

Marine Forum – May 2015



Maritime Security and the impact on Marine Insurance



Definition of Maritime security

- ❖ The marine industry faces more security challenges now than it ever has which in turn created the burgeoning field of Maritime security
- ❖ Maritime security is the science of providing both **physical** and **operational security** in a marine environment
- ❖ There are six recognised maritime threats namely:
 - ❖ Pilferage and theft
 - ❖ Stowaways
 - ❖ Drug smuggling
 - ❖ Sabotage
 - ❖ Piracy
 - ❖ Hijacking

The marine industry faces the above threats in various degrees

- **Shipping industry** – primarily concerned with cargo pilferage, theft, stowaways, drug smuggling and piracy
- **Offshore petroleum industry** – more concerned with the sabotage of its installations – a controversial research vessel for instance might be at risk not only from sabotage by militant environmentalist groups or terrorist organisations, but also hijacking and possible piracy.
- **Seaports** – have many concerns i.e. theft, stowaways, drug smuggling, sabotage not to mention day-to-day criminal activity



In Maritime security both physical and operational security are considered

- **Physical security** = involves protection of the item itself – i.e. the vessel, her cargo, her berth etc. Protection can be provided by proper security lighting; physical barriers i.e. fences, gates and locked doors; intrusion detection devices such as alarms, radars, and sonars; electronic monitoring systems such as closed circuit televisions; and manned security posts and guard patrols.
- **Operational security** = is provided by developing effective security procedures, policies and plans which, if followed, reduce the anticipated security risks. The challenge is to develop an integrated security plan that combines both the physical and operational security procedures which will protect the specific entity in question



The maritime **industry is not in the security business**. It is in the business of carrying passengers and cargo, producing raw petroleum products, conducting oceanographic research, developing port facilities etc.

The maritime industry does not have the expertise, in most cases, to comply with governmental security requirements without the help of experts, and it certainly hasn't the expertise to develop its own security standards absent governmental intervention.

This places virtually every vessel at risk, some more than others. It is therefore important that lenders and underwriters require their borrowers and insureds to conduct effective security surveys of their vessels and the port facilities at which they call, and adopt adequate security procedures that are consistent with the risks involved.

There are a significant amount of maritime security experts in existence nowadays. Some specialize in only certain areas, while others are capable of providing virtually any security service a maritime client may require.

Available Maritime Services are :-

- **Maritime security consulting;** maritime private investigations; pre-employment screening; proprietary guard force training; contract security personnel; perimeter security systems; Customs Carrier Initiative Agreement assistance; and intelligence gathering assistance. It also includes conducting of security surveys and risk analyses for ships, port facilities, offshore installations, and yachts, preparing or reviewing security plans, developing contingency plans, implementing security plans, conducting continuing routine security inspections, and developing and training crisis management teams.

- **Pre-employment screening** is essential in today's maritime environment. Most acts of sabotage, theft, and drug smuggling are committed by employees or former employees. Highly trained, professional security personnel who are knowledgeable in maritime operations are available, by contract, to provide both shipboard and shore side protection. Other types of investigations can also be made, and may be either covert or overt, and include investigations into such things as personal injuries to crew members, passengers or guests, thefts, collisions, cargo damage or loss, etc.

Pilferage / Theft – Cargo



Cargo Theft: Is it Real or Just a Bunch of Bull Ship?

- ❑ Cargo theft and loss estimates range from \$10 billion to \$30 billion a year. Yet, when we talk to logistics and shipping companies to offer solutions to deter cargo theft, the most common response is, “We don't have any theft problems and **even if we did, our insurance will pay for it!**”
- ❑ If there were truly no theft problems, insurance rates would still be affordable and there would be little need for the products and services offered by so many of today's cargo theft organizations and associations.
- ❑ Cargo theft is a very sensitive topic. However, it seems when people **deny** having a problem with cargo theft, it contributes to the problem and enables thieves to grow their lucrative business at the marine industry's expense.
- ❑ When products get stolen, it hurts a company's reputation. However, until people become more open about the subject, cargo theft will continue to thrive. Proactive measures need to be taken against cargo theft. In doing so, we will help bring profits back into our organizations, save time, reduce labor and most importantly, increase overall customer satisfaction.

Pilferage / Theft – Cargo

- ❑ Cargo is often overlooked especially considering that it's the largest segment of the marine insurance account. Whether carried out by sea, land or air, cargo transportation carries many risks for insurers, handlers and owners. Regardless of the mode of transport, cargo insurance should cover loss of or damage to goods while in transit as a minimum.
- ❑ The biggest global problem facing cargo underwriters is theft. The risks of theft or pilferage vary greatly from country to country. Cargo theft typically is rooted in social, economic and cultural conditions. Much of the world is in economic decline and the threat has never been greater.
- ❑ Freight Watch International, the industry watchdog for logistics security services, state the countries most at risk for cargo theft are **Mexico, Brazil, South Africa, the US, Russia, India and the UK**. Highly sought after items are copper and other metals used in the building/industrial category. Industry experts in the know say it is easier now than ever for thieves to sell stolen metals (due to soaring metal prices as well as rising demand for metals in emerging markets).

Pilferage / Theft – Cargo continued

- ❑ France enjoys a high economic development and the geographic location makes it a primary crossroad for international trade by all modes of transport. This also make France a hotspot for cargo theft but despite this reports suggest that the number of cargo theft incidents remain stable. France, in fact, is one of the European countries most actively working to reduce cargo crime.
- ❑ Freight Watch recorded 974 cargo theft incidents in the US in 2011 – an 8.3% increase over 2010, and the highest number of incidents per year on record. Cargo theft in the US is mainly non-confrontational, less than 2% of all recorded incidents involve violence, cargo theft in Mexico is almost exclusively violent, with armed gunmen roaming the country, stealing high-value loads seemingly at will.
- ❑ Mexico (where cargo theft rose last year by 13% over 2010) continues to face numerous other challenges to its supply chains, including cartel-related violence, natural disasters and smuggling operations.

Stowaways



Stowaways

- The International Ship and Port Facility Security Code provides ships with procedures to prevent stowaways from boarding ships. Nearly 50% of stowaways come from West Africa. Stowaways are likely to be found in containerships and geared multipurpose ships in containers, car decks, trailers, engine-rooms, hold ventilation, under or near the stern, ballast tanks, rudder trunks and lifeboats. A significant number are also found on bulk carriers, car carriers, general cargo and ro-ro ships.
- The IMO annual report on stowaway incidents reported to the Organization recorded 253 stowaway cases in 2010, involving 721 stowaways. (Fal.2/Circ 121)
- The statistics indicate that 136 stowaways travelled from the Mediterranean, the Black Sea and the North Sea region; 63 from West African countries; 25 from North and South America and the Caribbean region; and 12 from the Indian Ocean and East Africa region. According to the reports provided to the Organization, 485 stowaways embarked in unknown ports. It also appeared from the information reported that 8 stowaways requested political asylum, 4 escaped after being arrested and 8 boarded the ship dressed as stevedores. In 195 cases the stowaways were repatriated by authorities.



The **International Maritime Organisation** ([IMO](#)) has launched a statistics program concerning stowaway incidents that occurred in 2014.

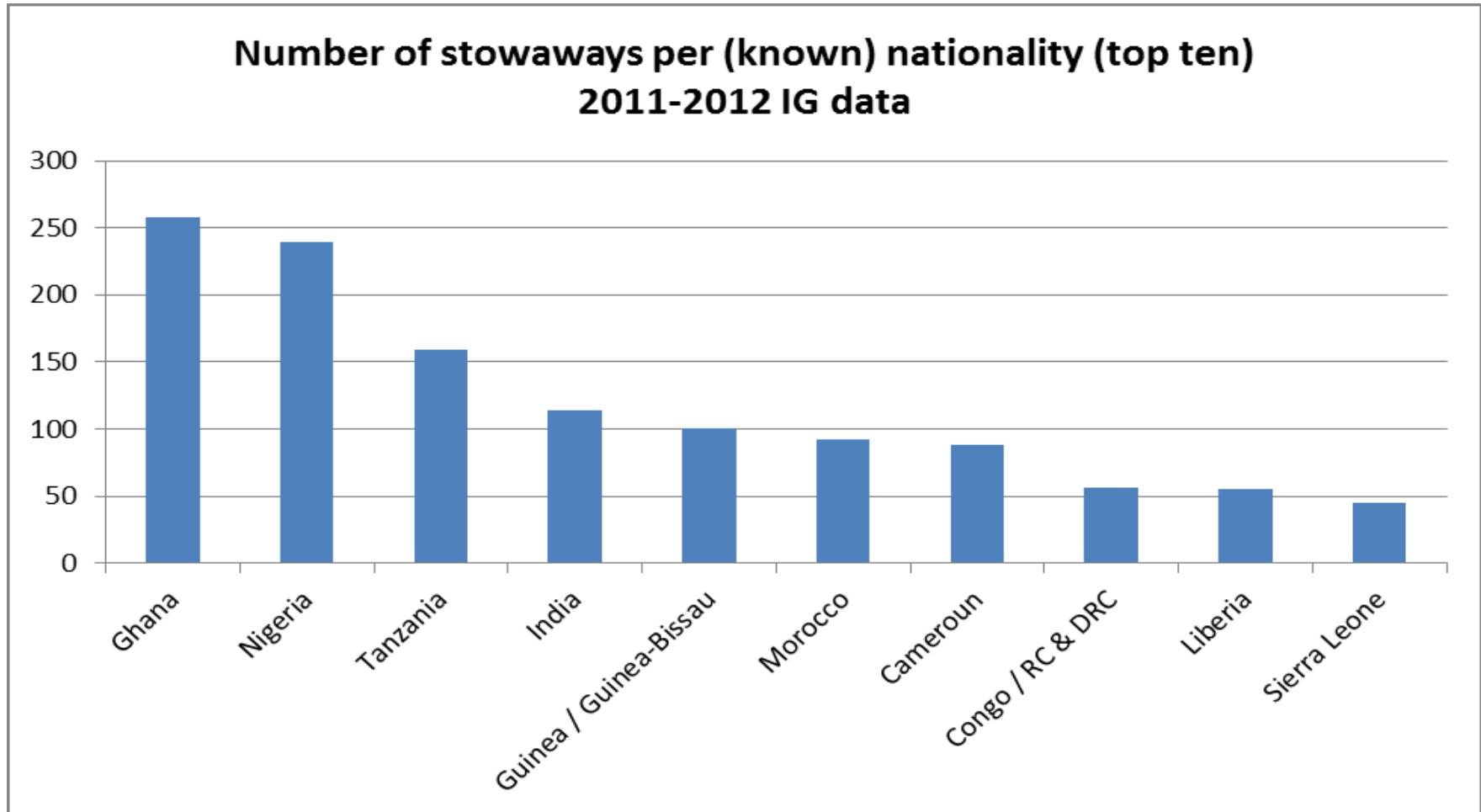
There were reports of a total of 61 incidents that involved 120 stowaways. Cape Town and Lagos happened to be the most common ports regarding embankment-

Africa accounts for approximately 81% of the total amount of cases, with the most common type of known stowaway nationalities being Nigerian, Ghana and Tanzanian.

Going by [Swedish Club](#)'s statistics, the average stowaway case's cost is in the amount of \$38,500 but one case's costs, however, may quite well go up to several hundreds of thousands of dollars as they depend on the legal and practical difficulties that may arise during the process itself

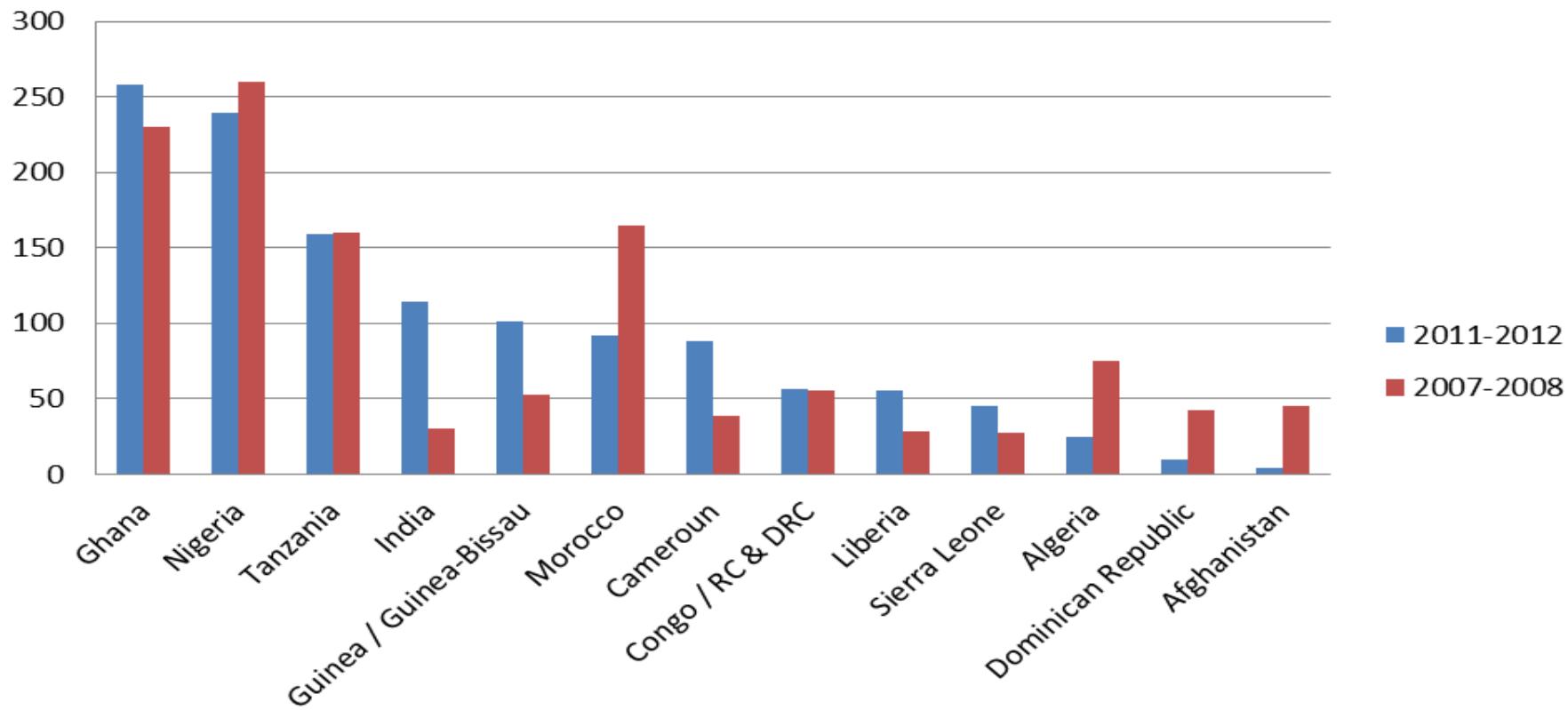


In terms of nationality of stowaways, the IG data indicates that the majority of the stowaways involved were from African States, specifically Ghana, Nigeria and Tanzania, as highlighted in the table below.



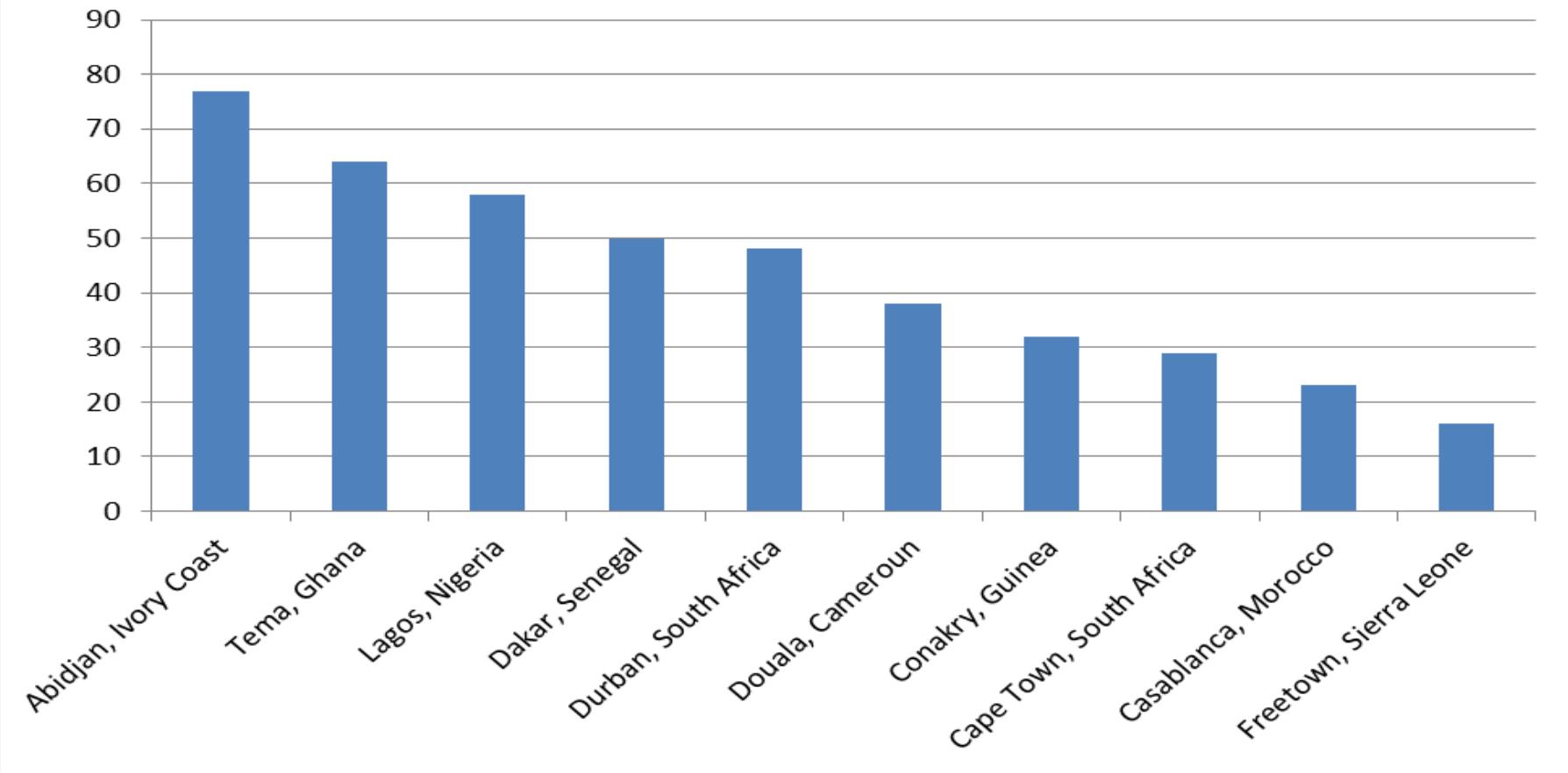
A comparison of the 2011-2012 data with the 2007-2008 data indicates very little shift in the nationalities of stowaways as highlighted in the table below.

Number of stowaways per (known) nationality Comparative analysis 2011-2012 / 2007-2008 IG data



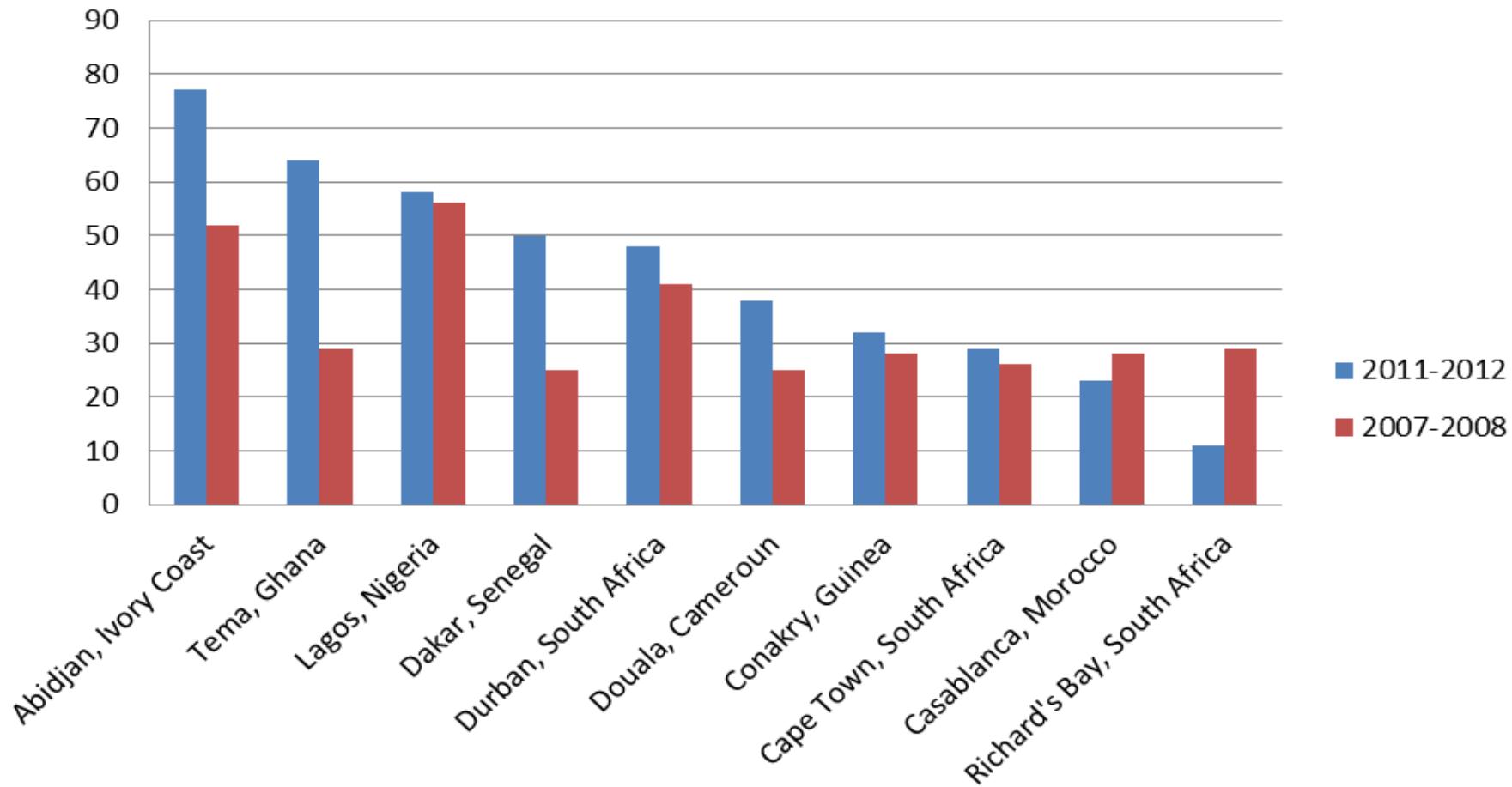
In terms of ports of embarkation, the IG data for 2011-2012 indicates that the top ten ports of embarkation in terms of the number of reported cases are all in the African continent, mainly West Africa as highlighted in the tables below.

Ports of embarkation (top ten)
2011-2012 IG data



Ports of embarkation

Comparative analysis 2011-2012 / 2007-2008 IG data



Drug smuggling in the shipping industry

Of concern to the shipping industry is the importation of illegal drugs and contraband by smugglers using shipping containers and other cargo for their illicit purposes.

- ❖ The US holds **carrying vessels and their owners** responsible, and can levy fines, based upon the amount and type of drugs, (> \$100 million per vessel). It can also seize and forfeit those vessels. Usually, the vessel's P&I and hull insurance will protect the lien holder's interests, but what happens if the vessel is forfeited to the US upon proof of the owner's complicity?
- ❖ In this instance **coverage** will more than likely be denied and, even though appropriate clauses exist in loan agreements that require lawful activity on the part of the shipowner, the lender will be left holding the bag. A breach of contract suit is of little consequence to an owner facing serious criminal charges and a lengthy prison term. Regardless of the owner's complicity, the law requires shipowners to "**exercise the highest degree of diligence and care**" in preventing drug smuggling activity, and the burden is upon the **shipowner** to prove he did so.
- ❖ The US Customs Service developed two contracts, the ***Carrier Initiative Agreement*** and the ***Super Carrier Initiative Agreement***, which set forth the security procedures a shipowner agrees to follow. If he can show he has, in fact, complied with these procedures, Customs will then presume he has exercised the highest degree of diligence and care.

Some security measures the shipowner must implement are:-

- ✓ Take reasonable measures to enhance security and control procedures making it more difficult for unauthorized persons to gain access to vessels, both overseas and in the US.
- ✓ Permitting only persons displaying proper identification access to vessels, and only when required by their duties.
 - ✓ Developing and implementing a security system acceptable to Customs that addresses the threat of the illegal drugs smuggler.
- ✓ Regularly searching vessels for illegal drugs and contraband prior to departure for, and en route to, the United States, and reporting to Customs all incidents where illegal drugs are found.
- ✓ Locking or sealing specific compartments aboard ships which may be used to conceal illegal drugs where such locking will not interfere with the normal vessel operation or pose possible safety hazards.
- ✓ For those areas which cannot be sealed or locked, limiting access to those persons with legitimate business in such areas.

Piracy and Hijackings



The classification of Piracy according to International Law and codified in Article 101 of the United Nations Convention on the law of the sea has three criteria for the offence of Piracy

➤ **Piracy must be conducted**

- on the high seas against
- another vessel
- and must be for private gain

➤ The definition used by the International Maritime Organisation is wider speaking not specifically of piracy, but acts of armed robbery against ships or at sea and also takes into account attacks in territorial waters (including internal waters) and on vessels in port.

➤ Maritime security has deteriorated substantially over the past fifteen years with the number of attacks on ships and maritime facilities increasing sharply. During this period the centre of gravity has moved from the Straits of Malacca and Southeast Asia to the Gulf of Aden and Somali basin.

➤ When studying territories such as Somalia, The Gulf of Aden, West Africa, The Straits of Malacca and Latin America attacks on ships or at sea encompass both private and political motives.

➤ Applying too narrow a definition to the problem of piracy hinders efforts to resolve piracy as it denies international communities the right of intervention which is required when a state is unwilling or unable to act against piracy within its own territories and the best approach is to treat the maritime security as a whole

Development and economic impact of piracy

- ❖ Although 90% of the EU's exports are transported by sea the probability of pirate attack is relatively small. Even with the problems in the Gulf of Aden in 2009 the probability of attack was 0.58%. However from a commercial perspective, the enormous value of the vessels and the cargoes they transport means there is a significant financial risk reflected for example an increased insurance premiums. When the revenue stream from piracy is spent on improving arms and equipment there is a risk of the problem blowing into a general economic threat.
- ❖ Piracy can also increase the risk of shipwreck, which in its worst form could completely block a major sea route.

Maritime insecurity have distinct forms ie.

- In West Africa and the Gulf of Guinea there is a concentration of attacks on ships in the Port of Lagos and along the nearby Nigerian coast with the objective of the pirates is usually to steal cargo but crew members are frequently captured and held for ransom. There are also attacks on the oil platforms which is aimed at stopping the production of oil.
- In the Gulf of Aden the main aim of pirates is to capture the vessels and holding them and their crew for ransom.
- In South and Southeast Asia the aim is generally to steal cargo but for a period a sophisticated form of piracy was practiced whereby the whole ship is taken over and furnished with forged documents allowing the new owners to operate them in their own name.

- When looking at the impact of maritime piracy on international trade the conclusion is that piracy increases the cost of international maritime transport via an increase in insecurity regarding goods deliveries.
- When studying the trade flows between the main European and Asian countries between 1999 and 2008 evidence indicates that maritime piracy reduces the volume of trade; the effect of ten additional vessels hijacked being associated to an 11% decrease in exports.
- **International cost of piracy in terms of trade destruction is estimated to be 28 billion dollars.**

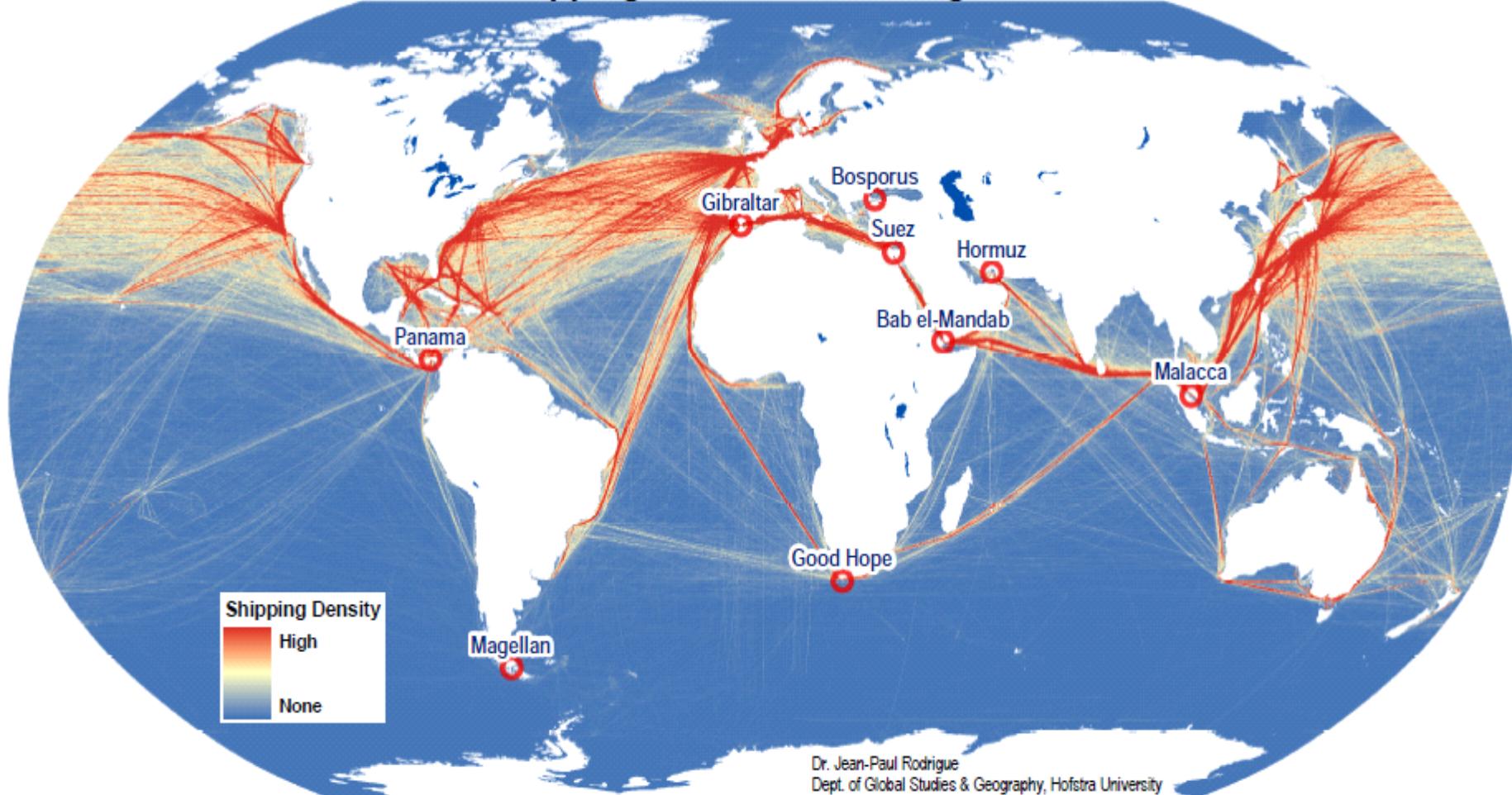
- International maritime piracy is a growing phenomenon, particularly in its disruption of the main trade route linking Europe and Asia. According to the International Chamber of Commerce (ICC), in 2009 Somali pirates hijacked 47 vessels, took 867 crewmembers hostage and carried out no less than 217 violent attacks on ships. The Economic effect is that piracy affects international trade through an increase in insecurity related to the prompt delivery of the goods transported.
- Recent research has dealt with various sources of insecurity (corruption, piracy, terrorism) by modelling the long-term effect insecurity has on trade. Research shows that inadequate institutions constrain trade far more than tariffs do
- There are however other violent issues such as terrorism, civil wars and external conflicts which impact on trade.
- Piracy increases the cost of international maritime transport since higher premiums must be paid to crews sailing through dangerous waters, and the cost of insuring the goods shipped also increases. Alternatively traders can adopt longer and costlier trade routes or change to alternative means of transport (products with a high value/weight ratio could switch to air-freight). The longer route around the Cape of Good Hope is an option considered by maritime companies, but it was not used before 2008, and only very scarcely since

The geography of Maritime Trade and Piracy

- The source of data on piracy incidents is the International Maritime Bureau (IMB) Live Piracy Report.
- It provides data on all Piracy and Armed Robbery incidents reported to the IMB Piracy Reporting Centre and acts as a focal point in the fight against all types of maritime crime and malpractice. Piracy suppression is one of the IMB's main areas of expertise
- It maintains a round-the-clock watch over the world's shipping lanes, reporting pirate attacks to local law enforcement agencies and issuing warnings about piracy hotspots to shippers

Maritime Shipping Routes in 2002

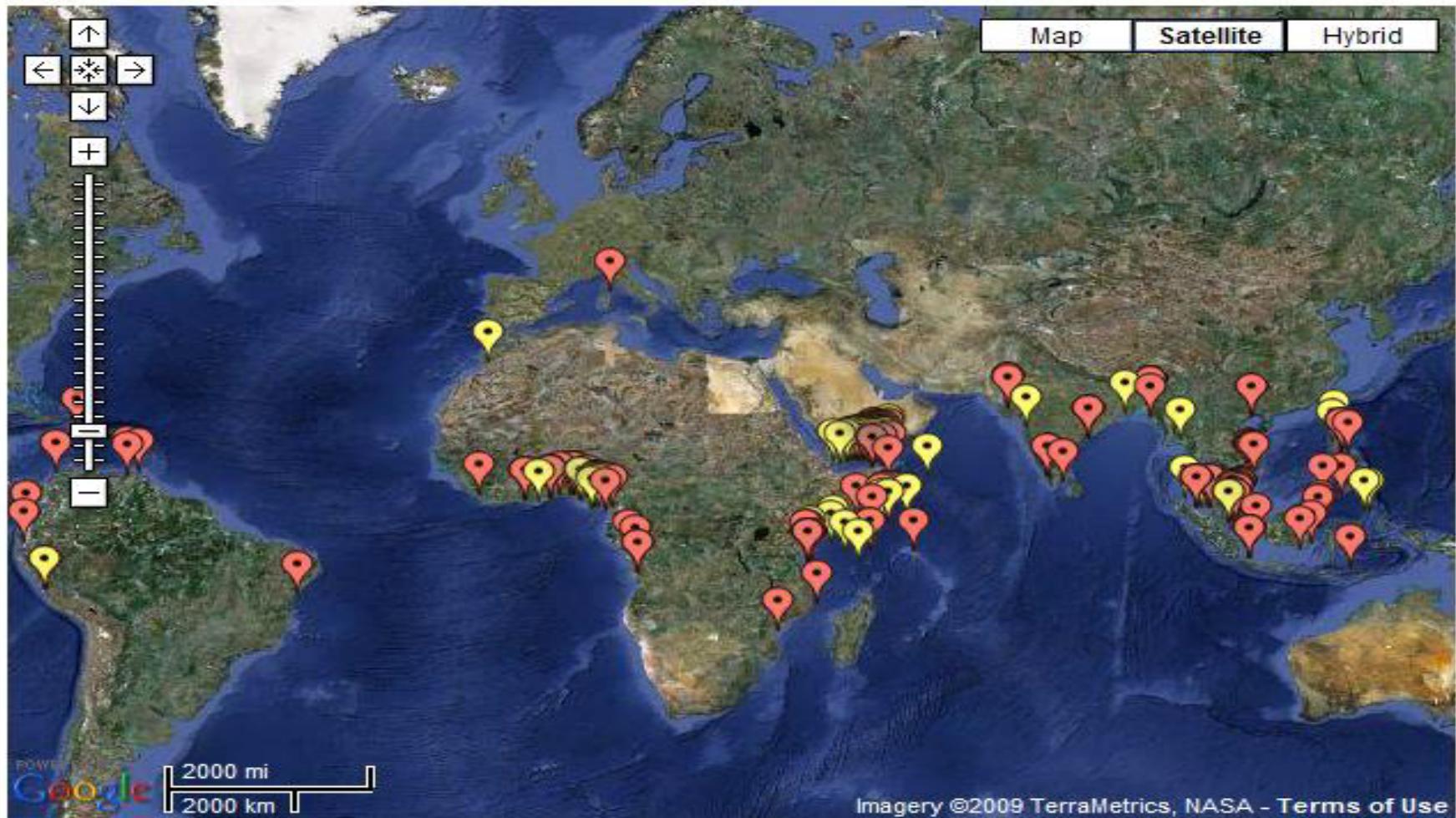
Maritime Shipping Routes and Strategic Locations



Source: Shipping density data adapted from National Center for Ecological Analysis and Synthesis, A Global Map of Human Impacts to Marine Ecosystems.

Location of piracy acts in 2008

 = Actual Attack  = Attempted Attack  = Suspicious vessel



Location of piracy acts in 2014

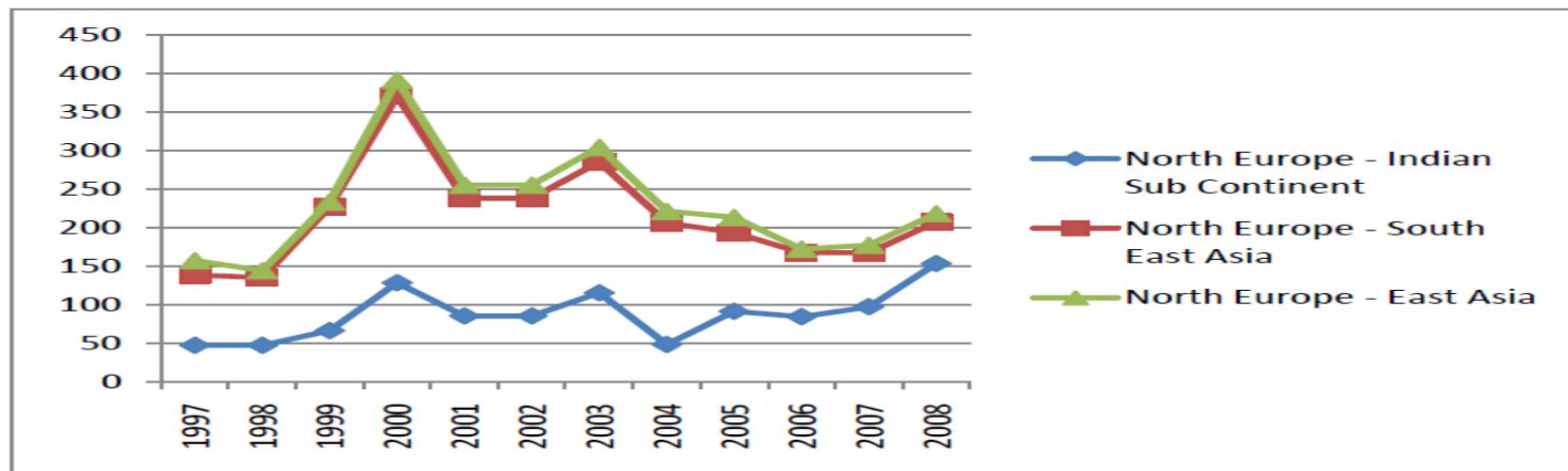
- Attempted Attack
- Boarded
- Fired upon
- Hijacked
- Suspicious vessel



A ship heading from a port in northern Europe to China must cross all five maritime regions; four if it stops its journey in Singapore and three if it unloads its shipment in Mumbai.

We have been able to count the number of incidents of piracy occurring annually in each of the five regions between 1997 and 2008, as well as the number of incidents on three different routes linking Europe and Asia over a 12-year period (see Table A.1 and Graph A.1 below).

Total number of incidents on the three maritime routes.



There is a differentiation between the three kinds of incidents i.e. the extent to which the ship's journey is disrupted: Attempted acts of piracy, boardings and hijackings.

An **attempted piracy** act occurs when pirates board a ship and abandon it empty-handed after being discovered, or in circumstances where a ship is fired upon without being stopped.

Boardings relate to the actual boarding of a ship by pirates and theft (i.e. personal belongings of crew and/or goods carried for crew maintenance and en-route ship repairs) these incidents may be accompanied by violence against the crew.

Hijacking, consists in the seizure of the ship and its crew, the immobilization of the ship in a coastal area under the control of the pirates and a ransom being demanded in exchange for the crew members, the ship and its cargo. It is most obviously hijackings that are the most disruptive for maritime trade. Table 1 below shows the evolution of piracy incidents over time. There was a sharp increase in hijackings in 2008 in comparison to previous years.

Results by Maritime Route

- There is greater effect of piracy on the Indo-European trade route which is not surprising considering the geographical position of the Indian Sub-continent and the recent history of piracy events in the region are considered. Because of its geographic position, it is almost impossible for ships reaching or leaving India to change maritime routes to avoid entirely the part of the Indian Ocean threatened by Somali pirates. Since 2008 and 2009 Somali Pirates have broadened the reach of their operations to include much of the Indian Ocean, practically reaching the Maldives Islands
- According to the IMB, 2009 saw a shift in the location of attacks by Somali pirates. In 2008 attacks were mainly in the Gulf of Aden, in 2009 they were concentrated along the Somali sea-board
- Studies show that Somali pirates accounted for 91% of all ships and crew hijackings in 2008 (42 out of 46 vessels hijacked) so the estimated cost of Somali Maritime piracy is approximately 25.49 billion dollars which has an impact on the International Community.

Conclusion of the impact of piracy

- The effects of piracy incidents were captured by the number of attempts, the number of boarded vessels and the number of hijacked vessels in the three maritime routes considered. The two main conclusions emerged. First, **not all acts of violence against ships hinder international maritime trade**, only the most harmful (hijackings) of these will lower the amount of trade between nations. Second, as most of the incidents of piracy involving hijacking are attributed to Somali pirates, it seems reasonable to say that, were piracy to disappear in the Gulf of Aden (RSGA region), there would be a slight drop in the cost of maritime trade between Asia and Europe. Third, air freight does not appear to be a substitute for maritime trade; this result is preliminary, as estimates for different type of goods need to be calculated.
- Interestingly, rather than eradicating piracy, the International Community has decided to contain it. According to the Commander in chief of the joint European Naval Task Force, the naval forces are in a position to deter, rather than fully eradicate, piracy, due to the vast expanse of ocean in which the pirates operate, as it is impossible to intercept systematically all attempts of piracy. An alternative solution would be to send ground forces onto the Somali shore. This option has been ruled out because of the human and economic cost it would entail, as demonstrated 18 years ago with the US lead operation "Restore Hope". Yet another solution would be to revive an active gunboat policy on the Somali ports such as Eyl and Garacad, which are known to be used by pirates. Although this may seem less expensive and more feasible, with modern war faring techniques, it would be to ignore a key fact in the current Somali political situation: pirates are one of the few organized forces capable of opposing the Islamist militia that rules a vast part of the country. Weakening the pirates and the two proto-states largely living off the spoils of piracy, could lead to a power vacuum in the regions where the Islamist militias are less active. A strong Islamist State could be a haven for global terrorist activities and, as recent history has shown, the economic costs brought about by large scale attacks on western soil, through the economic disruption and retaliations they induce, could be extremely costly.
- An alternative manageable solution for the International community may be to provide strong backing for one of the new Somali proto-states, and start a program for recycling pirates as pirate-fighting coast guards. This solution would have the advantage of being relatively cheap and creating an area of stability in a strategic region for International trade.