Security and Europe's Sea Ports: threats and issues facing maritime gateways to Europe

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Abstract:

The EU has more than 1,500 ports along the coastlines of member states. Those ports play a vital role in the movement of goods and passengers both within and from outside the EU. The largest may be visited by many thousands of cargo vessels from across the globe, or see millions of passengers using them each year. The smallest may only be visited by the occasional fishing vessel or foot ferry or pleasure craft. Threats to ports include the transport of bombs or the use of ships as bombs, narco-terrorism, weapons trafficking, people trafficking, facilitated illegal immigration and the smuggling of drugs, arms, alcohol and cigarettes. It is within this context that the issue of security is considered in this paper, which examines some of the significant threats facing the EU at the current time and also looks at some of the measures taken by the EU to try to overcome those threats. It also considers some of ways in which ports – generally the largest ports – can be made more secure, while recognising that many smaller ports and the coastlines will remain at risk as it is impossible to 'police' the entire coastline of the EU, some 89,000 km in length.

Key Words: security, seaports, terrorism, people trafficking, smuggling, transport hubs

1.   Introduction

In order to set the context for this paper, it is important to consider the geographical scale of the EU's maritime areas. 22 EU Member States (MS) have coastlines along the Baltic, Black, Mediterranean and North Seas, and on the Atlantic and Arctic Oceans (see Map 1), and these coastlines represent about 85% of the EU's international borders. Several countries including Cyprus and the UK are completely surrounded by the seas and oceans. Many EU states also have islands which make up part of their territories, for example the Balearic and Canary Islands which are part of Spanish territory.

Estimates of the length of the EU's coastline range between 70,000 km and 89,000 km, making the EU's sea border around three times longer than that of Africa, despite the land area of the EU being only a third that of Africa. However, if MS overseas territories were included, for example French Guyana, the coastline for the 22 EU MS is estimated to be 136,106 km long.

The seas and oceans of the EU play a significant role in its economic security and in areas of transport, employment, tourism, as a resource for both renewable and non-renewable energy, and as a source of food through its fisheries and aquaculture. This paper will focus on the area of transport and consider both shipping and ports. Shipping is of major importance in the EU. In total, the EU merchant fleet makes up over a third (37 per cent) of the world fleet[1]. There are over 1,500 seaports in the EU employing around 350,000 people. Those ports take an estimated 600,000 ship calls per year by merchant vessels, handle more than 3.5 billion tonnes of cargo annually, and generate some €20 billion per annum. Merchant vessels range from small cargo ships to very large container ships, oil tankers and natural gas carriers. In 2009 there were also some 404 million passenger movements through EU ports, travelling on passenger ferries, cruise ships and other vessels suitable to carry passengers.

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[1] Total controlled fleet by world region, 2009 (dwt million): World = 1,144.4 of which EU-27 = 417.9. Source: European Commission (2011). "EU transport in figures: Statistical Pocketbook 2011" ISSN 1831-998X

Map 1 – EU's Regional Seas

Source: European Environment Agency - Data for Sea Regions.

2. Maritime Security Threats

In the wake of the 9/11 attacks in the US, security has been an issue about which there has been growing concern. Carafano and Kochems (2005) note that "The challenges for maritime security are complex and growing. Addressing vulnerabilities, ensuring access to the maritime domain, and maintaining economic competitiveness while protecting US interests from sea-based attacks will be no easy task" (page 2). A similar statement can be made in relation to protecting EU interests.

While much of the focus on security has been on airports and air travel, there is also the potential for security threats to come from the sea and via EU seaports. McNicholas (2008) notes, for example, that "the seaports of the world are increasingly under threat ... [from] drug smugglers, stowaways, cargo thieves, pirates and terrorists" (page 263). The European Commission (2006), in its Green Paper on a future maritime policy for Europe, identified a number of challenges affecting security in its maritime area. These include illegal Immigration by sea; smuggling and drug trafficking; terrorism (which can further broken down into the use of ships as 'bombs' and narco-terrorism); and piracy and armed robbery at sea. To these issues can also be added weapons trafficking and people trafficking, the latter being where adults and children are transported between states for the purposes of exploitation.

Only in the case of piracy and armed robbery is there not a direct threat to the EU, but rather a threat to shipping companies that operate out of/sail under the flags of EU MS. In the other cases, ships entering the EU's seaports may potentially be undertaking one or more of these activities, whether knowingly or unknowingly and the different security threats are examined in this section.

2.1   Illegal immigration by sea

The European Commission (2006) identified that illegal immigration by sea is a particular problem in the Mediterranean and the southern part of the Atlantic external sea border (areas of southern Portugal and southern Spain). Illegal immigrants (migrants) often pay very large sums of money to smugglers for transport and false paperwork, and often travel to the EU in small, badly maintained ships or boats. As a result, there have been many cases where those boats have sunk, with resulting loss of life (see Example 1). Those vessels are also very difficult to detect which often reduces the possibility of survivors being rescued, particularly since they are often headed to remote coastlines rather than to seaports where the likelihood of detection is higher.

A report of the United Nations Office on Drugs and Crime (UNODC, 2011) indicates that prior to 2005 the majority of irregular migrants entered the EU by crossing the Mediterranean by small boats at the Straits of Gibraltar. However, increased measures by the Spanish government to prevent entry (for example the Straits of Gibraltar Surveillance System – SIVE) has resulted in West African irregular migrants first travelling towards Egypt and then "crossing by sea to Greece, or travelling towards Turkey with a view to entering EU by land from the south-east" (page 21).

In terms of the scale of the problem the UNDOC report refers to a study which suggests that "around 830,000 migrants travelled annually from Africa [to EU countries] of which 100-120,000 crossed the Mediterranean", further noting that tens of thousands of these will have entered the EU by sea (pp 11-12). Moreno-Lax (2011) notes that there is concern at how EU MS have dealt with boat migration in that region, identifying that while there are obligations under both international and EU law to rescue persons in distress at sea, there have been incidents where people have not been rescued, there have been arguments over responsibility and some boats have also been diverted to third countries including Libya, rather than permitting them to enter the EU (page 1).

While mass illegal immigration is a problem for southern EU states, there are also many cases of illegal immigrants attempting to enter northern EU states such as the UK, through ports such as Dover. In this case, they hide in lorries spending the night in Calais before crossing the English Channel on ro-ro ferries (see Example 2). In this example, port security and border control are significant issues at both ends of the voyage to stop people from getting onto lorries in France or to catch those that have successfully done so when they arrive in the UK.

Example 1 – Hundreds Feared Dead After Immigrant Boats Sink Near Libya.

"Hundreds of African migrants are believed missing after the boats they were using to try and reach Europe capsized on Sunday and Monday. At least 21 bodies have already been recovered ... [and] 23 survivors had been recovered. One of the boats was believed to have been carrying around 250 passengers and another had as many as 365".

Source: Spiegel Online (2009)

Example 2 – Illegal Immigrants Found in Lorry Bound for Dover

Six would-be illegal immigrants have been prevented from entering the UK after UK Border Agency officers found them hiding inside a lorry load of wheelie bins heading for Dover.

The 6 which were 4 men and 2 women from Vietnam, were found in a Polish registered lorry at Calais port in the early hours of 21 July. Officers noticed the trailer's security cord had been tampered with and they used sniffer dog Jake to search the vehicle.

The stowaways were handed over to the French border police and the vehicle was allowed to continue onto its destination in Dover.

Source: UK Border Agency (2011)

2.2   Smuggling and drug trafficking

2.2.1   Drug Trafficking
The growth of container shipping has, according to Griffiths and Jenks (2012) been exploited by drug trafficking groups whose own ships have been the target of US and EU law enforcement agencies. Containerised sea transport is, they indicate, a simple, convenient and cost effective mode of transport for drug smugglers (page 37). The European Commission (2006) note that the EU is "currently and seriously affected by the illicit traffic in drugs arriving by ship [and also] by the smuggling of cigarettes, alcohol etc." (page 29). Looking at the example of South American cocaine smuggling, EMCDDA-Europol (2010) report that 92,000 seizures of cocaine were reported in 2007, resulting in around 77 tonnes of cocaine being intercepted. Three main trade routes are used to ship cocaine into Europe which the UNODC (2008) identifies as being: the Northern route from the Caribbean via the Azores to Portugal and Spain; the Central route from South America via Cape Verde, Madeira and the Canary Islands to Europe; and the African route from South America to Western Africa and from there to Spain and Portugal (page 11) - see Map 2.

Map 2[2] – Main cocaine trafficking routes from South America and Africa to Europe
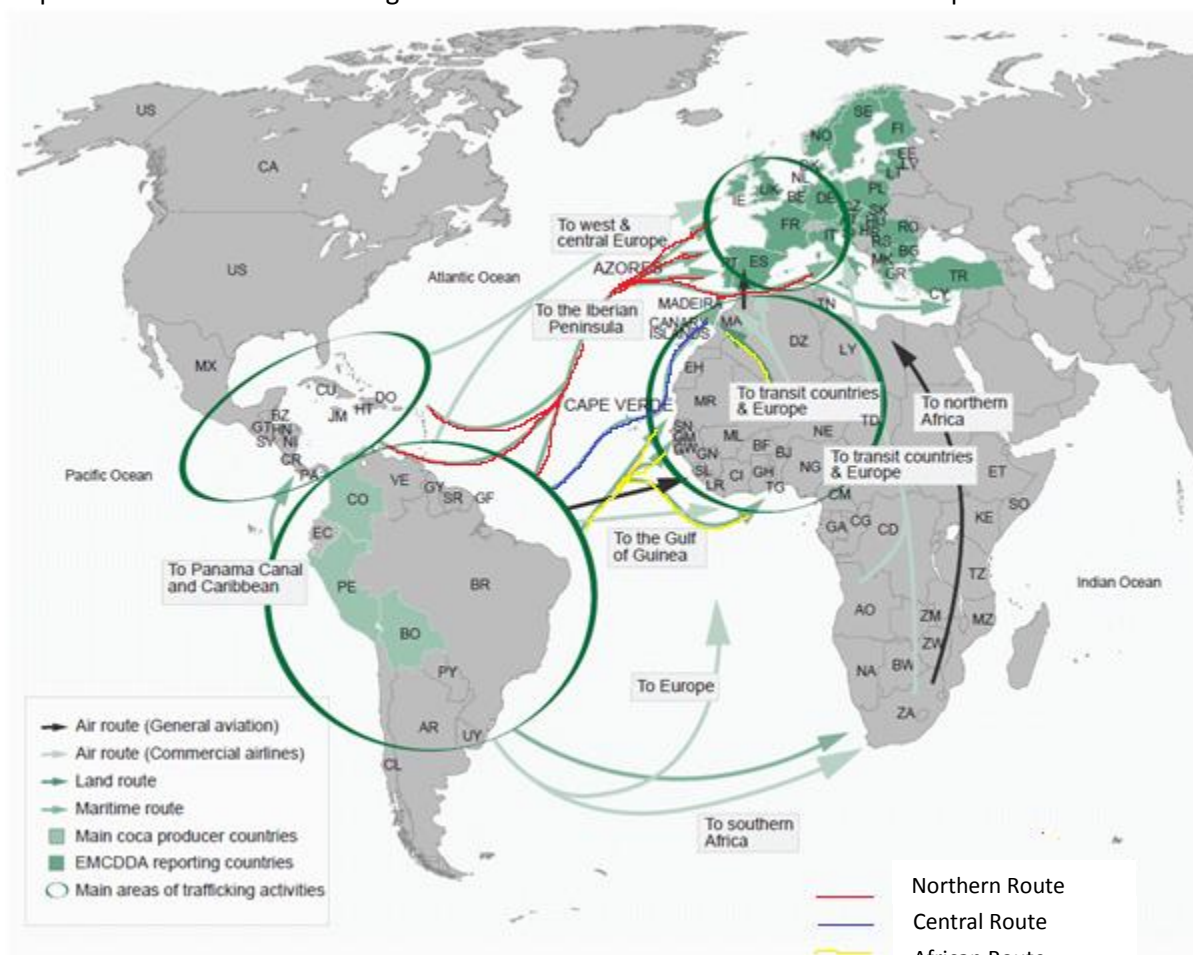
Source: UK Parliament. Available online at:
http://www.publications.parliament.uk/pa/cm200910/cmselect/cmhaff/74/7411.htm

In addition to the routes outlined above, Ireland is, according to McDonald and Townsend (2007), a major destination for drug smugglers and as a distribution centre for cocaine destined for the UK market. They note that hundreds of millions of Euros worth of cocaine were recovered off the west Cork coast in July 2007, making it one of the largest drug seizures in Irish history. In the case of other drugs such as heroine, cannabis and synthetic drug precursors, Europol (2011) indicates that planned

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[2] Map adapted to highlight the 3 main routes of entry to Europe

expansions of container ports in Tangier (Morocco) and Port Said (Egypt) will provide further opportunities for drugs to be transported by sea freight (page 8).

2.2.2   *Cigarette, tobacco and alcohol smuggling*
In respect of the cigarette and tobacco smuggling, large amounts originate from China. The European Anti-Fraud Office (OLAF, 2011) indicates that around one billion cigarettes had been seized in the EU over the previous 18 months, as a result of information provided by the Chinese Anti-Smuggling Bureau. The cost to EU taxpayers of the illicit tobacco trade was estimated to be €10 billion per annum. While much of the smuggling is identified as taking place along the EU's eastern land borders, EUROPOL (2011) indicates that many criminal groups ship cigarettes through free trade zones in Dubai and Jebel Ali in the United Arab Emirates, together with Port Said in Egypt (page 14) and ships are then used to transport them via EU ports.

There is little or no information available on the cost or scale of the problem of alcohol smuggling in the EU, although an article by uk-trucking.net (2007) indicated that £215 million was lost to the UK public purse through non-payment of excise duties on alcohol (£2.5 billion in the case of tobacco). In the case of both alcohol and tobacco fraud, at least some of the alcohol entering the UK will have been transported by sea and for both it is highly likely that smuggling will take place in other EU states. Customs inspections in ports will, therefore, play a significant role in trying to minimise the impacts of smuggling and consequent loss of revenue to member states.

2.3   Terrorism

The Institute for the Analysis of Global Security (2005) notes that: *"Maritime terrorism has emerged as a formidable threat in the world, targeting both civilian and naval vessels … compounded by the use of maritime vessels and shipping lanes by criminals who are often in league with terrorists. With the possibility that weapons of mass destruction could be used as a terrorist weapon, efforts to pre-empt such attacks … has become a top priority."*

In the wake of the 9/11 attacks in the US in 2001, security measures were tightened in airports across the EU to try and prevent similar attacks taking place. While some EU states face an internal threat from Islamic groups (e.g. UK, Netherlands) or from nationalist groups (Real IRA in the UK, Basque separatists in Spain and France), there is also an external threat posed by Islamic groups in North and West Africa. As with illegal immigration and drug smuggling, there is obvious scope to enter the EU through one of its many seaports or along the thousands of kilometres of unpatrolled coastline. Specific issues where ships and seaports can be used to facilitate terrorist activities are considered below and in the context of seaports, this will be an issue of concern to national maritime security agencies and also to defence agencies tasked with protecting the interests of the EU outside its borders.

2.3.1   *Ships as 'bombs'*
One area of concern in recent years has been the transportation by sea of dangerous substances such as explosives or weapons of mass destruction in cargo containers which are then offloaded in ports and transported by road and rail all across the EU. However, a further threat that has caused concern since the 9/11 attacks in the US is the potential use of ships as 'bombs'. Examples of vessels that have been considered to have the potential to cause significant damage to ports and surrounding hinterlands include: oil, liquid natural gas (LNG) and liquid petroleum gas (LPG) tankers; chemical tankers; and nuclear waste transport vessels.

Richardson (2004) considers the potential threat from different types of vessels including oil tankers, LPG and LNG vessels. In the case of the former he examines an attack on an oil tanker by a small vessel carrying explosives. It severely damaged the tanker and created a fire and large oil slick, but there was no explosion. He indicates that the structural design and double-hull nature of these vessels means that it is highly unlikely that they could be used as bombs, although there is a potential terrorist threat is at the stage when they are being unloaded in port (pp 41-45). However, Richardson (2004) does cite the case of a vessel carrying ammonium nitrate, a common agricultural fertilizer (see Example 3).

The possible threat from terrorist attacks using vessels has, in the US, led to direct action being taken to protect the port of Boston. Testa (2004) outlined the case where LNG carriers visit Boston Harbour every few days and travel within "a few hundred yards of downtown Boston and Logan Airport". In response to the 9/11 attacks, the US Coast Guard considered this to be a significant threat and not only provided an "armada of protection" for each ship including marine patrols and police divers but also closed down one of the major bridges along the route of the vessel. Testa goes on to cite a study which suggests that "an attack by a missile or boat bomb on a tanker could spill half the cargo over the water, causing a catastrophic, searingly hot fire that would burn people and buildings a half-mile away".

> **Example 3 – The Baltic Sky, June 2003**
>
> *Ship boarded by Greek commandos after 6 weeks sailing around the Mediterranean*
>
> *Vessel found to be carrying 680 metric tonnes of ammonium-nitrate based explosives and 8,000 detonators.*
>
> *Loaded in Tunisia and bound for Sudan - should have travelled through the Suez Canal*
>
> *Crew and captain charged with illegal possession and transport of explosives*
>
> *Cargo said to be the biggest quantity of explosives ever seized, with the explosive power of an atomic bomb*
>
> Source: Richardson (2004), pp 45-46

McNicholas (2008) also identifies that there has been growing concern about the possibility of terrorists using ships to deliver weapons of mass destruction to target key facilities and areas in the US (page 248), while Greenberg et al (2006) note that a scenario identified as having the greatest risk is the use of container ships which carry radiological or nuclear materials being detonated at a port (page xxi). There is potential for such a terrorist atrocity to occur, with Roach (2004) highlighting the suggestion that al Qaeda owned or controlled 15 cargo ships that could be used as floating bombs, to smuggle explosives or chemical, biological or radioactive dirty bombs, or to transport al Qaeda members to third countries (page 41). While this is identified as a threat to the US, it could equally pose a threat to EU seaports and can be considered an issue of concern to both maritime security agencies and to law enforcement agencies in EU states.

2.3.2 Narco-terrorism

Narco-terrorism is often considered to be a situation where drug producers use violence against police or government employees to gain concessions or protection by and from the very bodies that should be trying to halt their activities. However, it also refers to a situation where terrorist groups use money from drug trafficking to fund a political agenda (see Example 4). As an example of this, EURAD (2010) outlines how the sale of drugs supports terrorist activities by the Somali terrorist group, Al-Shabaab, which has been involved in smuggling Khat[3] into Europe to finance its operations in Somalia. This is, therefore, an issue of concern to both customs agencies and to law enforcement agencies in EU states.

> **Example 4 – The Narco-Terrorism Connection**
>
> *It's well known that both the Taliban of Afghanistan and the FARC in Colombia finances their operations with proceeds from illicit drugs trade. It is less known that other terrorist groups are involved such as al Qaeda and Hezbollah and that these groups may bring the connection between illicit drugs and terrorism closer to Europe and North-America.*
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> Source: EURAD (2010)

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[3] A leaf which has stimulant properties

2.3.3 Weapons Trafficking

McLean et al (undated) indicate that the "The trafficking of illicit small arms and light weapons (SALW)" undermines both the internal and external security of the EU, further noting that there is a small steady market for weapons which are sold to criminal groups and which are smuggled into Europe by similar means and routes as discussed previously for people, drugs, etc.. In addition to this trade in SALW and conventional explosives, Europol (2011) indicates that organised crime groups transport weapons such as anti-tank rocket launchers and anti-aircraft equipment, together with heavy firearms (page 17). Specific areas where organised crime groups operate are highlighted in this report and centre around Albania, the former Yugoslavian states, and also in Italy.

Two examples of weapons trafficking are set out in Example 5. However, there is limited information available on volumes of different types of weapons being trafficked into or out of EU ports since it may be the case that only when a vessel is searched in port for a different reason weapons are discovered and, in many cases, the ship's captain and crew are unaware that they are transporting such weapons. As in the case of drug trafficking, the growth in container shipping increases the likelihood of both SALW and heavy weapons being transported between countries, and by both criminal and terrorist groups.

> Example 5 – Two cases of weapons trafficking in the early 2000s
>
> - April 2004 - Italian police searched a container, destined for the port of New York, onboard a Turkish ship. Found 8,000+ assault rifles, 11 submachine guns, and magazines worth over seven million dollars.
>
> - April 2004 - Turkish Customs found 500 undeclared Bulgarian AK47s inside a container taken off a vessel from Bulgaria. Authorities believed the weapons were meant for terrorist group.
>
> Source: Institute for the Analysis of Global Security (2005)

2.4 Piracy and armed robbery

The final area of concern identified by the European Commission (2006) is that of piracy and armed robbery at sea. While they note that piracy is not generally a problem in EU waters, it can be a problem for European shipping companies which operate in areas such as the Malacca Strait[4], and also off the coastlines of certain African countries around the Horn of Africa (for example Somalia).

2.5 People trafficking

People trafficking – or facilitated illegal immigration – is not included in the European Commission (2006) Background Paper. The UN (2000) defines human trafficking as "*the recruitment, transportation, transfer, harbouring or receipt of persons, by means of the threat or use of force or other forms of coercion, of abduction, of fraud, of deception, of the abuse of power or of a position of vulnerability or of the giving or receiving of payments or benefits to achieve the consent of a person having control over another person, for the purpose of exploitation. Exploitation shall include, at a minimum, the exploitation of the prostitution of others or other forms of sexual exploitation, forced labour or services, slavery or practices similar to slavery, servitude or the removal of organs*" (Article 3).

People trafficking differs from illegal immigration in that money is made by exploiting the individuals once they have been brought into the EU, rather than through the fees paid to the smuggler. Such fees tend to be high and the UNODC (2011) report indicates that women will enter a contract with a trafficker and work as prostitutes to pay off their debts (see Example 6), further noting that the trafficking of women from West Africa is one area where professional criminal networks are operating to smuggle women into the EU to work in the sex trade (page 17).

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[4] The Malacca Strait is a narrow stretch of water between the Malay Peninsula and the island of Sumatra in Indonesia. Around half the oil shipped in the world travels through this sea strait.

The issue of people trafficking is not, however, restricted to individuals entering the EU from western and northern Africa. It has also been an issue in the Baltic region and in the United Kingdom, with individuals from both outside and from within the EU being trafficked between countries, with Europol (2011) noting that the UK and Nordic countries are particularly targeted by criminal groups (page 12). That report identifies Chinese, Vietnamese, Indian and Pakistani groups as being some of the most capable of facilitating illegal immigration and exploiting those migrants for illicit labour (page 12) which UNODC (2010) identifies a being the exploitation of both men and women for forced labour, domestic servitude, forced begging, forced illegal practices, as well as for sexual exploitation (page 42).

> Example 6 - Criminal activities linked to irregular migration.
>
> *"Some Nigerian women trafficked to Spain are 'bought' by Nigerian madams based in that country, who will place a call to a trafficker based in Morocco who will then go to recruit them. A madam will pay between €2,000 and €3,000 per woman or girl"*
>
> Source: UNODC (2011), page 13

2.6   Summary

This section has examined a number of security issues relating to the EU's maritime regions and its sea borders. It has illustrated some of the key routes for drugs and illegal immigrants entering the EU by sea, and also highlights some of the potential threats facing EU seaports. The next section will examine measures taken by the EU individually, or in cooperation with other agencies or governments, and through legislation or by practical measures, to counteract these security issues.

3.   EU measures and cooperative activities relating to Maritime Security

As noted in Section 2, there are a range of security issues facing EU maritime areas and seaports. The European Commission DG Maritime Affairs and Fisheries (2010) (hereinafter DG MAF), in a report on a Common Information Sharing Environment (CISE) for maritime surveillance, identifies the main user communities involved in maritime surveillance – and therefore security – in a diagram which appears as Figure 1.

All of the bodies identified in Figure 1 (apart from fisheries control) will have some responsibility for combating criminal activities identified at Section 2 of this paper and/or providing security at sea or in EU seaports. For example customs agencies will have responsibility for monitoring compliance with relevant regulations on the import, export and movement of goods through ports, and to provide support for any law enforcement operations to combat narcotics, cigarettes and alcohol trafficking. Border control agencies will have a responsibility to monitor illegal immigration and people trafficking, and to provide support for operations by law enforcement agencies to deport illegal immigrants, or to arrest and prosecute people traffickers.

Figure 1 - Maritime surveillance at EU level in a nutshell: Seven user Communities
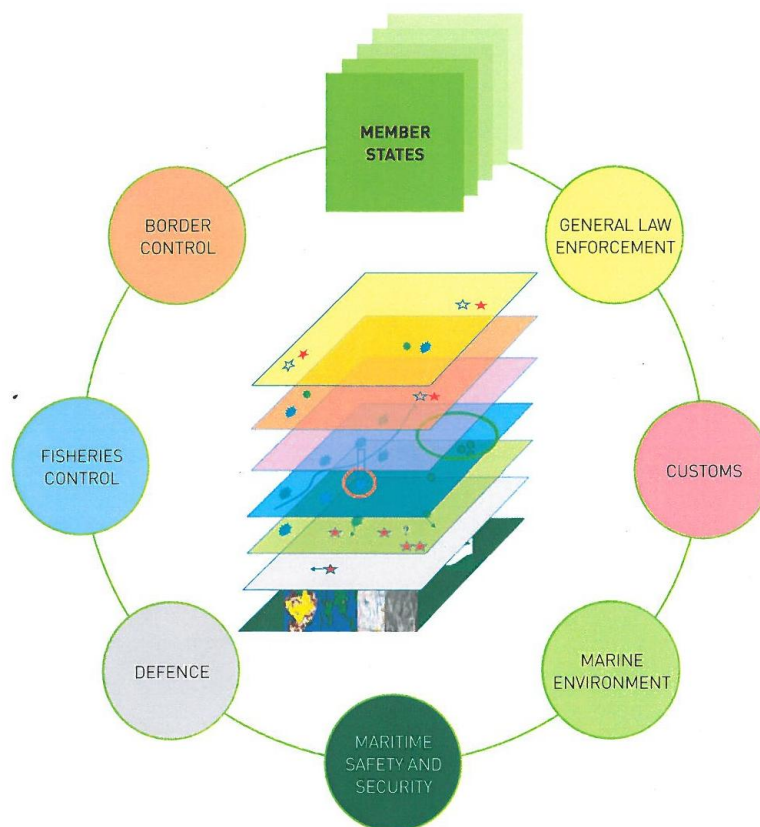
Source: European Commission DG MAF (2010)

3.1   Legislative and regulatory measures

A number of measures have been introduced by the EU in recent years to protect its maritime security. In addition, it has reached agreement to cooperate with agencies such as the IMO, the US Coast Guard Service and NATO[5]. Some examples of measures include:

- European Council Decisions relating to the UN Convention against Transnational Crime and in respect of the trafficking of women and children[6], with specific reference to the smuggling of migrants by sea
- Regulation (EC) No 725/2004 on enhancing ship and port facility security[7]. This regulation was aimed at "enhancing the security of ships used in international trade and domestic shipping and associated port facilities in the face of threats of intentional unlawful acts" together with the "harmonised interpretation and implementation ... [of maritime security]" under IMO conventions on safety of life at sea (SOLAS Convention) and International Ship and Port Facility Security Code (ISPS) Code – see Article 1;

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[5] See NATO Parliamentary Assembly Document 207 CDS 10 E bis – Maritime Security: NATO and EU Roles and Co-ordination for details of co-operative activities between the two parties. Available online at: http://www.nato-pa.int/default.asp?SHORTCUT=2087

[6] Council Decisions 2006/616/EC, 2006/617/EC of 24 July 2006 on the conclusion of the Protocol against the Smuggling of Migrants by Land, Air and Sea, supplementing the United Nations Convention against Transnational Organised Crime, and also Council Decisions 2006/618/EC and 2006/619 EC of 24 July 2006 on the conclusion, on behalf of the European Community, of the Protocol to Prevent, Suppress and Punish Trafficking in Persons, especially Women and Children, supplementing the United Nations Convention against Transnational Organised Crime.

[7] The ISPS Code, which came into force on 1 July 2004, aims to establish an international framework for ships and ports to cooperate against acts which threaten the maritime security. For further information on Regulation (EC) No 725/2004 see: http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32004R0725:EN:HTML

- Directive 2005/65/EC on enhancing port security[8] was introduced to complement Regulation (EC) No 725/2004 and makes an entire port subject to a security regime; and
- Proposal for a Regulation establishing the European Border Surveillance System (EUROSUR)[9]. EUROSUR has been put forward as a surveillance system that can be used to help manage the Schengen external border and strengthen information exchange and cooperation between MC Border Control agencies, making reference to the particular challenges of irregular migration through Spain, Malta, Italy and Greece, the loss of life at sea from small boats crossing from Africa to the Canary Islands and across the Mediterranean sea, and also to cross-border crime following the same routes.
- Establishment of European Borders Agency – FRONTEX – in 2004[10]. This Agency has been developed in order to improve the integrated management of the EU's external borders (Article 1.1) which includes it sea borders and seaports (Article 1.4).

In addition to the measures outlined briefly here, and many other measures, the EU has cooperated with the US against terrorism, holding a number of bilateral discussions since 9/11. In particular, Archick (2011) notes that the US and EU signed a customs co-operation accord in 2004 to extend the US Container Security Initiative (CSI) throughout the EU (page 14). The CSI is discussed at 3.2.2.

3.2   Practical measures

This section examines developments in maritime surveillance which can be used by the EU in a number of ways –as a method of monitoring marine environmental pollution, as a way of tracking vessels in distress and supporting coastguard rescue operations, and also as a way of tracking vessels suspected of illegal activities. It also examines the US container security initiative, introduced in the wake of 9/11, which has led to cooperation between a number of US and EU ports in tracking containers to ensure they pose no risk to the US.

3.2.1   Maritime Surveillance initiatives
The European Commission DG MAF (2010) set out an initiative to integrate maritime surveillance across states and sectors, where maritime surveillance is defined as *"the effective understanding of all activities carried out at sea that could impact on the security, safety, economy, or environment of the EU and its Member States"* (point 2 - What is Maritime Surveillance?). That report, at point 3, also identifies a number of challenges facing the EU in establishing an integrated maritime surveillance network, and these include:

- *Different actors:* at national and EU level, authorities responsible for a range of maritime activities including maritime safety and security, search and rescue, border control and others which collect information for their own purposes;
- *Different laws:* surveillance systems developed from sector specific legislation at national, EU or international levels; and
- *Different threats:* member states may face threats which are trans-national or trans-sectoral in nature.

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[8] For further information see: http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2005:310:0028:01:EN:HTML

[9] A proposal for a Regulation of the European Parliament and of the Council was put forward by the European Commission for consideration on 12 December 2011. Document COM(2011) 873 final. Available online at: http://ec.europa.eu/home-affairs/doc_centre/borders/docs/eurosur%20final.pdf

[10] Council Regulation (EC) No 2007/2004 of 26 October 2004 establishing a European Agency for the Management of Operational Cooperation at the External Borders of the Member States of the European Union – FRONTEX regulation. Pub: OJ L 349 of 25.11.2004. Available online at: http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2004:349:0001:0011:EN:PDF

As a result of these challenges, it was considered that a Common Information Sharing Environment (CISE) for maritime surveillance would improve information exchange between relevant maritime authorities for a number of functions which align with the seven user communities in Figure 1. The CISE would need to facilitate both interoperability between different systems and the exchange of information between the relevant agencies and authorities at all levels.

There are a number of systems in place for surveillance of vessels at sea. For example, in order to identify vessels intentionally dumping oily waste at sea (a criminal activity under international legislation[11]), surveillance by both aircraft and satellites is conducted under a number of regional agreements[12] and also by the EU under the CleanSeaNet[13] service.

In order to track vessels at sea and identify vessels to be inspected in seaports, three surveillance systems are in operation and these are summarised briefly below:
- *SafeSeaNet[14]*: automatically gathers information from vessels in order to track the position of all ships in EU waters and in ports; track vessels by name or by IMO number; identify the routes taken by ships while in EU waters; monitor specific vessel types; and provide information to a range of bodies including maritime and port authorities, search and rescue bodies, coastguards etc.
- *EU LRIT[15]*: a global system established under the IMO's SOLAS Convention (Safety of Life at Sea Convention, 1974) amendments of 2006, which is able to track EU-flagged vessels around the world, and also track vessels from third countries within 1,000 nautical miles of a participating country's coastline; tracks over 8,000 ships daily; established for maritime security but also used in search and rescue activities.
- *THETIS[16]*: a system integrated with SafeSeaNet which identifies vessels approaching EU ports and indicates those for which inspection by a port state control authority should be a priority[17].

However, CSES (2011) identifies a number of shortcomings relating to marine security which, in terms of satellite surveillance, include:
- lack of wide-area maritime surveillance, with only partial coverage in open seas;
- partial coordination and information between different coastal surveillance system;
- limited interoperability between sectoral stakeholders and systems; and
- surveillance systems mainly developed for maritime safety purposes, rather than security. (page 5)

In light of the identified shortcomings, the CISE system may have the effect of overcoming two over-arching challenges identified by CSES (2011), the need to ensure "effective coordination and integration of different national authorities involved in maritime (border) surveillance" at both national and EU levels, and the need to strengthen "cooperation with neighbouring third countries" (page 5).

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[11] International Convention for the Prevention of Pollution from Ships (MARPOL 73/78) to which all EU Member States are signatories. For further information see:
http://www.imo.org/About/Conventions/ListOfConventions/Pages/International-Convention-for-the-Prevention-of-Pollution-from-Ships-(MARPOL).aspx
[12] For example, 1983 Agreement for Cooperation in dealing with pollution of the North Sea by oil and other harmful substances (Bonn Agreement - http://www.bonnagreement.org/eng/html/welcome.html) and the 1992 Convention on the Protection of the Marine Environment of the Baltic Sea Area (Helsinki Convention - http://www.helcom.fi/stc/files/Convention/Conv1108.pdf).
[13] CleanSeaNet is a satellite-based oil spill and vessel detection system covering all EU maritime areas and is administered by the European Maritime Safety Agency. This system related to Directive 2005/35/EC on ship source pollution and on the introduction of penalties, including criminal penalties, for pollution offences. For further information see: http://www.emsa.europa.eu/operations/marine-pollution/cleanseanet/122-cleanseanet.html
[14] For more information see: http://www.emsa.europa.eu/safeseanet-in-action.html
[15] For more information see: http://www.emsa.europa.eu/operations/maritime-surveillance/lrit.html
[16] For more information see: http://www.emsa.europa.eu/operations/maritime-surveillance/thetis.html
[17] For more information on Port State Control inspections, see Carpenter (2011), Section 4, pp 77-85

3.2.2   EU Port and Maritime Container Security

The Delegation of the European Commission to the USA (2008) notes that, "in the current international environment, there exists the very real risk that terrorist organizations could exploit the mechanisms of international trade to transport dangerous goods or carry out large-scale attacks", going on to set out ongoing bilateral activities between the EU and US to "advance security goals while ensuring the continued free movement of legitimate trade" (paragraph 1). Those measures include the expansion of existing customs relations between the two countries, Archick (2011) noting that a customs cooperation accord was signed in April 2004 (page 14) which called for the extension of the US CSI initiative throughout the EU.

The CSI began in January 2002 and is a multi-national programme designed to protect containerized shipping from being exploited or disrupted by international terrorists. That accord called for the extension of the US CSI throughout the EU under which cargo containers loaded on ships in foreign ports are pre-screened against specific risk assessment criteria before they even leave port. This is to ensure that they do not contain dangerous substances or weapons of mass destruction.

By August 2006, 20 EU seaports were active under CSI, in 10 EU MS[18]. US Customs and Border Protection (2006) outline the four main elements of CSI as being:
*   identification of high risk containers (those that pose a potential risk for terrorism) using automated targeting tool;
*   early pre-screening of containers (generally at port of departure) before they are shipped;
*   use of technology such as large scale x-ray machines, gamma ray machines and radiation detection devices to screen containers
*   use of smart/secure containers which can be identified as being tampered with before arrival in port.

The Delegation of the EC (2008) notes that by 2012 all shipping containers destined for US ports must be scanned for nuclear weapons and radiation, although the same does not apply to containers leaving the US. It also notes that a similar 100% scanning approach is not advocated by the EU because of costs to ports and the fact that it is likely to lengthen shipping times. However, despite those issues, it is likely that some form of container scanning will occur in EU ports as a result of the mandatory scanning mentioned above, particularly if ports wish to trade with the US. Technological developments relating to smart/secure containers, and economies of scale in their production over time, may also result in a CSI-type system being used more widely in the future.

4.   Conclusions

As this paper illustrates, there are a number of security threats facing the EU marine areas and seaports. While piracy and armed robbery is a geographically distant problem, the issues of illegal immigration, people trafficking and drug smuggling are ones with a major impact across EU MS. Southern European seaports and coastlines face threats from both illegal immigration and people trafficking from West and North Africa while drugs from South America are taking similar entry routes via those same regions. While the levels are not necessarily as high, similar problems also exist in northern Europe.

Measures have been taken, both legislative and practical, to deal with maritime security threats facing the EU, and this paper offers a brief overview of some of those measures. This is, I would suggest, an area open to future research, and one where the EU is likely to face a continued security threat.

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[18] The 20 ports in 10 EU MS are: Antwerp and Zeebrugge in Belgium (which also includes Luxembourg); Le Havre and Marseille in France; Bremen/Bremerhaven and Hamburg in Germany; Piraeus in Greece; La Spezia, Genoa, Naples, Gioia Tauro and Livorno in Italy; Lisbon in Portugal; Algeciras in Spain; Gothenburg in Sweden; Rotterdam in The Netherlands; and Felixstowe, Liverpool, Thamesport, Tilbury and Southampton in the UK. See US Customs and Border Protection (2006), CSI Operational Ports map and table for Europe

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