Terror and piracy are not concepts from the modern time. They have been in existence far back in history. Most frequently connected with wars. Their background has for instance been greediness – the desire to possess land or wealth belonging to others, - peoples desire to enrich themselves, - religious feelings, ideas and concepts, – political ideas and many other

reasons. Terror and piracy have been carried out by individuals, by groups and by whole countries, the last to be termed “state terrorism”. The definition on terrorism varies among countries and international organizations, but the definition may be “boiled down” to: ***Civillian, single person’s or group’s unpredictable violence against non-combatants due to political, religious, racial or other reasons.***

We only have to look back to what the Romans did to the populations in countries they conquered, what the viking raids caused in many countries in the Western, Southern and Eastern Europe from year 800 and a couple of hundred years ahead, what took place in many countries during wars and suppressions in the Middle Ages and in particular later during the 30-Years-War in Europe from 1618 – 1648, which comprised a strong element of terror between Protestants and Catholics.

During the 20th Century terrorism grew stronger and it ignited for instance the 1st World War, when the Serbian terrorist, Gavrilo Princip, on 28th June 1914 assassinated Archduke Franz Ferdinand of Austria and his wife in Sarajevo. Terror also contributed substantially towards the decision of the US to participate in the WWI, when the German submarine, the U20, on May 7th 1915 was sinking the passengers vessel, Lusitania, near Ireland. In particular the years before and during WWII were full of terror in many countries and on the seas around the World. And after WWII so-called “liberation movements” together with islamic fundamentalists caused many acts of terror at sea in the period from 1960 to 2000.

TERROR AND PIRACY IN THE 21st CENTURY

1. THE TERROR

On 12th October 2000, Islamic fundamentalists with a background in Al-Qaeda carried out a suicide attack against the US Navy’s destroyer, Cole, during the ships fueling in the harbor of Aden, killing 17 and wounding 39 crew members. And on 6th October 2002 the French supertanker, Limburg, with 397,000 barrels of crude oil was hit by an explosive loaden speed boat outside Yemen. 90,000 barrels leaked out. Also here Al-Qaeda was responsible. The terror activity did also take place on land as for instance the attack on the World Trade Center in N.Y. on 11th September 2001. Again this terrible act of terror carried the disgusting fingerprints of Al-Qaeda. From year 2000 until today a great number of terror actions at sea including an increasing number of acts of piracy have been carried out at high costs in human lifes and in materials.

Some of the main reasons for attacks on ships are the following. Ships are extremely vulnerable, and it is nearly impossible to protect them. More than 25,000 ships are daily in international transit, and nearly 90% of the total world trade is transported at sea. 232 mill. containers are yearly transported to hundreds of harbours, and among them are 8 mill. sealed containers for the US. Harbours are most frequently more badly protected than ships, in spite of the fact that billions of dollar every year are invested in protection against acts of terror. But the hunting down of terrorists is difficult as for instance learned from the suspicious example of the operation of the ship, “The Baltic Sky”.

Containers transported on ships may carry tonnes of explosives and even weapons of mass destruction. Smaller amount of explosives, but equally dangerous, may be contained in a mine, the so-called “poor-mans weapon”. Limpet mines to be placed on the bottom of ships can be carried by scuba divers with open or closed breathing systems and offering minimal radiated acoustic signatures for passive sonar and low target strength for active sonar. Several active sonar systems are now available for protection of harbours and high-value object like

cruise ships, tankers and military vessels against underwater attacks by scuba divers. Examples exist on scuba divers use of Improvised Explosive Devices (IED), for instance consisting of a PVC tube filled with explosives and closed by gaffatape, to sink a vessel. Transport of scuba divers over great distances by use of mini- or midget-submarines, both having low acoustical signatures and target strength, forms a realistic threat. AUV's carrying sonar and camera to navigate and to detect potential limpet mines placed by terrorists on legs of offshore structures have been developed, as well as dipping sonar and seafloor mounted sonar systems to scan the bottom of passing vessels to detect potential limpet mines are now available.

Harbours and sea lanes have normally great amounts of waste of various types on the bottom, which can confuse a sonar operator, and as more than 80% of all the World's trade must pass a harbor, a mine disguised as one of the traditional waste objects may by its explosion close a harbor for weeks to several months. Sonar studies of the seafloor can unveil deviations from "a normal picture", and actions can be taken on suspicious items.

Drivers for terror are many. They include strength and possibilities as seen by the terrorists, the media's interest in terror acts and their appeal to the public, doctrine and theology, costs and efficiency, and terrorists interpretation of the situation. Key targets are for instance US's warships forming a symbol of power, tankers in particular from Saudi Arabia, Israeli interests and Indian interests due to the Pakistani problem.

2. THE PIRACY

A good view over the world-wide acts of piracy can be obtained through the quarterly and annually Piracy Reports worked out by International Maritime Bureau (IMB) in Kuala Lumpur. The greatest number of piracy attacks, out of a total number of 297 in 2012, took place in Indonesian waters (81 attacks), followed by Somalian waters (49 attacks) and with Nigerian waters as No. 3 with 27 attacks. During the period, January 1st to December 31st 2012, 28 ships were hijacked by pirates, 585 crew members were taken hostages, 174 ships were boarded, but not hijacked, 28 ships were fired upon only, while 67 attempts to board the ship were reported. 6 crew members were killed. Nearly all major sea-faring countries had victim ships among the 297 ships attacked. The first 5 ship types forming the top of the list of ships attacked by pirates are bulk carriers (65 attacks), chemical tankers (54 attacks), container ships (32 attacks) and product tankers (22 attacks), but also salvage vessels, research vessels and barges were on the list. However, due to international efforts the total number of attacks were reduced from 445 in 2010 to the 297 in 2012. In particular the number of attacks in the Somalian waters have been reduced due to international military presence, but the number of attacks on ships on the western side of the African continent near Nigeria have increased substantially.

It is necessary to distinguish between various steps in the acts of pirates. The first is *suspicious activities* as smaller boats being present at unusual positions on the sea with suspicious equipment like strong outboard engines, ladders and maybe also arms. The 2nd step is *approaches where course and weapons indicate piracy*. The 3rd step is *a direct attack, where weapons have been used, where pirates have boarded the ship, but where the pirates have not taken control over the ship's engine and steering system*, while the 4th step is *when the ship has been taken over by the pirates and the captain and crew have lost control of the ship's engine and steering systems*. A 5th step may sometimes be included, and it is *when interruption of the criminal act takes place due to military intervention*.

Protection measures against piracy include for instance changes on board the ship, to sail from the pirates, the use of armed guards and military assistance. The changes on board the ship include blocking of access to stairs, doors and transport passages by use of metal wires, nets, barrels, sandbags, barbed wire or razor wire, blocking of windows by use of steel plates, the use of smoke, steam and high pressure water, strobe lighting, sound devices like thunder flashes or flash bangs and electric wires. Also removal of stairs and other admission facilities and the use of propeller arrestors, i.e. long wires drawn after the ship, to stop the engines on the pirate's "skiff", form possibilities. Introduction of a Citadel on board the ships, a special protection facility designed and constructed to resist pirates attempts to get access to the crew over a predetermined time period, is also a possibility used by some ship owners. The demands to a citadel are that it must be big enough to comprise all crew members, the crew in the citadel must have independent and separate 2-way communication with others outside the ship, as for instance military units, the shipping company etc., and the pirates must be prevented from getting access to the ship's propulsion systems.

The increased speed necessary to sail from the pirates comprises nearly 40% of the costs to be paid in 2011 by the shipping companies to avoid the Somali pirates. Installation of security equipment constitutes about 17% of the costs, insurance and re-routing constitute 10% and 9%, respectively, while paying of ransoms only constitute 2% of the total costs.

We must, unfortunately, expect that terror and piracy will continue in the time to come, but information obtained through intelligence services and their international cooperation and through police forces and their international relations can contribute to an early detection of terror acts being planned, and the increasing number of efficient countermeasures developed over recent years can reduce the number of successful piracy acts. The international cooperations have convincingly proven their values in the abatement of criminalities at sea.

REFERENCES

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