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international federation of shipmasters' associations

Annual Review 2010-2011

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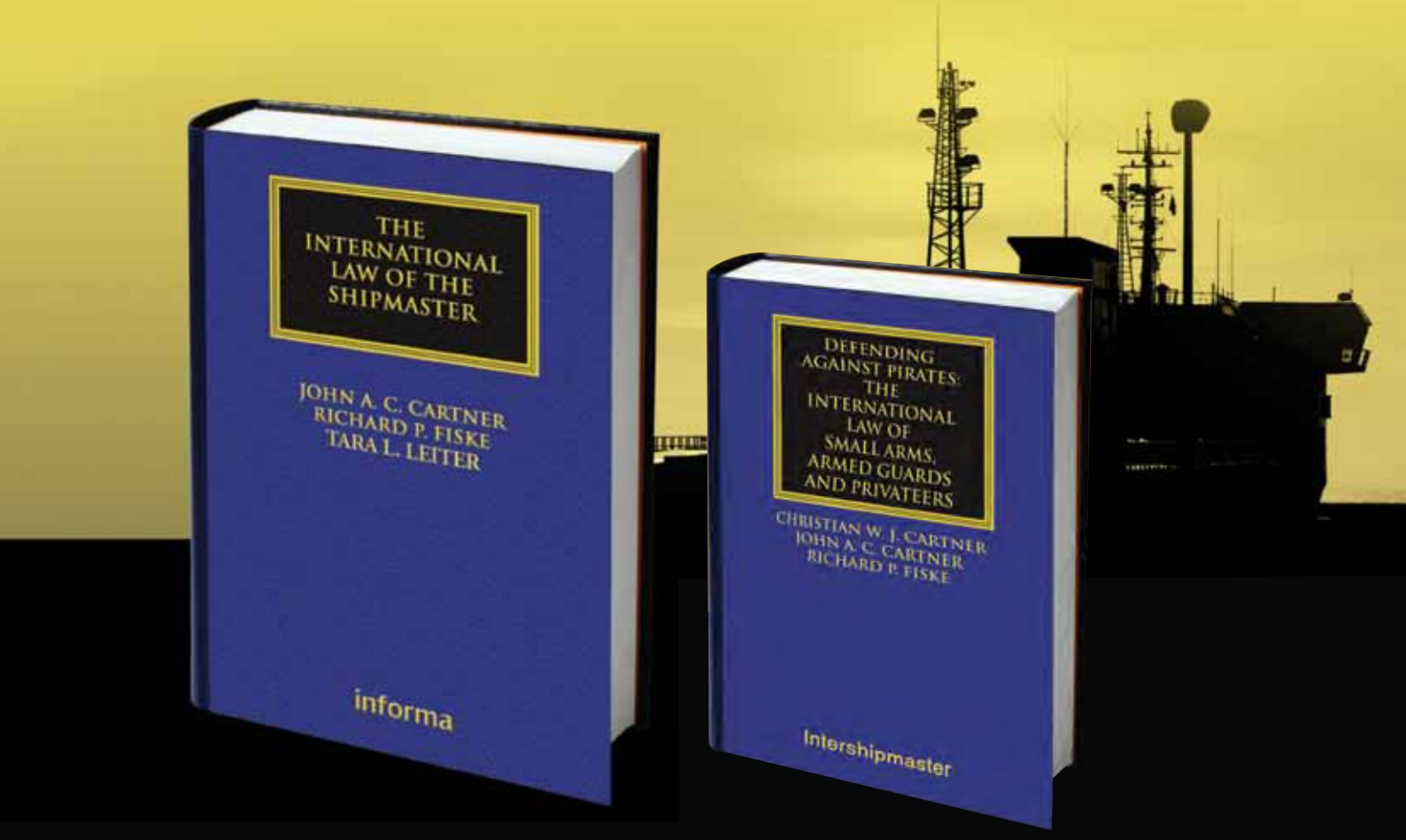

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UNITY FOR SAFETY AT SEA IFSMA

An introduction to IFSMA

IFSMA was formed in 1974 when eight European Associations of Shipmasters decided to unite their members from across the world in a single professional co-ordinated body. This non-profit apolitical organisation dedicates itself solely to the interests of the serving shipmaster, more than 11,000 of whom make up this federation. They come from about 60 countries, either through their national associations or as individual members.

IFSMA exists to uphold international standards of professional competence for seafarers. The federation's policy is to ensure safe operational practices, to prevent human injury, protect the marine environment and ensure the safety of life and property at sea.

Its headquarters is in London, close to IMO. IFSMA gained Consultative Status as a non-governmental organisation at IMO in 1975, which enables it to represent the unfiltered views of its members and protect their interests in an unfettered way. A Secretary General and a team of active or former shipmasters represent IFSMA at IMO and help the federation to function effectively there. These agents of IFSMA attend the four main IMO committees, namely the Maritime Safety Committee, the Maritime Environmental Protection Committee, the Legal Committee and the Facilitation Committee. This team is also active in the nine sub-committees of IMO, the organisation's working and drafting groups, council meetings and assemblies. ***IFSMA***

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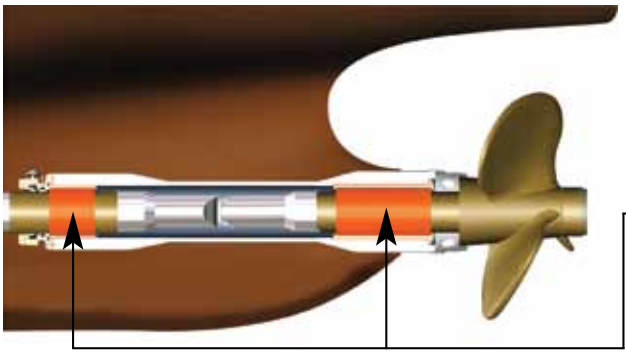

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Welcome!

Opening address to the 37th Annual General Assembly and Secretary General by Captain Christer Lindvall, IFSMA President

Fellow captains, colleagues, ladies and gentlemen.

I want, on behalf of IFSMA, to welcome you all to Halifax. Especially those members who are attending an IFSMA AGA for the first time. In this connection I will also say that we are very grateful to the Company of Master Mariners of Canada (CMMC) for inviting us to their home country.

At the same time, I will also send a "thank you" to last year's hosts in the Philippines, AMOSUP and FilsCapts, for their hospitality, not just during our AGA but also during our full stay, which I will come back to. I am sorry to inform you that the president of AMOSUP, a very close friend of mine, Captain Greg Oca, died at the end of November last year. He is now replaced by his son Dr Conrad Oca.

As I usually do, I will give you a brief history of Halifax, which is closely related to the history of shipping.

Pirates, Indians, warring colonialists and exploding ships make the history of Halifax read like an adventure story. The name the Mi'kmaq gave present-day Halifax was Che-book-took, which translates as 'great long harbour', and the British saw its potential as a port. From 1749, when Edward Cornwallis founded Halifax along what is today Barrington Street, the settlement expanded and flourished. The complete destruction of the French fortress at Louisbourg in 1760 increased British dominance and sealed Halifax as Nova Scotia's most important city.

In the early 1800s the growing port town became home to two universities. Despite being a seat of higher education Halifax was still a rough-and-ready sailors' nest that during the war of 1812 became a centre for privateer black-market trade. As piracy lost its government endorsement, Halifax sailed smoothly into a mercantile era, and the city streets became home to countless taverns and brothels.

On 14 April 1912 three Halifax ships were sent in response to a distress call. The 'unsinkable' *Titanic* had hit an iceberg. Over 1,500 people were killed in the tragedy and many were buried at Fairview cemetery, next to the Fairview overpass on the Bedford highway.

In 1917 during World War I, French munitions ship *Mont Blanc,* carrying TNT and highly flammable benzol, collided with another vessel. The 'Halifax explosion' the world's biggest man-made explosion before the A-bombs, ripped through the city. More than 1,900 people were killed and 9,000 injured. Almost the entire northern end of Halifax was leveled and many buildings and homes that were not destroyed by the explosion burned to the ground when winter stockpiles of coal in the cellars caught fire.

Halifax faced its worst natural disaster in September 2003 when the 185 km/hour winds of hurricane Juan ripped out thousands of trees, severely damaged buildings and scarred Halifax forever. Despite the violence of the storm only eight people were killed.

Once again we can look back to a very successful year since our latest AGA in Manila. Our Secretary General, Captain Rodger McDonald, will give you a more detailed report later but I really want to emphasise some highlights. As you remember, some of us stayed in Manila for the IMO Diplomatic Conference to amend the STCW Code A and B, which in the future will be known as the Manila Amendments to the STCW Convention. No changes were made in the convention as such. We were not entirely happy with the final result, as we couldn't solve the problem concerning rest and working hours and, thereby, the question of fatigue, at least not this time. At the end of the conference, IMO

adopted a proposal to the IMO Council as this was during the Year of the Seafarer, that 25 June annually shall be a tribute to the seafarers – the Day of the Seafarer. The council later endorsed the proposal.

After the conference IFSMA together with GlobalMet, NI and Newslink arranged a forum as another tribute to seafarers, which I opened. The main speakers were Admiral Efthimios Mitropoulus, Mr Neil Ferrer, ILO, and representatives from all major nongovernmental organisations within IMO, such as ICS, ISF, BIMCO, Intertanko, Intermanager, Intercargo and ITF. Some 700 delegates from different parts of the industry participated, including active seafarers and cadets.

We also participated in the Manning and Training Conference in Manila for the fourth time with our workshop entitled 'STCW – Beyond Manila 2010'. We are also invited this year but we haven't yet decided on the subject for the workshop.

At a reception in September last year IFSMA together with other NGOs handed over a petition of more than 940,000 signatures to the United Nations Security Council via IMO to stop piracy.

The IMO theme for 2011 is 'Piracy – Orchestrating the Response'.

On 3 February this was the theme for World Maritime Day, inaugurated by the United Nations's Secretary-General, Ban Ki-moon, who said, "The escalating problem of piracy off the coast of Somalia is completely unacceptable and requires an urgent and co-ordinated response."

IMO has adopted an Action Plan with six aims:

• increase pressure at the political level to secure the release of all hostages being held by pirates

• review and improve the IMO guidelines to administrations and seafarers and promote compliance with industry best management practices and the recommended preventive, evasive and defensive measures ships should follow

• promote greater levels of support from and co-ordination with navies

• promote antipiracy co-ordination and co-operation procedures between and among states, regions, organisations and industry

• assist states to build capacity in pirate-infested regions of the world, and elsewhere, to deter, interdict and bring to justice those who commit acts of piracy and armed robbery against ships

• provide care for those attacked or hijacked by pirates and for their families.

In carrying out the Action Plan, IMO and the international maritime community will seek to:

• engage at the political level (including at the UN Security Council) to bring about a solution to the Somali problem and facilitate and expedite the release of hostages.

This would bring the world's attention to the unacceptable plight of the innocent victims of pirates – seafarers, in the main – and, by so doing, create a worldwide momentum that would eventually lead to their release

• strengthen the protection of persons and ships sailing through pirate-infested areas by regularly reviewing and promulgating the IMO guidelines to administrations and seafarers and making industry-developed best management

IFSMA works to combat seafarer fatigue and ensure they get adequate rest hours

practice guidance widely available; enabling ships' masters and officers to access any available naval protection; encouraging compliance with the recommended preventative, evasive and defensive measures; and promoting even greater levels of support from navies

• promote co-operation between and among states, regions and organisations to reduce the risk of attacks on ships through information sharing; co-ordination of military and civil efforts; and development and implementation of regional initiatives, such as the Djibouti Code of Conduct

• help build up the capacity of states, in regions of the world, especially those infested with pirates, to deter, interdict and bring to justice those who commit acts of piracy and armed robbery against ships, thereby enhancing maritime law enforcement and the safety and security of life at sea. While so doing, the aim is also to help tackle the root causes of piracy through the provision of assistance to states for the development of their maritime capacities and the protection of their maritime resources. In the case of Somalia, the aim is also to contribute in any way possible (including through the potential development of a coastal monitoring force) to the stability of the country, which in due course will also have a beneficial impact on safety, security and stability

• work with all involved in the provision of social care and humanitarian support to ensure that they can deliver their services expeditiously to those attacked or hijacked by pirates and to their families.

IMO will seek to enhance public awareness of the piracy issue through outreach programmes, media, social networks and the development of promotional materials.

During this Assembly we have also discussed our policy regarding armed guards on board ships trading in pirate-infected waters.

IFSMA is also participating at IALA with our Assistant Secretary General Paul Owen as our representative and command seminars globally, mainly by our Secretary General Rodger MacDonald.

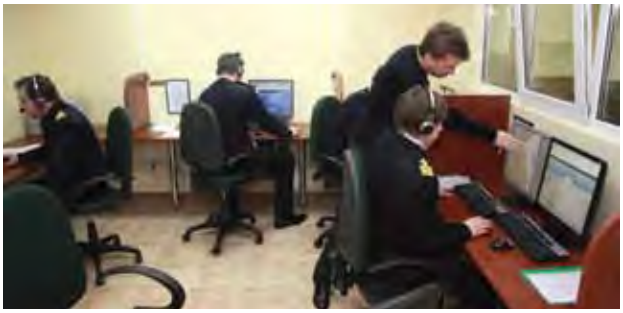
We have also decided that we shall try to have our Executive Council meetings together with some of our member Associations, so in 2010 we visited the Japan Captains' Association in Tokyo and the Council of American Master Mariners Chapter in Tampa, Florida, in the middle of April this year. We have also sent our deepest condolences to Japan after the disaster of the earthquake and the tsunami.

We are still expecting that the ILO MLC 2006 will enter into force next year but only 12 of the required member states have so far ratified it. The 33 per cent tonnage requirement is already fulfilled. This convention will have a lot of impact on the situation on board and the requirements will also be open for PSC.

I am also very happy that at last now we can present our new MasterMarinerProtect Benefit programme after several years of discussions. I want to mention that our members in Tampa were really impressed, even if we cannot cover them with the protection for the time being. This becomes more and more important as we see an increased number of shipmasters being arrested without trial and on mysterious grounds. Here, as a Federation, we have a very important task to assist our members or even those who are not members, because in the future the same thing could happen to our members and become accepted practice. Only members can be covered by the Protect programme.

Other tasks of highest priority are asbestos in the construction of ships, the problem with lifeboat hooks, e-navigation, ecdis, enclosed spaces and the continuous work to fight fatigue.

Finally you see that even though we have increased membership we need more funds to continue and increase our work for the benefit of shipmasters and their crews. We are now also in a situation in which we have to look at the future regarding the staff in our London office. The British pound has also decreased in value in the last couple of years, which has also affected the London office negatively although this has been positive in respect of other currencies. The Executive Council will therefore during this meeting ask for an increase in member fees to the level we had five years ago.



E-navigation and Ecdis are high priorities

It is with these words that I will open the meeting. I hope we will have a fruitful meeting here in Halifax. Thanks once again to the Company of Master Mariners of Canada for your invitation. ***IFSMA***

Secretary General's report 2010-2011

by Rodger MacDonald, Secretary General

Manila 2010

Immediately following our 36th AGA, held in Manila, the Diplomatic Conference on the Review of STCW resulted in what is now referred to as the Manila amendments. Needless to say, the IFSMA delegates worked hard to represent shipmasters' interests.

After the Diplomatic Conference on 26 June 2010, IFSMA hosted the 2010 Year of Seafarer Forum, which over 500 people attended, including many young seafarers and officer trainees. IMO secretary general Efthimios E. Mitropoulos gave the keynote address, in which he thanked IFSMA for arranging such a successful event, an initiative which showed that seafarers are recognised and respected.

Dealing with the resolutions made at our 36th AGA, held in Manila

IFSMA Res 1/2010 (AGA 36) – piracy

IFSMA encourages states to include in their criminal laws a prosecutable definition of intent to commit piracy. IFSMA recommends this be done by using equipment specific to maritime piracy as an evidentiary standard to prove intent. IFSMA also encourages a UN Security Council resolution that would call for the incorporation of equipment laws into national jurisdictions.

IFSMA will continue to be actively engaged in discussions of potential solutions for maritime piracy, particularly in forums that give voice to non-governmental organisations. IFSMA calls on the international community to provide the framework to enable ITLOS and ICC to become engaged in trials against pirates.

IFSMA has noted with great concern the recent US initiative to impose civil and criminal penalties on shipping companies who pay ransoms to pirates in order to end the hijacking of their crews and vessels.

IFSMA once again recalls its position that under no circumstances should the crew on board merchant ships be armed or any armed guards be taken on board. IFSMA calls upon all seafarers, their families and friends as well as everyone else, to sign the End Piracy Now petition at www.endpiracypetition.org to urge governments to act now to fight piracy.

Piracy: action taken

IFSMA joined other industry groups to raise awareness of piracy by getting together an antipiracy petition. On World Maritime Day the petition was signed by 930,406 people and presented to IMO secretary general Efthimios E. Mitropoulos at the London IMO headquarters. IFSMA's president, Captain Christer Lindvall, was present. The petition calls for governments to do everything possible to protect seafarers and ships at risk of attack by pirates by:

- dedicating significant resources and making concerted effort to find real solutions to the growing piracy problem
- taking immediate steps to secure the release and safe return of kidnapped seafarers to their families
- working within the international community to secure a stable peaceful future for Somalia and its people.

Mr Mitropoulos said that the petition would significantly support the objectives identified by IMO

with regard to the World Maritime Day theme for 2011, which will be 'Piracy: Orchestrating the Response'.

This petition was taken to the United Nations and the result was that on 3 February 2011 the UN secretary general attended the launch of IMO's Action Plan to promote the 2011 World Maritime theme Piracy: Orchestrating the Response. IFSMA's president and secretary general were invited and attended this important occasion.

This six-point Action Plan sets out an approach based on engagement at the political level to address the problem at its source, reviewing and promoting IMO guidelines and industry-developed best management practices, promoting co-operation among stakeholders, including civil-military co-ordination, furthering regional capacity building and supporting people attacked or hijacked by pirates and supporting their families.

IFSMA fully supports this initiative. On 14 March 2010 it attended the presentation to IMO of the mosaic made up of thousands of photographs to commemorate the IFSMA-organised Open Forum for the Year of the Seafarer, in Manila. In discussions with the IMO secretary general there was full agreement that the piracy issue is being debated by so many different groups around the world that we are in danger of losing focus on the problems facing seafarers. IMO, with the UN support, is the correct body to orchestrate this and is the best suited.

IFSMA has been involved in a number of other piracy debates and workshops, especially over the last year. The following are particularly significant.

The USA African Command seminar in Stuttgart, October 2010, was a most interesting conference, which updated delegates on events surrounding piracy in Africa. In overall terms the USA has taken a very serious interest in this situation as that country realise how vulnerable it is to interference in the sea lanes that provide it with fuel and other essential products.

The US has a policy it calls 3D: defence, development and diplomacy. This conference focused on these issues. They seek closer ties with stakeholders such as shipmasters, hence IFSMA's invitation to this conference.

What was particularly encouraging was behind-the-scenes developments that tried to set up a legal structure in Africa through which to prosecute pirates and punish them. For example, new jails have been constructed in Somalia. There is still a long way to go but at least something is happening.

IFSMA was also involved in a video-link interview between Cardiff University in the UK and the IFSMA secretary general that covered fair treatment for seafarers. This interview was conducted along with others in the industry such as Michel Grey (honorary member) to highlight the issues and bring them into the public domain.

The IFSMA secretary general participated in a workshop held in London run by Oceans Beyond Piracy. At this workshop the general feeling was that despite the wide range of counter-piracy initiatives in place, all signs point to 2011 being another record-breaking year in terms of the number of pirate attacks, ransom payments and violence against seafarers. The concept of an approaching tipping point is increasingly being used to describe the growing sense of frustration among key stakeholders. In order to inform this discussion, Oceans Beyond Piracy has chosen to highlight significant developments that illustrate what 'tipping point' may mean and how stakeholders are reacting. One definite sign was the swing of opinion from industry groups towards having merchant vessels armed when they are in areas in which pirates operate. This, of course, runs contrary to IFSMA's current resolution. As piracy escalates we will discuss this issue during our Annual General Assembly.

In February the secretary general was also able to discuss concerns whilst visiting the US Coastguard in Washington DC and to seek reassurance that it continues to be committed to supporting maritime trade in Somalia.

On 10 March 2011, the secretary general had a meeting with NATO Allied Command (Naples) to discuss the threat of terrorism in the Mediterranean subsequent to the Libyan, Egyptian and Tunisian situations. Seafarers should be made aware of this potential problem but, sadly, it would appear it is taking NATO's eye off the Somalian situation.

Piracy was also on the legal committee agenda at the meeting on 4-8 April 2011. Charles Boyle from Nautilus attended on IFSMA's behalf.

Res 2/10 Victims of any acts of piracy

IFSMA noted with great concern the information provided by the Master Mariners Society of Pakistan about the circumstances of the death of its member Captain Jaffer Jafri, who was murdered during the hijacking of QSM Dubai by pirates.

IFSMA is calling on all governments and shipping companies to take responsibility by giving full

support to the families of any victims among ships' crews of any act of maritime piracy.

IFSMA is of the opinion that all victims of any acts of piracy affecting crew and their families should be taken care of financially and by the provision of trauma counselling.

Res 3/10 Action taken

IFSMA has written letters of sympathy and concern to the family of Captain Jafri and received a letter of thanks.

This has also prompted a paper calling for a resolution on dealing with the care and welfare of the families of hostages taken by pirates. This will be discussed at the 37th AGA.

Res 3/10 Recruitment

IFSMA noted that the shipping industry will continuously need to attract, employ and retain young talent to keep the world fleet sailing.

The delegates further noted that attracting and retaining sufficient new entrants is a major task that will need the efforts of all stakeholders. The delegates emphasised that optimising recruitment would require a review of present recruitment methods and the exploration of new ones.

Moreover the delegates noted that the assessment of the quality of life on board vessels should be an integral part of all stakeholders' considerations in the shipping industry in order to recruit and retain seafarers.

During the year various papers have been submitted, including to IMO. This is a well established subject and everybody in the industry is concerned. The problem seems to be getting effective action.

The IFSMA secretary general chaired the ACI 7th Human Resource and Recruitment conference held in London on the 27 October 2010.

About 80 people attended, the majority of whom were from shipmanagers and owners, predominantly from HR departments. A number of good presentations were made, as was a lot of debate, mainly around criminalisation, fatigue and piracy. All agreed these ongoing problems have given the industry an image that discourages recruitment. Much of what was said has been said many times before but there were some interesting comments during the plenary and the round table debates:

- Bahamas flag state defended its stand of hours of rest at Manila 'to defend the master from criminalisation if he/she was forced to work excessive hours in an emergency'
- Maersk admitted it had been fined $50,000 for exceeding work hours – there was a hint that this was in the offshore segment
- a small Danish owner had to seek flag state assistance recently to force the German immigration authorities to permit Polish seafarers to leave their vessel to go home to Poland on leave (a distance of less than 160km). The EU at work!
- two different cases of sick seafarers being sent home by their company for treatment but facing barriers in transit through Spain. One was to be returned home to the Philippines (for being mentally ill) but was refused transit in Spain and returned to Mexico. The second was a Nigerian being sent home for treatment. Here the owner took evasive action by flying him to Heathrow and the UK co-operated fully
- it was suggested that seafarers are treated badly by the authorities and ignored by the public because their employers treat them as second class citizens
- whilst the industry could wake the world up to the problem by not sailing around the African coast, thus increasing transport costs, etc, it was felt that too many owners and masters would ignore the challenge and take advantage of picking up custom from those that did.

Toward the end of the conference I put it to the audience that IFSMA was considering insuring its members to help them if they faced criminalisation. I asked for opinions and I was surprised at the positive reaction.

I found none against the idea, several owners said that they would always provide protection and lawyers in any case but two or three owners suggested that they would be willing to support their masters financially to get this cover! One Tanzanian master came to me with his card and said he would like to join IFSMA and would sign up for this benefit! Very encouraging, I thought.

Res 4/10 Asbestos on board ships

IFSMA noted with great concern the continuous trend of seafarers being exposed to asbestos on board vessels.

Apart from the dangers related to exposure to asbestos present on vessels built before the coming into force on 1 July 2002 of Solas Chapter II-1 Construction – Structure, subdivision and stability, machinery and electrical installations,

the delegates noted that in addition to the current limited exemptions, ending 1 January 2011, that asbestos is also found on some newbuilds with keels laid after 2002.

The delegates also noted the concern recently expressed at the 53rd session of the IMO subcommittee on ship design and equipment, a proposal for the inclusion of a footnote to Regulation II-1/3-5 expressly prohibiting the installation of any material containing asbestos purchased prior to 1 January 2011, being kept in any ship's store or in a shipyard for a ship under construction, and that it should not be permitted to be installed after 1 January 2011 as a working part.

The delegates moreover noted that when vessels enter into service, they frequently become contaminated with asbestos when undergoing repairs at shipyards across the world and/or while storing and using maintenance products and spare parts that often contain asbestos.

The delegates further noted that without proper training seafarers cannot easily identify whether or not products or spare parts contain asbestos, and that they therefore run a serious exposure risk during maintenance work.

IFSMA calls upon the relevant international, regional and national bodies to take appropriate action to ensure compliance with national, regional and international regulations regarding the use of asbestos products.

IFSMA strongly recommends that information is provided on materials containing asbestos and that seafarers are made aware of the dangers of asbestos through appropriate training.

Action taken

Whilst awareness of this situation is being promoted, there had been some feedback that there are two types of asbestos: blue and white. The comments were made that only the blue asbestos has cause for concern. However, it has been clarified that all types of asbestos are dangerous. IFSMA will continue to bring this concern to the industry.

IFSMA statements made at our 36th AGA, held in Manila

In addition to the above resolutions, IFSMA made two further statements.

Stat 1/10 Deepwater Horizon

On the occasion of the 36th Annual General Assembly the delegates of IFSMA assembled in Manila, Philippines, on 17-18 June 2010 and expressed their deep concerns about the *Deepwater Horizon* catastrophe. They also expressed their sympathy with not only the families of those who lost their lives but all those who will suffer economic, environmental and domestic impacts in their lives, particularly seafarers and other people who work and earn their income at sea in the affected area.

Regarding the ongoing and forthcoming operations at sea in connection with the *Deepwater Horizon,* IFSMA recognises the need for urgency in order to save the environment from as much damage as possible. But at the same time IFSMA is concerned with reports from its members on the safety and wellbeing of the masters and crews on board salvage vessels and other vessels operating in the area. IFSMA has received reports on illness caused by fumes and gases as well as reports of excessive working hours over long periods of service.

Without any direct connection to *Deepwater Horizon* and in respect of the ongoing accident investigations and the future findings and conclusions, IFSMA also wants to emphasise that maritime skills and competences in general, and especially in terms of offshore operations, are vital to any deepwater operation. IFSMA therefore urges IMO to address standards for the manning of moveable offshore installations and standardisation of certification, training, competence and proficiency within the field of offshore operations as well as setting standards for contingency planning.

IFSMA will continue to press for this.

Stat 2/10 Hours of rest

At the 36th Annual General Assembly in Manila delegates expressed their concern over the proposals for a revision of the hours of rest in the STCW Convention. Therefore IFSMA wishes to use the opportunity of this conference to share the views of IFSMA members.

At IMO the subject of fatigue has been discussed at length on many occasions. As fatigue is of great concern to all of us, actions to prevent it should be taken whenever possible. The secretary general has mentioned fatigue as an important cause of incidents and accidents and has also requested that member states always take the human element into consideration.

Over the years IMO has taken initiatives in order to achieve a reduction of fatigue. At this

Diplomatic Conference the member states were given the opportunity to improve the existing regulations and thereby reduce the problems of fatigue even further.

During STW-39 the fatigue problem was discussed once again and action was taken on the derogation paragraph in the STW Chapter VIII, Section A-VIII/1.4. It was agreed that this paragraph went against the work to reduce fatigue and was therefore removed. This action was also recognised at the following meeting of the Maritime Safety Committee.

A number of papers have now been submitted, with the purpose to include new possibilities and means of deviating from the main rule set out in STW Chapter VIII, Section A – "Fitness for duty", the main rule providing for 10 hours of rest a day and 70 hours of rest a week.

IFSMA is not supportive of any of the submissions as they will all have an increased negative effect on fatigue and therefore also on safety.

IFSMA urges the IMO member states to focus on safety and prevention of further fatigue to seafarers, particularly with regard to watchkeeping personnel.

Action taken

IFSMA strongly followed the position made in this statement at the Diplomatic Conference on the STCW review.

Other key activities undertaken by IFSMA

The Industry Lifeboat group

The IFSMA secretary general attended several Industry Lifeboat group meetings since the last AGA which were held to prepare for a number of IMO Inter-sessional Lifeboat meeting and subcommittee meetings leading up to the MSC Committee meeting to be held from11 May 2011.

These meetings have, so far, been frustrating because in spite of the technical expertise that has been used to present our argument that on-load release hooks can be unstable and dangerous, and also the unanimous industry support, many administrations do not wish to change the status quo.

Our concern may be briefly summarised by noting that the guidelines still do not require assessment of a release hook to be 'stable in the closed position' or otherwise provide sufficient information regarding a 'design review' and that consequential amendments to Solas and the LSA Code were not considered.

With the findings on hook stability in the ILG study – which were ignored by ISWG – and this further failure of a supposed new approach, IFSMA members may wish to insist that we return to off-load release, at least on ships where painters take the load that caused the problem on *Alexander Kielland*. The industry did not have this problem with off-load release. It involved a certain discipline for detachment. That is admitted, but one can still see that on the boats that remain with it, crews are happy to use it – the same crews that manufacturers regularly claim are incompetent.

Ecdis training

IFSMA participated in the Nautical Institute meeting on 28 February 2011 to discuss serious concerns about ecdis training. After an open discussion of the current situation it was agreed that there is wide confusion between ecdis and ECS, and the term ecdis is often used to describe generic electronic chart systems.

There is wide confusion over the requirements and provision of ecdis training, particularly with reference to generic training, type specific training, the length of a course, the use of CBT, the role of the IMO Model Course 1.27 and the need for assessment.

There have been a number of accidents and incidents where the use of electronic charts (ecdis or ECS) were a contributing factor, and that without improvements the rate of such incidents could be expected to rise as greater use of these systems takes place.

Good quality generic training is essential for all ecdis users, and the better that generic training is, the easier and quicker type-specific familiarisation training needs to be.

- mariners should receive generic and type-specific training before becoming officers of the watch where ecdis is the primary means of navigation
- much of the confusion and complexity of ecdis can be attributed to the plethora of designs and models. A standardised or S-mode of operation in the future would be beneficial. It is important to support current IMO training requirements but beneficial to identify commercial benefits for improving training. Other points raised were that it is common to find watch officers who are not familiar with the use of ecdis/ ECS on board their ships. It is unreasonable for pilots to be type specific trained for all models of ecdis.

Manufacturers should be encouraged to provide better familiarisation material for their units, and the

NI familiarisation checklist could become a standard template for all manufacturers to use. Confusion was further aggravated by different interpretations of performance standards, and a simple type-approval system based on commercial demand should be considered. Inspectors and auditors should have generic ecdis training in order to effectively assess the crew's ability to use ecdis. Even on ships with ECS or ships using ecdis but not as their primary navigation aid, generic and type-specific training were recommended, and implied under the ISM Code. Familiarisation training was essential for all essential bridge systems before an officer can stand watch. ECS training is essential for all ships fitted with ECS, including those under the 10,000 tonne limit for mandatory ecdis. Effective student assessment was a key aspect of any ecdis training, and the assessment of instructors should be considered as well.

IFSMA has joined the NI task group for continuing discussions to:

• establish best practice for conducting generic ecdis training in support of the competencies identified in STCW (2010 Manila Amendments) and IMO Model course 1.27, including issues of length of training, training methods and assessment

• establish best practice for achieving effective familiarisation for type-specific systems

• establish best practice for the implementation of ecdis (and ECS systems where appropriate) on board and for the continuous quality management of training provision and crew competence

• establish best practice for soliciting and managing operational user feedback for the training and use of ecdis

• identify any design or regulatory issues that may need addressing for improving the effectiveness of ecdis in the future.

E-navigation

These ongoing developments are being discussed at the IMO subcommittee on Safety of Navigation (NAV), although there are other industry groups holding meetings on this subject.

Further significant progress on IMO's e-navigation strategy implementation plan, including the identification of e-navigation user needs, has been made by the subcommittee on Safety of Navigation.

The vision behind the e-navigation strategy (which has been developed in co-operation with the subcommittees on Radiocommunications, Search and Rescue (COMSAR) and Standards of Training and Watchkeeping (STW)) is to integrate existing and new navigational tools, in particular electronic tools, in an all-embracing transparent, user-friendly, cost-effective and compatible system that will contribute to enhanced navigational safety (with all the positive repercussions this will have on maritime safety overall and environmental protection) while simultaneously reducing the burden on the navigator.

The user needs identified include shipboard user needs and priorities; shore-based user needs; search and rescue authority user needs; and a list of existing systems and new communication technologies supporting user needs.

The subcommittee also endorsed a functional architecture concept, which has been developed to provide a framework for ongoing work on e-navigation on the basis that it will be continually updated.

Criminalisation

Sadly the guidance on fair treatment is being ignored by many states. For that reason, IFSMA launched its Master Mariner Protect benefit scheme in April 2011.

At the keynote address to the congress of the Australian Master Mariners your secretary general was able to explain this scheme and it received a warm welcome. Time will tell but at least IFSMA has delivered something to its members in response to this continuing problem. This is a plan that truly will help or, to quote a television advertisement, it does what it says on the can!

Attendance at IMO meetings

IFSMA has attended every IMO committee and subcommittee meeting held in London since our last AGA but space does not allow this report to discuss all the details of these meetings. Suffice it say that IFSMA has a strong team of delegates who represent the shipmasters well.

Conclusion

The above only highlights the main activities that I feel are of interest to our members. There is an immense amount of work that goes on in the background at IFSMA HQ, and for this I must thank Paul Owen and Roberta Howlett, who tirelessly keep things running smoothly. Finally, in my penultimate year as Secretary General, I would like to thank your Executive Council members who have supported me and will now be seeking my replacement, who will find the role both challenging and rewarding. ***IFSMA***

Cross-cultural competency through education and training

by Jim Parsons, academic director, School of Maritime Studies, Marine Institute, Memorial University, Newfoundland, Canada

In an effort to address the omnipresent reality of cultural and national diversities in the maritime workforce, as well as the current status and trends regarding cross-cultural training in maritime education and development of training systems, this research methodology involved:

- a review of international regulatory guidelines specific to cross-cultural competence
- an analysis of shipping companies' websites' content regarding the implications of career opportunities to the relative need for cross-cultural competency of future maritime professionals
- a curriculum analysis survey regarding the state of cross-cultural education
- a roundtable discussion that took place at a Maritime Human Resources Conference organised by the Company of Master Mariners of Canada (Marine Institute, St John's, Newfoundland) and feedback from a minisurvey of attendees at two conferences (the IAMU Annual General Assembly in Busan, Korea, and the International Maritime English Conference in Alexandria, Egypt)
- a field survey comprising six focus groups, i.e., three at the Marine Institute (MI), two at Maine Maritime Academy (MMA) and one at John B. Lacson Foundation Maritime University (JBLFMU).

The literature review among licensure documents, maritime labour-related regulations and other accepted industry documents showed that currently no maritime international regulatory body specifically requires cross-cultural skills for current and future maritime professionals. However, there is a strong inter-relationship between the level of quality of offered services by a ship operator, and the concern on cultural awareness, cultural sensitivity, interpersonal, diversity and negotiating skills. None of the IAMU member institutions that responded to the curriculum analysis (47 per cent) identified courses entitled Cross-cultural competency. The findings clearly showed that there are numerous courses which may address culture's effects, and cross-cultural and national diversity. However, this is not to say that this constitutes training. Rather this is mostly passive learning. The websites and career-links analysis revealed that almost half of the companies' sampled – shipowners, managers and operators – show that cross-cultural competency appears to be a human resources' competitive advantage over the long term, a finding that has significant implications for maritime training and professional development over the long term. Roundtable attendees unanimously supported the idea that cross-cultural competency was essential to the 'arsenal', so to speak, of maritime professionals. As

for the conference participants, a minisurvey showed that 97 per cent supported the idea that development of cross-cultural competency for present and future maritime professionals is important, if not vital.

Convenience samples assembled for focus groups 1 and 2 at Maine Maritime Academy in Castine, Maine, USA, supported the idea that cross-cultural competency should be integrated throughout the curriculum, to varied extents, and not just for the licensed programmes. There was no support for a single course dedicated to cross-cultural competency training for maritime professionals. Rather, both FG1 and FG2 supported an infusion of cross-cultural competency across the curriculum and to varying extents. Even if existing courses are factored into cross-cultural competency in their existing form or adapted through collaboration, the need for an "international perspective" regarding the issue of cross-cultural competency was emphasised. Both FG1 and 2 stressed the importance of stereotyping avoidance and authoritative country expertise. Training needs identified included, but were not limited to, attention to education content pieces such as protocols for interaction and decision making, education about stereotyping and stereotyping avoidance, gender roles, cross-cultural perceptions of gender roles, reporting relationships, world religions, dietary practices, culture's influence on teamwork and social interaction processes, job roles and perceptions of personal space.

Challenges to implementation might be mitigated through partnerships with private sector and not-for-profit agencies with diverse cultural and national constituencies and workforces. Convenience samples assembled for focus groups 1, 2 and 3 at the Marine Institute in St John's, Newfoundland, Canada, supported the idea that cross-cultural competency should be integrated throughout the curriculum in a staged and phased approach. The training needs to be offered to everyone, should be commenced early and continued throughout the professional progression and development of the individual. The topic of cross-cultural competency was generally considered to be very broad and diverse, and consequently was not considered suited for delivery in a standalone, single-course offering. Another consensus among the three groups was the need for highly skilled, experienced and qualified resources for the delivery of training. It was also noted that the measurement or evaluation of cross-cultural competency will be a significant challenge given the global complexity of the topic. Unless the students can experience cultural diversity, it will be difficult for the student to truly understand cross-cultural differences and to remain cross-culturally competent. The same will be true for a faculty tasked with the development and provision of the training. How will they stay current when physically stationed in a maritime university?

Finally in the focus group at the JBLFMU show in the Philippines participants generally agreed that there is a significant need for cross-cultural training and skills among present and aspiring seafarers. Cross-cultural working environments are unavoidable for those who are and will be in the seafaring profession. Therefore cross-cultural competency was deemed to be extremely necessary, as it ultimately optimises seafarers' efficiency, effectiveness and productiveness in the practice of their profession. Further, there was consensus that this research on cross-cultural competency could potentially pave the way to alleviate social discrimination among seafarers and other maritime personnel, as well as create mutual understanding among the crew and officers on the sailing vessel. This is not to say that there are not challenges to be faced in the provisional of cross-cultural training to seafarers. ***IFSMA***

CCUL.COMPET

IAMU 2010 research project, summary report, December 2010 by the Fisheries & Marine Institute, Memorial University, Canada (contractor) and James R Parsons (research co-ordinator)

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Materials and data were obtained through the support of the International Association of Maritime Universities (IAMU) and The Nippon Foundation in Japan

Piracy and armed robbery against ships: Time for a policy review?

The time has come to seriously consider assistance such as from regular forces or armed private security guards and to focus on how to enable this to happen in a responsible way, says Marcel van den Broek, Nautilus International

The present IFSMA policy on piracy and armed robbery, as described in the 2009 IFSMA Policy book, strongly opposes the idea of arming ships either through weapons that seafarers can use or onboard armed forces. This policy has been reconfirmed by IFSMA resolution 1/2010 (AGA36), in which the organisation restates its position that under no circumstances should crews on board merchant ships be armed or any armed guards be taken on board.

Since the adoption of this part of the policy and its subsequent reconfirmation during the 2010 AGA the piracy and armed robbery issue has further evolved, especially in the waters infested by Somali pirates. Most likely as a result of successful naval tactics in and near the Gulf of Aden these pirates have quickly adapted their modus operandi, moving to new and ever more dangerous business models.

The new strategy of the pirates is principally based on moving their activities further out to sea, thus expanding their work further afield to such an extent that protection by naval forces becomes unrealistic. The pirates use captured merchant and fishing vessels as so-called mother-ships to successfully extend their range. Moreover the use of these often large vessels enables them to continue to raid other vessels during the monsoon, a period when piracy activities are traditionally low due to the limited abilities of the skiffs that were, until recently, commonly the sole means of attack.

These new tactics are extremely successful and painfully highlight the limits of the power of naval forces and the international community. The new tactics of the Somali pirates have already been given the title 'the ultimate business model'.

These new tactics have new and severe consequences for those seafarers who have to sail the infested waters. In the 'good old days', when the pirates could reasonably only be expected to show up in and near the Gulf of Aden, sailing those waters was stressful and dangerous but at the same time orderly in a strange way. The

number of days that the crew had to be alert for piracy attacks was limited; fast vessels with high freeboard had little to fear; naval patrols were relatively close by; and, if all went terribly wrong and the ship was hijacked, the vessel could be transferred to the Somali coast in anticipation of the arrival of the ransom money. In almost all cases the seafarers could return home safely, where they, after receiving proper medical assistance, could pick up their lives again. The new situation however, is completely different.

The new danger area has expanded tremendously and with that the number of days the vessels have to sail within the area. The new area is too extensive to be protected by naval forces and therefore the vessels and their crews are on their own. Due to the use of mother-ships there are no longer moments of relative quietness. In principle all types of vessels can be hijacked successfully. Moreover as hijacked vessels are now often used as mother-ships, the hijacked crews of those ships are far more uncertain about the moment of their possible release. However, what causes most concern is the fact that the Somali pirates have started to treat the captured crews far more cruelly than in the recent past.

There's more and more evidence that crews are being tortured physically and mentally, and that an increasing number are being killed. Moreover the increasing willingness of naval forces to storm hijacked vessels is on the rise, and with that comes the chance that hijacked crew members will get killed in exchanges of fire between the pirates and naval forces or in retaliation by the pirates.

To cope with the new situation, shipowners are seeking additional protection for their vessels and crews. They increasingly turn to their flag-states for naval protection. This is often unsuccessful as even the willing flag-states and/or their coalition partners are unable to protect the vast number of vessels in the enormous area concerned. As a last resort many shipowners now turn to private companies that offer (armed) security guards to be placed on board the vessel and/or to accompany the vessel with one armed patrol vessel or more. All these options are currently not in line with IFSMA's policy.

Nautilus International is of the opinion that in light of the newly developed situation, it would be wise to reconsider whether the present IFSMA policy is still robust enough to protect our members in the best possible way. Is it the best policy for dealing with the new tactics used by the Somali pirates? Is it the best policy for dealing with the new tactics of naval forces? Is it the best policy in a situation where more and more flag states are allowing the use of armed private security?

One of the most strongly voiced arguments within IFSMA against the armed protection of merchant vessels is that the use of firearms will lead to an escalation of violence and subsequently to a higher number of casualties among merchant seafarers. But does this old, conventional wisdom nowadays also apply to the new situation in waters infested by Somali pirates? Their standard tactic is to empty their machine guns and RPGs on merchant vessels, even the ones that have no arms on board at all. Subsequently, once they have hijacked a ship, they often use violence against the defenceless crew. Crews that lock themselves up in so-called citadels as their last means of self-protection often become the victims of the pirates' outrage once they have successfully gained entrance to the safe room.

Conclusion

The situation for seafarers sailing the waters infested by Somali pirates has changed tremendously since the end of 2010. The area covered by the pirates has now expanded to such an extent that realistically, in most cases, the chance of receiving assistance from naval forces in encounters with pirates is practically zero. Moreover the Somali pirates have adopted new strategies that make all vessels vulnerable to their attacks in various degrees and year round.

Seafarers now really have to fear for their lives since the pirates have become brutal in their approach towards them and because armed forces increasingly tend to storm hijacked vessels, a policy which can easily lead to seafarers getting shot in the exchange of fire with the pirates or their retaliation.

The time has come to take back the initiative. IFSMA should be concentrating its efforts more on a policy that deals with the means to really enable seafarers to keep the pirates away from their ships and to really protect them from getting shot at, humiliated, tortured or killed.

The time has come to seriously consider the assistance of regular forces and/or armed private security guards and to focus all our knowledge and capacity on ideas that enable this to happen in a responsible way without our shipmasters getting criminalised and/or prosecuted. ***IFSMA***

Piracy and maritime terrorism: a two-headed Hydra?

by Dave Mugridge, independent maritime security consultant, research fellow, Dalhousie University

Questions about possible maritime links between terrorist and criminal groups have resurfaced following the rise of Somali piracy and the unconnected Mumbai attacks in December 2008. Within the context of a growing criminal exploitation of the world's oceans, this paper will attempt to ascertain the nature of this strengthening and apparently symbiotic relationship.

The evident and well documented deterioration in maritime security reflects a general malaise in society's appreciation of its importance to both the global economy and strategic environment, particularly at a time when terrorism could be said to have entered a new phase of methodology in its attacks on non-combatants. The potential solution to these multifaceted problems would appear to lie in developing a co-ordinated, coherent and comprehensive approach (C3) rather than the standard myopic military jerk of the knee. Gaining political acceptance is essential if operational cross-pollination from related fields such as counter-insurgency, international development and law enforcement can be brought together to aid the restoration of good order.

In terms of methods of operation the practitioners of maritime criminality and terrorism share many common characteristics. Analysis of this should in turn aid the international response but, to date, what we have witnessed has been misdirected and avoids the many lessons learnt from fighting irregular opponents in modern-day counter-insurgency. These disparate terrorist and criminal forces are unconventional in their organisation, financing[1] and campaigning. They are small in number and, with the exception of the likes of Al-Qaeda or large-scale narco-terrorist organisations, focus on local or regional issues. The singular and fundamental issue that separates their political and criminal activities is the presence of ideology.

The maritime economy's multifaceted vulnerability to both terrorism and criminality should not come as a surprise to the readers of this journal. After all, sea going vessels carry 80 per cent of world trade by value and 92-96 per cent of trade by volume. This compares with less than 1 per cent by air. Since the end of the cold war we have seen the seemingly irresistible development of commercialism's greatest revolution – globalisation. This has in turn fuelled an incredible rise in both the volume and value of maritime trade, which allows terrorists and criminals to operate with virtual impunity as mere background noise.[2]

This environment has seen the rise of both piracy and maritime terrorism. Our collective failure to deal effectively with either should be the concern of all because, unless enduring solutions can

be implemented, we are likely to witness their proliferation across the globe. Their spread will be based on growing global poverty, failures in national governance and a constant stream of targets of opportunity. The obdurate incidences of piracy off the Horn of Africa and into the Indian Ocean suggests the limited success of the conventional military response, the increased sophistication of these organised criminals and the growing recognition that piracy will continue unless outside authorities impose some degree of stability and effective security over Somalia and Yemen.

Tangible and enduring improvements in security and stability off the Horn of Africa are far from likely in the immediate term. The region reflects the ravages of civil war and the failure of the international community to intervene to stop this travesty from getting out of hand. Islamist and Al-Qaeda franchisee group Al-Shabab has enjoyed a successful military campaign but lacks widespread indigenous support for its political and religious agenda. On the coast, fishing clans are reluctant to turn their backs on the spoils of piracy and kidnap to follow a rule of law established by a transitional government of diaspora academics and domestic warlords who would undoubtedly return them to grinding poverty. As of March 2010 they held over 700 hostages and 30 ships, an unimaginable scenario in any other global industry.

My contention is that as time has progressed we are now on the cusp of seeing a strengthening of these links and a potential nexus is either upon us or is imminent. There seems little more to divide these groups than the very radical ideology that separates a terrorist from the rest of mankind. Yet the factors that could unite them are being fused at an alarming rate by current world events and demonstrate little sign of abating. Terrorists are no strangers to criminality, and criminals are not strangers to the use of terror. So I suggest neither side has far to walk on their respective philosophical rendezvous. The current situation is in fact a time in which the "mutation" that Charters wrote of could in fact commence the final descent towards the "revolution in terrorist affairs".[3]

Now is not the time to turn our collective backs on maritime-based terrorism or criminality which threaten to interrupt the vital circulation of goods or raw materials, or their exploitation of the inability of failing nation states to police their territorial waters at a time of global weakness. What is required is comprehensive, coherent and co-ordinated (3C) activity that transcends both nation state and international body.[4]

Tackling the source socio-economic problems in concert with direct military and judicial delivery is reflective of the 'comprehensive approach' being pursued hesitantly in both Iraq and Afghanistan. With perhaps the exception of the forward-leaning examples of the US Navy (USN) and Royal Australian Navy (RAN) few maritime security organisations have taken advantage of learning from other people's mistakes, particularly in looking towards their land-based military cousins for divine inspiration in solving these problems.[5] Even in the USA and Canada the pace of security co-operation in the maritime domain lags behind other well established aspects of mutual defence and protection.

As I have argued publicly, the multitude of modern international laws and conventions which were designed to support maritime security has proved to be incoherent in the face of modern security challenges.[6] Based upon outdated concepts, a lack of international co-operation over their enactment and outright failure on the part of the international

Missions accomplished, but military forces are stretched

community to deal effectively with failed or rogue states, it has left many commentators questioning their validity.[7] These problems have forced some states like the UK to establish bi-lateral agreements with similarly minded countries in problem regions to prosecute those involved in piracy. The International Ship & Port Facility Security Code (ISPS) (2002) was supposed to provide the maritime world with a comprehensive legal framework to combat both terrorism and criminality upon the high seas.[8] Its stringent obligations are designed to guarantee the safety of crew, cargo and society from terrorist or criminal acts. Yet this stove-piped bureaucratic response will not address the many root causes of maritime criminality or deter radical non-state terrorism upon the high seas.

Somali piracy's pre-eminent position as the most newsworthy maritime security issue has come about because of the recent number of 'spectacular' attacks aimed at Western merchant shipping. Despite the efforts of the UN and a number of maritime powers they have continued to attack, seize and ransom vessels in the glare of the media spotlight. The IISS published an excellent article which examined the root causes behind its rise and its growing sophistication.[9] There are a number of socio-economic and political reasons behind this, not least the failed nature of the Somali state, the loss of lucrative fishing grounds and the rise of warlord-ism. What is unclear is the level of co-operation that exists between the pirates who operate from Somali ports and the terrorists who have found sanctuary there.[10] What is clear is the growing sophistication of their operational methodology that now includes money laundering, swarm tactics, encrypted communications, developing competence in weapons handling and

an ability to operate from mother ships well into international waters. Western intelligence sources within Somalia are questionable at best. Despite ideological and religious differences the potential scenario of Al-Qaeda or Al-Shabab assisting pirates and vice-versa cannot be discounted.

Any new multidimensional approach will require additional political capital if it is to stand a chance of being successful. The western world is now vulnerable to any escalation in terrorist violence, and its ability to combat serious criminal activity remains questionable. Throughout history global financial crises have always seen a deterioration in national and personal security, and today is no exception. The need for flexibility in our response to security challenges has never been greater. Our ability to respond conventionally is overstretched and becoming less politically appealing, whereas a more comprehensive policy could offer politicians the ability to bring together the full force and legitimacy of whole government with new-found civilian partners within the shipping industry. The ability to learn lessons from the Iraq and Afghan campaigns would pay dividends in the arena of maritime security and certainly be more appropriate than looking for inspiration in a reincarnation of Lord Palmerston's gunboat diplomacy. ***IFSMA***

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1. Heidi Johnson, masters candidate at Dalhousie's CFPS (2007), pp1-21
2. Peter Lehr, professor at St Andrew's University, Scotland (2007), pviii
3. David Charters, professor at Greg Centre University of New Brunswick, in Charters & Walker (2004), p17
4. P Lehr (2007), pxi
5. J Michael Waller in Serviam (Nov/Dec 2008), p7
6. Author, research fellow at Dalhousie University (2009), maritime security seminar CFPS 29/01/09
7. Martin Murphy, fellow at Corbett Centre UK, in Peter Lehr (2007), p155-183
8. ISPS Code (2003 Edn), piii
9. Jason Alderwick, naval analyst at MBDA, London, formally of IISS (2009)
10. Ken Menkhaus, associate professor at Davidson (2008), pp21-22

What about the human suffering caused by pirates?

by Captain Bjorn Haave, individual member, Vice President, IFSMA

Seafarers are not soldiers. They are ordinary people doing a job like any other worker and should have the same right to be protected against criminals at their workplace as any worker ashore.

During the past few years piracy has become a nightmare for seafarers and their families. 'Everybody', including the UN, is working to protect ships from being hijacked, but who is working on the protection of seafarers' health and sanity after they have been released from hostage situations?

We know that seafarers are being treated very badly whilst being held hostage. We also know that they can face a lack of food and water. Seafarers have been killed both while their ship has come under attack and while being held hostage.

This is something that gets little coverage in the news unless it is a pleasure craft that has been taken. We have seen an English couple taken hostage, the brutal murder of Americans and now the taking hostage of a Danish family.

While I have sympathy for the situation these people find themselves in I do not understand why the yachtsmen sailed into an area that is known to be infested with pirates. The people on the yachts were all aware of the piracy problems in the Indian Ocean and Somalian waters, so why on earth did they risk their lives and sail into the area? That is a mystery to me. I am sure that the people themselves have been wondering why they took such a decision. The main thing is that they get a lot of attention from the press. That is good, but when it comes to seafarers who are out there to make a living for themselves and their families, one rarely reads a word about their situation. No one seems to care when it comes to merchant seafarers.

I do think it important to mention that the only way for the criminals to get their money is to take the ships with the crew on board. Without the crew no money will be paid, so it is not the ship and cargo that the criminals are after but the people on board. The funny thing about this is that the insurance companies do not pay a ransom for a crew but for the release of a ship and its cargo.

At the moment more than 800 seafarers from a number of countries are being held hostage by criminals from Somalia – criminals that the world now likes to call pirates. These criminals are nothing but a gang of well armed murdering bandits who take merchant seafarers hostage to make money. They are no better than bank robbers or kidnappers anywhere in the world. Yet international society finds it very difficult to agree on the way in which to solve the problem, and in the meantime more merchant seafarers are being taken hostage.

The worst part of hostage taking, in addition to the risk the seafarers take when they enter such waters, is the uncertainty of their fate after being taken.

I would like to call upon international society to start thinking of the stress and fatigue the seafarers live with and of the seafarers' families and friends. We know that hostages are given no way to communicate with their families, or vice-versa. A hostage situation can last a long time, a period

during which neither the seafarer nor the seafarer's family has any idea of the other's general wellbeing. Worse still, the family ashore won't even know if the seafarer is alive.

The world at large seems to carry on as usual. No one seems to care about how important seafarers are and that they are essential for the successful transportation of goods around the world. Even those people who should know better seem to shut their eyes to the seafarers' situation. What do shipowners, insurers and administrations around the world do in the aftermath of such a situation? Do they follow up with the seafarer to make sure that he or she will be able to take care of themselves and their families? Do they know if the seafarer is going back to sea? Do they really care?

I am concerned that there will be many seafarers and their families who will suffer great mental stress in years to come and I am also sure that nobody will do a thing to help if we cannot get the public's attention regarding this situation. A study carried out in Bulgaria last autumn indicated that as many as 50 per cent of seafarers who had been held hostage did not go back to sea. Some of them felt forced to go back due to their economic situation but one can also expect some to leave the sea in the near future due to the post-traumatic stress caused by the hostage situation they experienced.

This is a very short paper and it is meant to be. It is just an attempt to bring forward what I think is the worst effect of this criminal behaviour called piracy.

My question to you my fellow shipmasters is this: How do we put the spotlight on the human aspect of piracy and hostage taking? How do we work to protect seafarers and their families from the mental stress they suffer in the aftermath of a hostage situation? Can we do anything more than just talk about it? ***IFSMA***

Hostages can suffer post traumatic stress. Will seafarers get the counselling they need?

Counting the human cost of piracy

Maritime stakeholders have expressed deep concern over the lack of public outrage at the physical and psychological damage seafarers suffer as a result of violent attacks and kidnappings in international waters at the hands of Somali criminals. To better understand this issue, the Oceans Beyond Piracy Working Group unanimously called for research into the true magnitude and human impact of these crimes.

A review of piracy narratives from multiple public and private databases identified several different types of experiences that piracy survivors might have, with different types of dangers associated with each. These categories include:

- seafarers attacked (affecting up to 4,211 seafarers in 2010)
- citadel survivors (342 seafarers)
- hostages (1,116 seafarers)
- human shields or forced collaboration (516 seafarers)
- hostages abused or tortured affecting (up to 461 seafarers).

Seafarers attacked

Numerous ships and crews have suffered attacks, some multiple times, and increasingly the pirates are not intimidated by armed security guards, as excerpts from this incident report from an attack on Al Nouf shows: "The pirate action group (PAG) fired RPGs and other automatic weapons at the tanker and attempted to board her... Their armed security team engaged in a firefight that eventually led the PAG to break off their attack. Three crew members were injured by pirate gunfire, one seriously, and the vessel sustained damage from the RPGs and automatic gunfire."

Citadel survivors

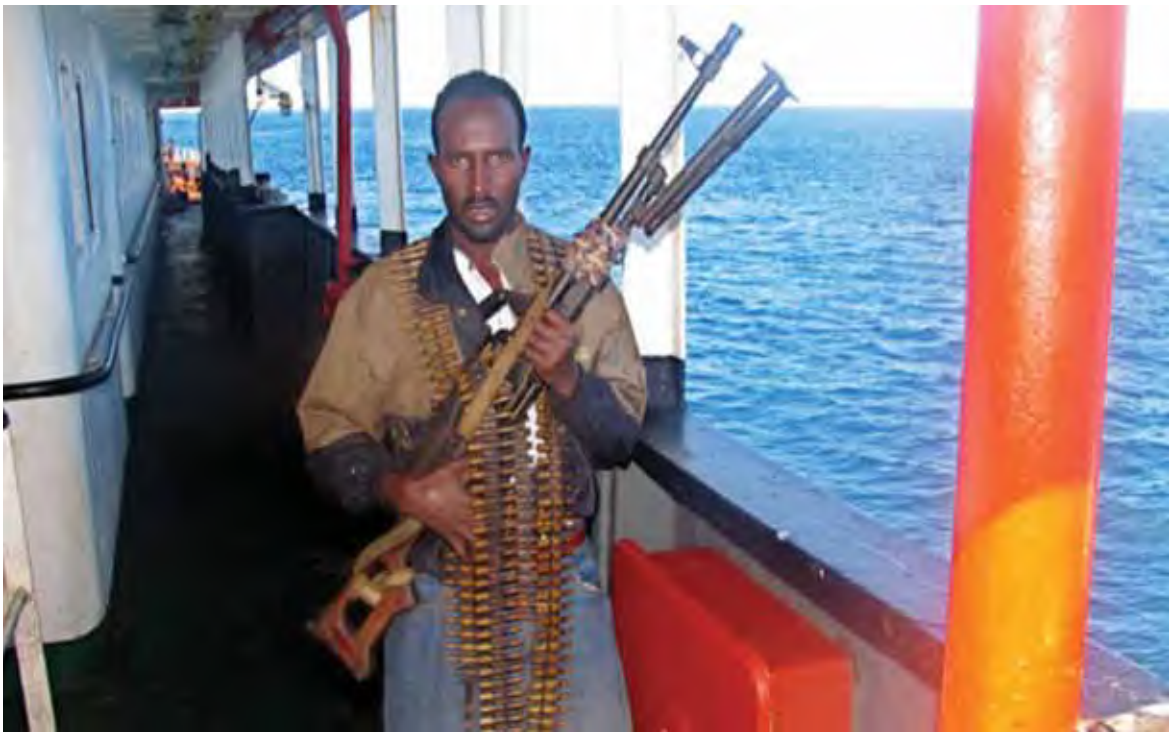
Citadels are intended to provide seafarers with a refuge when pirates board a vessel. While these do provide protection, seafarers have endured hours or days of persistent attacks while sheltering in them. Major General Buster Howes reports that pirates have fired RPGs at the doors at close range, used plastic explosives, and even set three ships on fire while terrified crews huddled below decks. An account of the 30-hour siege of Arillah-I gives a more personal indication of the terror: "They started fires, they burned ropes and they put burning wood on the fans that were bringing in air. They wanted to suffocate us, they wanted to murder us and take control of the ship and take it. They went crazy."

Hostages

Even in the best case, hostages are held for months without proper nutrition, access to medical care or interaction with their families. This is reported to have led to the deaths of some hostages, both through malnutrition and suicide. The captain of Iceberg 1 described their experience this way: "Diseases have appeared among crew members, some have haemorrhoids, one has lost his eyesight and another has serious stomach problems… The water we have is unclean and we have only one meal a day, boiled rice, that's it. The crew is suffering physically and mentally."

Human shields or forced collaboration (affecting 516 seafarers in 2010)

The crews of some captured ships are forced to continue to operate their ships as the pirates use them to capture others. Even more terrifying, some crew members are used as human shields



Piratical attacks are increasingly characterised by physical and psychological abuse

in attacks on other vessels. Kim Dae-Geun, captain of FV Keummi 305, spent four months in captivity, during which his captors forced him into participating in four hijacking attempts: "Steering the boat to capture other innocent vessels was really more painful than death because I myself was experiencing hell under the pirates. But I had no choice because they threatened to kill me instantly if I didn't do what I was told."

Hostages abused or tortured (affecting up to 461 seafarers in 2010)

Press reports and other sources indicate that as many as 21 of the 53 hostage incidents in our database may have involved physical or psychological abuse or torture. "There have been regular manifestations of systematic torture," according to General Buster Howes. In the words of Mr Dangwal, an engine technician from Marida Marguerite: "They took me on deck one day and tied my hands and my legs behind my back for two hours, and also tightened a cable around my genitals. When I screamed, they tightened it more."

Initial findings

The study's initial findings indicate that thousands of seafarers are subjected to gunfire, beatings, confinement and, in some cases, torture. In most settings ashore, these types of crime would be reported in a systematic and consistent way, allowing the public to grasp the significance of these crimes. However, the unique challenges of co-ordinating police activities and public affairs in international waters, and the multinational nature of crews and shipping concerns have resulted in inconsistent reporting of these violent crimes. The economic cost of piracy is now well known. This study makes clear that the human cost may be less known, and staggering. ***IFSMA***

Oceans beyond piracy project

One Earth Future (OEF), a private foundation, is committed to seeking effective solutions to emerging governance challenges. OEF's first project is a strategic commitment to the Oceans Beyond Piracy Project.

Oceans Beyond Piracy seeks to engage and mobilise stakeholders to develop a global response that deals comprehensively with deterrence, suppression and prosecution.

www.oceansbeyondpiracy.org

The Ecdis revolution

Ecdis technology will be of little benefit in enhancing navigational safety if the watchkeeping officer is not fully trained and competent in its use, says Philip Wake, Chief Executive, The Nautical Institute

A revolution is a fundamental change in power or organisational structures that takes place in a relatively short period of time, according to Wikipedia. We're not trying to overthrow the establishment here but we are making a fundamental change to the way we navigate vessels. The electronic chart display and information system (ecdis) concept is a total change from using paper charts and the transition from paper to electronic charts will pose a major challenge for the industry, particularly for those who have no electronic chart experience.

Mariners should be aware that ecdis is more than just a digital version of a paper chart. Important bridge procedures are significantly affected, and these require careful analysis and consideration if ecdis-assisted groundings are to be avoided. Sadly they have already started to occur. It is important that traditional navigation skills are not lost and that navigators become confident in the use of ecdis – but not overconfident.

There is a danger that many bridge watchkeepers will increasingly trust without question what is displayed. The need for bridge watchkeepers to remain vigilant and to continuously monitor a vessel's position in relation to navigational hazards remains paramount, regardless of the electronic aids available.

Having an ecdis must not lull the mariner into a false sense of security. Ecdis is another electronic aid to navigation, albeit a very significant one, but it is not a substitute for observing good seamanship or for maintaining an effective lookout at all times during the voyage. By itself, ecdis is no replacement for a trained and experienced navigator. The benefits and limitations of electronic navigation must be understood by the navigator to enable ecdis to be used efficiently and safely.

To ensure the safety of navigation, the shipping community must acknowledge that watchkeepers' training and experience are critical factors in mitigating the risk of collisions and groundings.

However, ecdis requires a different way of thinking, and this cannot be picked up by attending an ecdis course lasting a few days. All of this new technology will be of little benefit in enhancing navigational safety if the watchkeeping officer is not fully trained and competent in its use.

Advice

When joining a vessel for the first time where navigation is by ecdis, mariners should:

- ensure that the system is an approved ecdis, i.e., that it is type approved, is approved by the flag state administration and always uses official hydrographic data – everything else is an electronic chart system (ECS) used for situational awareness only, and it is difficult to tell them apart; the vast majority of ships use ECS not ecdis
- be aware of the differences between official and unofficial chart data for use in the onboard system (many ecdis hardware systems are able to display unofficial data)
- ensure that there are clear procedures in place which take into account system limitations if

used during a watch; without clear procedures, mariners may assume that a non-ecdis ECS can be used for navigation.

Masters should:

• be aware of the systems on board and ensure that watchkeepers are familiar with restrictions and procedures for ecdis use

• ensure that training and familiarisation is carried out in accordance with STCW requirements and company procedures

• advise companies if the level of training or familiarisation is inadequate; electronic charts give the navigating officer the capacity to manage the entire voyage from route planning through to route monitoring and the ability to quickly plan alternative routes.

Two of the biggest differences between paper charts and ecdis are the size of the display and the symbology. Those used to a paper chart spread out on the chart table, where a glance is often enough to get an overview of the situation, may find the ecdis's smaller display off-putting. Good use has to be made of the zoom and scroll facilities to get the same overview. However, as a member of the institute's Sea-Going Correspondence Group (SGCG) puts it: "Watch officers can step onto the bridge and real-time data is there on the screen, ready to be interpreted. This is very convenient."

Symbols such those for wrecks and isolated dangers can change according to safety contour settings. For example, the MAIB report about *Pride of Canterbury's* grounding on a charted wreck said: "Lack of proper training in use of ecdis possibly led to the wreck being undetected. It is possible that the wreck was displayed but the ecdis symbol was misunderstood."

Ecdis is a system that is meant to help the watchkeeper to make informed decisions. It is not infallible nor a replacement for sound judgement. The watchkeeper should be aware of information overload when using ecdis, and set the display level accordingly.

Updating

When I was a navigator, chart corrections occupied a large part of my off-duty time, even after tracings were introduced. Chart corrections (or updating) with ecdis is carried out automatically by use of CD-ROM. However, there are critical steps needed to achieve an up-to-date ecdis database, and considerable time must be spent to ensure accuracy. Loading and updating charts vary significantly in complexity between manufacturers.

Error messages when the update is unsuccessful, or when a chart is in use and hasn't been correctly updated, can go unnoticed or be difficult to understand. The mariner can interrogate an ecdis chart on the details of the originator, edition number and status of updating, but again on some systems there is no obvious indication showing the operator how to do this. The information is there, it is just not in an obvious position.

Passage planning

Mariners developed a sixth sense for spotting potential hazards when using paper charts, and were actively engaged in situation awareness by the need to plot positions at regular intervals. Electronic systems are so sophisticated that potential problems may not be so obvious, particularly if either too many or too few layers are on display. The navigator must become familiar with the type-specific ecdis on board.

Ecdis provides a potentially invaluable asset in passage planning and monitoring, but mariners must be aware of the need to make use of the inbuilt check functions provided by ecdis when validating and approving the voyage. The MAIB report on the grounding of *CFL Performer* highlights this. The passage plan had been modified, but: "it is clear that this route was not adequately checked for navigational hazards either when planned or when being monitored".

This check for navigational hazards is not aseasy as it seems. Recently one of our staff was at a training centre where he was shown how one ecdis defaulted to checking the route at a scale not greater than 1:25,000, even when the scale in use was 1:10,000.

Passage monitoring

When using paper charts, the navigator is engaged in situational awareness by the need to plot positions at regular intervals. However, this requires the watchkeeper to spend considerable time at the chart table, plotting the position, assessing the direction of travel, estimating the course to steer and time at next waypoint, which also detracts from the watchkeeper actually looking out of the window.

When navigating using ecdis, bridge procedures

must be adapted appropriately. We have published a guide to best practice: *From paper charts to ecdis,* written by our technical manager, Captain Harry Gale FNI, with extensive input from the SGCG member. It should be on every bridge and required reading for all fleet managers as the required bridge procedures really are substantially different. The task of situational awareness is entirely down to the discipline of the bridge watch team and the watchkeeper should check the vessel's position by alternative means. A lack of discipline can lead to being caught up in other tasks and disengagement due to fatigue or over-confidence in the technology. Ecdis is a system that is meant to help the watchkeeper make informed decisions. It is not infallible nor a replacement for sound judgement.

The watchkeeper should be aware of 'information overload' when using ecdis and set the display level at an appropriate scale. The watchkeeper should also monitor the position source and have the navigational and area alarms set as appropriate. Manual plotting of lines of position is a requirement under the performance standards, and this can provide a quick check on the vessel's position as well as keeping the watchkeeper engaged in the process.

Conclusion

The experiences of those who have been using electronic charts for some time show its use will reduce the navigational workload when compared with using the paper chart. This will enable mariners to execute all voyage planning, route monitoring and positioning that is now performed on paper charts. The reduction in workload associated with navigating on paper charts, however, must be taken into account when implementing operational procedures. Failure to instigate the discipline of being alert and engaged in the process of ecdis navigation has proved to lead to distractions, complacency and, ultimately, accidents.

An officer newly appointed to an ecdis navigated ship should have completed a generic course and also a type-specific course. However, just as a check to help familiarise himself with the ecdis on board, the officer would be advised to use the familiarisation checklist, published by The Nautical Institute, in Dr Andy Norris's book *ECDIS and Positioning*.

The Nautical Institute has set up an ecdis forum so that mariners can share their experiences and problems. Please take part in it via our website: www.nautinst.org.

It is imperative that the shipping community acknowledge that the training and experience of watchkeepers are critical factors in mitigating the risk of collisions and groundings

Real-time underkeel clearance systems

by Captain Allan Gray, GM port operations/ harbourmaster, Fremantle Ports & Federal Master Company of Master Mariners Australia

Throughout this paper I will be referring to DUKC, a trademark of OMC, because Fremantle Ports has over 15 years' experience with this product as a real-time under-keel clearance system. However, this discussion is about real-time under-keel clearance systems in general, their application and the impact they may have on mariners.

Consider as master of a laden tanker you have arrived at Fremantle Ports with a draught of 13.8m. You were advised by your chartering department that this was the maximum economical draught for this period (whatever that means). You note that the channel you must pass through is only 14.7m at LAT. The pilot boards in good spirits, as they always do, and presents you with a report with a lot of numbers and a pretty graph and calmly advises you, "Captain, we are good to go as we will have a minimum bottom clearance of 25cm for the transit."

What does it all mean?

In this paper I would like to unravel some of the mystery. However, it is not my intention to delve into the science behind it all. I would like to start with touching on the extent to which DUKC is being used and its application in Fremantle. This will help to set the picture moving forward. We will consider the static methodology versus the DUKC methodology and the resultant outputs and what they mean. To close, I would like to consider both the benefits and limitations for the mariner and consider what we as an industry must do.

As you can see, DUKC is beginning to be more widely used but particularly within the Australasian area. Most ports in Australia are using it for export. However, Fremantle and Melbourne are utilising it for imports.

Fremantle Ports has two principal areas of authority: the inner harbour (containers, cars and break bulk) and the outer harbour (bulk cargoes such as grain, alumina, mineral sands, fertilisers and petroleum).

Three key channels exist:

- the Deep Water channel which was 15.2m but was recently dredged to 16.5m and 18m on the bend
- the Success and Parmelia channels at 14.7m
- the Stirling/Calista channel at 11.6m.

Fremantle ports operate DUKC in these three areas of the port. Recently experience with large tidal residuals required us to reduce the trigger points for operation of DUKC to zero tide. Real-time conditions are measured by three wave rider buoys, three wave poles (which measure wave and tide), two wind sensors, a met station and a current meter.

Coming back to our example of the tanker arriving at 13.8m, given current static parameters only two factors would be taken into account when determining under-keel clearance; the predicted tide and squat based on the speed envelope of the vessel.

I would question how many vessels consider with squat the impact of shallow and deepwater and bank effect. In many cases, from my experience, safety management systems on board vessels stipulate

UKCs are required to be maintained by company vessels either by a single quantitative figure, for example, 1.0m or percentage of draught, for example 10 per cent of draught. It is most likely the case that these figures are prescribed by the port in the port parameters. In many cases these figures have been based on past experience and generally apply equally to all vessels. They have been developed from either experience, gut instinct or good luck in that there has not been a grounding in the past.

So given the static parameters for Fremantle, our tanker of draught 13.8m would be faced with the following:

- Success and Parmelia channels static rule is 13 per cent of draught (November to April) 14 per cent (May to October)
- depth 14.7m
- transit time 30mins
- 15.6m depth of water required for draught of 13.8m, which would equate to a tide of 0.9m.

Static tidal windows: passage commencement windows . Window 1 open-close: 08:38, 25 March 2011 to 17:17, 25 March 2011. Window 1 open-close: 09:23, 26 March 2011 to 18:18, 26 March 2011.

However, this calculation takes no account of the fact that on this day tides exceeded predictions in the order of 20-25cm. This factor alone may have given our master a little more comfort for the transit but it should be noted that equally Fremantle experiences similar negative residuals which would have, on paper, closed out the vessel, and the master would not have been aware of it from his calculations.

The DUKC methodology takes into account the following;

- Surveyed depths taking into account survey tolerance and, if necessary, allowance for siltation
- actual tides recorded from tide gauges, i.e., astronomical tides plus or minus any tidal residual
- vessels draught
- squat given the vessel's speed envelope and channel profile
- reduction in UKC due to heel from wind, rolling or turns
- pitch, yaw and roll.

The resultant is the residual under-keel clearance, our 25cm.

So given the same tanker as previously discussed, we can see that on that day, given the conditions, the vessel would have achieved a window that would have extended to 2030 and reopened at 0600 on 26 March. This would have extended the operational window by around 3 hours either end.

However, reducing the speed to 8.5 knots through the Success and Parmelia channels would have provided the vessel a 24 hour window. In fact had the master known, could he have loaded the vessel to a deeper draught? We will consider that latter.

Let's consider more the DUKC output and what it means. The chart provided to the pilot and master is similar to the one shown. In this case it is for a transit through the Stirling channel. The bold lines are the limits and the lighter red and blue lines are the calculated results for the transit.

For a safe transit, two criteria must be satisfied. Firstly that the bottom clearance (BC), i.e., the minimum clearance between the keel and the highest point of the sea floor, allowing conservatively for all factors affecting UKC, must be greater than 25cm (PIANC guideline). Secondly the manoeuvrability margin (MM), i.e., the minimum clearance between the keel and the manoeuvrability-governing depth, allowing conservatively for all factors affecting UKC, is greater than 0.9m. The manoeuvrability margin ensures that there is adequate flow of water over the rudder to maintain vessel steerage. The general PIANC accepted MM is 0.9m. However, our experience with certain vessel types and sizes, such as the new-generation container ships and 48m beam tankers, has resulted in us modifying this limit to 1.0m and 1.1m, respectively, so as to ensure we have adequate water flow over the rudder to ensure manoeuvrability.

The chances of the actual BC or MM reaching the displayed values are remote. However, when considering the overall risk-mitigation strategy, it is assumed that there is an equal probability of the event occurring.

You can see from this chart that the controlling depth may be well to the side of a sector being considered but, as previously indicated, the point is given equal probability to any other point as to the likelyhood of approaching it.

Given that one of the factors to be considered in DUKC is vessel type and stability condition, I thought it relevant to provide an example of what this means. You can see here that I have two vessels: a container vessel and a tanker both at a draught of 13.55m, which have been modelled for the same transit. You will note that the gross UKC (GR) being depth plus tide minus draught, is the same for each vessel. However, the resultant BC and MM is quite different and in fact in the subsequent charts you will see that the controlling points for the transit are quite different. This fact is

important to consider as, from our experience, we quite often have agents and masters arguing that it is not right that a vessel of equal or deeper draught is able to transit a channel and they are not. It is also important to understand here that they have taken little account for the way their vessel will respond in the prevailing sea conditions.

I would like now to consider a couple of real-life examples that demonstrate this point.

The first is a tanker similar to the one we have been talking about in this paper. It had a draught of 13.82m, which was close to the maximum economical draught expected for the period, and tidal residuals were not significant. However, we could not find a window for the vessel.

The swell/wave conditions were on the beam and at a period of 15 seconds. Upon investigation it was discovered that the roll period for the vessel's loaded condition was coincident with the period of the swell, resulting in what may be deemed a synchronous roll. This meant that the vessel's turn of the bilge was approaching the BC depth for the transit.

The second example demonstrated where a squat container vessel would have been restricted from entry to the harbour because the pitch of the vessel resulted in the vessel approaching its BC depth.

During the period we had an extensive period of severe weather. Combined sea conditions were in the order of 7m and had been present for over 24 hours. The vessel's draught was only 11.6m and the Deep Water channel was at that time dredged to 15.2m. Normally a vessel would not apply for DUKC until its draught exceeded 12.2m.

In this case, due to the squat form of the vessel, the combination of roll and pitch from wave conditions and heel on turning at DWC 1 resulted in a close out. This is something we would not normally have expected but have validated over time. Again it had never been considered as a possibility because we were nowhere near a static situation.

So what's the challenge to the master?

There is a real probability that, given suitable weather conditions, the master could achieve increased loadings for the company. But, as you have seen, there is also the probability that the master could be delayed. For a master discharging in the port, what draught should they load, considering they are loading well in advance of known weather conditions? This is somewhat overcome by producing a table of maximum economical draughts for customers which are based on static calculations with seasonal corrections. These draughts generally allow for an 8 hour window per day based on average conditions.

The port often receives stability data which is transposed or is outside what would be considered the normal parameters, so how confident or competent are the ship's crew at producing validated stability information? The port has experienced a case in which one master falsely declared the arrival draughts at less than what they really were without understanding the ramifications of that action. Ensuring reliability and availability of sensors is critical to the operation. This is generally covered by back-up sensors and modelling of wave transformation from alternate sensors.

Despite all of this, the biggest challenge for the master is that they have no knowledge or training in real time of under-keel clearance systems. What should be done?

Firstly the real-time under-keel system needs to be recognised as an aid to navigation and appropriate standards established. I am not calling for anything new here, in fact considerable work has already been done over the past three and half years through the chairmanship of Terry O'Brien at the PIANC working group 54. I believe it is expected that a report will be provided by the end of 2011 or early 2012. This will ensure that the master can be ensured of common standards and reliability when faced with these systems. However, more importantly, the recognition of this system as an aid to navigation must ensure that mariners are appropriately trained to understand the mechanics of the system, its outputs and its limitations.

Ports utilise DUKC as a risk mitigation tool whilst customers in general benefit commercially from well planned loadings. The master, like the port, needs to recognise that DUKC or other real-time systems are available as a risk evaluation tool and in real terms provide a more defensible argument than the old static calculations. The difficulty will always be that the master is unable to see the tool before arrival and therefore the master's planning lacks the foresight of this information. Again I would highlight that only good training will put the master in a position of having reasonable expectations of the system output and that the master understands the need for supplying accurate and reliable ship stability data.

Product enhancements of DUKC, such as PPU and VTS monitoring in real time will further give the master confidence in transits. ***IFSMA***

Saving fuel by surfing on real-time ocean surface currents

Using oceanographic data from satellites and recommendations from experienced ocean forecasters, shipping companies can optimise their vessels' routes by Remi Boissel Dombreval

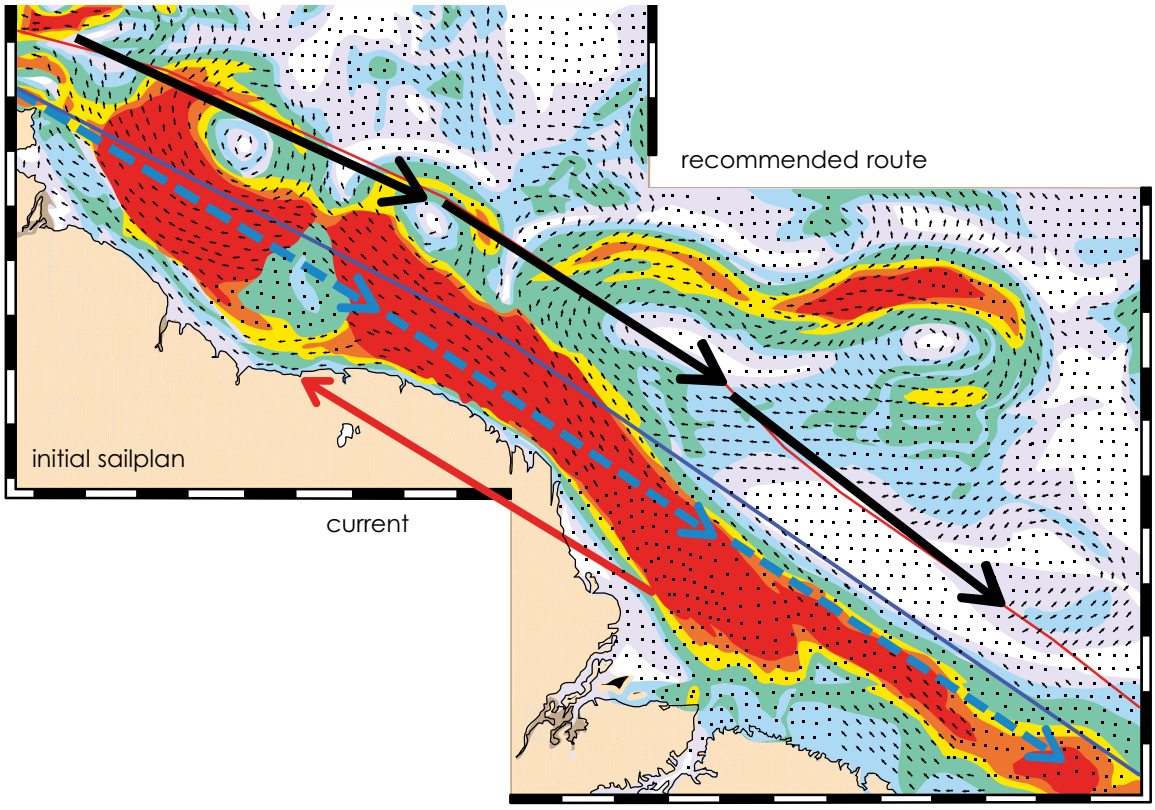
Until now, vessel captains only had information on monthly averaged surface currents to help them choose the best current veins. These monthly charts (called pilot charts) were created more than 30 years ago based on captains' observations while navigating on maritime routes. The information is therefore very sparse and not accurate. Nowadays, through the use of data from satellite altimeters, oceanographers have the required expertise to help captains to choose their routes based on favourable real-time currents.

Surfing on surface ocean currents allows vessels to go faster while navigating at constant power (constant rpm). It also allows a vessel to navigate at a reduced motor speed (reduced rpm) while meeting a required time of arrival. The use of real-time currents can cut times by 1-2 hours per day, leading to reductions in fuel consumption. Over the course of the year, these savings in time and energy have a significant impact on a company's bottom line and on the marine environment.

CLS (Collecte Localisation Satellites), a French Company specialising in satellite-based ocean services, is developing a new service relying on the knowledge of real-time and forecasted surface currents. Data derived from satellite observation (mainly of sea level, from Jason 1 and 2 and Envisat radar altimetry satellites) and ocean forecast modelling are used to calculate the best-current route, i.e., the quickest route to reach the arrival port. Input parameters supplied by the captain for the calculation are: departure and arrival port, planned route (way points), a given ETD (estimated time of departure) and the vessel calm-weather speed. The route takes advantage of real-time ocean currents while taking account of the extra distance associated with the route. The best-current route is therefore the best compromise between favourable currents and distance.

These innovative techniques that have been successfully tested with several major maritime companies. Scientists and engineers at CLS have worked with vessel captains to study and qualify the benefits of using ocean observation products for marine transportation.

On every route monitored during this test phase, when the vessel followed the recommended route and surfed on advantageous currents, significant



A planned route, from north to south and against the current, is shown in blue; the route recommended by CLS is shown in black

savings in trajectory time were established. These gains in time were also converted into significant fuel savings.

In the above image, the planned route –from north to south – (in blue) was set to go against the current. The route recommended by CLS (in black) takes advantage of the good side of two current eddies and avoids the strong current vein of the Brazilian current. By taking the recommended route, the captain saved approximately 20 hours for a voyage that lasted approximately 13 days. This gain represents 7 per cent of the duration of the voyage.

General figures for fuel savings

Current optimisation always produces benefits but depends on the area crossed. On a global scale, the average saving is 1.8 per cent but can be as high as 8 per cent in favourable areas. We have classified three types of route:

- low-benefit area: Europe, Mediterranean, West Africa, north India
- medium-benefit area: North Africa, south India, South Africa, north Atlantic
- high-benefit area: Gulf of Mexico, Brazil, south Atlantic, north Pacific.

For example, for a vessel navigating for 182 days in a year and with a fuel price of $450/tonne, the table below shows the benefits of various vessel routes.

Conclusion

More and more attention is being given to 'green shipping'. This new CLS service may be one of the technological responses shipping companies can take if they are concerned about economic and environmental sustainability. ***IFSMA***

AVERAGE ANNUAL FUEL CONSUMPTION AND CO_2 EMISSIONS

average economy per year	average consumption (tonnes/day)	average of % gain of total duration	average fuel saved (tonnes/year/vessel)	average CO_2 saved (tonnes/year/vessel)	average economy (US$/year/vessel)
low-benefit area	40	0.6	43	140	$19,350
medium-benefit area	40	1.7	124	404	$55,800
high-benefit area	40	4.0	291	930	$130,950

Dealing with maritime emergencies in the UK – the role of the SOSREP

by Hugh Shaw, secretary of state's representative, Maritime Salvage & Intervention

It has often been stated that the development of maritime safety regulations can be directly related to major maritime disasters. From 1969 onwards this would also become the case for the development of marine pollution regulations. In March 1967 the tanker *Torrey Canyon*, loaded with 120,000 tonnes of crude oil, grounded off the southwest coast of England. The disaster illustrated, for the first time, how the physical evidence of a major shipping/pollution disaster, enjoying wide media coverage, can influence public opinion. Over 90,000 tonnes of crude oil spread along the British and French coasts, making it the largest single oil spill in maritime history up to that time. In every respect, whether scientific, ecological or legal, the *Torrey Canyo*n disaster caught the maritime world completely unprepared.

Two years later we had the International Convention Relating to Intervention on the High Seas in Cases of Oil Pollution Casualties, 1969 (Intervention 1969). This agreement permitted coastal states to take early action on the high seas against vessels which pose a threat to their coastlines. The fact that coastal states are thus given the right to take action outside their own areas of maritime jurisdiction indicates how seriously the threat of large-scale ship-source pollution was taken in the post-*Torrey Canyon* period.

The convention, which entered into force in 1975, enables concerned coastal states to take action if it is felt that a potential casualty is not receiving the response necessary from owners, insurers, salvors or pollution-response providers. In that case, the coastal state may take over such response and, in drastic circumstances, where a major pollution disaster is imminent, may even remove or destroy the affected vessel.

In the case of the United Kingdom, the Merchant Shipping Act provided legislation for the secretary of state (for transport) to intervene but also enabled him to authorise other persons to exercise the intervention powers on his behalf. In practice, officers holding senior positions in the Maritime and Coastguard Agency were given such delegations.

The UK system was to be tested in early 1993, when the disabled tanker *Braer,* loaded with 84,000

tonnes of crude oil, drifted and eventually grounded off the southwest coast of Shetland, Scotland.

Less than three years later, in 1996, the tanker *Sea Empress* grounded in Milford Haven, Wales, resulting in a loss of 72,000 tonnes of crude oil into the environment.

Both incidents highlighted the need for early intervention and decisiveness. The *Sea Empress* incident yet again attracted enormous public interest and provided the news media with headlines for several days as efforts to salvage the tanker and prevent massive oil pollution unfolded before the cameras of the world.

Following the incident, the late Lord Donaldson was instructed by the UK Government to carry out a full review of how, through its various departments and agencies, should in future respond to maritime emergencies. It was clear at an early stage that there were important lessons to be learned from the incident itself and the consequential salvage operation.

In the course of his report *Review of Salvage and Intervention and their Command and Control* Lord Donaldson observed that "salvage by committee" was generally ineffective and inefficient. In his opinion what was needed in such emergencies was a single voice, able to make and enforce decisions on behalf of the UK Government and in the overriding public interest and, if necessary, to override any and all other interested parties. Thus was born the idea of a 'SOSREP' – the secretary of state's representative.

The Maritime and Coastguard Agency (MCA), an executive agency within the Department for Transport, is responsible for a number of areas, including maritime search and rescue, and developing, promoting and enforcing high standards of maritime safety and pollution prevention. It was given the task of finding and recruiting the first SOSREP in 1999.

Their brief was quite clear. Find an individual to provide overall direction for salvage, intervention and the prevention of marine pollution incidents involving ships (and later) offshore installations that required a national response. As recommended in Lord Donaldson's report, ministers and senior officials should not attempt to influence a SOSREP's operational decisions while operations are in progress. In Lord Donaldson's words, they should "back him or sack him".

Strictly speaking, when dealing with an incident, the SOSREP is not part of the MCA but is physically located within its headquarters in Southampton. However, he works very closely with them and in particular the Counter Pollution and Response Branch. The MCA also provides the SOSREP with a support officer. Since 2004 there has been a deputy to the SOSREP co-located with the Department of Energy and Climate Change in Aberdeen.

In practice the SOSREP is free to act on their own initiative without having to refer matters to their political masters. This means that decisions can be taken quickly and on the basis of factual information, logic and reason, rather than on the basis of political or emotional considerations. In an incident the SOSREP has the final and decisive voice, can exercise ultimate control and has the ultimate responsibility.

In 2002, and following the introduction of The Offshore Installations (Emergency Pollution Control) Regulations, the SOSREP also became the representative for the secretary of state for the Department of Trade and Industry (now Department for Energy and Climate Change (DECC)), for dealing with incidents from the oil & gas offshore sector.

When dealing with shipping incidents within the UK Counter Pollution Zone (200 nautical miles (370km)) or the Continental Shelf for offshore incidents, the SOSREP has extremely wide-ranging powers for preventing or reducing pollution or for safety purposes although the latter is restricted to territorial waters (12 nautical miles (22km)).

Instructions can be given to anyone involved in a marine emergency. More often this will be to a master or shipowner, but it could be to a salvor, a harbourmaster or to other shipping where a temporary exclusion zone has been established around a ship which is wrecked, damaged or in distress. It could also be to the offshore installations manager on an oil or gas platform.

He can direct a shipowner or an insurer to enter into a salvage contract or he can direct a port or harbour to grant a place of refuge to a vessel in difficulty. In accordance with recent EU Directives, the SOSREP is deemed the 'competent authority' within the UK for determining places of refuge.

Triggered by the MCA for a shipping incident or by the DECC for an oil or gas offshore incident, the SOSREP will in the first instance determine whether the owner has appointed a salvor and, if so, its name and contact details. He will also

need to ascertain the broad nature of the contract between owner and salvor and information on the intentions of the salvor and any other important data. It is for the SOSREP to decide whether the salvor has the capability to carry out the necessary salvage actions, in terms of experience, personnel and material.

The SOSREP may decide to establish a salvage control unit (SCU) close to the scene of the incident. Membership is kept deliberately small (a key lesson following the *Sea Empress* incident) – the SOSREP, a salvage manager from the salvage company appointed by the shipowner, the harbour master (if the incident involves a harbour or its services), a single representative nominated by agreement between the shipowner and the insurers (for both the physical property and their liabilities), an environmental group liaison officer (nominated by the chair of the standing environment group) and a counter-pollution and salvage officer from the MCA.

Depending on the complexity of the incident the SOSREP may also decide to appoint his own advisors. These may include salvage, pollution, fire-fighting and ordnance experts or subsea engineers, drilling managers, etc.

The SOSREP uses all the information available to assess whether the actions proposed are in the public interest. SOSREP also considers what should happen if the current salvage plan goes wrong or the incident escalates in severity.

The SOSREP is empowered to exercise intervention powers to whatever extent is required in the public interest and may take control of the salvage operation by issuing directions. If the SOSREP takes control of a salvage operation, all those involved act on directions issued. In other cases, the salvors operate by agreement with or with the tacit approval of the SOSREP, without the need to issue further directions. Thus silence is usually approval.

The SOSREP strictly monitors and, if necessary, controls access to the casualty, establishing any necessary protocols. The SOSREP uses discretion in limiting access. Every additional body increases the potential problem of rescue, and every additional person increases the risk of confusion as to what the salvage master and his crew are doing.

As soon as it is judged that the situation is safe, the SOSREP may grant access to one or more inspectors of the Marine Accident Investigation Branch (MAIB). The MAIB has a statutory duty to investigate accidents falling within its jurisdiction and prompt access to witnesses and to other evidence on board greatly facilitates the work of these technical investigators.

When not engaged in incident working, the SOSREP spends a lot of his time networking with salvors, ports & harbours, the insurance industry, shipping companies and offshore operators and liaising with his counterparts in other neighbouring coastal states, especially those with whom the UK has a casualty response agreement. He also participates in a large number of shipping and offshore related exercises.

Since 1999 the SOSREP has been involved in over 1,000 incidents, ranging from small fishing vessels to large tankers and container ships. Since taking up post the current SOSREP has dealt with nearly 350 incidents in his first three years in the job.

The *MSC Napoli* incident in January 2007 has been the most complex and took over 900 days to resolve.

The *MSC Napoli*, en route from Antwerp to South Africa, experienced difficulties whilst transiting through French waters. The 26-person crew abandoned the 53,409gt vessel in gale force 9 conditions, leaving the ship with 3,500 tonnes of HFO and over 2,500 containers at the mercy of the elements. With the French Government unable to find a nearby suitable place of refuge, the SOSREP offered a refuge off the UK's south coast. As the incident developed, salvors reported that the vessel was in imminent danger of breaking up and, following discussion with the local environment group, the SOSREP made the decision to beach the vessel in Lyme Bay rather than taking the risk of her sinking in deep water with the consequential damage to the marine environment from the bunkers and cargo. Bunkers were safely removed within weeks, the containers within four months and the wreck was finally removed in July 2009. An SCU was established at MRCC Portland, Weymouth, for the duration of the incident.

Since 1999 there have been two SOSREPs. Robin Middleton was appointed as the first, in October 1999, and he retired on 31 January 2007. Hugh Shaw, the current SOSREP, was the deputy to the SOSREP for over three years prior to accepting the post on 1 January 2008 (his birthday). Less than 30 hours later he was dealing with his first incident, the 62,677gt container vessel *LT Cortesia,* aground on the Varne Bank, Dover Strait. Thankfully she was safely refloated and, following inspection, continued her passage to Alexandria. ***IFSMA***

"NO ONE SHALL BE SUBJECTED TO TORTURE OR TO CRUEL, INHUMAN OR DEGRADING TREATMENT OR PUNISHMENT." – UNIVERSAL DECLARATION OF HUMAN RIGHTS ARTICLE 5

OCEANS BEYOND PIRACY

Piracy cost the global economy between $7–12 billion in 2010.[1] However, the true cost of piracy is the cost to the victims.

Did you know that in 2010…

- 1,090 SEAFARERS ON 53 SHIPS WERE HIJACKED AND HELD HOSTAGE FOR AN AVERAGE OF 5 MONTHS
- 1,432 SEAFARERS ON 72 SHIPS WERE BOARDED BY ARMED PIRATES
- 4,185 SEAFARERS ON 191 SHIPS WERE FIRED UPON WITH AK-47S AND RPGS

SOMALI PIRATES ARE SYSTEMATICALLY TORTURING HOSTAGES AND USING THEM AS HUMAN SHIELDS, THE TOP COMMANDER OF THE EUROPEAN UNION NAVAL FORCE SAID.[2]

Public news sources indicate that up to one third of all hostages have endured **severe physical** and **psychological abuse** such as death threats, mock executions, beatings, and being taken on land to see their own graves being dug. However, the human cost of piracy is both overlooked and misunderstood by the public.

Oceans Beyond Piracy has completed the Human Cost of Piracy Study to document the severity of Somali piracy. It can be downloaded from www.oceansbeyondpiracy.org—visit our website and help us raise awareness!

[1] Bowden, Anna. "The Economic Cost of Maritime Piracy." One Earth Future Foundation Working Paper. December 2010. Available at: www.oceansbeyondpiracy.org

[2] Houreld, Katharine, "AP Interview: Somali pirates torturing hostages." Associated Press. February 1, 2011.

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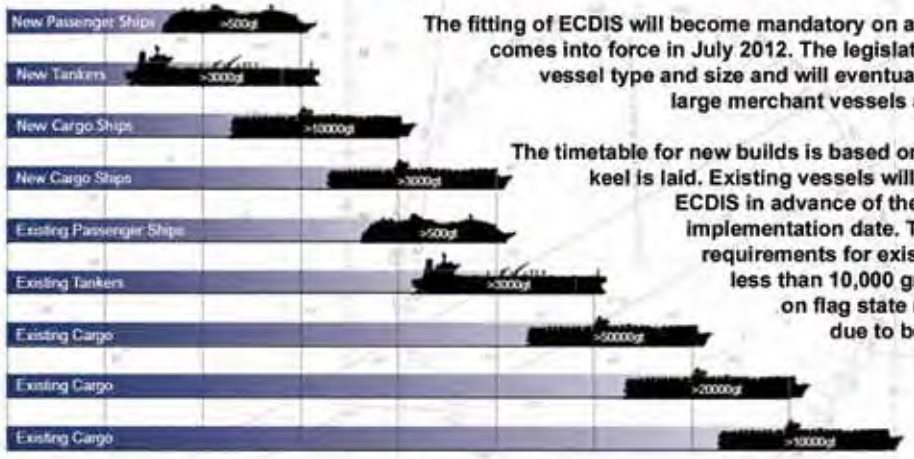
Admiralty AVCS/ENC/ARCS cell & permit updates
Admiralty Digital Publication updates
Weekly UK M-Notices
Updates via Web service or Email
No special equipment required

ECDIS Mandation Timeline



The fitting of ECDIS will become mandatory on a rolling timetable that comes into force in July 2012. The legislation will be phased by vessel type and size and will eventually apply to almost all large merchant vessels and passenger ships.

The timetable for new builds is based on the date the vessels keel is laid. Existing vessels will be required to install ECDIS in advance of the first survey after the implementation date. There are currently no requirements for existing cargo vessels of less than 10,000 gross tons. Depending on flag state requirements vessels due to be taken out of service within 2 years of the implementation date maybe exempt.

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