Maritime security in the Mediterranean: Challenges and policy responses

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The 2011 Arab Spring has impacted Mediterranean security for the long-term. While work on this discussion paper started before the events in Tunisia, Egypt, Libya, Yemen and Syria the existing problems have only been exacerbated and brought to the light of international media attention.

The questionable leaders of these countries ensured a certain guarantee against illegal immigration, fundamentalist groups and terrorist cells through bilateral agreements with members of the EU. The revolutions in the Arab world are an opportunity for a new era in international relations in the Mediterranean, and its natural position is a key area of this new phase. New relationships with future leaders and governments of the region will have to be established, and must heed the wide variety of maritime security aspects highlighted in this paper.

This paper continues the work started by the SDA’s 2008 discussion paper, *The Questionmarks over Europe’s Maritime Security*. Experts on maritime security were invited to reassess the situation in light of the development of new technologies, the development of the EU’s Integrated Maritime Policy, and the new political scenario. This paper aims to outline achievements to date in Mediterranean maritime domain awareness, as well as to detail future action.

Stefano Manservisi, Director General for Home Affairs at the European Commission, presents the maritime security elements within the EU Internal Security Strategy. He also underlines the role of DG Home Affairs in facing threats resulting from the new situation in North Africa.

Lowri Evans, Director General for Maritime Affairs and Fisheries at the European Commission, analyses the importance of the introduction of an Integrated Maritime Policy and the need for synergies between member states’ public authorities.

Paolo Salieri, Principal Policy Officer for Security Research and Development at the European Commission’s Directorate General for Enterprise and Industry, highlights FP7 security research projects dedicated to maritime security aimed at improving member states’ capabilities in this domain.

Eustathios Mainas, Specialist in the Office of the Director, EUROPOL, brings to light the existing framework within European Agencies for coordination and cooperation and gives recommendations for its further use and development.

Vice Adm. Lutz Feldt, former Chief of Staff of the German Navy and Member of the "Wise Pens" group, focuses on the technical and structural status of naval capabilities in the Mediterranean. He looks at NATO and EU naval operations and identifies challenges to be addressed.

Leendert Bal, Head of the Operations Department at the European Maritime Safety Agency (EMSA), emphasises the importance of information-exchange between member states and partners to improve coverage, working practices and overall awareness of vessel activity in the Mediterranean.
Introduction

Capt. John Dalby, CEO, Marine Risk Management, points to the vulnerability of the Mediterranean to terrorist threats and attacks on its maritime infrastructure, and questions the over-reliance on military authorities by the commercial shipping community.

Brig. Gen. Ilkka Laitinen, Executive Director of FRONTEX, says that with so many internal and external actors, and with so many conflicting approaches in maritime security, clear, set and binding priorities are essential to operational efficiency in the Mediterranean.

Gen. Marc Duquesne, Deputy Director for Strategy at the French Ministry of Defence, describes the technical capabilities of European agencies and industry for gathering information and the need to couple it with the capability for action at sea.

Ana Maria Gomes, Member of the European Parliament, tackles the issue of the migration influx in Mediterranean countries, also in light of the current events in the Arab world and calls for the EU to redefine its migration policy to provide for long-term answers.

Vice Adm. Jean-Marie Van Huffel, Special Advisor to the Secretary General for the Sea, French Ministry of Defence, presents the origin, progress, purpose and contribution to maritime security in the Mediterranean of the BlueMassMed project.

Frederic Fave, Deputy Vice-President for Safety, Security and Environment at CMA-CGM, elaborates on the steps taken by private companies to secure their vessels against piracy and discusses the problems that stem from a pirate attack.
Gilles de Kerchove, EU Counter-terrorism Coordinator, sees weakened and destabilised security agencies in North Africa and the Middle East unable to respond to the terrorist threat in the Mediterranean.

Ian Anthony, Project Leader, Arms Control and Non-proliferation Programme at the Stockholm International Peace Research Institute (SIPRI), identifies the EU’s progress in detecting proliferation and points out that it has not yet reached its full capacity in this area.

Harm Koster, Executive Director of Community Fisheries Control Agency (CFCA), focuses on Mediterranean states’ efforts to secure the area of illegal, unregulated, unreported fishing.

I hope you will find these contributions stimulating and I am sure they will offer some food for thought on the ongoing discussion on integrated maritime security. The SDA will continue to analyse these issue and propose policy recommendations through debates and analyses.

Giles Merritt
Director
SECURITY & DEFENCE AGENDA
The maritime security elements in the EU’s internal security strategy

Stefano Manservisi presents the maritime security elements within the EU Internal Security Strategy. He also underlines the role of DG Home Affairs in facing threats resulting from the new situation in North Africa.

Since the end of last year, many countries in the southern Mediterranean have experienced radical changes. No one can deny the historic and unprecedented nature of these events and the fact that they provide a unique opportunity for millions of people to accede to democracy, rule of law, respect for human rights and better functioning institutions. The positive effects of these changes for the countries directly concerned and for the entire region will become apparent in the years to come.

In the short term, an indirect consequence of these events is the significant movement of peoples. So far, most of these movements have been from North African countries towards neighbouring countries, as is the case with more than 500,000 people who fled the violence in Libya to Tunisia and Egypt. However, significant flows have also reached some EU member states. More than 25,000 migrants, mainly from Tunisia and, to a lesser extent from other African countries, have managed to enter the Union irregularly, reaching the Italian island of Lampedusa and Malta.

Most of them, in particular the persons leaving Tunisia, are economic migrants, who migrate irregularly and should be returned to their countries of origin. There has been a considerable number of persons who appear to be in genuine need of protection (Somalis, Eritreans and Sudanese), and who have left Libya and reached EU member states' shore.

In the current situation, the issues concerning how to deal with the crisis and how to manage flows of irregular migrants, while offering protection to those in need, are under the spotlight. For the Union to be credible, it should offer effective and viable answers, in line with the principle of solidarity, both in the short and in the long term perspective.

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Moreover, the EU should, as requested by the European Council in March this year, enter into a dialogue on Migration Mobility and Security, and present to the neighbourhood countries a package of measures to translate this dialogue into concrete actions.

Being credible on how to prevent irregular migration is one of the answers to this crisis. In the area of border surveillance, since 2008 the Commission, in close consultation with member states and FRONTEX, has been working on the development of a European Border Surveillance System (EUROSUR) which would allow the EU to face the challenges to the security of its borders more effectively.

“EUROSUR will establish an information-sharing and cooperation mechanism enabling member states' authorities carrying out border surveillance activities and FRONTEX to increase their situational awareness and to improve their reaction capability.”

One of the objectives of the EU Internal Security Strategy, as proposed by the Commission in its Communication of 22 November 2010, is to strengthen security through border management. Under this objective, the Commission proposes to intensify the cooperation in the field of border surveillance in order to meet the three main challenges currently faced by member states in the Mediterranean sea and its Atlantic approaches (Canary Islands), namely irregular migration, the unacceptable loss of lives of migrants at sea and cross-border crime. In order to meet these challenges, at the end of 2011 the Commission will present a legislative proposal for the establishment of EUROSUR.

EUROSUR will establish an information-sharing and cooperation mechanism enabling member states' authorities carrying out border surveillance activities and FRONTEX to increase their situational awareness and to improve their reaction capability. This should be achieved, in particular, by improving:

1. Interagency cooperation within, as well as among member states and FRONTEX, by streamlining and interlinking existing systems and mechanisms for border surveillance;
2. Technical capabilities for detecting and tracking vessels used for irregular migration and cross-border crime;
3. Information exchange with other relevant actors in the maritime domain (e.g. navies, maritime authorities, customs, fishery control authorities etc.).

Industry plays an important role in developing, testing and implementing the technical parts of EUROSUR. For example, industry has supported the Commission by developing system architectures for the main components of EUROSUR, such as national coordination centres for border surveillance. Industry is currently cooperating with FRONTEX in setting up - on a pilot basis - a secured communication network between these centres and FRONTEX. Furthermore, industry is also carrying out a number of FP7 projects to develop technical capabilities for maritime border surveillance, such as PERSEUS, SEABILLA and I2C, which should hopefully improve the detection and tracking of small vessels.

The objective is to make EUROSUR, one of the key initiatives under the EU Internal Security Strategy, operational as of 2013, followed by the establishment of a common information sharing environment for the EU maritime domain as of 2015.
The Mediterranean basin, at the crossroads of three continents, has always been the focus of pan-European and worldwide attention. This focus was recently renewed in view of the democratic uprisings that brought dramatic changes to the European Southern Neighbourhood, creating a new hope and opportunity to build a more democratic future based on the rule of law. At the same time, those developments could only increase internal security considerations for the EU, particularly because of the expected increased migration flows during this transitional period, which mainly concern the six EU Mediterranean coastal states.

The EU reacted rapidly at the highest political level. The heads of state adopted in March 2011 two sets of priority objectives including humanitarian assistance, financial and technical support to the Mediterranean partner countries and a comprehensive approach to migration\(^1\). In parallel, the European Commission adopted on 8 March 2011 a joint communication from the Commission and the High Representative proposing a Partnership for Democracy and Shared Prosperity with the Southern Mediterranean\(^2\). Maritime security elements range from solidarity and assistance to the member states most affected by migration flows, capacity-building in the Mediterranean countries on borders/migration/asylum and more effective law enforcement cooperation to improve security throughout the Mediterranean. Last but not least, cooperation with Mediterranean partners is embedded in the EU’s strategic priorities, through the implementation of a Mediterranean Maritime Strategy that should enhance maritime safety, security and surveillance.

“...we need to be more effective by coherently developing our internal and external maritime security action, building on civilian and military cooperation and shared resources to ensure cost efficiency...”

Turning those institutional enablers into concrete action is the next challenge for all institutions, including the newly established European External Action Service. However, the EU mandate is clearer now; we need to be more effective by coherently developing our internal and external maritime security action, building on civilian and military cooperation and shared resources to ensure cost efficiency.

The starting point for public authorities active in the particular security domain (mainly border control, law enforcement, customs, transport) is Maritime Situational (or Domain) Awareness. In everyday language this means being aware of
what is happening in the seas and oceans that surround our continent, in the case of the Mediterranean from Gibraltar and its Atlantic approaches to the Suez Canal, with a natural extension to the Black Sea. This is indeed a prerequisite for swift reactions to security threats, efficient responses to safety and pollution incidents, the protection of the economic interests of our member states and the realisation of a single market for maritime activities.

“A Common Information Sharing Environment (CISE) for all EU sea basins including the navies...[it] will interconnect different national authorities with a mission at sea on a "responsibility to share data" logic, across sectors and borders.”

The gradual development by the Commission of an Integrated Maritime Policy (IMP) for the EU which aims to ensure coherence and synergies from the different policies affecting the seas has started to produce tangible results. The integration of maritime surveillance, one of the cross-cutting policy tools of the IMP, was inscribed in President’s Barroso political guidelines for the new Commission and has been met with strong support from member states. On this basis, EU operational authorities will be able to exploit all available data from every possible source to create Situational Awareness, to distinguish for example at an early stage between an actual security threat or an illegal activity from a merely reckless shipmaster who forgot to report his position, course or destination.

A Common Information Sharing Environment (CISE) for all EU sea basins including the navies is the vision. This cross-sectoral surveillance tool will interconnect different national authorities with a mission at sea on a "responsibility to share data" logic, across sectors and borders. It will thus enable coordinated actions through increased data flows. The first tangible result will be better tactical patrolling and increased response capability in case of maritime incidents (be it law enforcement of border control, search and rescue, response to natural disaster, tracking ille-
gal fishing or polluters of the marine environment etc). At a second level, better knowledge of the processes and interactions in the EU and the Mediterranean maritime domain has a strong potential to contribute to improved governance and thus create a favourable environment for maritime economic activities to flourish.

The cost savings from the CISE will be important and will be realised across sectors and borders through:

- avoiding multiplied data-gathering by different maritime authorities (once a particular data is shared in the CISE it does not have to be gathered twice);
- more effective situational analysis (CISE should allow better and faster decision-making about particular situations at sea);
- immediate understanding that no further investigation is necessary (saves time and resources);
- better coordination of follow-up operations at sea (if various actors are made aware through CISE that they are enquiring in the same area or about the same incident);
- avoiding multiple parallel uses of patrolling assets (e.g. parallel patrolling of planes or boats for similar purpose or similar areas);
- sharing of information on patrolling results through CISE.

The logic of the CISE is gradually being embedded in EU maritime policies. Seven User Communities have already been identified to exchange surveillance data (maritime safety and security, law enforcement, border control, marine environment, fisheries control, customs, and defence).

In the security domain, full coherence is ensured with the development of the European Border Surveillance System (EUROSUR) which naturally has a specific focus in the Mediterranean and also targets cross-border crime. Member states are already working together in the frame of CISE-driven⁵ or EUROSUR pilot projects in the Mediterranean. Further operational initiatives to explore synergies on risk analysis and surveillance data concerning different types of threat in the Mediterranean will be launched in the course of this year with the involvement of all relevant actors⁶. Situational awareness may pave the way for new forms of cooperation in the Mediterranean which may take the form of a regional network for coastguards. A Mediterranean Maritime Strategy for safety, security and surveillance needs to put all those elements together.

Maritime security in the Mediterranean concerns over 500 million people, 150 million of whom live on the coast, and is a key factor for economic development, environmental protection, sustainability of natural resources and quality of life. The choice of the EU is to go for it.
FP7 initiatives in the maritime domain

Paolo Salieri highlights FP7 security research projects dedicated to maritime security aimed at improving member states’ capabilities in this domain.

The European Union implements its research policy via a multi-annual framework programme (presently the seventh (FP7)).

FP7 gives priority to areas where European funding and transnational cooperation in projects (amongst undertakings, research centres and universities) is of particular importance and provides added-value at the European level. The objective is to strengthen the scientific and technological bases of industry, thereby ensuring a high level of competitiveness at international level, and to promote "all the research activities deemed necessary by virtue of other Chapters of the Treaties" (i.e. in support of the implementation of policies).

A secure Europe is the basis for planning our lives, for economic investments, for prosperity and freedom. For this reason, for the first time in FP7, Security Research is identified as a specific theme, whose overall aim is to develop the technologies and knowledge for building the capabilities needed to ensure the security of citizens from threats such as terrorism, natural disasters, and crime, while respecting fundamental human rights including privacy.

The Security Research theme has an exclusively civilian application focus in support of the implementation of Community policies and initiatives relevant to security, such as the establishment of an EU-wide area of freedom, security and justice (with the guidance provided by the “Stockholm Programme”), transport, health, civil protection, energy, environment and external policies.

The theme is being implemented so as to ensure optimal and concerted use of available technologies. The cooperation of providers and users for civil security solutions is particularly stimulated. The aim is threefold: (i) to deliver mission-oriented research results, (ii) to reduce security gaps, and (iii) to improve the competitiveness of industry, by promoting growth and employment in general, in line with the Europe 2020 strategy and the Innovation Union flagship initiative.

"A number of challenges are to be faced, including the need to improve the capability of authorities to detect, identify, track and intercept vessels, including small/fast boats, as used for irregular migration and cross-border crime."

Indeed, existing security-related research activities in Europe suffer from fragmentation of efforts, lack of critical mass of scale and scope, and lack of connections and interoperability. Europe needs to improve the coherence of its efforts by developing efficient institutional arrangements and by instigating cooperation and coordination among the various national and international actors in order to avoid duplication and to explore synergies, wherever possible.

Security research in FP7 emphasises European capabilities regarding surveillance, distribution of information and knowledge of threats and incidents, as well as systems for better assessments and situation control through better use of common ICT-systems in the fields of different operations.

The FP7 Security Research theme identifies four mission areas for activities:
1. security of citizens;
2. security of infrastructures and utilities;
3. intelligent surveillance and border security;
4. restoring security and safety in case of crisis,

with the support of activities of a more cross-cutting nature (i.e. security systems integration, interconnectivity and interoperability, security and society, and security research coordination and structuring).

These mission areas correspond to a large extent to the priorities identified by the Commission in its communication of 22 November 2010 on the "Internal security strategy in Action" (and formerly by the Stockholm and Hague action plans).

Security research FP7 initiatives in the maritime domain correspond essentially to mission 3 (and to a lesser extent, mission 2).

Indeed, today maritime borders are monitored by each member state, and discrepancies exist between surveillance strategies, tools, techniques and regulations at member state level, hindering the establishment of a coherent European strategy. A number of challenges are to be faced, including the need to improve the capability of authorities to detect, identify, track and intercept vessels, including small/fast boats, as used for irregular migration and cross-border crime.

A number of FP7 security research projects being implemented do relate to wide area maritime border surveillance (Mediterranean sea), such as AMASS, GLOBE, OPERAMAR, WIMAAS, OPARUS, SEABILLA, and I2C. A major demonstration project on maritime border surveillance (PERSEUS) (with 29 partners, including the coastguards of several member states), will validate its target vision through two real-life demonstration campaigns in the western and eastern Mediterranean (for implementation in 2013 and 2014, respectively).

Demonstration programmes represent a novelty for the EU Research and Technology Development (RTD) framework programmes. They are aimed at large-scale integration, validation and demonstration of novel security systems of systems, providing a federative frame to coalesce research in areas of significant European interest.

PERSEUS is expected to deliver tested, demonstrated and validated recommendations. Five specific exercises will implement missions, defined, in cooperation with the EU border agency Frontex, under the context of preventing irregular migration and drug trafficking.

The abovementioned FP7 projects are examples of how EU research and development activities are set in the EU political context. Since the European Commission presented its roadmap for the development of the European Border Surveillance System ('EUROSUR') in 2008, progress towards its establishment has been significant, both at political and technical level.
**Towards an effective Integrated Maritime Policy: New roles and priorities**

**Maritime surveillance and policing - integrated and coordinated?**

_Eustathios Mainas_ brings to light the existing framework within European Agencies for coordination and cooperation and gives recommendations for its further use and development.

_Eustathios Mainas_ has been a Senior Analyst at Europol since 2003. Mainas retired from the Hellenic Coast Guard with the rank of Lieutenant Commander in 2007.

The developing situation in North Africa carries significant security considerations for the EU in the Mediterranean area. For obvious reasons the humanitarian crisis and military conflict dominate the headlines but attendant issues regarding threats from organised crime and terrorism are also important.

Responding to a call for assistance from the Italian authorities, Europol and Frontex deployed teams to the south of Italy to give operational and analytical support to efforts dealing with the influx of migrants. While Frontex assisted on the ground with manpower and equipment, Europol assessed intelligence derived from debriefing those arriving from North Africa with a view to identifying suspected organised crime and terrorist elements seeking to take advantage of this situation. This demonstrates the availability in the EU of a coordinated and structured response capability to critical situations in and around its territory.

Meanwhile the threats are becoming more substantial and diverse. In the Organised Crime Threat Assessment (OCTA) published by Europol in April 2011, several findings are directly relevant to the Mediterranean security space. While traditional trafficking routes across the Mediterranean for persons, drugs and other illicit goods remain, new routes and destinations have been identified.

The Black Sea, and its improving transport infrastructure connecting maritime traffic to the eastern EU, is developing as a criminal as well as a commercial hub. With increasing drug consumption in the Western Balkans this area is changing from a transit area for criminality to a market in its own right.

Commodity counterfeiting is no longer the preserve of small highly skilled craftsmen copying high value goods, but is now a global trade in counterfeit toys, medicines, deodorant, toothpaste, condoms, washing products, electrical items, foodstuffs, beverages and other commodities. The health hazard posed to EU citizens is clear. The economic threat to legitimate business is equally clear. Produced in industrial quantities, these illicit goods are shipped in containers and enter the EU through major sea ports and container terminals, many of which are in the Mediterranean area.

_“While traditional trafficking routes across the Mediterranean for persons, drugs and other illicit goods remain, new routes and destinations have been identified.”_  

In response to large-scale cocaine trafficking by sea and air, the maritime centres of MAOC-N⁹ and CECLAD-M¹⁴ were set up to facilitate interdiction operations in the western Mediterranean and the eastern Atlantic Ocean. They have been successful with several high profile operations and seizures carried out. The effective coordination of intelligence and operational capabilities are the hallmarks of the centres’ success.

But these centres focus on very specific types of criminality, cocaine trafficking across the Atlantic and trafficking from North Africa to southern Europe. Meanwhile, there is no similar centre in the eastern Mediterranean. Europol’s OCTA
Maritime security in the Mediterranean: Challenges and policy responses

shows that the criminal landscape is changing, prompting the need for new response measures and capabilities.

To be successful, a network-centric approach should be adopted in which the EU maritime security apparatus should be linked and intelligence-led. Appropriate integration and coordination of maritime surveillance, intelligence and policing in the Mediterranean would require an information management system designed in such a way that “centralisation and decentralisation occur simultaneously”¹⁵. This is where Europol, working closely together with its partners as a network, can make a real difference¹⁶.

“Appropriate integration and coordination of maritime surveillance, intelligence and policing in the Mediterranean would require an information management system designed in such a way that centralisation and decentralisation occur simultaneously.”

As Europe’s criminal information hub, Europol has unique analytical capabilities to support major investigations by transforming large amounts of maritime target-related data into actionable and timely intelligence for its partners in the EU. Europol is well equipped to conduct sophisticated all-source analysis. For instance, data and information obtained from commercial and free-access maritime databases, risk analysis systems, earth observation (e.g. SAT-AIS), aerial and maritime surveillance can easily be analysed by Europol to derive meaning and assist in determining enforcement and intelligence priorities.

In conclusion, a comprehensive European policy on maritime security should address, among others, the need for integrated and coordinated maritime intelligence collection, analysis and dissemination. At present, the knowledge on maritime threats in the Mediterranean sea and beyond remains fragmented with a danger of overshadowing improvements in other key areas and limiting the effectiveness of EU policy on maritime security. So, the development of a maritime intelligence capability at the European level is imperative. Europol recommends:

- creating a European intelligence strategy for maritime security in the framework of the Common Information Sharing Environment (CISE) featuring integrated and coordinated surveillance, intelligence and policing focusing primarily on the Mediterranean but also on the Black Sea, North Sea, Baltic Sea and the Atlantic and Indian Oceans;
- making full use of Europol’s unique analytical capabilities by sharing maritime intelligence on criminal and terrorist threats to fill knowledge gaps and launch major operational projects;
- promoting trust, meaningful collaboration and a shared security culture amongst all members of the European security and military network (i.e. EU agencies, MAOC-N, CE-CLAD-M, navies, coastguards, customs, police and border guard agencies);
- Involving other international partners in the European maritime intelligence network that play important roles in global security.
Securing the Mediterranean - Technological and structural reform of European navies

**Vice Adm. Lutz Feldt** focuses on the technical and structural status of naval capabilities in the Mediterranean. He looks at NATO and EU naval operations and identifies challenges to be addressed.

It is of great importance to clarify from the start that naval capabilities in the Mediterranean, their technical and structural status are significant and promising.

Existing naval networks are well developed and have proven their value through many naval exercises and real-world crisis management operations.

One example is the NATO-led operation “Active Endeavour” which was activated after the 9/11 terrorist attacks in the United States. This operation has achieved a high degree of visibility at sea and is a strong contributor to “good governance” in the Mediterranean sea and the Straits of Gibraltar.

This ongoing operation started in October 2001 with the Standing Naval Force Mediterranean, which was exercising in the western Mediterranean. The principle of having “standing” naval forces proved to be right and enabled quick and appropriate action.

Another naval force, the European Maritime Force (EUROMARFOR), in a different status, not “standing” but “on call”, contributed to operation “Active Endeavour” in two ways: in a separate operation, coordinated with NATO, and as part of the NATO operation. EUROMARFOR is the European naval answer to the growing importance of security and defence in the Mediterranean. Another ongoing naval operation is the UN-led operation United Nations Interim Force in Lebanon (UNIFIL), the weapons embargo operation. Naval vessels from different navies, including from South America are operating in the Mediterranean. The naval operation for “good governance” at sea was from the very beginning one of the main tasks of both naval forces - NATO and EU. In these operations, the military task was connected to political and diplomatic goals and non NATO/EU nations, like the Russian Federation, assigned temporary assets to the operation.

From a technological point of view there are at least 3 areas in which improvements are vital:

a. communication needs the whole spectrum of available options: military and civil connectivity/interoperability and the necessary bandwidth to exchange all kinds of information;

b. naval platforms - ships, submarines and naval aviation - must be able to fight an asymmetric threat at sea, so both a “high-low-mix” and “numbers” are required;

c. all naval assets must spend more time at sea and improve their technological and logistical endurance. The number of escorts are dwindling, from 800 in the 1950s to less than 250 now, among all Western countries combined, especially in the Mediterranean states.

From a structural point of view, the existing command and control structure and the existence of “standing” and “on call” forces are a backbone for successful naval operations. The ability to coordinate and integrate non NATO/EU naval forces must be improved and this can and will be achieved through exercises and the further devel-
opment of naval meetings like the annual meeting of the Maritime Commanders of the Mediterranean, as well as commanders participating in naval operations in the Mediterranean or the biannual Sea Power Symposium by invitation of the Italian Navy. An annual meeting of the Mediterranean coastguards is equally a very important step to built trust and confidence.

“The backbone of all projects is Maritime Domain Awareness (MDA) and how to achieve and improve it. Maritime surveillance is the foundation for safety, security and defence.”

Structural and technological problems are thus not the most crucial areas for change. They are important, and a common European approach for better technical standards and interoperability is necessary. The European Union has, with the Lisbon Treaty and the European Defence Agency, the framework and the capability to achieve progress and more efficient use of limited resources.

In recent years the European Union has recognised the importance of safety, security and defence at sea. Several regional projects to improve the situations have been launched, including the EU pilot project for Mediterranean Maritime Surveillance. The backbone of all projects is Maritime Domain Awareness (MDA) and how to achieve and improve it. Maritime surveillance is the foundation for safety, security and defence. It can be used as a facilitator for MDA and the Common Information Sharing Environment, developed by the EU Commission, is an excellent example of how to achieve MDA.

The Mediterranean for the years to come will be a focal region and its bridging function between East and West as well as South and North will remain crucial. Maritime security in this region can and will be achieved through coordination, cooperation and integration of naval forces and all other maritime services. Northern European force contributions have been essential to offset the insufficient numbers of resident assets in the Mediterranean, both from NATO and the EU. A strong political will is needed to achieve security through a comprehensive approach. But this approach, executed step by step, is the best way to maintain and improve maritime security.
The Mediterranean sea has long been a trading crossroads of the world. It is the meeting point of three continents: Africa, Asia and Europe. And since the opening of the Suez Canal in 1869, it has also been the major transit corridor that links the Indian and Atlantic oceans.

With goods being shipped from the orient to the north and vice-versa, and with the globalisation of trade, maritime traffic in the Mediterranean has significantly increased. Vessels carrying products to their markets are getting bigger, and are carrying more. Furthermore, energy routes are diversifying. Europe has increased its demand for natural gas and petroleum from the Middle East. New pipelines are linking oil and gas fields to ports in the eastern Mediterranean, Turkey and the Black Sea.

So the picture for the Mediterranean is an increasingly crowded one. There is upwards pressure from all sides, and resources and space are becoming increasingly scarce. Never before has there been such a need for effective vessel monitoring capabilities.

The key driver behind the latest tools for monitoring shipping is accident prevention and response.

Monitoring systems help to avoid collisions and, in the worst cases, to respond to incidents at sea such as accidents, fires, engine failures and oil spills. Vessel traffic monitoring is also important to ensure the safe and timely transit of ships, so as to avoid congestion in port and other choke points. For example, vessel traffic monitoring is useful in ensuring that traffic separation schemes along the busiest shipping lanes are respected.

“The key driver behind the latest tools for monitoring shipping is accident prevention and response. Monitoring systems help to avoid collisions […] to respond to incidents at sea such as accidents, fires, engine failures and oil spills.”

There are further uses for vessel traffic information. The European Union must tackle issues such as border control, illegal immigration, drug smuggling and people trafficking. European member states also benefit from being able to detect illicit pollution by ships, and to analyse the risk posed by vessels entering their territorial waters (hazardous cargoes, arms shipments). Fisheries also need to be monitored: increased surveillance ensures that agreed rules are respected, and that a ‘level playing field’ exists for any vessel landing catches at an EU port.

The Mediterranean area comprises many countries. So it is vital to take a supra-national, multi-
actor approach to vessel traffic monitoring. Brokered by the European institutions, legislation has been enacted to provide the tools and systems needed to monitor vessel traffic. These tools combine the efforts of the national transport administrations and coastguards of the EU’s Mediterranean members.

This is where the European Maritime Safety Agency (EMSA) steps in: tools are developed by EMSA, and are operated on behalf of the EU member states. These are SafeSeaNet (SSN), an AIS-based (Automatic Identification Signal) EU vessel traffic monitoring system based on national infrastructure of member states, which uses local shore stations to ‘listen’ for ship-broadcasted AIS radio messages; Long Range Identification and Tracking (LRIT), a satellite global long-range identification and tracking system; and CleanSeaNet (CSN), an illicit pollution-detection system using synthetic aperture radar (SAR) by satellite. All are used for transport (vessel traffic services and port activities); search and rescue; incident response and environmental monitoring. The geographical reach of the systems is global for LRIT, European and to neighbouring countries for CleanSeaNet, and EU coastal, for SafeSeaNet.

“Detecting and identifying small vessels remains a challenge.”

The range of SafeSeaNet is expected to be extended by introducing satellite-based reception of AIS signals: by listening for radio signals from space, the earth will, quite literally, be the limit for vessel tracking. The types of vessels concerned are the larger commercial vessels that come under the International convention for Safety of Life at Sea (SOLAS).

By aggregating data from numerous sources, these systems provide a shared and wider picture. The advantage is clear: a more extensive view enhances the restricted maritime transport information at the national level. EMSA is also engaged in a number of pilot projects with partners from different sectors – such as fisheries, customs, border control, and law enforcement – who have also recognised the benefits of these systems to support them in carrying out their tasks.

With vessel information now being provided by multiple sources, stretching from east to west, the basin is well covered. Moreover, the EU has also been working with neighbouring countries through a number of programmes to further improve coverage, working practices and overall awareness of vessel activity: an on-going activity improving the maritime picture. However, detecting and identifying small vessels remains a challenge.

Perhaps the best illustrations of how these systems can help people in practice are the recent events in North Africa. These have clearly created a situation where fast, reliable information on maritime traffic has proved helpful for EU customs officers, law enforcement, border control, and security authorities. It has also been proven straightforward to track those commercial vessels involved in mass evacuations off Libya. In the midst of unrest, tankers have been still able to make calls at ports, where possible. Naval forces and coastguards have been able to interact with commercial shipping, to ensure no one was caught in the crossfire. The whereabouts of commercial shipping in the Mediterranean can be known without too much effort, being a well-established part of the maritime picture.
Critical infrastructure security in the Mediterranean

Capt. John Dalby points to the vulnerability of the Mediterranean to terrorist threats and attacks on its maritime infrastructure, and questions the over-reliance on military authorities by the commercial shipping community.

The Mediterranean sea does not present a realistic threat in terms of modern-day piracy as we now know it. Unlike the Indian Ocean, it is both enclosed and very well policed, surveilled and trafficked. The entire area is also within easy and rapid reach of sophisticated military and naval resources.

However, more clandestine, and arguably more damaging, operations are perfectly feasible. It is no secret that obvious targets include port facilities, berthed vessels, outlying transport structures and logistical hubs.

Having dismissed piracy as a credible threat, it remains to identify other sources of risk to the Mediterranean maritime community.

The ever-present dangers posed by terrorist organisations are paramount, especially given the proximity of sympathetic states and, thus, staging posts and possible forward command and control centres being made available (in addition to training cells). That, coupled with the numerous opportunities for covert activities along little-used coastlines and off-lying islands, suggests that awareness and defensive measures should be rigorously encouraged and pursued by all involved in shipping – and not simply left to military
and naval authorities, as is too often the case even today.

There are three further activities that merit inclusion here, although superficially not allied to the terrorist threat and possible attacks on shipping.

The first is that one of illegal arms shipments (often, paradoxically, carried on merchant vessels – innocently or otherwise). Not all such shipments are on behalf of non-terrorist criminal organisations as is popularly thought, but are logistical relocations of this equipment to facilitate an attack.

“it must be remembered that Europe is a predominantly open continent with few or no serious border controls”

The remaining two may largely be considered as “fundraisers” for terrorism. Although historically the remit of organised crime, drug dealing and smuggling are becoming increasingly attractive (and relatively low-risk) means of raising large amounts of untraceable cash to fill terrorist coffers, whilst human trafficking not only provides another revenue source but also exposes the flaws in border controls which may (and probably do) facilitate the insertion of terrorist cells or individuals into a target country. And, in this particular respect, it must be remembered that Europe is a predominantly open continent with few or no serious border controls.

“There is a marked reluctance on the part of ship-owners, port authorities...to assume some responsibility for their own protection, safety and security.”

Having briefly demonstrated the vulnerability of the Mediterranean sea and its littoral state to attacks on its maritime infrastructure, it remains to discuss how that exposure may be reduced or eliminated.

Naval and military authorities in the more stable countries in the region are operating at heightened awareness and are employing more and more sophisticated defences against security incidents. There is a myriad of options for these procedures ranging from aerial surveillance, underwater countermeasures, acoustic and sonar arrays, increasingly sensitive and threat-specific radar technology and the good old surface patrols and divers. The list goes on, with new products launched on a weekly basis.

There is a major drawback in all this. And that is the over-reliance being placed on the military authorities by the commercial shipping community. There is a marked reluctance on the part of ship-owners, port authorities (even those that are state-owned) and others associated with the carriage of goods by sea (and remember we’re talking about 20% of the world’s trade passing through these waters) to assume some responsibility for their own protection, safety and security. After all, they are on the front line in the event of an incident. Admittedly, their valid argument that such measures are expensive, carries weight. The counter argument is that costs will only decrease when the equipment is more universally utilised (implying approval by the relevant bodies and authorities and, by extension, proven to be effective). Whether or not state subsidies should be made available to responsible owners is for another day and time.

This brief article is not intended to present a thorough treatment of the maritime security challenges facing those responsible and/or trading in and through the Mediterranean sea. It is, however, hoped that it will provide food for thought for those so engaged, and encourage a more active (and pro-active), aware and responsible approach towards the many risks posed in today’s environment.
Global solutions to enforce maritime security

STRENGTH at sea

DCNS is a world leader in naval defence and an innovative player in energy.

Thanks to its experience in naval construction and systems integration, DCNS is able to provide global solutions to enforce maritime security. Through the development of 24-hour long-range detection systems, the processing and synthesis of relevant data and the deployment of appropriate means of intervention, including unmanned vehicles, potential threats at sea can be rapidly identified and handled. In today's demanding international environment, maritime situation awareness and adapted reaction capabilities are indeed vital to make the oceans safer.
New challenges for the Mediterranean as an EU border - how to better coordinate European efforts?

Brig. Gen. Ilkka Laitinen says that with so many internal and external actors, and with so many conflicting approaches in maritime security, clear, set and binding priorities are essential to operational efficiency in the Mediterranean.

Within the scope of EU external borders, the Mediterranean maritime border could not be more topical. At the time of writing, the region immediately to the south of that border was in a state of highly dynamic turmoil. Popular revolutions in Tunisia and Egypt, along with a major armed rebellion in Libya and general unrest throughout the North African region all raised the profile of border security in the public domain.

The traditional priorities of migration management and border control have shifted continuously since Frontex was founded. Our first maritime operation, Hera, is notable not so much for controlling irregular migration as for saving lives at sea. Since the effective closure of the “West African” route and its perilous high-sea voyage to the Canary Islands, Frontex has been recognised as a world-leading search-and-rescue organisation. Other notable changes include the movement of dominant migration routes, first progressively east and then from sea to land, focussing on the Greek-Turkish land border in the Evros river region. Here, the operating environment — physical, legal and political — continued to determine the Agency's form, function and identity. In tandem with these changes in the operational sphere, we have also witnessed major changes in our legal basis and political atmosphere. These elements combine to form the backbone of Frontex's operational life and mould our responses. They also define our scope and effectiveness. To combine those factors in order to maximise our role as operational coordinator at the external borders is the ongoing challenge Frontex was set up to meet. Since then of course, the Lisbon Treaty has further defined and broadened our role. The balance of freedom and security at the borders is now a paramount principle. To marry the twin concerns of free movement with the need to protect citizens from security and terrorist threats as well as to tackle cross-border crime is now at the heart of the Agency’s agenda.”

To marry these considerations, to balance the need for accurate intelligence and effective planning with the needs of member states, EU legislators, law enforcement agencies, international organisations, human rights groups, and of course the migrants themselves, is a colossal undertaking. At face value it is insurmountable. At a practical level the challenge can be summed up in one...
word — priorities. With so many internal and external actors, and with so many conflicting approaches, clear priorities are essential to operational effectiveness. Furthermore, agreed, set and binding priorities are needed to gain the maximum benefit from available resources. Europe’s resources are more than ample. In terms of surveillance capacity alone, Frontex’s 2006 BORTEC study revealed that coverage ran at 180% of requirements. Yet there are surveillance gaps. Why? Priorities differ and approaches vary. It was for this reason that Frontex was instrumental in establishing the European PatROLS Network (EPN), an initiative that aimed not to increase capacity per se but to harmonise efforts in the Mediterranean so that they were synchronised to form a whole that is greater than the sum of its parts. The benefits of this extend beyond operational efficiency to greater cost effectiveness for the taxpayer.

To achieve the same results by applying a similar philosophy to all operations would be a huge step forward. Perhaps the most concise way of sharing this vision is through a hypothetical best-case scenario.

Ideally, there would be agreed and unambiguous European policies governing migration, asylum, security, foreign policy and maritime issues from search-and-rescue to fisheries. Such a framework would provide a solid foundation for a multi-layered structure of operational cooperation. Within this, there would be absolute trust between member states, to the point where each absolutely trusts all others to do their utmost at all times — there would be no accusations of complacency or “passing the buck.” Support from the EU, in terms not only of finance but of political will, would be fair and sufficient. This would in turn create a scenario in which systematic and beneficial information exchange could take place, leading to “smart” use of assets to eliminate overlaps and gaps. It would also enhance cohesion between the various, and often competing, agencies at work. This information-gathering framework would extend to third countries, without whose partnership the results we achieve can only ever be partial. Finally, this reciprocity with third countries would provide ample incentives to ensure that respect for human rights are enshrined at the heart of all resulting credible processes from first- and second-line border control, through migration and asylum policy and judicial systems to effective returns.

The list of requirements for optimal coordination may seem intimidating, but some important steps have already been taken. The revised Frontex mandate, if approved, will give the Agency more power to be effective. The establishment of the European Asylum Support Office is an important move towards the common migration policy Europe needs to manage the movement of people. But these are only beginnings. Until or unless all the pieces of the puzzle are addressed, the EU’s border-management players will find themselves forever running to stand still.
Maritime and border surveillance - the role of new technologies in protecting EU borders

**Gen. Marc Duquesne**, describes the technical capabilities of European agencies and industry for gathering information and the need to couple it with the capability for action at sea.

The events on the southern banks of the Mediterranean have shed a harsh light on problems of clandestine immigration to Europe. While in 2010 10,000 illegal border crossings at sea were reported, i.e. barely 11% of illegal entries into the EU, almost 22,000 arrivals already were numbered on the island of Lampedusa in the first three months of 2011. This data would be incomplete without mention of some 500 candidates to exile who, en route to the north, lose their life each year at sea. These realities have pushed Europeans to better coordinate their efforts in fighting clandestine immigration, amongst other through the EU’s Frontex agency, which today conducts several joint operations on Europe’s coasts.

The fight against clandestine immigration by sea is a key maritime security priority for Europeans. It justifies increased cooperation in surveillance along the 70,000 km of coastline. Furthermore, saving human lives at sea, preventing and fighting pollution, protecting fishing resources and marine sites, fighting against drug trafficking and ensuring the safety of maritime traffic which today accounts for more than 90% of EU foreign exchanges, are objectives which cannot be achieved without efficient maritime surveillance. We are thus confronted with a requirement which concerns all member states and, within those bordering the Mediterranean, a large number of civilian or defence administrations dealing with maritime activities.

This fundamentally horizontal aspect of maritime surveillance is well understood by the European Commission’s Directorate General for Maritime Affairs and Fisheries in its work to establish a common environment for information-sharing. With the Council’s agreement, its objective is to reach a shared image among member states of ships at sea around the EU. The principle is to use existing systems within member states that already have an image of maritime activity in their vicinity, and to link these systems among themselves. On the basis of this common situation appraisal, states will be better able to coordinate the use of their capabilities at sea, be they civilian administrations or navies, often the only ones able to durably intervene in the high seas in any weather.

Before information can be shared however, it must be collected. The area to be monitored is 4 times the surface of all 27 member states and is marked by intense traffic, for example in the Straights of Gibraltar or those of the Pas-de-Calais, used daily by more than 300 oil-tankers, methane-tankers, container ships, ferries, etc.

For such narrow areas, land-based means are adapted. AIS (Automatic Identification System) signal reception stations can collect information...
transmitted by ships above 300 tonnes according to regulations. This information is useful but insufficient. It is commonly accepted that data transmitted this way is either incomplete or incorrect in 70% of cases. Numerous ships do not emit such signals, either because their weight is below 300 tonnes, or voluntarily, or because their equipment does not work. It is thus necessary to complete or merge this data with that collected by other captors. Radars, semaphores able to remotely interrogate ships, and even electro-optical sensors able to precisely identify ships when weather conditions and distances are adequate, are used.

“In larger maritime areas, European industry today offers a wide range of mature solutions. From the coast, high-frequency surface-wave radar technology is promising. These are a collection of fix antennae which, completed by a powerful treatment of the signal, can detect and follow ships cruising far beyond the horizon. This equipment can complement classical radars and thus offer a maritime early warning, coherent with the limits of the exclusive economic zone which will become the norm in the Mediterranean.

Further away from the coast, information collection requires embarked naval or aerial solutions. These can be surveillance aircraft or unmanned aerial vehicles (UAVs), which can embark maritime detection radars, AIS receptors and possibly electro-optical captors. These technologies are mature, and both the size and reliability of such equipment today allow for the conception of rotary-wing UAVs, a perfect format for operations at sea launched from a ship as much more compact than a light helicopter.

For very high seas, collecting maritime information from space can bring new responses. Two technologies can now be fitted into one single satellite. Synthetic Aperture Radars (SAR) can detect both ships and layers of maritime pollution, even with cloud cover. The second technology is the AIS signal receptor. Experience shows that AIS messages can be received by satellites equipped with specific antennae, even if progress remains to be made for coverage of high-traffic zones. The European Space Agency (ESA), together with certain member states, is studying the possibility of placing a constellation of satellites in low orbit as early as 2015, offering global AIS coverage.

All of these technologies have considerably increased the volume of information available for maritime surveillance and protection of maritime borders. What is required is an extensive recourse to databases and information systems to merge this information with detection of abnormal activity, a recent functionality which facilitates authorities’ decision-making. France, with the second biggest maritime area in the world, must be a major actor of maritime surveillance. We must keep in mind that information capabilities, as helpful as they may be, are useless without capabilities for action at sea: ships and men, hardened to a tough environment. Safety and security at sea need this balance between information and action.
Policy responses to people-trafficking in the Mediterranean

Ana Maria Gomes tackles the issue of the migration influx in Mediterranean countries, also in light of the current events in the Arab world and calls for the EU to redefine its migration policy to provide for long-term answers.

After the 2008 peak in the influx of migrants crossing the Mediterranean from the North of Africa towards Europe, these numbers in 2010 dropped drastically to a virtual halt. Alongside the economic downturn in Europe, this was the result of diplomatic efforts of southern European member states to reach bilateral agreements with neighbours across the Mediterranean aimed at preventing migrants from sailing to the shores of the European Union.

As a result, several countries in the north of Africa tightened control of their ports, pushing further south the available routes for departure. The 2008 Treaty of Friendship between Italy and Libya is a sad example of the effectiveness of this closed-doors and push-back policy: in exchange for $5 billion over 20 years, the Gaddafi regime ensured - almost overnight - that immigrants stopped arriving on Italian shores.

“Migrants and asylum-seekers are often delivered to traffickers who hold them for ransom or handed back to the hands of dictators, with the help of EU member states’ patrols.”

Such gains in migration control were achieved at high cost: the rights of migrants and refugees, pushed back at times by brutal methods, with asylum-seekers even prevented from asking for asylum.

According to the 2009 Human Rights Watch report “Pushed back, Pushed around”, such tactics include electrical shocks. Migrants and asylum-seekers are often delivered to traffickers who hold them for ransom, or handed back to the hands of dictators such as Gaddafi, with the help of EU member states’ patrols. Furthermore, the EU has made failed attempts to negotiate readmission agreements, foreseeing the return of all migrants intercepted at sea, including third-
country nationals, to countries where dictatorial regimes prevail, in contradiction with the principle of 'non-refoulement', which prohibits forced return to places where people are at risk of inhuman treatment.

The current revolutions in the North of Africa are leading to a new wave of migration. About 20,000 migrants crossed the Mediterranean since the upheavals in the region began in January. The 5,000 inhabitants of the Italian island of Lampedusa have already been outnumbered by newly arriving migrants and refugees, who remain stuck in the streets, with no beds or sanitary facilities (there are only about 1,500 beds available for 7,000 new arrivals).

“While stepping up efforts to combat human traffic, the EU needs to redefine its migration policy in order to provide long-term answers to migration challenges.”

The EU response to this migration influx can be summarised by the conclusions of a Justice and Home Affairs Council in late February 2011: solidarity among member states to cope with the difficulties, a new border control operation, humanitarian aid and strengthened policy cooperation. In practice, Hermes 2011 performs sea patrols and border surveillance, search and rescue activities and screening of migrants. It also tries to gather intelligence on people-smuggling networks. While this operation may prove useful to help investigate and dismantle organised crime networks (and there is also a need to investigate EU actors cooperating with them), it remains a short-term response to the current crisis.

While stepping up efforts to combat human traffic, the EU needs to redefine its migration policy in order to provide long-term answers to migration challenges. This encompasses the need to address the root causes of trafficking of human beings: instability, poverty and political repression in the countries of origin. Such a process requires coordination among several external action policies, such as development and security.

The EU will also have to redefine its asylum system. The Dublin II agreement, which established that irregular migrants have to file their asylum claims in the first EU country they entered, is unsustainable and unfair for southern EU member states. EU countries must accept burden-sharing, in accordance with the solidarity clause. Moreover, if the EU wants its added-value as a soft power to be taken seriously, it needs to significantly increase its resettlement offers, which are ridiculously low when compared with those of the US or Canada.

Despite all efforts, without addressing the root causes of migration, traffickers will always find alternative routes for desperate persons willing to pay over 1000€ to risk their lives by boarding crowded decrepit boats trying to reach the promised land of Europe - as leaving without the consent of traffickers is even riskier. And tyrants will continue to blackmail Europe for huge sums in return for preventing Europe from “turning black”, as Gaddafi did last year. Thus, promoting democratisation, human rights and sustainable pro-poor development in the countries of origin is essential. This should become a foreign action priority for the EU not exclusively in the Mediterranean region.
Multinational mission of interest - the BlueMassMed project

Vice Adm. Jean-Marie Van Huffel presents the origin, progress, purpose and contribution to maritime security in the Mediterranean of the BlueMassMed project.

Maritime surveillance is a key goal for the European Union in its building of an Integrated Maritime Policy. Considering the legal responsibility of states, the issues of neighbourhood governance and sovereignty, this field may also be a vector of integration.

Maritime safety and security are permanently challenged by threats and risks which develop out of sight of the “normal life” and bear systematically one element of “surprise” for authorities and concerned political decision-makers rather used to the land theatre.

Early knowledge of what is going on at sea, thanks to information-sharing and exchange of best practices, may increase efficiency and save money by focusing on “black holes”.

Political pilot projects have been developed and supported by the Directorate General for Maritime Affairs and Fisheries (DG MARE) to foster cooperation among member states’ maritime surveillance agencies, then to improve exchange of information among them.

“BlueMassMed is the first European pilot project, with more than 30 partner administrations of 6 member states of the Mediterranean neighbourhood.”

BlueMassMed is the first European pilot project, with more than 30 partner administrations of 6 member states of the Mediterranean neighbourhood: Greece, Italy, Malta, France, Spain and Portugal. This project is co-funded by partner administrations and the European Commission’s DG MARE. The French Secrétariat Général de la Mer is the lead partner of the project.
BlueMassMed was launched in January 2010 in Paris and will last until the end of 2011. The project is divided into two phases: elaboration then demonstration. A user working group defines the scope of enhanced cooperation through information-sharing, aiming at elaborating a common basic situation, to be regularly provided to the actors. This exhaustive situation is subject to dissemination, traceability and treatment between the partners. A technical working group translates user requirements into technical specifications for system architecture, while a legal working group examines the legal state of play and possible obstacles. Those activities clearly belong to the building of a Common Information Sharing Environment for maritime data, emphasising consistency and non-duplication of efforts with other relevant initiatives in this field.

BlueMassMed will provide a demonstrator able to link to the respective maritime surveillance systems in service by the partners, exchanging data...and services useful to mission actors.”

BlueMassMed involves the military navies of all member states (with the exception of Greece), unlike other pilot projects such as Marsuno and industry-driven projects supported and developed by the European Commission. The bridging of the military (naval) and civilian worlds, of paramount importance in the field of maritime awareness, is another benefit of this project.

The active contribution of the development of the “Common Information Sharing Environment” according to the roadmap proposed by DG Mare and welcomed by the European Council is also worth noting, in particular within the different steps in the agenda of the “Technical Advisory Group” in charge of shaping the best technological choices to be proposed to EU, in the framework of the politically chosen architecture principles (maritime surveillance national experts’ group).
Piracy - a potential danger for maritime routes to and from the Mediterranean

Frederic Fave elaborates on the steps taken by private companies to secure their vessels against piracy and discusses the problems that stem from a pirate attack.

Frédéric Fave is Deputy Vice President of Safety, Security and Environment at CMA CGM (Compagnie Maritime d’Affrètement - Compagnie Générale Maritime).

Any master of a vessel leaving the Mediterranean for Asia through the Suez Canal or leaving Asia for the Mediterranean is aware that his transit through the Gulf of Aden and Indian Ocean will be risky, as he may have to face pirate attacks.

Although the Mediterranean has not been directly affected, piracy has in recent years increased significantly in the Gulf of Aden and Indian Ocean. For instance, in 2010, at least 219 attacks and 49 hijackings were reported in the area, with Somali pirates conducting attacks very far from Somali coasts, targeting any kind of vessel (sailing yachts, chemical tankers, bulk carriers, tankers, container ships, etc.), and using previously hijacked vessels as mother-vessels for their operations.

Assets, numbers and finances of pirates have increased in recent years. Ransoms have gone from $150,000 in 2005 up to $9.5 million at the end of 2010 (in the case of the Samho Dream).

Regrettably, military forces deployed in the area are insufficient with regards to the number of pirates and surface of the area to be covered. The lack of military assets and weakness of East African coastal states lead shipping companies to implement their own procedures and measures to prevent pirate attacks against their vessels. With between five and six CMA CGM vessels transiting through the Gulf of Aden on a daily basis and already nine vessels attacked within the first three months of 2011, the CMA CGM Group is directly concerned and impacted.

“The lack of military assets and weakness of East African coastal states lead shipping companies to implement their own procedures and measures to prevent pirate attacks against their vessels.”

For a ship-owner, having a vessel hijacked means that his crewmembers, carried goods and vessel will remain (statistically) for at least three months in pirate hands, which is the time usually needed to negotiate with pirates.
Beyond the emotional impact of such an event for crew-members, families and teams in head offices, financial impacts are important for a shipowner, with the off-hire of the vessel, the goods remaining on board (and potential pilferage), the potential damages suffered by the vessel while staying at anchorage off Somalia, payment of ransom, etc.

In order to avoid or at least prevent such a tragic event, CMA CGM Group has decided to implement several security measures on board its vessels.

All CMA CGM vessels strictly apply military transit requirements (as per MSCHOA instructions in the Gulf of Aden), as well as International Best Management Practices, as produced by the International Chamber of Shipping, BIMCO, UKMTO, and EU Navfor, amongst others. Dedicated emergency teams are available 24/7 in CMA CGM head office to assist vessels in case of any security situation. Meanwhile, vessels are in close contact with navy assets in the Gulf of Aden and Indian Ocean, reporting any suspicious activity to relevant authorities (IMB, UKMTO, etc.). All attacks in the area are closely monitored by the head office, which immediately warms vessels in the vicinity of the attack to help them adjust their route. The use of private security companies now seems to be an option that all shipowners in the area have to consider.

Finally, CMA CGM Group is developing exchanges with other shipping companies and both international and regional organisations, in order to address this common plague of piracy together.

It is obvious that any long-term solution against piracy requires intervention not only at sea but above all ashore, by providing Somalia with capacity building and future prospects. The path seems to be long before our vessels can once again safely transit in the Gulf of Aden and the Indian Ocean.

"The use of private security companies now seems to be an option that all ship-owners in the area have to consider."
We are currently witnessing a process of enormous change in the Arab world. The EU shares the hopes of Egyptians, Tunisians and others for an orderly and irreversible transition towards democracy and free and fair elections. We cannot discuss maritime security in the Mediterranean without looking at what is happening in our southern neighbourhood.

Maritime security is already a significant component of the EU Counterterrorism Strategy and its implementing Action Plan. But are we really ready, or does our strategy need adjusting? How can we better integrate new technology into a comprehensive approach and also take full advantage of the opportunities offered by the Lisbon Treaty?

The current changes and new uncertainties (migration aspects, the transformation of the security forces in Egypt and Tunisia, the situation in Libya) reinforce the point that security depends on strategic planning and preparation.

Unfortunately the terrorist threat remains high. Successful reforms in the Arab world might reduce the terrorist risk in the long term, but weakened and destabilised security agencies in North Africa and the Middle East might be unable to respond to the current threat, which could also influence maritime security in the Mediterranean.

Al Qaeda has not in the past used illegal routes for terrorist travel, so it is unlikely that terrorists may hide in the flow of migrants trying to reach Europe by sea. However, it is worth remembering that the Mumbai attacks of 2008 were launched from a small ship of a type often used by people smugglers. Many prisoners suspected of involvement in terrorism have escaped in the confusion of the uprisings. Weapons like those used by Somali pirates are in free supply and might be used against maritime targets. The problems facing neighbouring countries show that security problems cannot be handled by one Member State alone, but influence directly the security of several member states.

The Mediterranean sea is one arena for our counterterrorism measures. These include transport (passengers, tourism, freight), and maritime border security and information-sharing as well as illegal migration.

“We have to support the Commission initiative to develop a Common Pre-Frontier Intelligence Picture in the Frontex context as outlined by the Commission’s Eurosur guidelines.”

The protection of the EU’s borders was the main objective when establishing Frontex and creating the European Border Surveillance System (Eurosur). We should continue and extend these activities.

To be prepared, we cannot start to analyse the situation and the threat when it is already inside our borders. We therefore have to support the Commission initiative to develop a Common Pre-Frontier Intelligence Picture in the Frontex context, as outlined by the Commission’s Eurosur guidelines. This should provide national coordination centres with effective, accurate and timely intelligence on pre-frontier areas (high sea and coastal waters, third countries) which are relevant for the prevention of irregular migration and serious crime at our external borders. In the field of maritime security there is a lot of information...
to integrate from different sources (like geodata, strategic information, but also operational information such as that gathered for fisheries protection).

Member states have increased the cooperation of their special forces through the ATLAS network. This coordination - including joint exercises (like the liberation of a passenger liner from terrorist hostage takers) ensures a level of preparedness to react to potential threats. Given the vulnerability of maritime transport (including our energy supply from the Gulf and Mediterranean region through tankers) preparedness in this field is essential to ensure safe maritime transport of goods and people.

“Maritime security, better information-sharing and an integrated approach to maritime surveillance and security should feature prominently in the 8th multi-annual research Framework Programme.”

The Treaty of Lisbon makes it easier to work across different policy fields and to share information, instruments and facilities for different policy purposes (security, migration, safety, environment or fishery). In times of budget cuts and austerity measures this allows the member states to use the same technology and the same resources to work on different problems. We should continue this integration and enhance the cooperation of the various actors. This includes an increased use of satellites, which could provide sophisticated information to all security agencies operating at sea. We should examine if we are already taking full advantage of new technology - like unmanned aerial vehicles (UAV). This technology makes it easier to observe certain areas - and thus to prevent terrorism as well as to better help in emergency situations.

Maritime security, better information-sharing and an integrated approach to maritime surveillance and security should feature prominently in the 8th multi-annual research Framework Programme. The discussion is now starting.

Maritime security in the Mediterranean is another example that it is less and less possible to distinguish between internal and external security - internal efforts alone cannot guarantee maritime security in the region. They have to go along with capacity-building and the stability of our southern neighbours. The Lisbon Treaty allows for a better coordination of both aspects. Let us take advantage of this and continue to work on maritime security as a prime example of a better integrated EU policy.
Detecting proliferation in the Mediterranean - how real is the threat?

*Ian Anthony* identifies the EU’s progress in detecting proliferation and points out that it has not yet reached its full capacity in this area.

The EU has strengthened its overall contribution to non-proliferation through actions by member states and through collective actions. A huge amount still needs to be done before the EU plays a non-proliferation role commensurate with its capacity. However, after 2003 there is a significant body of evidence that member states increasingly see the EU as the main forum in which to coordinate their national non-proliferation policies, as a key source of financing for practical non-proliferation measures and as a vehicle to maximise the impact of national efforts.

There are many examples of non-proliferation actions taken by each of the common institutions, but it is possible to highlight the main areas where a contribution has been made.

One such area is helping states to strengthen their national export control systems. Export controls help legitimate exporters reduce the risk that products and services supplied for civilian end-uses will be diverted into programmes of concern. The European Union itself has developed modern and comprehensive legislation in this area and is increasingly active in engaging with partners who would like to do the same. This is largely done through a peer approach based on mutual problem solving.

From experience the EU understands that it has a long way to go itself before an effective export control system is in place. Therefore it does not offer states an export control blueprint, but instead puts together groups of working level officers who can exchange experience and knowledge with partners about how to solve identified problems. The evidence suggests that this approach is highly appreciated by partners.
A second area where the EU has been particularly active has been in efforts to prevent illicit trafficking.

“In the future the EU has made a deliberate choice to take a regional approach to working with partners on risk mitigation in the CBRN area and one of the regions considered for a focused programme is the Mediterranean basin.”

The EU has common customs legislation and cooperation between national customs authorities has been used on many occasions to stop shipments suspected to be for programmes of concern. Apart from its own programme of customs cooperation with external partners, there may be increased opportunities for the EU to contribute in the framework of the Proliferation Security Initiative (PSI). Initially dominated by military actors, the PSI has gradually transformed into a platform for cooperation among national legal authorities. The emphasis of interdiction exercises is now less on the military and more on the voluntary diversion of a vessel to a port where existing customs powers to search and seize suspect items can be applied.

A third area where the EU is beginning to develop a programme for practical action is in the field of laboratory biosecurity. As a general rule the more coherent the EU is internally, the more effective its actions are externally. Unlike export control and customs powers, there are no European laws or technical standards for laboratory biosecurity, and this has been a serious handicap in developing a practical programme of work in this area. There are indications that this is gradually being overcome, including the development of a consensus-based specification for laboratory biosecurity codified in a Workshop Agreement under the umbrella of the European Committee for Standardization.

In the future the EU has made a deliberate choice to take a regional approach to working with partners on risk mitigation in the CBRN area and one of the regions considered for a focused programme is the Mediterranean basin. A central element in such a programme would be working to reinforce institutional capacity in partners’ legal, regulatory, technical and enforcement authorities.

In conclusion, there is a continued requirement for European action to strengthen non-proliferation and a framework for delivery is evolving.
Principal threats in the Mediterranean

**Maritime surveillance to tackle: Illegal, Unregulated, Unreported fishing**

Harm Koster focuses on Mediterranean states’ efforts to secure the area of Illegal, Unregulated, Unreported fishing.

Illegal, Unregulated and Unreported (IUU) fishing undermines the measures ensuring sustainable exploitation of marine living resources and generates unfair competition in the market to the disadvantage of fishermen operating legally.

The core task of the Community Fisheries Control Agency (CFCA) is to organise cooperation between national control and inspection activities so that the rules of the common fisheries policy are effectively applied. It coordinates joint control activities by member states concerned inter alia with the blue fin tuna fishery in the Mediterranean and eastern Atlantic, the fisheries in international waters of the North Atlantic as well as cod fisheries in the Baltic and North Sea.

The work of the Agency has proved its European added value by pooling national control means for joint deployment across borders and exchange of inspectors. The CFCA contributes to a level playing field so all operators are treated equally, irrespective of their flag. In addition, it contributes towards sustainable fisheries by enhancing compliance and enhanced mutual confidence in the effectiveness of joint control both for stakeholders and authorities.

The blue fin tuna fishery is probably the most symbolic in the Mediterranean, as its history dates back to centuries and today is one of the world’s most lucrative commercial fisheries. Its popularity had led to the overfishing of the resource.

“For this reason, tough measures to secure the future of the blue fin tuna stock have been taken by the International Commission for the Conservation of Atlantic Tunas (ICCAT). They have taken the format of a multi-annual recovery plan adopted in 2006 with the objective of bringing this stock back within safe biological limits. After its revision in November 2008 and 2010, the recovery plan introduced even stricter measures.

EU institutions are committed to the maintenance of this heritage. Therefore, as a contracting party of the ICCAT, they have taken the adequate measures to fulfil international obligations in this fishery. To ensure the success of the recovery plan, the Commission has established a Specific Control and Inspection Programme. Control and enforcement is a critical issue in the fishery to maintain the resource at sustainable levels.

In the past, control, inspection and surveillance activities carried out by each of the member states concerned were not well coordinated and not evenly spread over the different fleets targeting blue fin tuna. In 2007, the blue fin tuna Com-
munity quota was overfished and the Commission had to close the fishery.

To avoid this situation happening again, member states involved in the fishery, the Commission and the CFCA decided to combine their efforts to maximise control results by coordinating inspection, surveillance and control of all fishing activities of the blue fin tuna fishery in the Mediterranean and the eastern Atlantic.

“...member states involved in the fishery, the Commission and the CFCA decided to join their efforts to maximise control results by coordinating inspection, surveillance and control of all fishing activities of the blue fin tuna fishery in the Mediterranean and the eastern Atlantic.”

Since 2008 and for the last three years during the fishing season of the blue fin tuna, the CFCA has organised the pooling and deployment of national means for control, surveillance and inspection activities both at sea and ashore, bringing together seven member states involved in the control of the blue fin tuna fishery – Cyprus, France, Greece, Italy, Malta, Portugal and Spain - through its Joint Deployment Plan (JDP).

The CFCA hosted on its premises national coordinators from member states as well as four full-time staff members of the CFCA who were operational 7 day week. This multinational team has coordinated the control, inspection and surveillance activities of the national means pooled by member states concerned under the JDP.

Member states concerned made a substantial effort in terms of pooling of means to control and inspect blue fin tuna fishing activities. In addition, the CFCA chartered, on behalf of the member states concerned, an EU inspection vessel, the "Jean Charcot". This vessel served as an international platform for inspection and surveillance of fishing activities by EU vessels and third country vessels from contracting parties of the ICCAT. The "Jean Charcot" had inspectors on board from all member states concerned and contributed in this way to a uniform and effective application of the ICCAT measures.

Since then, the three annual JDPs implemented in the Mediterranean have had very positive results. Last year, 665 inspections were carried out and the ratio of infraction/inspection decreased from 0.14 in 2008 to 0.09 in 2011. The CFCA has been successful in brokering cooperation between all national services involved in control, inspection and surveillance. As a result, control of the blue fin tuna fishery has been implemented in a more rational and cost-effective way and compliance has considerably improved.
Conclusion

The articles in this discussion paper have highlighted the growing challenges to maritime surveillance in the Mediterranean. For the most part, these challenges are to be found in other maritime areas around the world.

While there is naturally a political dimension to the issue, be it only in coordinating the actions of the different countries involved, it is also important to think carefully about the technological aspects.

From a political standpoint, the European Commission has taken it upon itself to lead the thinking on the matter and has launched a number of varied but complementary initiatives: the Integrated Maritime Policy, the EUROSUR border surveillance programme and the “Common Information Sharing Environment” study.

On the technological front, the challenges are of an entirely different nature, but are no less ambitious. The aim here is not to list these challenges, but rather to highlight those that are most crucial:

- To detect threats as early as possible and therefore prepare for maritime intervention in an optimal way, permanent surveillance covering the widest possible area is required. Considering that hundreds of ships enter and leave the Mediterranean each day via the Suez Canal, Gibraltar or the Bosphorus, it would be useful to look more closely at these particular traffic flows.
- Several thousand ships are present in the Mediterranean at any one time. Among them, only a few are likely to present a threat of any kind, whether it relates to environmental protection, maritime security, fishing, trafficking of people and illicit goods, immigration or terrorism. A system allowing these threats to be characterised in a reliable manner is therefore required, the aim being to determine the best way to handle them.
- Regardless of the reliability with which these threats are identified, it will be impossible to deal with them at sea without the right naval means and, in certain cases, some form of aerial capability, all of which will need to be managed in a rational and coordinated way.
- The operational personnel charged with dealing with these threats head on must be given tools that are reliable and easy to use.

These topics have formed the basis of various studies and demonstrations, notably as part of the Framework Programme for Research and Technology Development funded by the EU. The industry is highly committed to these efforts and provides a significant proportion of the investment required. This work should make it possible to qualify the best solutions and innovations, which will then be deployed during an operational phase.

However, some challenges straddle the line between politics and technology.

Today, no one system covers the combined maritime areas of all the European nations, but examples of systems with a regional scope do exist in certain countries. Some are already deployed and managed with continuous development in mind, while others have reached different stages of evolution and deployment. The aim is obviously
not to scrap these existing systems. On the contrary, there are clear advantages in making them interoperable within a wider system coordinated at European level.

Beyond the political and cultural difficulties such cooperation tends to encounter, certain technological issues also need to be overcome:

- Achieving interoperability between systems designed independently and which do not necessarily cater for the same requirements.

- Maintaining the confidentiality of the data exchanged, while adhering to the different procedures applicable depending on the case being handled and the administration in charge.

Monitoring European maritime areas and their approaches is certainly one of the major challenges facing Europe. In addition to the threats mentioned above, we must also consider that the oceans are now our primary source of energy resources, raw materials and food. Europe’s maritime domain is considerable and it is our responsibility to develop it while preserving its immense wealth through reasonable exploitation.

Whether it involves the implementation of reliable, coordinated surveillance systems or intelligent use of the means of action already wielded by different states at sea, setting up this maritime surveillance programme should be considered a priority for Europe, now a world leader when it comes to skills in the wider maritime field.

By contributing effectively and proactively to controlling its maritime areas, Europe will be in prime position to manage and exploit the ocean in a reasonable way, something on which the future of our Blue Planet will hinge.
4. In the areas of control of persons under the umbrella of FRONTEX and combating narcotics trafficking in the framework of the Maritime Analysis and Operation Centre – Narcotics (MAOC-N) and the Centre de Coordination pour la Lutte Anti-Drogue en Méditerranée (CeCLAD-M).
5. AMASS stands for "Autonomous MAritime Surveillance System", proposing an array of autonomous, automated surveillance platforms with sensors. The project started on 1 March 2008 and lasts for 42 months. It has a budget of MEUR 4,9.
6. GLOBE stands for "GLObal Border Environment", proposing a comprehensive framework for integrated border management. The project started on 1 July 2008 and lasted one year. It had a budget of almost MEUR 1.
7. OPERAMAR stands for "An interoperable approach to EU maritime security management", addressing the interoperability of European and national assets in maritime security. The project started on 1 March 2008 and lasted for 15 months. It had of budget of EUR 669 000.
8. WIMAAS stands for "Wide maritime area airborne surveillance", aiming in particular at preparing the use of unmanned aerial vehicles. The project started on 1 December 2008 and runs for 36 months. It has a budget of MEUR 3,9.
9. OPARUS stands for "OPen ARchitecture for Unmanned Aerial Vehicle-based Surveillance system", proposing an open architecture for unmanned border surveillance platforms. The project started on 1 September 2010 and runs for 18 months. It has a budget of MEUR 1,18.
10. SEABILLA stands for "Sea border surveil-
11. I2C stands for "Integrated System for interoperable sensors and information sources for common abnormal vessel behaviour detection and collaborative identification of threat". The project will integrate data from a variety of shore and aerial sensor platforms coupling them with automated capacities for the detection of anomalous behaviour at sea, particularly small boats. I2C started on 1 September 2010 and will run for 4 years. It has a budget of MEUR 15,9.
12. PERSEUS stands for "Protection of European seas and borders through the intelligent use of surveillance". It aims at implementing a large scale demonstration of a surveillance system of systems, integrating existing platforms (including space based) and enhancing them with innovative capabilities. The project started on 1 January 2011 and will run for 54 months. It has a budget of MEUR 43,6.
14. Centre de Coordination pour la Lutte Anti-drogue en Méditerranée.
17. Technical surveillance system of EU Southern Maritime borders.
20. The Baltic and International Maritime Council
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