

New Security Measures for the International Shipping Community

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Abstract

On 1 July 2004 the new maritime security regulatory regime set out in the International Convention for the Safety of Life at Sea (SOLAS), 1974 as amended, namely the new chapter XI-2 on Special measures to enhance maritime security and the International Ship and Port Facility Security (ISPS) Code entered into force only 18 months after adoption by the SOLAS Conference in December 2002. Following the devastating terrorist acts of 11 September 2001 in the United States, the international community recognised the need to protect the international maritime transport sector against the threat of terrorism. IMO responded swiftly and firmly by developing these new requirements, which represent the culmination of co-operation between Governments, Government agencies, local administrations and shipping and port industries.

The new requirements form the international framework through which Governments, ships and port facilities can co-operate to detect and deter acts, which threaten security in the maritime transport sector. In order to determine what security measures are appropriate, Governments must assess the threat and evaluate the risk of a potential unlawful act. The ISPS Code provides a standardized, consistent framework for managing risk and permitting the meaningful exchange and evaluation of information between Contracting Governments, companies, port facilities, and ships. The requirements also include provisions, which establish the right of a State to impose control and compliance measures on ships in or intending to visit its ports. It also provides for Contracting Governments to take further action when relevant requirements are not met or when there are other clear grounds for taking such action. In addition, where a risk of attack has been identified, the coastal State concerned shall advise the ships concerned of the current security level; of any security measures that should be put in place by the ships concerned to protect themselves from attack; and of the security measures that the coastal State has decided to put in place.

The new requirements entered into force only recently and this paper also reports, notwithstanding the fact that Contracting Governments to the 1974 SOLAS Convention were obliged to give full and complete effect to the requirement by the aforesaid date, on the status of their implementation, so far, both by ships and port facilities. It further discusses the consequences for the shipping and port industry, including human element

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factors as well as the financial aspects involved, and for the economy of a country of the failure to comply.

Key words: regulatory framework, implementation, technical co-operation, balance, consequences, future challenges

1 History

The hijacking of the Italian cruise ship ACHILLE LAURO, in October 1985, marked one of the first actual terrorist acts recorded in modern maritime history. Following that incident, the International Maritime Organization adopted resolution A.584(14) on Measures to Prevent unlawful acts which threaten the safety of ships and the security of their passengers and crews. Subsequently in 1986, taking also account the request of the United Nations General Assembly to study the problem of terrorism on board ships and to make recommendations on appropriate measures, the Organization issued MSC/Circ.443 on Measures to prevent unlawful acts against passengers and crew on board ships.

Pursuant to the ACHILLE LAURO incident the Organization continued working towards the development and adoption of conventions and security regulations and adopted, in March 1988, the **Convention for the Suppression of Unlawful Acts against the Safety of Maritime Navigation (SUA)**. The Convention, which is a legal instrument, ensures that appropriate action is taken against persons committing unlawful acts against ships, including the seizure of ships by force; acts of violence against persons on board ships; and the placing of devices onboard a ship which are likely to destroy or damage it. The Convention, which is currently under review by the IMO's Legal Committee, provides for application of punishment or extradition of persons who commit or have allegedly committed offences specified in the treaty. The Protocol for the Suppression of Unlawful Acts against the Safety of Fixed Platforms located on the Continental Shelf, 1988 extends the provisions to unlawful acts against fixed platforms located on the Continental Shelf.

1.1 Other Security-related Instruments

The Organization has adopted other maritime security instruments including, among others:

- MSC/Circs. 622 and 623, as revised, on Guidelines for administrations and industry on combating acts of piracy and armed robbery against ships;
- MSC/Circ.754 on Passenger ferry security, providing recommendations on security measures for passenger ferries on international voyages shorter than 24 hours, and ports;
- Assembly resolution A.871(20) on Guidelines on the allocation of responsibilities to seek the successful resolution of stowaway cases; and
- resolution A.872(20) on Guidelines for the prevention and suppression of the smuggling of drugs, psychotropic substances and precursor chemicals on ships engaged in international maritime traffic.

2 IMO Activities since “September 11”

In the wake of the tragic events of 11 September 2001 in the United States, Assembly resolution A.924(22) (November 2001) called for a review of the existing international legal and technical measures to prevent and suppress terrorist acts against ships at sea and in port, and to improve security aboard and ashore. The aim was to reduce risks to passengers, crews and port personnel on board ships and in port areas and to the vessels and their cargoes and to enhance ship and port security and avert shipping from becoming a target of international terrorism.

IMO responded swiftly and firmly by developing new requirements under the International Convention for the Safety of Life at Sea (SOLAS), 1974 as amended, namely the new chapter XI-2 on Special measures to enhance maritime security and the International Ship and Port Facility Security (ISPS) Code which was adopted by the SOLAS Conference in December 2002, attended by 109 Contracting Governments to the 1974 SOLAS Convention, observers from two IMO Member States and observers from the two IMO Associate Members. United Nations specialized agencies, inter-governmental organizations and non-governmental international organizations also sent observers to the Conference. The new provisions entered into force on 1 July 2004, only 18 months after their adoption.

3 Regulatory Framework for Maritime Security

3.1 General

SOLAS chapter XI has been amended to include special measures for maritime security. Specifically, SOLAS Chapter XI has been divided into two parts: Chapter XI-1: Special Measures to Enhance Maritime Safety; and Chapter XI-2: Special Measures to Enhance Maritime Security. In principle chapter XI-2 incorporates new regulations regarding definitions and the requirements for ships and port facilities. These regulations are supported by the **International Ship and Port Facility Security Code** (ISPS Code) which has a mandatory section (part A) and a recommendatory section (part B). The guidance given in part B of the ISPS Code will be taken into account when implementing the SOLAS XI-2 regulations and the provisions of part A. However, it is recognized that the extent to which the guidance on ships applies will depend on the type of ship, its cargoes and/or passengers, its trading pattern and the characteristics of the Port Facilities visited by the ship. Similarly, in relation to the guidance on Port Facilities, the extent to which this guidance applies will depend on the types of cargoes and/or passengers and the trading patterns of visiting vessels. In principle, the new requirements will be applicable to Mobile Offshore Drilling Units (MODUs) in transit and in port and will not apply to fixed and floating platforms and MODUs on site.

3.2 The Rationale behind the New Requirements

In essence, the new SOLAS chapter XI-2 and the ISPS Code have been developed under the basic understanding that ensuring the security of ships and port facilities is a risk management activity and that to determine what security measures are appropriate, an assessment of the risks must be made in each particular case. The

purpose of the ISPS Code is to provide a standardized, consistent framework for evaluating risk, enabling governments to offset changes in threat levels with changes in vulnerability for ships and port facilities.

This risk management concept will be embodied in the ISPS Code through a number of minimum functional security requirements for ships and port facilities. For ships, such requirements will include:

- ship security plans;
- ship security officers;
- company security officers; and
- certain onboard equipment.

For port facilities, the requirements will include:

- port facility security plans; and
- port facility security officers.

In addition the requirements for ships and for port facilities will include:

- monitoring and controlling access;
- monitoring the activities of people and cargo; and
- ensuring that security communications are readily available.

To ensure implementation of all these new requirements, training and drills will obviously play an important role.

3.3 Responsibilities of Contracting Governments

Under SOLAS chapter XI-2 and part A of the Code *Contracting Governments* can establish *Designated Authorities* within Government to undertake their security responsibilities under the Code. Governments or Designated Authorities may also delegate the undertaking of certain responsibilities to *Recognized Security Organizations (RSOs)* outside Government. Additional guidance is provided in MSC/Circ.1074 on “Interim Guidelines for the authorization of RSOs”.

The setting of the *security level* applying at any particular time will be the responsibility of Contracting Governments and will apply to their ships and Port Facilities. The Code defines three security levels for international use:

- *Security Level 1*, normal;
- *Security Level 2*, lasting for the period of time when there is a heightened risk of a security incident; and
- *Security Level 3*, lasting for the period of time when there is the probable or imminent risk of a security incident.

SOLAS chapter XI-2 and the ISPS Code will require certain *information* to be provided to the IMO and information to be made available to allow effective communication between Company/Ship Security Officers and the Port Facility Security Officers responsible for the Port Facility their ships serve.

3.4 The Company and the Ship

Any shipping company operating ships to which the Code applies will have to appoint a *Company Security Officer (CSO)* for the company and a *Ship Security Officer (SSO)* for each of its ships. The responsibilities of these officers are defined, as are the requirements for their training and drills. The training needs and requirements of the SSO are being developed in the context of the STCW Convention. The CSO's responsibilities include ensuring that a *Ship Security Assessment (SSA)* is undertaken and that a *Ship Security Plan (SSP)* is prepared for each ship to which the Code applies.

The *Ship Security Plan* will indicate the minimum operational and physical security measures the ship shall take at all times (security level 1). The plan will also indicate the additional, or intensified, security measures the ship itself can take to move to security level 2. Furthermore, the Plan will indicate the possible preparatory actions the ship could take to allow prompt response to the instructions that may be issued to the ship by the authorities responding at security level 3 to a security incident or threat. The need for these plans to be ultimately incorporated in the ISM Code has been acknowledged. The Ship Security Plan has to be approved by, or on behalf of, the ship's Administration. The Company and Ship Security Officer will be required to monitor the continuing relevance and effectiveness of the Plan, including the undertaking of independent internal audits. Any amendments to specified elements of an approved Plan will have to be resubmitted for approval.

The ISPS Code includes provisions relating to the verification and certification of the ship's compliance with the requirements of the Code on an initial, renewal and intermediate basis. The ship will have to carry an *International Ship Security Certificate (ISSC)* indicating that it complies with the Code. The ISSC will be subject to *Port State Control (PSC)* inspections but such inspections will not extend to examination of the Ship Security Plan itself. The ship may be subject to additional control measures if there is reason to believe that the security of the ship has, or the port facilities it has served have, been compromised. The ship may be required to provide information regarding the ship, its cargo, passengers and crew prior to port entry and it is the responsibility of the company that up to date information relating to the ownership and control of the vessel is available on board. There may be circumstances in which entry into port could be denied, if the ship itself, or the port facility it served before, or another ship it interfaced with previously, are considered to be in violation with the provisions of SOLAS chapter XI-2 or part A of the ISPS Code.

The implementation of the mandatory fitting of ship-borne *Automatic Identification Systems (AIS)* for all ships of 500 gross tonnage and above, on international

voyages has been accelerated, through amendments to Regulation 19 of SOLAS Chapter V, to the first safety equipment survey after 1 July 2004 or to 1 December 2004, whichever occurs earlier.

There is also a requirement for fitting a *ship security alert system* (SSAS) for seafarers to use to notify authorities and other ships of a terrorist hijacking, and appropriate performance standards and procedures for fitting such systems on board ships have been developed. Further guidance on SSAS is given in MSC/Circ.1072 on “**Guidance on provision of ship security alert systems**”, MSC/Circ.1073 on “**Directives for maritime rescue co-ordination centres (MRCCs) on acts of violence against ships**” and MSC/Circ.1109 on “**False security alerts and distress/security double alerts**”.

IMO is maritime security equipment and measures to prevent unauthorised boarding in ports and at sea. It is recognized that the type of equipment to be used on board would depend largely on risk assessment (e.g. ship types, trading areas). The section of the ISPS Code addressing the Ship Security Plan includes the consideration of such equipment and measures.

It was recognized that urgent action on an up-to-date **seafarer identification document** was needed. A new convention revising the ILO Seafarers’ Identity Documents Convention of 1958 (No. 108) was adopted by the ILO General Conference in June 2003.

3.5 The Port Facility

Contracting Governments will have to undertake a *Port Facility Security Assessment (PFSA)* of its Port Facilities. This assessment is to be undertaken by the Contracting Government, a Designated Authority, or the Recognized Security Organization. The Port Facility Security Assessments will need to be reviewed over time. The results of the Port Facility Security Assessment have to be approved by the Government or Designated Authority and will be used to help determine which Port Facilities are required to appoint a *Port Facility Security Officer (PFSO)*.

The responsibilities of the *Port Facility Security Officers* are defined in the ISPS Code, as are the requirements for the training they require and the drills they will be responsible for undertaking. The Port Facility Security Officer is responsible for the preparation of the *Port Facility Security Plan (PFSP)*.

Like the Ship Security Plan, the *Port Facility Security Plan* shall indicate the minimum operational and physical security measures of the Port Facility, which shall always be applied (security level 1). The plan should also indicate the additional, or intensified, security measures the Port Facility can take to move to security level 2. Furthermore, the plan should indicate the possible preparatory actions the Port Facility could take to allow prompt response to the instructions that may be issued by the authorities responding at security level 3 to a security incident or threat.

The Port Facility Security Plan has to be approved by, or on behalf of, the port facility's Contracting Government. The Port Facility Security Officer must ensure that its provisions are implemented and monitor the continuing effectiveness and relevance of the approved plan, including commissioning independent internal audits of the application of the plan. The effectiveness of the plan may also be tested by the relevant Authorities. The Port Facility Security Assessment covering the Port Facility may also be reviewed. All these activities may lead to amendments to the approved plan. Major amendments to an approved plan will have to be submitted to the approving authority for re-approval.

4 Conference Resolutions

A number of other longer-term maritime security-related issues were also raised during the discussions at IMO in 2002. As a result, apart from the resolutions adopting the SOLAS amendments and the ISPS Code, nine Conference resolutions were adopted, which address:

- Further work by the International Maritime Organization pertaining to the enhancement of maritime security;
- Future amendments to Chapters XI-1 and XI-2 of the 1974 SOLAS Convention on special measures to enhance maritime safety and security;
- Promotion of technical co-operation and assistance;
- Early implementation of the special measures to enhance maritime security;
- Establishment of appropriate measures to enhance the security of ships, port facilities, mobile offshore drilling units on location and fixed and floating platforms not covered by chapter XI-2 of the 1974 SOLAS Convention;
- Enhancement of security in co-operation with the International Labour Organization;
- Enhancement of security in co-operation with the World Customs Organization;
- Early implementation of long-range ships' identification and tracking; and
- Human element-related aspects and shore leave for seafarers.

5 Work Undertaken since the 2002 Conference

In order to assist Member Governments in the implementation of the new maritime security regulations and related requirements, the Organization's relevant bodies have completed work on:

- IMO model courses for SSOs, CSOs and PFSOs to provide training to relevant port and ship personnel;
- guidelines on recognized security organizations (MSC/Circ. 1074);
- amendments to Assembly resolution A.890(21) on Principles of safe manning, (A.955(23));
- guidelines on the aspect of security of ships to which chapter XI-2 applies when interfacing with floating production storage units and floating storage units; and other maritime security aspects related to the harmonized implementation of SOLAS chapter XI-2 and the ISPS Code (MSC/Circs.1097, 1110, 1111 and 1112);

- format and guidance for the maintenance for the Continuous Synopsis Record (CSR), as required by SOLAS regulation XI-1/5 (Assembly resolution A.959(23)); and
- interim guidance on control and compliance measures to enhance maritime security (MSC resolution MSC.159(78) and MSC/Circ.1113).

5.1 Co-operation with WCO and ILO

As mentioned previously two of the resolutions adopted by the 2002 maritime security conference addressed specifically IMO's work in collaboration with the World Customs Organization (WCO) and the International Labour Organization (ILO).

One invited the WCO to consider urgently measures to enhance security throughout international closed container transport unit (CTU) movements and requested the Secretary-General of IMO to contribute expertise relating to maritime traffic to the discussion at the WCO. The importance of this work in the context of maritime security cannot be overstated: the world container fleet was estimated by Containerisation International's 2003 Yearbook at some 15,855,000 TEUs. The reported movements of containers through maritime ports were estimated at 225,300,000 TEUs in UNCTAD's "Review of Maritime Transport 2003", and experts say this figure may grow to up to 450 million TEUs by 2010. Today, according to the Lloyd's Register/Fairplay World Fleet database, the population of dedicated containerships stands, at nearly 4000 units, representing more than 100 million deadweight tonnage.

These figures show not only the importance of the sea mode transportation of containers but, more significantly, the serious difficulties encountered in knowing, at any time in the transportation chain, where they are, where they are transported to and, above all, what they contain. Containers are typically loaded some distance from seaports and terminals, hence the importance of close co-operation between all parties concerned.

Co-operation between IMO and WCO had already been established, but it was further strengthened by the signing, in July 2002, of a Memorandum of Understanding between the two Organizations to arrange for matters concerning container examination and integrity in multi-modal transport as well as matters relating to the ship/port interface.

With regard to seafarer issues, the ILO was invited by a conference resolution to continue the development of a Seafarers' Identity Document as a matter of urgency. The idea was that this document would combine, among other things, a document for professional purposes, a verifiable security document, and a certification information document. Subsequently, the 91st session of the International Labour Conference (in June 2003) adopted a new Convention on Seafarers' Identity Documents to replace the ILO Convention, which had been adopted in 1958. The new Convention establishes a more rigorous identity regime for seafarers with the aim of developing effective security from terrorism and ensuring that the world's 1.2 million seafarers will be

given the freedom of movement necessary for their well-being and for their professional activities and, in general, to facilitate international commerce.

The 2002 security conference also invited IMO and the ILO to establish a joint Working Group to undertake more detailed work on comprehensive port security requirements. This Working Group produced a Code of Practice on Security in Ports, which extends the consideration of port security beyond the area of the port facility into the whole port area. It is compatible with the provisions of the ISPS Code, which contains requirements that relate only to security of the ship and the immediate ship/port interface. This Code was finalized in December 2003, adopted by the ILO Governing Body in March 2004, and adopted by the IMO Maritime Safety Committee in May 2004.

6 Future Technical Work

Further technical security-related activities of the Organization will focus on:

- deciding how Long Range Ships' Identification and Tracking Systems will operate. The issue was considered at COMSAR 8 in February 2004 and MSC 78 in May 2004, and will be further considered at MSC 79 in December 2004 and COMSAR 9 in early 2005;
- continuing close co-operation with World Customs Organization (WCO) to enhance security in the multi modal movement of CTUs;
- considering, in the context of security, relevant aspects of facilitation of maritime traffic such as, for example, port arrivals and departures, standardized forms of reporting and electronic data interchange and take action as appropriate;
- reviewing the Organization's Assembly resolution A.872(20) on Guidelines for the Prevention and Suppression of the Smuggling of Drugs, Psychotropic Substances and Precursor Chemicals on Ships Engaged in International Maritime Traffic and developing appropriate amendments thereto; and
- consider the need and, if necessary, develop any further guidance to ensure the global, uniform and consistent implementation of the provisions of chapter XI-2 or part A of the ISPS Code.

7 The Way Forward

7.1 Implementation Holds the Key

Even though every new standard adopted by IMO represents a step forward, it is virtually worthless without proper implementation. And, in this particular context, there is no doubt that the mere existence of the new regulatory maritime security regime will provide no guarantee that acts of terrorism against shipping may be prevented and suppressed. It is the wide, effective and uniform implementation of the new measures that will ensure shipping does not become the soft underbelly of the international transport system.

One of the most important of the resolutions adopted by the conference dealt with this aspect in some detail, referring to the difficulties that had been experienced dur-

ing implementation of the International Safety Management (ISM) Code and drawing the attention of Contracting Governments and the industry to the fact that chapter XI-2 of the SOLAS Convention did not provide for any extension of the implementation dates for the new security measures.

Conference resolution 6 on Early implementation of the special measures to enhance maritime security urged Contracting Governments, as a matter of high priority, to take any action needed to finalize as soon as possible the legislative or administrative arrangements required at national level to give effect to the requirements of the adopted amendments and recommended that Contracting Governments and Administrations should designate dates, in advance of the application date of 1 July 2004, by which requests for certification should be submitted so that the certification process could be completed in good time and for any non-compliance to be rectified.

From the outset, even before the amendments and the Code were adopted, the SOLAS Contracting Governments and the industry knew very well that they were bound to face a very challenging task. In the event, there were administrative bottlenecks in the run up to the deadline, and there were instances, from all sectors of the maritime community, where the necessary processes were started too late.

But, important though it undoubtedly is, the administrative process is not the most critical factor in all this. What really counts is the work that has been done on the ground: security officers appointed on ships, in companies and port facilities, training undertaken, security plans drawn up, awareness raised, vigilance heightened. The real aim of the security measures is to make shipping more secure, and the issuance of certificates is simply the final part of a lengthy process, every step of which is a step in the right direction.

All over the world, a huge amount of work was undertaken in the period leading up to the entry-into-force date of the security measures to ensure the highest possible level of compliance. Figures given to IMO by Member Governments indicated that more than 86 per cent of ships and 69 per cent of port facilities had their security plans approved by 1 July 2004 and these statistics have increased significantly since. To date information available from the Contracting Governments and industry sources shows that 90% of the globally over 9000 declared port facilities have their PFSPs approved and for ships it indicates that the compliance rate is now well beyond the 90 per cent mark.

Clearly there have been and will continue to be teething problems in the period immediately after entry into force. IMO Secretary-General Efthimios E. Mitropoulos expressed appreciation that, in the period immediately after the implementation date, the response to identified shortcomings was pragmatic. He pledged to monitor developments closely during the initial period of implementation, throughout the summer of 2004 and beyond, so that any appropriate action, including technical assistance for those Governments that need and request it, might be taken.

7.2 Technical Co-operation

As ever, IMO also recognized that not all its Member States shared the same ability to implement the new measures; that, particularly among the developing countries, there would be shortages of expertise, manpower and resources. Another key conference resolution addressed the vital question of technical co-operation and assistance, strongly urging Contracting Governments to the Convention and Member States of the Organization to provide, in co-operation with the Organization, assistance to those States, which have difficulty in meeting the requirements

It also requested the Secretary-General of the Organization to make adequate provision, within the IMO's Integrated Technical Co-operation Programme, to strengthen further the assistance that was already being provided and to ensure that the Organization is able to address the future needs of developing countries for continued education and training and the improvement of their maritime and port security infrastructure and measures, and invited donors, international organizations and the shipping and port industry to contribute financial, human and/or in-kind resources to the Integrated Technical Co-operation Programme of the Organization for its maritime and port security activities.

In January 2002, 11 months before the package of new maritime security measures was adopted, IMO inaugurated a US\$2.5 million global technical co-operation programme on maritime and port security. Worldwide activities under this programme have included seminars and workshops at regional and national level and more than 3,200 people have so far been trained throughout the developing regions. While the initial work in the Programme focussed on raising awareness of maritime security threats, this has now been adapted to place more emphasis on specific operational measures, which need to be taken to safeguard the security of passengers and crews.

In this context, a "Train-the-Trainer" programme has been developed by IMO to assist Governments to strengthen their maritime security implementation through the provision of trained instructors capable of delivering quality training using the relevant IMO Model Courses. The Train-the-Trainer programme gets underway in the second half of the 2004 and will be targeted at instructors from national institutions responsible for maritime security training.

The success and continuation of IMO's work in this field depends, inevitably, on funding being made available to support further training activities. An International Maritime Security Trust Fund (IMSTF) has been established, on the basis of voluntary donations, to provide a dedicated source of financial support for the maritime security technical co-operation activities and, in particular, for national initiatives in the developing regions. Governments and industry have been invited to make contributions to the Fund in order to support the programme over the coming biennium.

7.3 The Cost Factor

Of course, it is not just the developing countries that have had to consider resource implications in implementing the new security provisions. Significant and far-reaching measures such as these cannot be implemented without cost, and while it is impossible to put a completely accurate figure on the total cost to the industry and the various other stakeholders, there have been some attempts made to do so.

In 2003, the OECD published a detailed report on the risk factors and economic impact of security in maritime transport. It reached three broad conclusions. The first was that the costs of inaction would have been potentially tremendous. A large, well-co-ordinated attack, it said, could have the effect of shutting down the entire maritime transport system as Governments scrambled to put in place appropriate security measures – which might be drastic, such as the complete closure of some ports, and inefficient, such as duplicative and lengthy cargo checks in both originating and receiving ports. The report estimated that the cost of such an attack would likely be measured in tens of billions of dollars, and quoted a figure of up to US\$58 billion for the United States alone.

The second conclusion – perhaps not surprisingly – was that some costs are more easily measured than others, and that those costs that can be measured with some precision are significantly less than the costs of doing nothing. Generally, said the report, ship-related costs tend to be relatively easy to ascertain as these involve specific equipment purchases and labour costs at known international rates. The OECD estimated the initial burden on ship owners to be at least US\$1,279 million and US\$730 million a year thereafter. The bulk of ship-related costs are related to management staff and security-related equipment expenses.

Estimates of port-related security costs are extremely difficult to derive, says OECD, due to uncertainty about exactly what the new measures will mean in terms of additional personnel requirements coupled with the vast differences in labour rates that apply, depending on location. Also very difficult to estimate are costs derived from procedural changes: however, OECD estimates that, for the costs that can be measured, the overall figure of slightly over US\$2 billion is still substantially below the costs that might result from a major attack.

Finally, while its main focus had been on costs, the report also concluded that many of the new measures had distinct benefits that were not directly related to their anti-terrorism task. These benefits related from reduced delays, faster processing times, better asset control, fewer losses due to theft and decreased insurance costs. For example, direct savings to US importers through a new electronic customs manifest handling system in the US are estimated to be US\$22.2bn over 20 years while the US Government would make savings of US\$4.4bn over the same period, according to the report.

Aside from the OECD report, a number of individual countries have also attempted to quantify the financial costs and benefits associated with the new measures. In the

United States, for example, the Commandant of the Coast Guard has stated that the US maritime security regulations will cost the home industry US\$7bn over the next 10 years. The regulations will affect some 10,000 US vessels, 5,000 facilities, 361 ports and 40 offshore facilities.

And in Australia, the Government announced in the 2003–04 Federal Budget that it would allocate A\$15.6 million over 2 years to tighten the country's maritime and port security by developing enabling legislation, providing guidance to industry and ensuring compliance with the ISPS Code. The Government expects that the implementation costs to industry will be A\$313 million in the first year with ongoing costs of up to A\$96 million per year thereafter; while the Australian Shipowners' Association estimates that the cost for Australian flagged vessels could be between A\$750,000 and A\$900,000 each.

7.4 Achieving a Balance

Throughout the development of the new security measures and the implementation process, IMO has always been at pains to stress the importance of achieving a proper balance. This has applied not just in the cost/benefit equation but in other aspects, too.

Clearly, there is an overriding imperative to find a balance between the need to implement the new security regime strictly and robustly and yet ensure that disruption to global trade is kept to a minimum; a balance between the traditional and legally enshrined right of ships to enjoy free passage in international waters, and the need to make sure that strategic and potentially vulnerable sea lanes have the special protection they may need must be established; and there is a need to balance the need to tighten security provisions so that criminals and terrorists cannot gain access to ships by posing as seafarers, while ensuring that innocent seafarers are not themselves unfairly penalized as a result – such as, for example, by denying them shore leave.

7.5 Seafarer Issues

The whole question of human element-related aspects and, in particular, of shore leave for seafarers was dealt with in one very important Conference resolution. It urged Governments to take the human element, the need to afford special protection to seafarers and the critical importance of shore leave, into account when implementing the new security provisions. It also encouraged Governments, Member States of IMO and non-governmental organizations with consultative status at the Organization to report to the Organization any instances where the human element has been adversely impacted by the implementation of the provisions of chapter XI-2 of the Convention or the Code, and requested the IMO Secretary-General to bring to the attention of the Maritime Safety Committee and the Facilitation Committee of the Organization any human element-related problems that may be reported to the Organization.

This issue was subsequently addressed by the 31st session of the IMO Facilitation Committee in July 2004, which noted that Secretary-General Mitropoulos on the eve of the ISPS Code becoming effective had appealed to Governments and port authorities to apply the Code with a sense of pragmatism and common sense. His plea was that they should do so not only when they were dealing with ships and cargoes but also when dealing with seafarers serving on ships calling at their ports. It should not be forgotten that it was on the seafarers, initiatives, co-operation and constant vigilance that the industry relied heavily in order to prevent breaches of maritime security. Without their support and wholehearted commitment to the cause of security, the system the ISPS Code aimed so meticulously to put in place would be severely weakened, to the detriment of the overall effort.

Mr. Mitropoulos had added that if, on security grounds, seafarers face difficulties, such as refusal of shore leave, they might well feel somehow rejected or their services not sufficiently recognized. He had pointed out how important shore leave was to hard-working professionals reaching port after days or even weeks of isolation at sea, often after having faced the elements at their full strength. He also had warned that such restrictions might easily discourage prospective entrants to the maritime profession from joining ranks at a time when the industry was already short of quality officers worldwide – a situation, which might worsen in the future to include shortage of ratings as well.

He, therefore, had appealed to Governments and port authorities to treat seafarers as partners in the fight against terrorism and to facilitate their access to ports and shore facilities, since ships' stays in port were nowadays short and the seafarer's free time was limited. They should, therefore, be provided with every opportunity to relax and recover before they again had to take their ships out to sea in pursuit of their peaceful objectives in the service of world trade.

7.6 Strategic Sea Lanes

In addition to seafarer issues, another concern in which finding the right balance is paramount is keeping strategically important shipping lanes secure and open to international maritime traffic, thereby ensuring the uninterrupted flow of world trade. The IMO Secretariat has taken steps to identify which areas might be particularly vulnerable and the IMO Council, at its 92nd meeting earlier this year, shared the Secretary-General's concern in this respect and authorized him to work with parties concerned to find ways in which they might collaborate – while always observing, of course, the sovereign rights of the coastal States concerned.

One of the world's most important, indeed truly vital strategic shipping channels, for example, is the Malacca Strait. This 800 km long and, in places, extremely narrow link between the Indian Ocean and the South China Sea is an artery through which runs a large proportion of global trade. Tankers and bulk carriers move vast quantities of oil, coal, iron-ore and grain to the manufacturing centres of south-east and north-east Asia, while high-value manufactured goods carried in millions of containers

pour back through the same outlet to feed consumer markets all over the world. Some 50,000 ship movements carrying as much as one quarter of the world's commerce and half the world's oil pass through the Straits each year.

Any serious disruption to the flow of maritime traffic through this channel would clearly have a widespread and far-reaching detrimental effect. That is why the preservation of its integrity is such an important issue. But being a natural "choke point" for shipping makes the area particularly vulnerable, both to operational and navigational incidents and to the external threat posed by pirates and armed robbers. However, with south-east Asia still, unfortunately, recording the highest number of pirate attacks globally, there is clearly a fear that terrorists could resort to pirate-style tactics, or even work in concert with pirates, to perpetrate their evil deeds. And there have been warnings that an upturn in crew abductions could signal a move by terrorists to train themselves in operating and navigating large commercial vessels. Although criminals and terrorists may operate in similar ways, it should be remembered that terrorists aim to use their violence in pursuit of strategic objectives and, all too frequently, mass destruction: while pirates seek private gains, terrorists pursue political ones.

It is clear that the maintenance of unfettered navigation through the Malacca Strait, and within Southeast Asia generally, is an issue of international significance and importance. Subsequently, the littoral States concerned – Indonesia, Malaysia and Singapore – have shown their willingness to recognize this and to act accordingly by commencing joint patrols in the area.

For IMO, balance had been a recurring theme throughout the entire process of developing and implementing the new maritime security regime. The concern had been expressed that, if the focus were placed too heavily on "security" and less attention was paid to the other parts of IMO's responsibilities, i.e. "safety", "the environment" and the "facilitation of maritime traffic", then this would have detrimental effects. The right balance had to be struck between the various objectives involved when legislating, for example, on inspecting ships for port State control purposes; and the need for such balance has been reflected in IMO's new mission statement which calls for "Safe, Secure and Efficient Shipping on Clean Oceans".

8 Future Challenges

Although IMO is already pursuing various activities relating to the enhancement of maritime security, the future work of the Organization relating to the establishment of further regulatory requirements is largely dependant on how successful SOLAS Contracting Governments will be in creating, through effective, efficient and consistent implementation, application and enforcement of the provisions of SOLAS chapter XI-2 and the ISPS Code, an adequate security net and an appropriate security culture, and a climate of mutual trust and reliance. In addition, the success the shipping and port industries will have in maintaining continuous compliance with the special measures to enhance maritime security will have a bearing on the development and will

influence the nature and extent of any future internationally imposed regulatory requirements in this area.

Notwithstanding the aforesaid, some areas where discussions and further developments relating to maritime security might be envisaged within the scope of work of IMO are:

- In relation to the development of the long-range identification and tracking, discussions might take place in connection with the right of a coastal State to identify and to track ships exercising the right of innocent passage either through its exclusive economic zone or on the high seas and not intending to proceed to a port or an anchorage located within the territory of that coastal State;
- In the context of the enhancement of maritime security and with a view of fostering the creation of a security conscious culture, the need for and, if considered necessary, the nature of, mandatory security-related education, training and certification requirements for seafarers, irrespective of rank or discipline;
- In the same context, the need for and, if considered necessary, the nature of, mandatory security-related education, training and certification requirements for shore based personnel of Companies and port facilities;
- The possible development of self-assessment questionnaire(s) as tools for promoting, amongst SOLAS Contracting Governments, implementation and compliance in a harmonized and consistent manner and as a means for creating public confidence;
- As a result of the experience gained with the implementation of the new maritime security regime, the identification of areas where either SOLAS chapter XI-2 or the ISPS Code require improvements and consequently the adoption of amendments thereto;
- The development of measures which would foster the facilitation of international maritime traffic and which would, simultaneously, contribute to the enhancement of the security of the entire transport chain and reduce the security-related work load and burden on port facilities and on ships;
- The monitoring of the actual situation following the entry into force of the special measures to enhance maritime security in order to enable, in the future, the conduct of an assessment of the impact the measures have had.