

# C h a n g i n g   C o u r s e





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The Paris Memorandum of Understanding on Port State Control



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**1. Executive summary** Measures implemented in July of 2003 are showing results and have made it increasingly difficult for “rust buckets” to operate in the region. For the 4th year in a row the detention rates have dropped indicating that the strategy of the Paris MOU on Port State Control is paying off. The meeting of Ministers of the Paris and Tokyo Memoranda in Vancouver at the end of 2004 has underlined the political determination to strengthen the “Circle of Responsibility”, in which all parties of the maritime industry are held accountable for safer shipping.

The determined efforts by the 20 members of the Memorandum, taken in harmony with initiatives of the European Commission, have now demonstrated Port State Control to be an effective tool against the operation of substandard ships in the region. While the number of detained ships dropped from 1,764 to 1,187 over the last 5 years, new initiatives are already underway to enhance the deterrent against ships, shipping companies, flags and recognized organizations which are not committed to maritime safety.

The decisions by the Committee to introduce a new inspection regime focussed on risk based profiling of ships, and the agreement to include all ship types under the banning regime for multiple detentions, will introduce the most significant changes in policy since the inception of the Memorandum. A key proposal is that ships with a good safety record will only be inspected every 2 years, thereby reducing the inspection burden for responsible operators, taking account of a long standing wish from the industry.

At the same time ships with a high risk profile can expect determined control measures on a more frequent basis. Whereas banning for multiple detentions is now only aimed at certain ship types<sup>1</sup>, this measure will include all ship types in the future under a more stringent regime.

On 2-3 November 2004 Ministers responsible for maritime safety met for the 2nd Joint Ministerial Conference of the Paris and Tokyo MOUs at the invitation of Canada in Vancouver. They called for strengthening of ties between the Memoranda and gave political endorsement to more effective action against sub-standard ships. Many decisions by the Ministers will require further action from the respective Committees of both MOUs.

In an effort to continue a dialogue with the industry, the Paris Memorandum invited representatives to a high level forum titled "Commitment through Partnerships". This new initiative, opened by the Netherlands' Minister of Transport Karla Peijs in The Hague, established an open exchange of views and created a platform for public-private partnerships. The forum was well attended by bankers, insurers, shipping companies, charterers, classification societies, industry organizations and others. Several representatives committed themselves to a partnership in order to support the development of learning tools for Port State Control Officers.

With the enlargement of the European Union, the Paris MOU will also extend its membership in the near future closing some "white spots" in the geographical scope. The agreement has been extended to 6 co-operating members who are undergoing an assessment in order to achieve full memberships in the coming years. Working together with these maritime administrations has been very successful since none of them is now on the "Black List".

This year also marked the entry into force of measures to enhance maritime security. Inspectors were well prepared after special training courses and guidelines developed within the Memorandum. Taking a pragmatic approach a Harmonized Verification Programme was started on 1 July 2004, in a joint effort with the Tokyo MOU. Results have indicated that compliance with the ISPS Code was better than anticipated. Although many ships were detained in the initial month due to certification problems, no major security risks were encountered.

In the last quarter of 2004 a Concentrated Inspection Campaign was held to verify compliance with ILO standards for working and living conditions and hours of work and rest. The campaign revealed that more than 40% of the ships inspected had deficiencies in at least one of the selected inspections areas.

A total 21 ships were detained for ILO matters. Most ILO deficiencies were found in the areas of food storage, condition of the galley, sanitary facilities and hospital accommodation. Special attention was also aimed at the implementation of the Seafarer's Hours of Work and the Manning of Ships Convention, 1996 (No. 180). In almost 50% of all inspections deficiencies were found related to working arrangements.

<sup>1</sup> Passenger ships, bulk carriers, oil tankers, chemical tankers and gas carriers.





## 2. Paris MOU developments GENERAL - Once a year the Port State Control Committee, which is the executive body of the Paris MOU, meets in one of the Member States. The Committee considers policy matters concerning regional enforcement of port State control, reviews the work of the Technical Evaluation Group and task forces and decides on administrative procedures.

The task forces, of which 10 were active in 2004, are each assigned a specific work programme to investigate improvement of operational, technical and administrative port State control procedures. Reports of the task forces are submitted to the Technical Evaluation Group (TEG) at which all Paris MOU members and observers are represented. The evaluation of the TEG is submitted to the Committee for final consideration and decision making.

The MOU Advisory Board advises the Port State Control Committee on matters of a political and strategic nature, and provides direction to the task forces and Secretariat between meetings of the Committee. The board meets several times a year and in 2004 was composed of participants from Croatia, Germany, Italy, Norway, the United Kingdom and the European Commission.

### **Port State Control Committee**

The Port State Control Committee (PSCC) held its 37th meeting in Copenhagen, Denmark on 11-14 May 2004.

For the first time since the inception of the Paris MOU the Committee embarked on a fundamental review of the inspection regime. The port State control region aims to enhance its fight against sub-standard shipping by adopting a more risk based approach while at the same time reducing the burden on good operators.

Changes under consideration include a move towards full coverage of ships entering the region rather than

the current commitment of each member to inspect 25%. Periods between inspections would depend on the risk profile of an individual vessel. The review will also consider extending the current provisions for banning tankers, bulk carriers and passenger ships to other ships which independent research has shown to present a disproportionate risk, particularly to their crews.

Paris MOU membership is approaching double the number at the time of the Memorandum's formation in 1982, setting new challenges. Consequently the time has come to undertake a root and branch review of the inspection policy of the Paris MOU. This will include challenging some of the long standing concepts such as the 25% inspection commitment and the target factor, which have served well for many years.

The Committee will be working closely with the European Commission to take account of the 3rd Maritime Safety Package in developing a new regime for the 21st century.

Continuing its annual programme of inspection campaigns it was agreed to organize campaigns on GMDSS and MARPOL Annex 1 for 2005 and 2006, respectively.

Provisions for the banning of ships with multiple detentions introduced in July 2003 have increased the pressure on substandard ships operating in the region. However, detained ships which fail to call at an agreed repair yard continue to be the main reason for imposing bans. Procedures for releasing ships to a repair yard have been tightened to ensure that all parties

(the detaining state, flag, class and the next port) agree to the release of the vessel and will ensure that a proper follow-up inspection is carried out.

The Committee adopted a new list<sup>2</sup> of targeted flags which will be available on the Paris MOU website and take effect from 1 July 2004.

Recognizing the advantages of a harmonized inspection regime with the Tokyo MOU and the USCG, the Committee revised its criteria for allocating class responsibility in detention cases to bring it into line with the other two regimes.

### **Technical Evaluation Group**

The Technical Evaluation Group (TEG) convened in November 2004. Several task forces submitted reports to the TEG for evaluation before submission to the Port State Control Committee.

Issues considered by TEG included:

- development of a new inspection regime
- implementation and control of the ISPS Code related to security measures on board ships
- enhancement of the SIRENaC information system
- evaluation of statistics
- development of a new software system to check statutory requirements for ships
- development of guidelines for control of Condition Assessment Scheme (CAS) compliance
- development of guidelines for campaigns on GMDSS and MARPOL73/78 Annex I

### **Port State Control Training initiatives**

The Paris MOU will continue to invest in the training and development of Port State Control officers in order to establish a higher degree of harmonization and standardization in inspections throughout the region.

The Secretariat is organizing three different training programmes for port State control officers:

- Seminar (twice a year)
- Expert training (twice a year)
- Specialized training (once a year)

The Seminars are open to members, co-operating members and observers. The agenda is more topical and deals with current issues (i.e. inspection campaigns, new requirements). Expert and Specialized Training aims to promote a high degree of professional knowledge

and harmonization of more complex PSC issues and procedures. These 5 day training sessions are concluded with an examination and certification.

### **38th PSC Seminar**

The 38th Port State Control Seminar was held on 15 – 17 June 2004, in Stockholm, Sweden. The Seminar was attended by Port State Control Officers from the Paris MOU, as well as participants from Cyprus, Estonia, Latvia, Lithuania, Malta, Tokyo MOU, the Viña del Mar agreement and South Africa.

The Seminar covered the latest developments in the Paris MOU, including the first presentation of the ILO module of the Port State Control Distance Learning project. It also focussed on security, and more specifically an introduction to the Harmonized Verification Programme that was held later in 2004. Furthermore a presentation was given by the UK on issues regarding dockworker safety.

### **39th PSC Seminar**

The 39th Port State Control Seminar was held on 7 - 9 December 2004, in Ghent, Belgium. It was attended by Port State Control Officers from the Paris MOU, as well as participants from the EC, Bulgaria, Cyprus, Latvia, Lithuania, Malta, the Tokyo MOU, the Viña del Mar Agreement and the Black Sea MOU.

Participants were informed of the latest developments regarding PSC in the Paris MOU and EU. The Seminar was dedicated to three subjects: an introduction to Annex VI to protocol 1997 of MARPOL, thickness measurements and the voyage data recorder. Furthermore an introduction was given to the inspection campaign on GMDSS to identify training needs with regard to preparation for this campaign taking place in 2005.

### **Expert and Specialized Training**

For the Expert Training the central themes are "The Human Element" and "Safety and Environment". The theme of the Specialized Training will change every year. This year it was "Inspection of Bulk Cargoes". Both training programmes are intended for experienced PSC officers. Using that experience, the participants can work together to establish a higher degree of harmonization and standardization of their inspection practice. Lecturers for the training programmes are recruited from the maritime Administrations of the member States, international organizations, educational institutions and from the maritime industry. For the training programmes in 2004 lecturers came

<sup>2</sup> known as the Black, Grey and White list

from the member States UK, the Netherlands, France, Denmark, as well as the ILO, IMO, DNV, Class NK, shipping companies and others.

#### **The 1st Expert Training: “Safety and Security”**

The first Expert Training programme on Security and ISPS was held in The Hague in February 2004. Participants from all member States and co-operating members took part in the programme. This particular event was a “train-the-trainer” session for specialists from the (co-operating) member States in preparation for the introduction of the ISPS Code on 1 July 2004. The training gave an insight into the ISPS Code and the way all parties involved were preparing for the introduction: Port State Control, Recognized Security Organizations, shipping companies and the Competent Security Authority.

#### **The 1st Specialized Training on the inspection of Bulk cargoes**

The first Specialized Training programme was conducted in April 2004 in Gijon, Spain, and was developed in co-operation with the Spanish Maritime Authority and the Centro Jovellanos in Gijon. Participants from members States and co-operating members took part in this training. The lecturers covered a broad range of subjects. Different types of bulk cargo were discussed with the focus on aspects to be taken into account during a port State control inspection.

#### **The 3rd Expert Training: “The Human Element”**

In October 2004 the third Expert Training programme was held in The Hague with the Human Element as the central theme. Participants from member States as well as from the co-operating members took part in this training. The issues discussed during the training session were the ILO and STCW conventions, inter-cultural communication and operational control.

#### **Distance Learning Programme**

In 2004 the first module of the Port State Control Distance Learning Programme was completed. It covered working and living conditions on board (ILO Convention No. 147). The modules will be used primarily as preparation exercises for participants in the Expert and Specialized training programmes. Other modules under development are related to STCW, ISM and inter-cultural communication. This Distance Learning Programme was developed with

the assistance of the ITF and is an excellent example of an area in which the Paris MOU is working with all sides of the marine industry to improve the quality of the training and the inspections. It is hoped that following the High level Forum “Commitment through Partnerships” there will be other areas in which this type of training package can be developed.

#### **High level Forum “Commitment through Partnerships”**

On 4 October the Paris MOU organized the first High Level Forum with representatives from the industry. The forum was intended as a first exchange of ideas between all relevant partners in the shipping industry and Port State Control. Representatives from classification societies, ship owners, bankers, insurance and P&I Clubs attended the meeting. The meeting was chaired by Mr. Jim Davis OBE. Among the speakers were Mr. William O’Neill, former Secretary General of the IMO, and Mr. Ugo Salerno, CEO of RINA and former chairman of IACS Council.



#### **Review Panel**

The Review Panel became a permanent feature of Paris MOU procedures in 2003. Flag States or classification societies that cannot resolve a dispute concerning a detention with the port State, may submit their case for review. The Review Panel is composed of representatives of 3 different MOU Authorities, on a rotating basis, plus the Secretariat.

In 2004 the Secretariat received 3 official requests for review. Each case was administrated by the Secretariat and submitted to MOU members for review. Different members are used for each case.

In two cases the port State withdrew the detention based on the information gathered for submission to the panel.

One case was still pending at the end of 2004.

Two cases submitted in 2003 that remained unresolved, are now considered closed.

### **Paris MOU on the internet**

The Paris MOU Internet site has continued to enjoy an increasing demand from a variety of visitors. In particular from flag and port States, government agencies, charterers, insurers and classification societies, who are able to monitor their performance and the performance of others on a continuous basis. In March 2004 a project was finalized for a complete reconstruction of the website, allowing for more user-friendly access and several new functionalities.

Ships which are currently under detention are entered in a listing by the port State. Previously the information on detained ships was not made public until after the detention was lifted.

The inspection database on the website has been modified. PSC inspections are no longer updated on a weekly basis, but can now be accessed live and provide the visitor with more detailed information.

The regular publication of the "Rustbucket" has highlighted particularly serious detentions. These are described in detail and supported with photographs to make the general public aware of unsafe ships that have been caught by port State control. During 2004 details were published of the m/v MORO 4, flagged with the Korean Democratic People's Republic and detained in Italy, and of the m/v Archangelos Sea, flagged with Cyprus and detained in the United Kingdom. The annual award for the best contribution to the "Rustbucket" has been presented to the United Kingdom.

Other information of interest such as the monthly list of detentions, the annual report, the statistics of the "Blue Book" and news items can be downloaded from the website, which is found at "[www.parismou.org](http://www.parismou.org)".





### 3. Looking at 2005

Although the overall situation appears to be improving slightly in terms of detentions, Port State control results for 2004 indicate that efforts still need to be enhanced to obtain a substantial reduction in the number of substandard ships visiting the region.

Actions agreed by the Committee during its 37th session (2004) and 38th session (2005) are in the process of being implemented.

After serving 2 terms as chairman of the Port State Control Committee, Mr. Alan Cubbin will hand over his position to Mr. Brian Hogan.

Mr. Cubbin, who was employed by the Maritime and Coastguard Agency of the United Kingdom as Director of Standards, was the driving force of many new initiatives in the Memorandum. He greatly encouraged stricter targeting criteria, transparency, quality of information, training of Port State Control Officers and an open dialogue with the industry. He was also the driving force behind the MOU Advisory Board for many years and instrumental in 2 Ministerial conferences. The new chairman is currently employed by the Irish Maritime Safety Directorate as Chief Surveyor and will be holding this position until 2008.

and a check list have been developed. Inspectors will undergo a special training programme and in case of irregularities may find themselves assisted by specialized radio surveyors.

The campaign will involve roughly 5,000 inspections and will start on 1st September 2005 for a period of 3 months.

The Committee has closely monitored the performance of classification societies. The 2003 edition of the Blue Book included a table indicating a performance ranking, based on similar principles to the table for flag States. When comparing the performance with results published by the Paris MOU over the past years, the ranking in the list is unlikely to lead to many surprises. On the other hand, the list may provide an incentive, as it does for flag States, to compete for higher quality.

Among the best performing classification societies were:

- Germanischer Lloyd
- Det Norske Veritas
- Registro Italiano Navale

The lowest performing societies were:

- Register of Shipping (Albania)
- International Naval Surveys Bureau (Greece)
- International Register of Shipping (U.S.A.)

Decisions taken by the 2004 Vancouver Ministerial Conference have been translated in an action list for the Paris MOU Committee. These actions will be taken forward in close co-operation with the Tokyo MOU. The Committee welcomed the initiative from IMO to revise its inter-governmental organisation agreement which would allow the Paris MOU (and other MOUs) to submit papers and attend meetings in its own right.



Although radio communication in the framework of the GMDSS system has not been a prominent deficiency category, this area has never been the subject of a Concentrated Inspection Campaign. In order to verify that equipment and operational requirements meet the international standards, the Committee has decided that a CIC will take place in 2005. Guidelines for verification



#### 4. Looking ahead

The Port State Control Committee is already looking ahead in order to anticipate new developments and to take concerted and harmonized actions. Such actions need to enhance the effectiveness of the region in combating sub-standard shipping.

The Paris MOU Advisory Board has considered several policy issues of a political or strategic nature and will submit proposals to the Committee in 2006 for consideration.

##### **Concentrated Inspection Campaigns**

For 2006 the Concentrated Inspection Campaign will address the requirements of MARPOL 73/78, Annex I. Although the requirements have been in force for some years, it appears that equipment failures, illegal bypasses of the oil filtering equipment, as well as lack of familiarity of the responsible persons with the requirements give reason for concern. One in every 5 inspections reveal Annex I deficiencies.

For 2007 it has been decided that the inspection campaign will focus on the requirements of the ISM Code again. Five years will have passed since the campaign of 2002 and ships and companies will be going through a new cycle of audits and certification. It is therefore an appropriate time to examine whether the parties involved are conversant with the management system or whether compliance is simply a paper exercise. The Committee agreed that this campaign would have more impact if carried out jointly with the Tokyo MOU. This would also follow the decision taken by Ministers at the Joint Conference in 2004.

##### **New Inspection Regime**

Now that the Committee has decided on a fundamental review of its inspection regime, these principles have to be translated into practical implementation. Very important for the MOU members will be how the new inspection regime will affect their national port State control programmes, in particular since 5 to 7 new members may be joining in the future. An analysis has to be made of whether their inspection efforts will have to be increased or reduced.

The inspection regime will also take into account a "fair sharing" principle where, under certain conditions, the inspection burden can be shared among the members.

To support the new inspection regime, it will be necessary to design a new database. Although the SIRENaC 2000 system has only been in operation since 2003, the Paris MOU is already considering the next generation information system.

It is expected that when the Committee meets in 2006 in France, more fundamental decisions can be taken on how the new regime can be implemented.



**5. Concentrated Inspection Campaigns** Several concentrated inspection campaigns have been held in the Paris MOU region over the past years. The campaigns focus on a particular area of compliance with international regulations with the aim of gathering information and enforcing the level of compliance. Each campaign is prepared by experts and identifies a number of specific items for inspection. Experience shows that they serve to draw attention to the chosen area of compliance.

In 2004 two campaigns were held:

- the Harmonized Verification Programme on maritime security and
- the Concentrated Inspection Campaign on working and living conditions, including hours of work and rest

#### **Maritime Security**

With the introduction of the International Ship and Port Facility Security Code on 1 July 2004 the Paris MOU mounted a three month programme to verify compliance with new security requirements for ships. Results show that of the 4,681 security checks carried out only 72 resulted in the ship's detention on security grounds.

The policy of issuing visiting ships with Letters of Warning in the run up to the Code deadline helped to ensure that most owners met their obligations to bring about a more secure shipping environment. While the level of compliance is encouraging, the challenge for industry is to maintain its vigilance and for security to become engrained in the operation of ships.

The programme, which was held in conjunction with the Tokyo MOU, ran from 1 July to 30 September 2004 and used a uniform questionnaire to test the key elements of the ship's security arrangements.

Aspects considered by port State control officers (PSCO) included:

- the International Ship Security Certificate (ISSC) and inappropriate use of Interim Certificates
- access control
- access control to sensitive areas of the ship
- security level

- records of ship & port interfaces
- records of security drills
- crew familiarity with essential ship security procedures
- communication among key crew members

An analysis of programme results showed that a total of 4,681 security checks were made on 4,306 individual ships. A total of 28 inspections resulted in detention solely on security grounds while another 44 ships were detained on security and other grounds. Representing a rate of 1.5% of inspections resulting in detention for security reasons compared with an overall detention rate for the period of 5.7%.

Monthly figures revealed an improving level of compliance as the programme progressed. In July 50 ships were detained compared with 13 in August and 9 in September.

60 ships were detained due to a lack of a valid ISSC while further 45 had problems with their certificates which did not result in detention. Ships found not to be in compliance are subject to a range of measures from straightforward rectification to expulsion from the port. In most cases non-compliances were rectified on the spot. The most common non-compliance was a failure to record previous ports of call. This was found on 349 occasions. Problems with access control onto and around the ship were found in just over 200 inspections. 215 Inspections revealed a failure to keep records of security drills.

It should be recognized that in cases where the PSCO found areas of non-compliance the Competent Security Authority were called in to consider taking further control measures.

In some states this authority is quite separate from the port State control authority and therefore subsequent actions against the ships may not have been recorded by the PSCO.

### Working and Living Conditions

The inspection campaign started on 1 October 2004 and to help ensure focus and efficiency, certain areas covered by the ILO Conventions were addressed during the campaign.

Minimum international standards for the living and working conditions for seafarers are set out in the Merchant Shipping (Minimum Standards) Convention, 1976 (No. 147). Convention No. 147 is a relevant instrument applied by the Paris MOU as well as the EC Directive on Port State Control.

During the campaign, port State control officers, often in co-operation with port health officers, paid particular attention to the following areas:

- food supply and storage
- condition of the galley
- condition of equipment for receiving and producing
- potable water
- ventilation and heating in accommodation spaces
- sanitary facilities
- hospital accommodation
- condition of accommodation spaces

The campaign, which ran until 31st December 2004, revealed that more than 40% of the 4555 ships inspected had deficiencies (total 1345) in at least one of the selected inspections areas, compared to 25% in 1997. A total of 285 ships were detained during the CIC, of which 21 were detained for ILO matters.

Most ILO deficiencies were found in the areas of food storage, condition of the galley, sanitary facilities and hospital accommodation. In most cases the master was instructed to correct the deficiencies without the ship being detained.

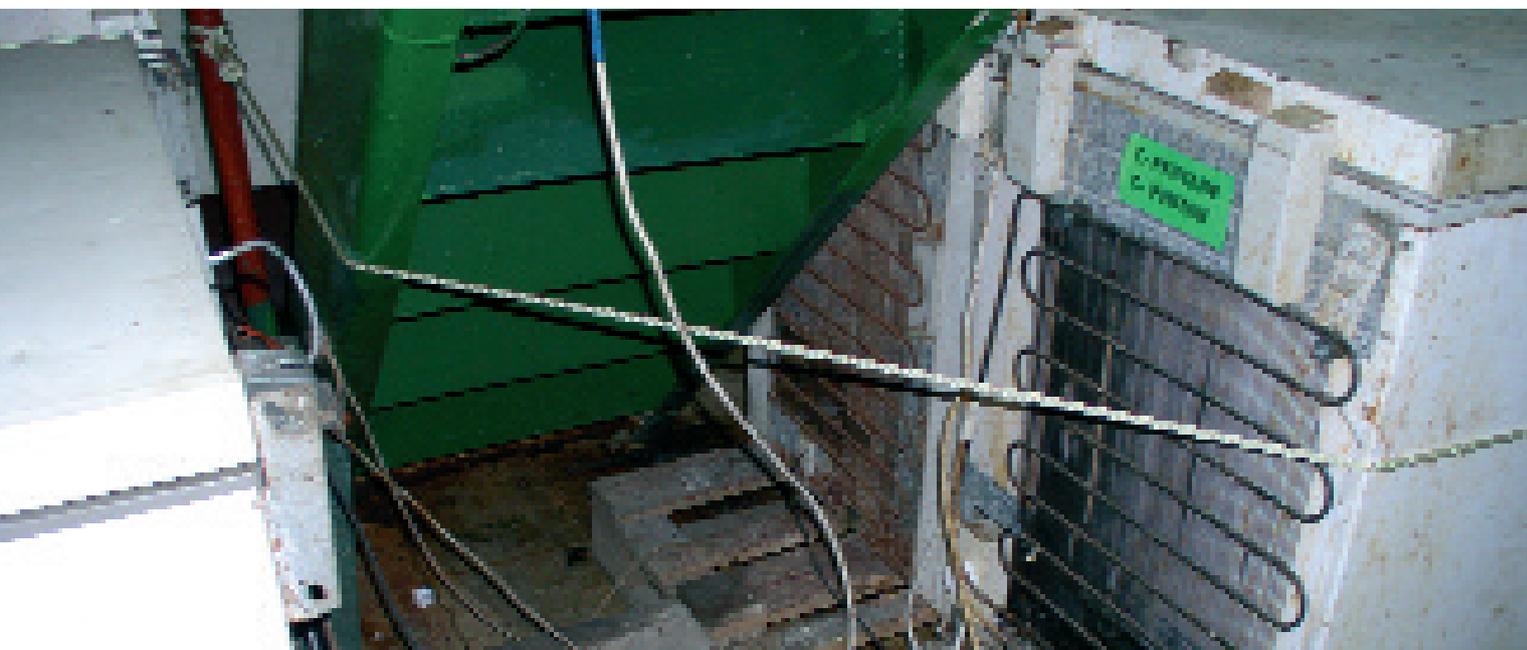
Special attention was also aimed at the implementation of the Seafarer's Hours of Work and the Manning of Ships Convention, 1996 (No. 180). As part of this the table with the shipboard arrangement and the records of seafarer's hours of work or rest were checked. In almost 50% of all inspections deficiencies (total 2392) were found related to working arrangements. This implies that 64% of the deficiencies found (total 3737) during the CIC were ILO No. 180 related. Unsurprisingly, statistics also revealed that ships flying a flag of a State targeted for poor standards concerning maritime safety and marine environmental protection are also found to have poor living and working conditions.

Flag States with the highest deficiency ratio during the campaign were Albania, Algeria, Georgia, Libya, Morocco, Romania, Syria, Togo and Tuvalu.

Ships flying the flag of Algeria, Morocco, Romania and Syria also scored the highest deficiency ratio per flag during the CIC in 1997.

General cargo ships were the worst performing ship type (57%), followed by bulk carriers (21%).

Ships detained for serious ILO deficiencies were usually also detained for defects in safety and pollution prevention areas. This underlines again the vital relation between the human element and all areas of maritime safety and environmental protection. This issue was also raised by Ministers during the Second Joint Ministerial Conference of Paris and Tokyo MOU's held in Vancouver, Canada (November 2004).



## 6. Membership of the Paris MOU

In preparation for prospective new members of the Paris MOU, the Port State Control Committee has adopted criteria for co-operating status for non-member States and observer status for newly developed PSC regions.

Specific criteria, including a self-evaluation exercise, have to be met before co-operating status can be granted. Regional agreements seeking observer status must demonstrate that their member Authorities have an acceptable overall flag State record and have a similar approach in terms of commitment and goals to that of the Paris MOU.

In 2004 the following maritime Authorities have a co-operating member status:

- Estonia has already been visited by a monitoring team and a fact finding mission to complete the final stages towards membership. Since not all relevant instruments had been ratified in 2004, the Committee decided to extend the period of co-operative membership by one year. It is anticipated that Estonia will complete the requirements for membership in 2005.
- Latvia has also nearly completed the process for membership, which include the recommendations from the Committee to meet the qualitative requirements. A fact finding mission visited in 2004 and based on the report the MOU members will decide on membership in 2005.
- Lithuania has been a co-operating member since 2003 and is now implementing the recommendations to meet the qualitative criteria. When these are in place, the Committee will decide to send a fact finding mission.
- Cyprus has also been co-operative member since 2003. The Committee agreed that Cyprus should also meet the recommendations from the monitoring team and should report on a quarterly basis to the Advisory Board with regard to

detentions of ships under its flag. Cyprus has shown significant improvement in this aspect and has now moved from the "Black List" to the "Grey List", a condition for full membership. It is expected that the Committee will send a fact finding mission to Cyprus in 2005.

- Malta joined the same year as Lithuania and Cyprus and is also in the process of implementing the recommendations from the monitoring team. Since Malta also figured on the "Black List", the Committee decided that it should also submit quarterly reports on flag detentions to the Advisory Board. Positive action has been taken by the authorities and it can now be reported that Malta has moved up to the "Grey List". The Committee will be able to send a fact finding mission at the request of Malta.
- Bulgaria is the latest co-operating member, as decided by the Committee in 2004. The visit by the monitoring team has resulted in a number of recommendations which have been endorsed by the Committee. Once the recommendations have been implemented, Bulgaria may request full-membership status in due course.

Until now the Paris MOU only has 2 members (Canada and Russian Federation) which have dual membership with the Tokyo MOU, while the Russian Federation is also a member of the Black Sea MOU. If Malta, Cyprus and Bulgaria do become members, there would also be ties with the Mediterranean and Black Sea MOUs. For these new members the Paris MOU standards will prevail.



**7. Co-operation with other organizations** The strength of regional regimes of port State control which are bound by geographical circumstances and interests is widely recognized. Nine regional MOUs have been established. The Committee has expressed concern that some of these MOUs are dominated by Members who have not made efforts to exercise effective control over their own fleet. Several flag States belonging to regional MOUs appear on the “Black List” of the Paris MOU. In order to provide technical co-operation to these new MOUs, they may apply for associate observer status.

Two regional agreements have obtained official observer status to the Paris MOU: The Tokyo MOU and the Caribbean MOU. The United States Coast Guard is also an observer at Paris MOU meetings.

The 37th meeting of the Port State Control Committee has agreed to the requests from the Black Sea MOU and the Mediterranean MOU for associate observer status. Although these MOUs will not be represented in the Committee, there is a commitment from the Paris MOU to assist them on a technical and administrative basis. This will include participation in seminars and technical meetings.

The International Labour Organization (ILO) and the International Maritime Organization (IMO) have participated in the meetings of the Paris MOU on a regular basis.

In 2004 the IMO organized the 3rd workshop for the Secretariats and database managers of regional agreements on port State control. Participants from all regional agreements attended the workshop, which took place at the IMO headquarters in June 2004. The workshop made a number of recommendations which will be considered by the Committee in 2005. The 2003 Annual Report, including inspection data, has been submitted to the Sub-Committee on Flag State Implementation (FSI) by Croatia, Germany, Italy, Norway and the United Kingdom. The figures will hopefully generate discussion on how several flag States intend to implement measures to improve their records. The Paris MOU would welcome such a dialogue in the interest of safety and the protection of the marine environment and welcomes an initiative by IACS to assist certain flags on a technical level.



**8. Facts and figures** INTRODUCTION - During 2004, 20,316 inspections were carried out in the Paris MOU region on 12,538 foreign ships registered in 108 different flag States. The number of inspections is almost equal to the inspection figure for 2003 (20,309). Since 1996 (16,070) the number of inspections has increased significantly up until this year.

The number of individual ships inspected in 2004, 12,538, increased by 156 compared with the number inspected in 2003 (12,382).

The overall inspection rate in the region was 31,49% in 2004, compared with 30,07% in 2003, 28,93% in 2002 and 28.84% in 2001. All member States reached the 25% inspection commitment of the Memorandum. A chart showing the individual efforts of Paris MOU members is included in the statistical annexes to this Annual Report.

#### **Detentions**

Detention rates are expressed as a percentage of the number of inspections, rather than the number of individual ships inspected to take into account that many ships are detained more than once during any one year. The number of ships detained in 2004 for deficiencies clearly hazardous to safety, health or the environment amounted to 1,187. It compares with the number of 1,431 detained in 2003, 1,577 in 2002, and 1,699 in 2001. The significant decrease of 244 (17,0%) ships compared with 2003, has reduced the average detention percentage to 5.84% in 2004, compared with 7.05% in 2003, 7,98% in 2002 and 9.09% in 2000. This positive development over a 4-year period is an encouraging sign that more sub-standard ships are avoiding the region.

#### **"Black, Grey and White List"**

In the 1999 Annual Report the traditional "Black List" of flags was replaced by a "Black, Grey and White List". The tables are still based on performance over a 3-year rolling period but now show the full spectrum between quality flags and flags with a poor performance which are considered a high or very high risk.

The "Black List" is composed of 21 flag States, 5 less than last year. The "White List" includes 31 flag States, 2 more than last year. A hard core of flag States reappear on the "Black List". Most flags that were considered "very high risk" in 2003 remain so in 2004. The poorest performing flags are still Albania, North Korea, Tonga and Bolivia. The flag of Sao Tome & Principe has disappeared from the Black list. However this is due to insufficient inspections being carried out on ships flying this flag, in the period 2002-2004. Brazil and Taiwan have moved from the "Grey List" to the "Black List".

On a more positive note: Bulgaria, Cyprus, India, Iran, Malta and Morocco have moved from the "Black List" to the "Grey List" and will hopefully maintain this trend.

The "White List" represents quality flags with a consistently low detention record. Germany, Isle of Man, the United Kingdom, the U.S.A. and Sweden are placed highest in terms of performance. Vanuatu and Saudi Arabia have moved down to the "Grey List".

New to the "White List" are Philippines, Malaysia, Barbados and Cayman Islands.

Flag States with an average performance are shown on the "Grey List". Their appearance on this list may act as an incentive to improve and move to the "White List". At the same time flags at the lower end of the "Grey List" should be careful not to neglect control over their ships and risk ending up on the "Black List" next year.

There are signs that several flags appearing on the "White List" now use their ranking to advertise themselves as quality registers and are making efforts to reach a higher ranking the following year.

From the figures it may be concluded that since the "Grey List" and the "Black List" are getting smaller and the "White List" is increasing there is a movement towards quality flags. Supported by the lower detention percentage, this is a positive development.

### Ship types

Looking at detentions by ship type over several years, it is noted that general dry cargo ships and bulk carriers still account for over 74% of all detentions.

Most ship types indicate a slowly decreasing trend in detentions.

Passenger ships have shown a substantial improvement compared with last year.

On the other hand the detention percentage of Refrigerated Cargo ships has increased, although it is too early to speak of a trend.

Statistical annexes to this report show the detention percentage for each ship type in 2004, 2003 and 2002.

### Banning of ships

A total of 35 ships were banned from the Paris MOU region in 2004, because they failed to call at an agreed repair yard (11), jumped detention (1), were not certified in accordance with the ISM Code (1) or because of multiple detentions (22).

By the end of 2004 the ban had been lifted on 19 of these ships after verification that all deficiencies had been rectified. A number of ships remain banned from previous years. An up-to-date list of banned ships can be found on the internet site of the Paris MOU on Port State Control. A new table and statistic related to banning has been included in this year's report.

### Performance of Classification Societies

Details of the responsibility of classification societies for detainable deficiencies have been published since 1999. When one or more detainable deficiencies are attributed to a classification society in accordance with the criteria it is recorded and class is informed. Out of 1,187 detentions recorded in 2004, 16% (188) were considered class related.

When considering the rate of class related detentions as a percentage of inspections in 2004, Register of Shipping (Albania) 13,6%, Indian Register of Shipping 12,5%, China Corporation Register of Shipping 8,7% and Rinave Portuguesa 8,33% scored highest as indicated in Model 2 in the Statistical Annex.

### Deficiencies

A total of 64,113 deficiencies were recorded during port State control inspections in 2004, a major decrease (10,9%) on the number of 71,928 recorded in 2003 (69,079 in 2002).

With some exceptions, ships older than 15 years show substantially more deficiencies than ships of less than 5 years.

The trends in key safety areas are shown below.

### Safety

In 2004 deficiencies in vital safety areas such as life saving appliances, fire fighting equipment, safety in general and navigation accounted for 47% of the total number of deficiencies.

Deficiencies in these areas have decreased about 10%, from 33,598 in 2003 to 30,267 in 2004.

Older ships ( $\geq 15$  years) show 24,409 deficiencies, compared to younger ships ( $< 5$  years) with 1,175 deficiencies, a rate 21 times higher.

### Security

In 2004 security related deficiencies were recorded for the first time. Taking into account that inspections were only carried out during the last 6 months and ships were also subject to Harmonized Verification Programme, the results are no direct cause for alarm. However, the implementation will be closely monitored in the coming years. A total of 149 deficiencies were found in relation with the International Ship Security Certificate, in particular during the early stages of implementation. In other areas the number of deficiencies amounted to 107.

### Marine environment

MARPOL73/78 Annex I, II, III and V deficiencies have decreased by 28%, from 5,207 in 2002 to 3,714 in 2004. Again a positive trend when compared with previous years. In 2004 older ships ( $\geq 15$  years) show 3,316 deficiencies, compared to younger ships ( $< 5$  years) with 211 deficiencies, a deficiency rate 16 times higher.

### Working and living conditions

Major categories related to working and living conditions are "crew and accommodation", "food and catering", "working places" and "accident prevention". Deficiencies in these areas increased by 40%, from 4,548 in 2002 to 7,607 in 2004.

In 2004 older ships ( $\geq 15$  years) show 5,914 deficiencies, compared to younger ships ( $< 5$  years) with 173 deficiencies, a deficiency rate 34 times higher.

### Certification of crew

Compliance with the standards for training, certification and watch keeping for seafarers indicated a decrease of 43%, from 5,522 in 2002 to 3,127 in 2004.

Older ships ( $\geq 15$  years) show 2,411 deficiencies in 2004, compared to younger ships ( $< 5$  years) with 200 deficiencies, a deficiency rate 12 times higher.

### Operational

Operational deficiencies have steadily increased from 1,694 in 2002 to 2,971 deficiencies in 2004 (42%).

A trend that is observed over the past years with growing concern.

In 2004 older ships ( $\geq 15$  years) show 1,948 deficiencies, compared to younger ships ( $< 5$  years) with 108 deficiencies, a rate 18 times higher.

### Management

The International Safety Management Code came into force for certain categories of ships from July 1998, and was extended to other ships in July 2002. In the year under review 2,794 (major) non-conformities were recorded, a decrease of 21% when compared with the 2002 results. The trend from the past years which showed a major increase of ISM related deficiencies appeared to have stopped, since for the first time since the implementation of the ISM code the number of deficiencies has decreased.

Older ships ( $\geq 15$  years) show 2,199 (major) non-conformities, compared to younger ships ( $< 5$  years) with 120 (major) non-conformities, a rate 18 times higher. Most prominent are older general dry cargo ships and bulk carriers with 1,635 non-conformities, 74% of the total (2,199).

Older general dry cargo ships ( $\geq 15$  years) show 1,109 (major) non-conformities, which score a non-conformity rate 36 times higher than younger ships ( $< 5$  years) with 31 (major) non-conformities.

Older bulk carriers ( $\geq 15$  years) show 526 (major) non-conformities, which score a non-conformity rate 24 times higher than younger ships ( $< 5$  years) with 22 (major) non-conformities.

Other ship types of over 15 years show lower rates, although ISM compliance of older tankers, Ro-Ro/Container ships, and passenger ships should be closely monitored.



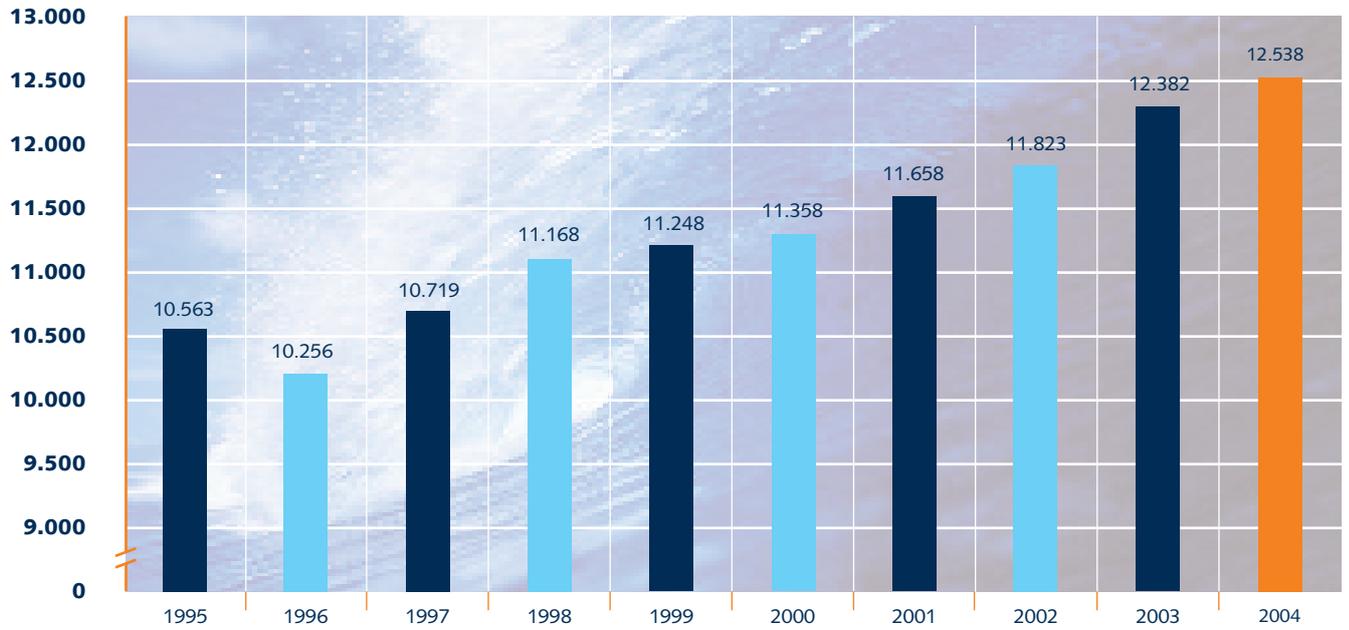
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Statistical Annexes to the 2004 Annual report

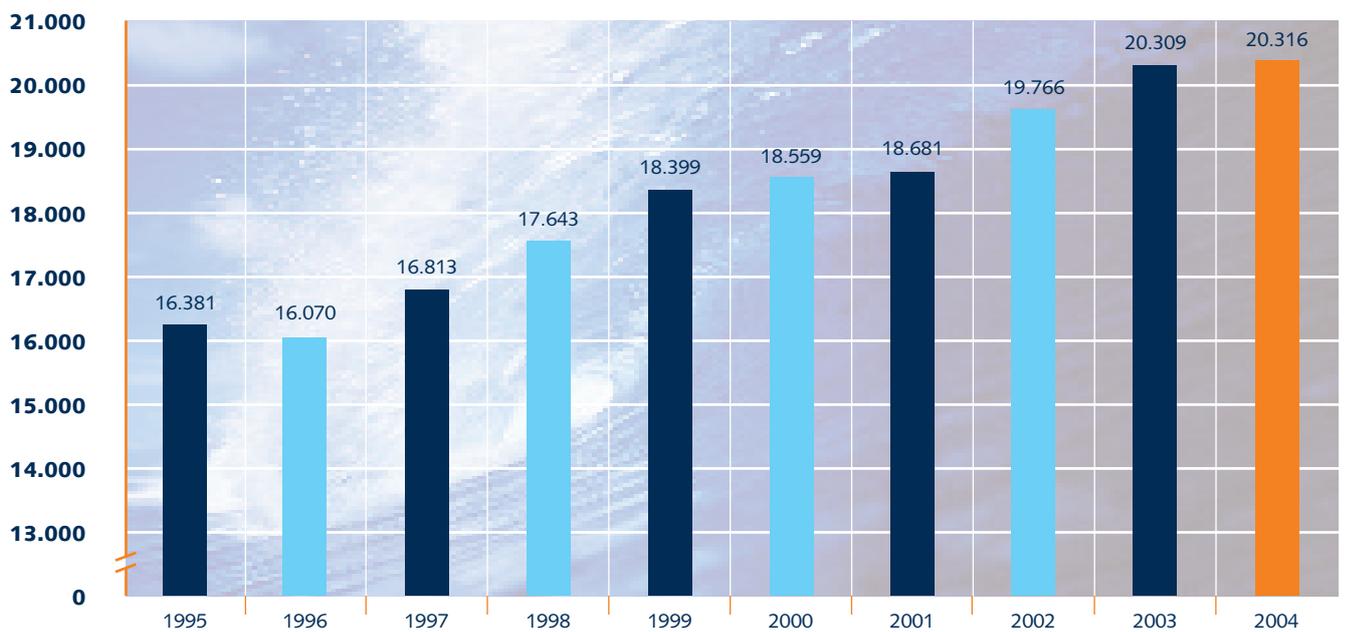


## Basic port State control figures 2004 - 1

### number of individual ships inspected

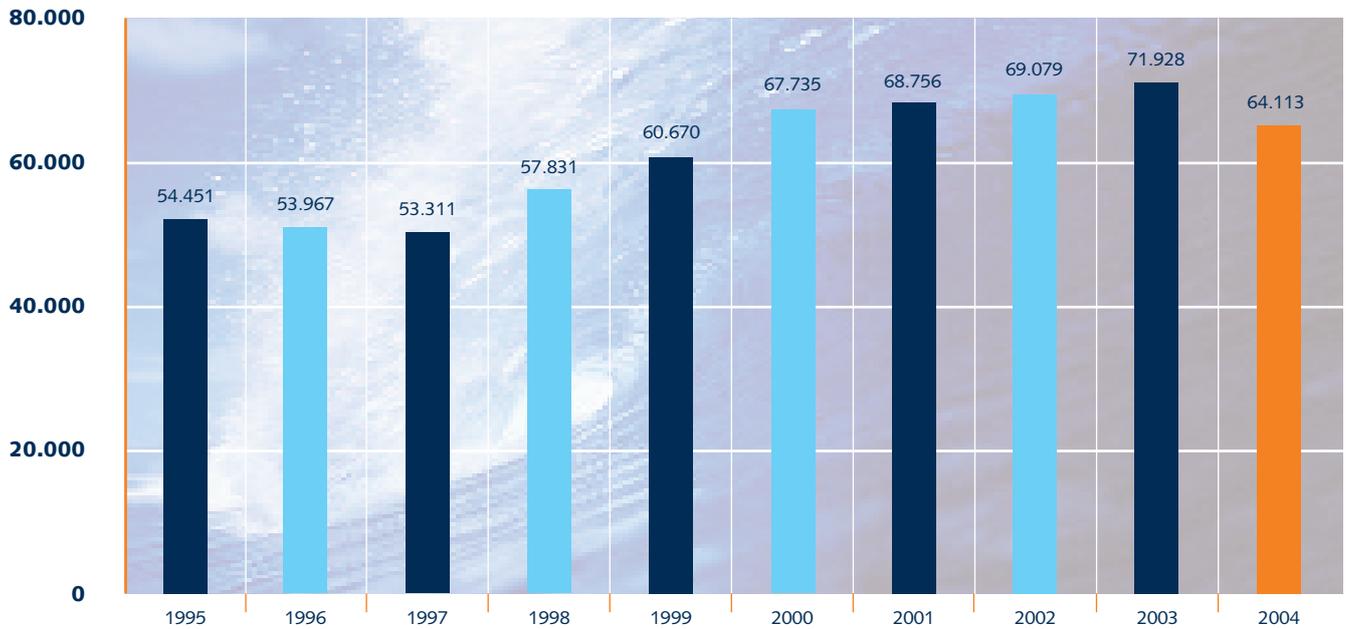


### number of inspections

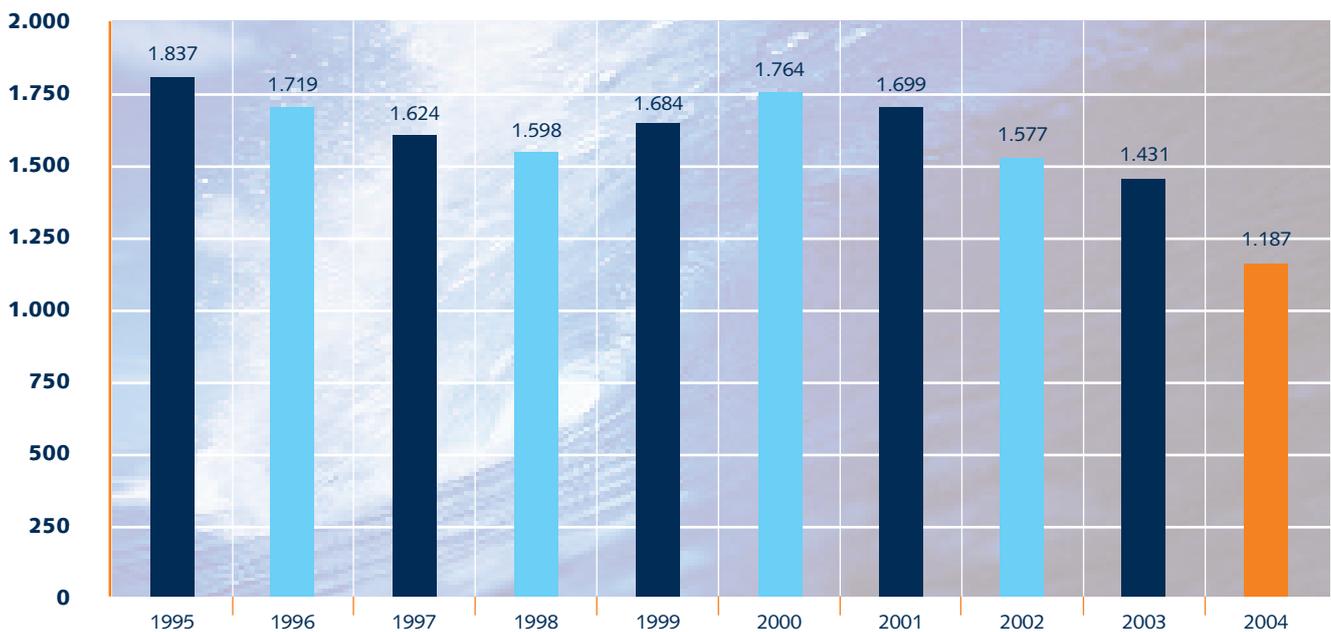


### Basic port State control figures 2004 - 2

number of deficiencies observed

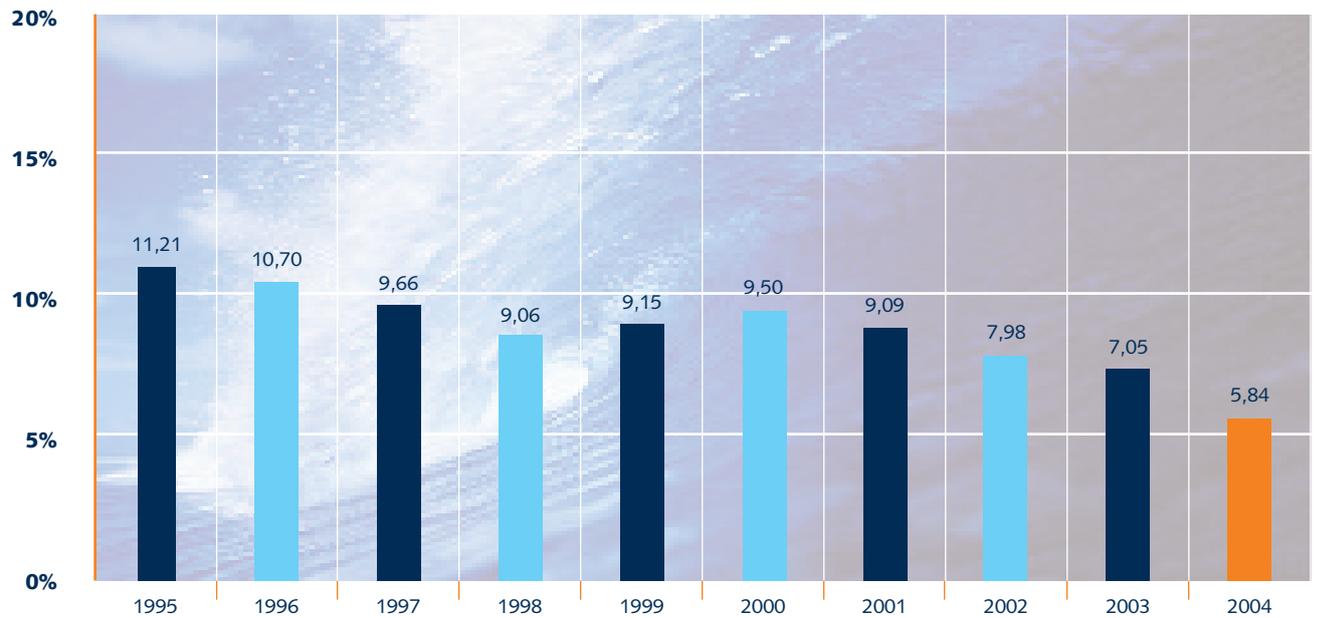


number of detentions



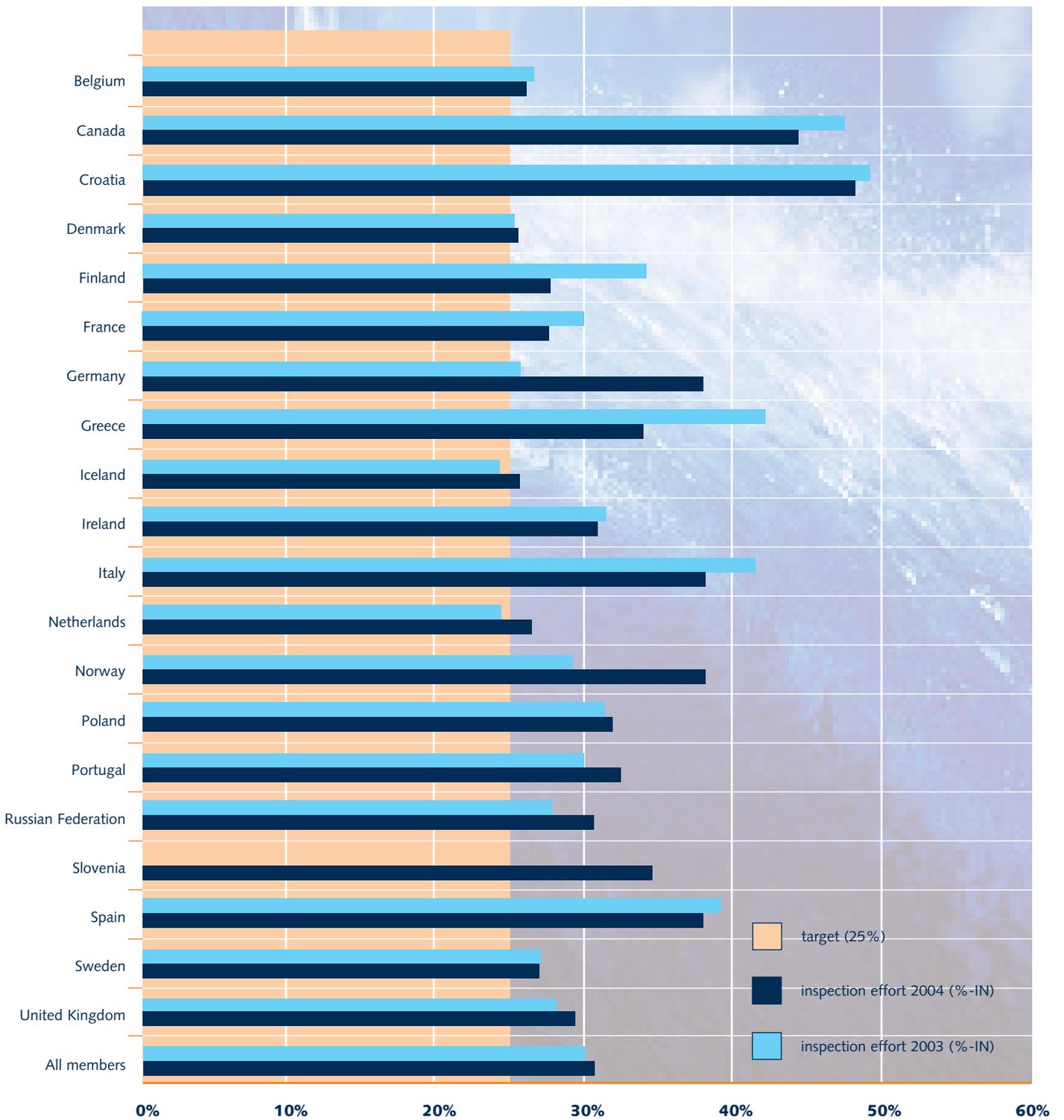
## Basic port State control figures 2004 - 3

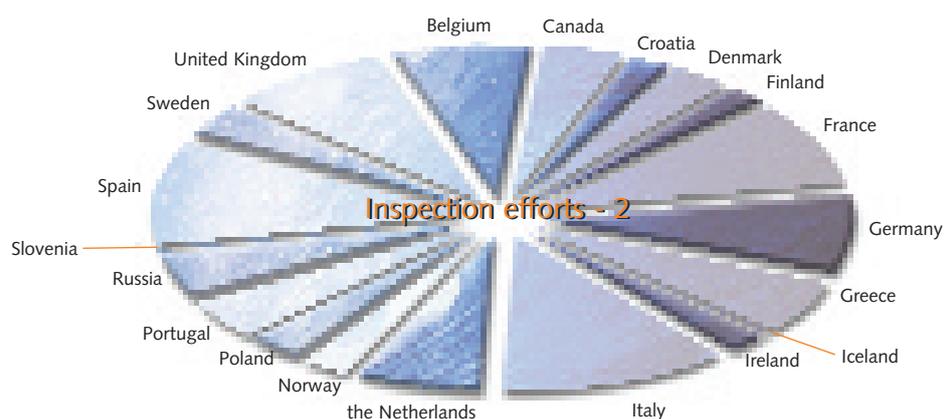
detentions in % of inspections



## Inspection efforts - 1

Inspection efforts of members compared to target





### Mou port States' individual contribution to the total amount of inspections

MOU port State	Estimated ship calls	Inspections			Detents with Class related deficiencies		% -Insp. With deficiencies	% Detained	% Inspected Ship calls (25% commitment)	% Inspection of MOU total
		Inspections	with deficiencies	Detentions	with Class related deficiencies					
Belgium	5200	1364	460	51	10	33,72	3,74	26,23	6,53	
Canada <sup>1</sup>	1760	784	259	41	13	33,04	5,23	44,55	3,76	
Croatia	964	459	273	25	1	59,48	5,45	47,61	2,20	
Denmark	2400	613	227	27	1	37,03	4,40	25,54	2,94	
Finland	1245	351	104	6	0	29,63	1,71	27,71	1,68	
France	6436	1773	1041	59	6	58,71	3,33	27,55	8,49	
Germany	4704	1778	865	60	8	48,65	3,37	37,80	8,52	
Greece	3156	1082	591	63	9	54,62	5,82	34,28	5,18	
Iceland	313	80	28	4	0	35,00	5,00	25,56	0,38	
Ireland	1323	410	211	20	1	51,46	4,88	30,99	1,96	
Italy	6446	2422	1657	346	46	68,41	14,29	37,57	11,60	
Netherlands	5343	1436	878	81	16	61,14	5,64	26,87	6,88	
Norway	1800	681	219	13	2	32,16	1,91	37,83	3,26	
Poland	1914	634	335	26	2	52,84	4,10	33,12	3,04	
Portugal	2867	964	556	63	14	57,68	6,54	33,62	4,62	
Russian Federation <sup>2</sup>	3447	1062	717	24	7	67,51	2,26	30,81	5,09	
Slovenia	673	231	116	48	9	50,22	20,78	34,32	1,11	
Spain	5932	2231	1448	116	5	64,90	5,20	37,61	10,69	
Sweden	2776	745	241	10	1	32,35	1,34	26,84	3,57	
United Kingdom	6286	1778	1220	104	20	68,62	5,85	29,29	8,52	

<sup>1</sup> Only East coast of Canada <sup>2</sup> Excluding Black Sea ports (Novorossiysk, Sochi and Tuapse) as from 01 December 2002

Black - Grey - White lists

Flag State	Inspections 2002 - 2004	Detentions 2002 - 2004	Black to Grey Limit	Grey to White Limit	Excess Factor	
Albania	296	120	28	Black list	10,60	
Korea, DPR	224	87	22		9,81	
Tonga	117	48	13		9,81	
Bolivia	79	28	10		7,54	
Honduras	186	52	19		very high	6,21
Lebanon	180	46	19		risk	5,45
Comoros	150	39	16		5,42	
Algeria	188	44	19		4,83	
Cambodia	868	176	74		4,69	
Slovakia	33	10	5		4,61	
Georgia	524	108	47		4,59	
Syrian Arab Republic	261	52	26		4,00	
St. Vincent & Grenadines	2480	385	195		high risk	3,45
Turkey	2377	358	187		3,29	
Belize	458	56	42		1,94	
Egypt	172	23	18	1,81		
Ukraine	662	72	58	1,66		
Romania	164	20	17	medium	1,45	
Taiwan	43	7	6	risk	1,42	
Brazil	45	7	6	1,29		
Panama	5954	462	450	1,07		
Tunisia	47	6	7	0	0,90	
Morocco	175	17	18	6	0,89	
Mongolia	30	4	5	0	0,84	
Croatia	186	16	19	7	0,74	
India	136	11	15	4	0,64	

Grey list

Flag State	Inspections 2002 - 2004	Detentions 2002 - 2004	Black to Grey Limit	Grey to White Limit	Excess Factor
Faroe Islands	48	4	7	0	0,59
Estonia	245	18	24	10	0,56
Bulgaria	288	21	28	13	0,56
Tuvalu	32	2	5	0	0,46
Malta	4432	307	339	282	0,44
Cyprus	3531	244	273	222	0,44
United Arab Emirates	36	2	6	0	0,41
Iran, Islamic Republic of	226	14	23	9	0,37
Belgium	58	3	8	0	0,36
Poland	139	8	15	4	0,34
Russian Federation	2468	165	194	151	0,32
Kuwait	30	1	5	0	0,30
Ethiopia	31	1	5	0	0,29
Gibraltar	569	35	50	29	0,27
Latvia	55	2	7	0	0,24
Lithuania	353	20	33	16	0,22
Spain	289	14	28	13	0,09
Vanuatu	121	4	14	3	0,06
Switzerland	65	1	8	1	0,04
Korea, Republic of	108	3	12	3	0,03
Saudi Arabia	47	0	7	0	0,01
Azerbaijan	131	4	14	4	0,01
Thailand	136	4	15	4	-0,04
Philippines	212	8	21	8	-0,05

Grey list

White list

Flag State	Inspections 2002 - 2004	Detentions 2002 - 2004	Black to Grey Limit	Grey to White Limit	Excess Factor
Malaysia	175	6	18	6	-0,05
Ireland	184	6	19	7	-0,16
Israel	53	0	7	0	-0,18
Barbados	287	11	28	12	-0,21
Antilles, Netherlands	604	28	53	31	-0,22
Cayman Islands	400	16	37	19	-0,31
Greece	1569	77	127	93	-0,36
Japan	63	0	8	1	-0,52
Antigua & Barbuda	4242	204	325	269	-0,54
Portugal	596	21	52	31	-0,64
France	255	6	25	11	-0,76
Singapore	698	22	60	37	-0,83
Marshall Islands	829	26	71	45	-0,88
Bahamas	3303	124	256	207	-0,88
Italy	975	30	82	55	-0,94
Denmark	1308	42	107	76	-0,95
Hong Kong, China	795	23	68	43	-0,96
China	269	5	26	11	-1,00
Norway	2712	88	212	167	-1,04
Liberia	2842	92	222	176	-1,05
Bermuda	218	3	22	9	-1,11
Luxembourg	190	2	20	7	-1,19
Netherlands	3031	87	236	189	-1,19
Finland	519	10	46	26	-1,24
Sweden	931	20	78	52	-1,30
United States of America	167	1	18	6	-1,34
United Kingdom	1325	24	109	77	-1,49
Man, Isle of	715	10	62	38	-1,55
Germany	1151	18	95	66	-1,57

## Inspections, detentions and deficiencies 2004

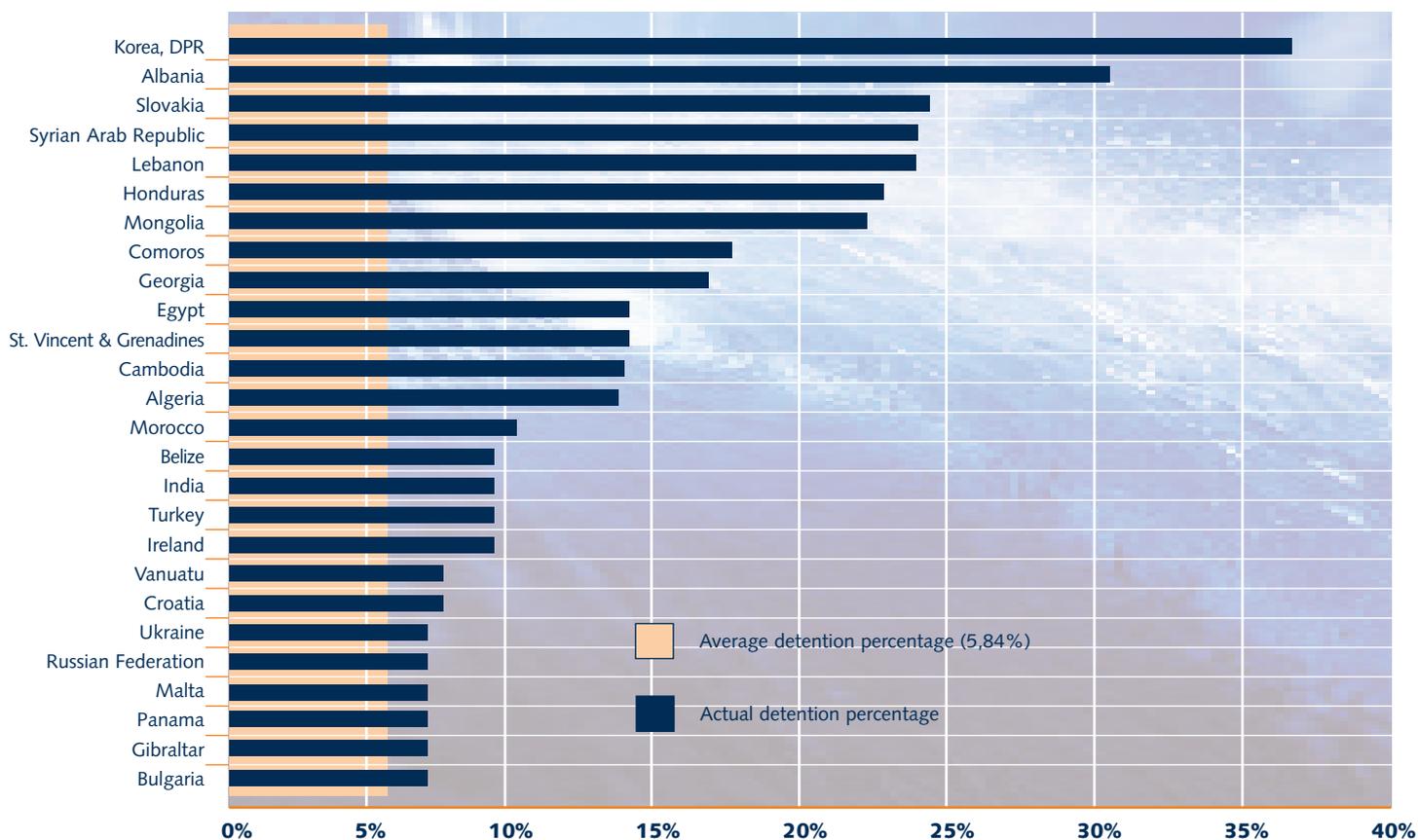
Flag State	Inspections	Detentions	Inspections with deficiencies	Detentions %	Inspections with deficiencies %
Albania	140	44	122	31,43	87,14
Algeria	49	6	35	12,24	71,43
Angola	1	2	1	200,00	100,00
Antigua & Barbuda	1443	56	760	3,88	52,67
Antilles, Netherlands	240	14	140	5,83	58,33
Austria	10	-	3	0,00	30,00
Azerbaijan	49	1	38	2,04	77,55
Bahamas	1078	32	489	2,97	45,36
Bahrain	2	-	0	0,00	
Barbados	112	3	63	2,68	56,25
Belgium	39	1	13	2,56	33,33
Belize	202	19	159	9,41	78,71
Bermuda	85	1	34	1,18	40,00
Bolivia	18	4	13	22,22	72,22
Brazil	16	4	13	25,00	81,25
Bulgaria	106	7	75	6,60	70,75
Cambodia	186	24	159	12,90	85,48
Canada	4	-	4	0,00	100,00
Cayman Islands	140	5	59	3,57	42,14
Chile	1	-	0	0,00	
China	86	1	33	1,16	38,37
Comoros	76	14	66	18,42	86,84
Cook Islands	5	2	3	40,00	60,00
Croatia	64	5	43	7,81	67,19
Cuba	1	-	1	0,00	100,00
Cyprus	1050	60	596	5,71	56,76
Denmark	407	6	153	1,47	37,59
Dominica	22	1	14	4,55	63,64
Dominican Republic	5	-	4	0,00	80,00
Egypt	52	7	37	13,46	71,15
Eritrea	1	-	1	0,00	100,00
Estonia	69	1	31	1,45	44,93
Ethiopia	9	-	6	0,00	66,67
Faroe Islands	15	1	13	6,67	86,67
Finland	181	2	89	1,10	49,17
France	78	1	27	1,28	34,62

Flag State	Inspections	Detentions	Inspections with deficiencies	Detentions %	Inspections with deficiencies %
Georgia	222	38	179	17,12	80,63
Germany	352	6	123	1,70	34,94
Gibraltar	229	16	98	6,99	42,79
Greece	515	27	237	5,24	46,02
Honduras	50	10	36	20,00	72,00
Honk Kong, China	329	9	146	2,74	44,38
Hungary	2	-	2	0,00	100,00
Iceland	1	-	1	0,00	100,00
India	44	4	26	9,09	59,09
Indonesia	1	1	1	100,00	100,00
Iran, Islamic Republic of	92	3	44	3,26	47,83
Ireland	70	6	32	8,57	45,71
Israel	22	-	6	0,00	27,27
Italy	370	7	179	1,89	48,38
Jamaica	7	1	5	14,29	71,43
Japan	20	-	10	0,00	50,00
Jordan	4	1	3	25,00	75,00
Kazakhstan	1	-	1	0,00	100,00
Korea, DPR	127	47	117	37,01	92,13
Korea, Republic of	40	1	17	2,50	42,50
Kuwait	9	-	1	0,00	11,11
Latvia	28	1	22	3,57	78,57
Lebanon	53	12	42	22,64	79,25
Liberia	948	26	396	2,74	41,77
Libyan Arab Jamahiriya	4	1	4	25,00	100,00
Lithuania	102	3	64	2,94	62,75
Luxembourg	55	-	22	0,00	40,00
Malaysia	55	2	26	3,64	47,27
Malta	1339	95	803	7,09	59,97
Man, Isle of	243	3	87	1,23	35,80
Marshall Islands	325	7	121	2,15	37,23
Mexico	1	1	1	100,00	100,00
Moldova, Republic of	2	-	2	0,00	100,00
Mongolia	21	4	20	19,05	95,24
Morocco	58	6	51	10,34	87,93
Myanmar	5	-	2	0,00	40,00

Flag State	Inspections	Detentions	Inspections with deficiencies	Detentions %	Inspections with deficiencies %
Namibia	1	1	1	100,00	100,00
Netherlands	992	26	415	2,62	41,83
New Zealand	1	1	1	100,00	100,00
Nigeria	3	2	3	66,67	100,00
Norway	919	23	425	2,50	46,25
Pakistan	5	-	4	0,00	80,00
Panama	2116	149	1169	7,04	55,25
Philippines	73	-	44	0,00	60,27
Poland	36	2	21	5,56	58,33
Portugal	185	6	106	3,24	57,30
Qatar	7	-	3	0,00	42,86
Register Withdrawn	1	1	1	100,00	100,00
Romania	46	1	22	2,17	47,83
Russian Federation	857	63	499	7,35	58,23
Saudi Arabia	15	-	4	0,00	26,67
Serbia and Montenegro	2	1	2	50,00	100,00
Singapore	251	8	107	3,19	42,63
Slovakia	25	6	21	24,00	84,00
Spain	105	2	51	1,90	48,57
Sri Lanka	3	-	1	0,00	33,33
St. Vincent & Grenadines	782	104	553	13,30	70,72
Sweden	302	9	119	2,98	39,40
Switzerland	19	-	7	0,00	36,84
Syrian Arab Republic	70	16	48	22,86	68,57
Taiwan	15	4	9	26,67	60,00
Thailand	65	2	46	3,08	70,77
Togo	3	2	3	66,67	100,00
Tonga	9	2	7	22,22	77,78
Tunisia	14	1	8	7,14	57,14
Turkey	776	67	560	8,63	72,16
Tuvalu	10	-	7	0,00	70,00
Ukraine	215	16	158	7,44	73,49
United Arab Emirates	10	1	5	10,00	50,00
United Kingdom	494	5	189	1,01	38,26
United States of America	62	1	25	1,61	40,32
Vanuatu	38	3	18	7,89	47,37
Vietnam	1	-	1	0,00	100,00

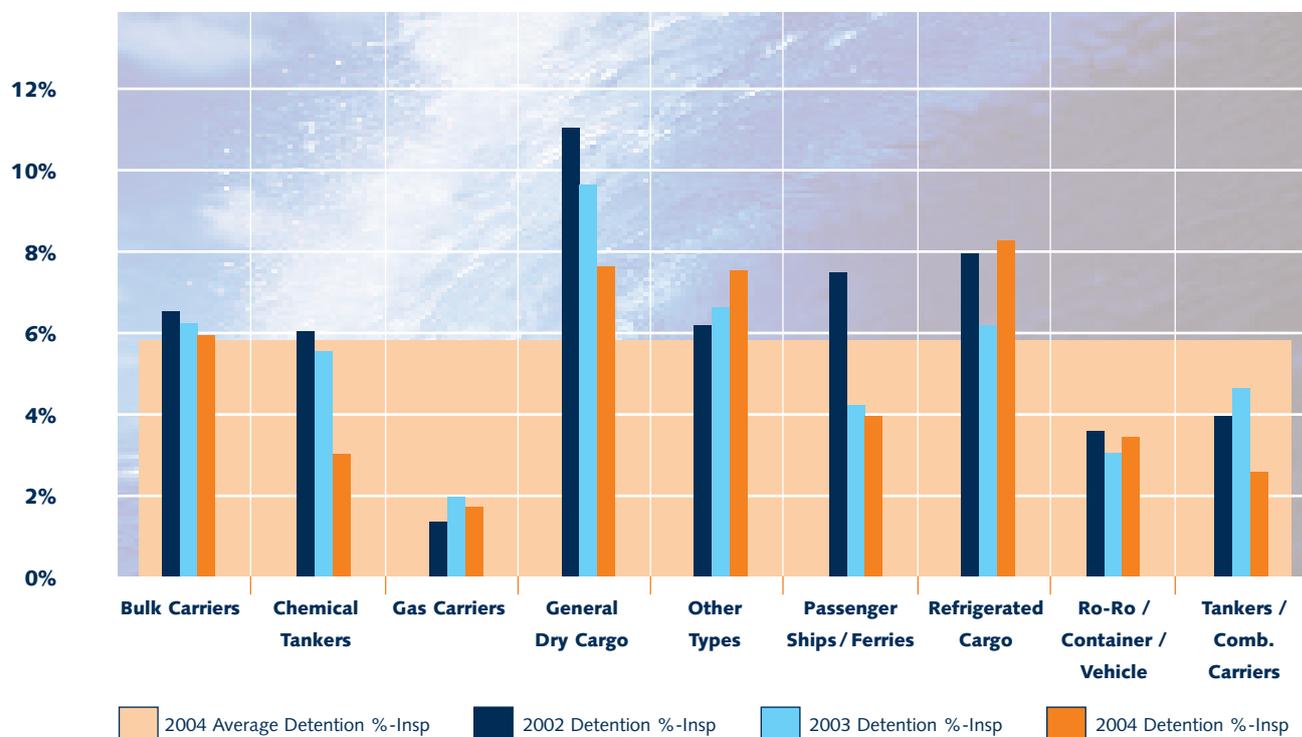
## 2004 detentions per flag State, exceeding average percentage

- Only flags with more than 20 port State control inspections in 2004 are recorded in this table and the graph on the next page
- The light area at the bottom of the graph represents the 2004 average detention percentage (5,84%)



Flag	Inspections	Detentions	Detentions %	Excess of average
Korea, DPR	127	47	37,01	31,17
Albania	140	44	31,43	25,59
Slovakia	25	6	24,00	18,16
Syrian Arab Republic	70	16	22,86	17,02
Lebanon	53	12	22,64	16,80
Honduras	50	10	20,00	14,16
Mongolia	21	4	19,05	13,21
Comoros	76	14	18,42	12,58
Georgia	222	38	17,12	11,28
Egypt	52	7	13,46	7,62
St. Vincent & Grenadines	782	104	13,30	7,46
Cambodia	186	24	12,90	7,06
Algeria	49	6	12,24	6,40
Morocco	58	6	10,34	4,50
Belize	202	19	9,41	3,57
India	44	4	9,09	3,25
Turkey	776	67	8,63	2,79
Ireland	70	6	8,57	2,73
Vanuatu	38	3	7,89	2,05
Croatia	64	5	7,81	1,97
Ukraine	215	16	7,44	1,60
Russian Federation	857	63	7,35	1,51
Malta	1339	95	7,09	1,25
Panama	2116	149	7,04	1,20
Gibraltar	229	16	6,99	1,15
Bulgaria	106	7	6,60	0,76

## 2004 Detention % of Inspections per ship type



## Inspections and detentions per ship type

Ship type	Inspections	Inspections with deficiencies	% of Inspections with deficiencies	Individual ships	Detentions	Detention % 2004	Detention % 2003	Detention % 2002	+/- average detention %
Bulk Carriers	3429	1984	57,86	2415	206	6,01	6,47	6,73	0,17
Chemical Tankers	861	359	41,70	565	26	3,02	5,5	6,08	-2,82
Gas Carriers	410	175	42,68	287	8	1,95	2,3	1,40	-3,89
General Dry Cargo	8834	5238	59,29	4728	677	7,66	9,66	10,96	1,82
Other Types	690	368	53,33	519	52	7,54	6,63	6,30	1,7
Passenger Ships / Ferries	770	433	56,23	478	30	3,9	4,16	7,17	-1,94
Refrigerated Cargo	485	344	70,93	338	39	8,04	6,27	7,75	2,2
Ro-Ro / Container / Vehicle	2777	1193	42,96	1867	98	3,53	3,03	3,62	-2,31
Tankers / Comb. Carriers	2060	793	38,50	1513	51	2,48	4,66	4,03	-3,36
<b>All types</b>	<b>20316</b>	<b>10887</b>	<b>53,59</b>	<b>12710</b>	<b>1187</b>	<b>5,84</b>	<b>7,05</b>	<b>7,98</b>	

\* Follow up inspections not included in this table

## Major categories of deficiencies in relation to inspections/ships

	Number of deficiencies			Def. in % of total number			Ratio of def. to inspections x 100			Ratio of def. to indiv. ships x 100		
	2002	2003	2004	2002	2003	2004	2002	2003	2004	2002	2003	2004
Ship's certificates and documents	3369	3410	3198	4,88	4,74	4,99	17,04	16,79	15,74	28,50	27,54	25,51
Training certification and watchkeeping for seafarers	5522	3284	3127	7,99	4,57	4,88	27,94	16,17	15,39	46,71	26,52	24,94
Crew and Accommodation (ILO 147)	1853	2133	2150	2,68	2,97	3,35	9,37	10,50	10,58	15,67	17,23	17,15
Accident prevention (ILO 147)	1429	114	671	2,07	0,16	1,05	7,23	0,56	3,30	12,09	0,92	5,35
Food and catering (ILO 147)	664	1149	1928	0,96	1,60	3,01	3,36	5,66	9,49	5,62	9,28	15,38
Working space (ILO 147)	602	3404	2858	0,87	4,73	4,46	3,05	16,76	14,07	5,09	27,49	22,79
Mooring arrangements (ILO 147)	1060	1130	1052	1,53	1,57	1,64	5,36	5,56	5,18	8,97	9,13	8,39
Safety in general	9306	6794	5194	13,47	9,45	8,10	47,08	33,45	25,57	78,71	54,87	41,43
Safety of navigation	6769	7536	6795	9,80	10,48	10,60	34,25	37,11	33,45	57,25	60,86	54,20
Fire Safety measures	8158	10862	9022	11,81	15,10	14,07	41,27	53,48	44,41	69,00	87,72	71,96
Life saving appliances	9009	8406	6793	13,04	11,69	10,60	45,58	41,39	33,44	76,20	67,89	54,18
Alarm - signals	301	476	435	0,44	0,66	0,68	1,52	2,34	2,14	2,55	3,84	3,47
Radio communication	2421	2160	2028	3,50	3,00	3,16	12,25	10,64	9,98	20,48	17,44	16,17
Bulk carriers - Additional safety measures	51	121	135	0,07	0,17	0,21	0,26	0,60	0,66	0,43	0,98	1,08
Gas and chemical carriers	202	190	135	0,29	0,26	0,21	1,02	0,94	0,66	1,71	1,53	1,08
Carriage of cargo and dangerous goods	1028	741	600	1,49	1,03	0,94	5,20	3,65	2,95	8,69	5,98	4,79
Load lines	3507	3747	3519	5,08	5,21	5,49	17,74	18,45	17,32	29,66	30,26	28,07
Propulsion & aux machinery	3606	4547	4346	5,22	6,32	6,78	18,24	22,39	21,39	30,50	36,72	34,66
SOLAS related operational deficiencies	1353	2865	2361	1,96	3,98	3,68	6,85	14,11	11,62	11,44	23,14	18,83
ISM related deficiencies	3210	3539	2794	4,65	4,92	4,36	16,24	17,43	13,75	27,15	28,58	22,28
MARPOL - annex I	4421	4502	3646	6,40	6,26	5,69	22,37	22,17	17,95	37,39	36,36	29,08
MARPOL - annex II	64	97	52	0,09	0,13	0,08	0,32	0,48	0,26	0,54	0,78	0,41
MARPOL - annex III	21	14	7	0,03	0,02	0,01	0,11	0,07	0,03	0,18	0,11	0,06
MARPOL - annex V	701	696	9	1,01	0,97	0,01	3,55	3,43	0,04	5,93	5,62	0,07
MARPOL related operational deficiencies	341	11	610	0,49	0,02	0,95	1,73	0,05	3,00	2,88	0,09	4,87
Security (ISPS)			107			0,17			0,53			0,85
Other def. clearly hazardous safety	48			0,07			0,24			0,41		
Other def. not clearly hazardous	63			0,09			0,32			0,53		
<b>Total</b>	<b>69079</b>	<b>71928</b>	<b>64113</b>									

## Model 1 Detentions with class related detainable deficiencies in % of total number of detentions (per Classification Society)

Classification Society <sup>3</sup>		Total number of detentions	Detentions with class related deficiencies	Number of individual ships	Percentage detentions with class related deficiencies	+/- Percentage average
Other (Class Not Specified)		45	14	38	31,11	16,32
American Bureau of Shipping	ABS	77	3	72	3,90	-10,89
Bulgarski Koraben Registrar	BKR	14	1	13	7,14	-7,65
Bureau Veritas (France)	BV	163	17	149	10,43	-4,36
China Corporation Register of Shipping	CCRS	4	2	4	50,00	35,21
Det Norske Veritas (Norway)	DNVC	89	13	82	14,61	-0,18
Germanischer Lloyd	GL	188	14	168	7,45	-7,34
Hellenic Register of Shipping (Greece)	HRS	37	8	28	21,62	6,83
Honduras Int. Naval Survey and Insp. Bureau	HINSIB	6	1	5	16,67	1,88
Indian Register of Shipping	IRS	4	3	3	75,00	60,21
International Naval Surveys Bureau (Greece)	INSB	31	8	24	25,81	11,02
International Register of Shipping (USA)	IS	30	10	25	33,33	18,54
Isthmus Bureau of Shipping (Panama)	IBS	4	1	4	25,00	10,21
Korean Register of Shipping	KRS	12	3	11	25,00	10,21
Lloyd's Register of Shipping (U.K.)	LRS	174	25	157	14,37	-0,42
Nippon Kaiji Kyokai (Japan)	NKK	63	7	62	11,11	-3,68
Panama Maritime Documentation Service	PMDS	1	1	1	100,00	85,21
Polski Rejestr Statkow (Poland)	PRS	41	4	38	9,76	-5,03
Register of Shipping (Albania)		33	14	21	42,42	27,63
Register of Shipping Korea, DPR		1	1	1	100,00	85,21
Registro Cubano De Buques (Cuba)	RCB	1	0	1	0,00	-14,79
Registro Italiano Navale (Italy)	RINA	41	1	37	2,44	-12,35
RINAVE Portuguesa (Portugal)	RP	2	2	1	100,00	85,21
Russian Maritime Register of Shipping	RMRS	146	24	129	16,44	1,65
Russian River (Rechnoj) Register	RR	3	0	3	0,00	-14,79
Shipping Register of Ukraine	SRU	10	3	9	30,00	15,21
Turkisch Lloyd	TL	31	5	25	16,13	1,34

<sup>3</sup> Where a country is shown after a classification society this indicates its location and not necessarily any connection with the maritime administration of that country.

<sup>4</sup> The information contained in the statistical material of Models 1-4 concerning classification societies were collected during the calendar year 2004 on the basis of provisional criteria for the assessment of class responsibility. Due to updating anomalies the figures may include a small margin of error. This margin is not greater than 1,5 percent to either side.

## Model 2 Detentions of ships with class related detainable deficiencies per Classification Society

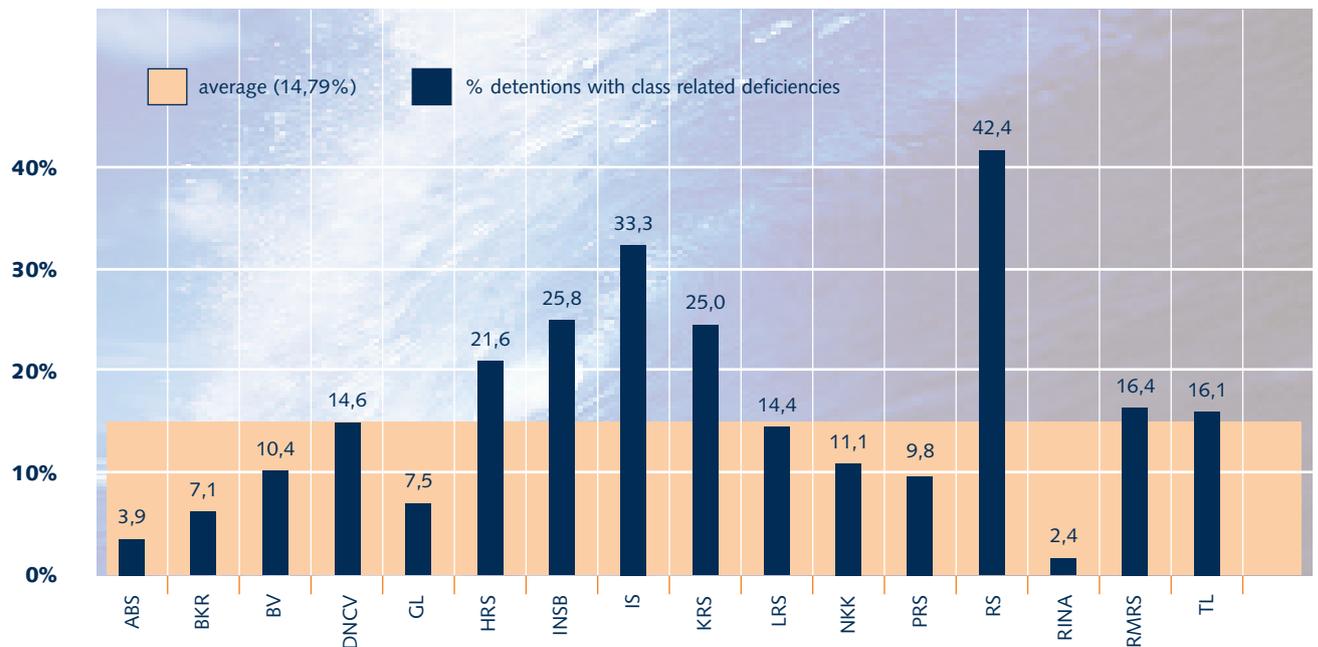
(Cases in which more than 10 inspections are involved)

Classification Society <sup>4</sup>	Total number of inspections	Number of individual ships inspected	Total number of detentions	Detention-% of total number of inspections	+/- Percentage of average	Detention-% of individual ships inspected	+/- Percentage of average
Other (Class Not Specified)	177	124	14	7,91	6,98	11,29	9,79
American Bureau of Shipping ABS	1444	1045	3	0,21	-0,72	0,29	-1,21
Bulgarski Koraben Registar BKR	120	63	1	0,83	-0,10	1,59	0,09
Bureau Veritas (France) BV	2850	1723	17	0,60	-0,33	0,99	-0,51
China Classification Society CCS	158	128	0	0,00	-0,93	0,00	-1,50
China Corporation Register of Shipping CCRS	23	19	2	8,70	7,77	10,53	9,03
Croatian Register of Shipping CRS	89	60	0	0,00	-0,93	0,00	-1,50
Det Norske Veritas (Norway) DNVC	2734	1885	13	0,48	-0,45	0,69	-0,81
Germanischer Lloyd GL	4083	2324	14	0,34	-0,59	0,60	-0,90
Hellenic Register of Shipping (Greece) HRS	174	88	8	4,60	3,67	9,09	7,59
Honduras Int. Naval Survey and Insp. Bureau HINSIB	15	9	1	6,67	5,74	11,11	9,61
INCLAMAR (Cyprus) INC	33	13	0	0,00	-0,93	0,00	-1,50
Indian Register of Shipping IRS	24	19	3	12,50	11,57	15,79	14,29
International Naval Surveys Bureau (Greece) INSB	151	84	8	5,30	4,37	9,52	8,02
International Register of Shipping (USA) IS	119	74	10	8,40	7,47	13,51	12,01
Isthmus Bureau of Shipping (Panama) IBS	27	18	1	3,70	2,77	5,56	4,06
Korean Register of Shipping KRS	172	128	3	1,74	0,81	2,34	0,84
Lloyd's Register of Shipping (U.K.) LRS	3637	2318	25	0,69	-0,24	1,08	-0,42
Nippon Kaiji Kyokai (Japan) NKK	1714	1288	7	0,41	-0,52	0,54	-0,96
Polski Rejestr Statkow (Poland) PRS	332	177	4	1,20	0,27	2,26	0,76
Register of Shipping (Albania)	103	35	14	13,59	12,66	40,00	38,50
Register of Shipping Korea, DPR	11	11	1	9,09	8,16	9,09	7,59
Registro Italiano Navale (Italy) RINA	653	428	1	0,15	-0,78	0,23	-1,27
RINAVE Portuguesa (Portugal) RP	24	15	2	8,33	7,40	13,33	11,83
Romanian Naval Register RNR	30	18	0	0,00	-0,93	0,00	-1,50
Russian Maritime Register of Shipping RMRS	1813	1110	24	1,32	0,39	2,16	0,66
Russian River (Rechnoj) Register RR	97	67	0	0,00	-0,93	0,00	-1,50
Shipping Register of Ukraine SRU	75	47	3	4,00	3,07	6,38	4,88
Turkisch Lloyd TL	261	139	5	1,92	0,99	3,60	2,10

<sup>4</sup> Where a country is shown after a classification society this indicates its location and not necessarily any connection with the maritime administration of that country.

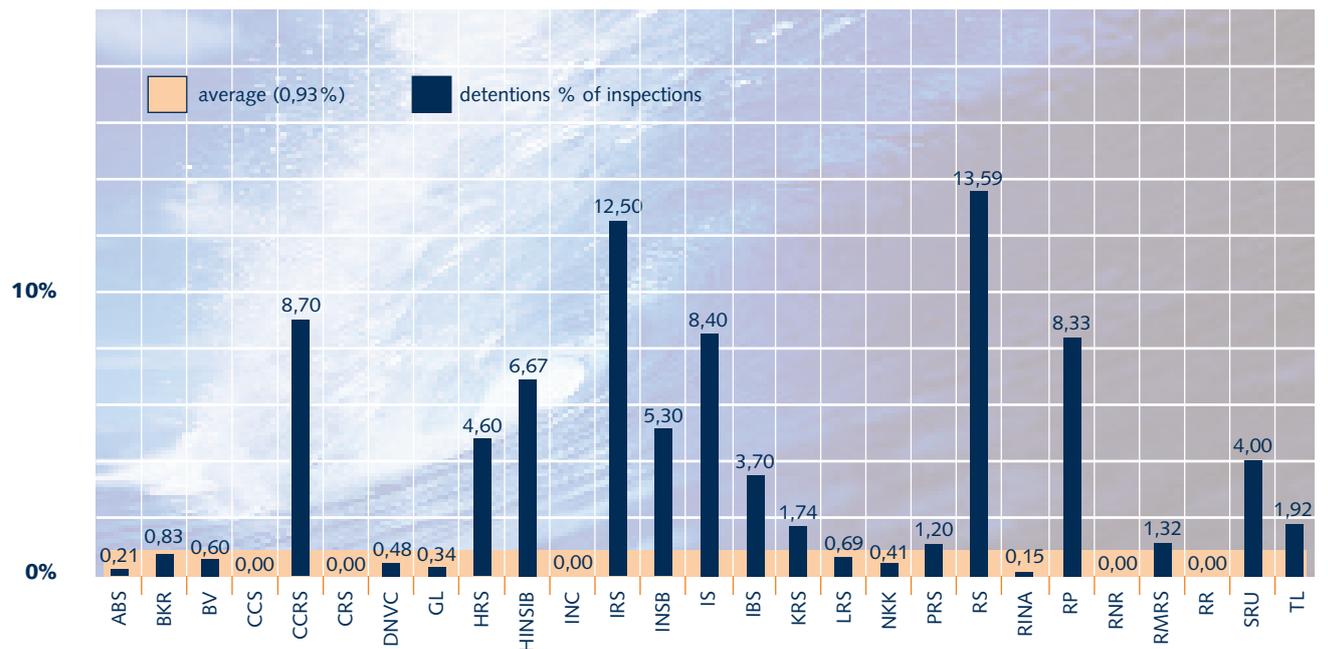
## Model 1 Detentions with class related detainable deficiencies in % of total number of detentions (per Classification Society)

(cases in which more than 10 detentions are involved, see table on page 34)



## Model 2 detentions of ships with class related detainable deficiencies (per Classification Society)

(cases in which more than 10 detentions are involved, see table on page 35)



### Model 3 Number of detentions per Classification Society

(individual ships with class related detainable deficiencies)

#### NUMBER OF SHIPS WITH CLASS RELATED DETAINABLE DEFICIENCIES

Classification Society <sup>6</sup>	detained once	detained twice	detained three times
Other (Class not specified)	11		1
American Bureau of Shipping	3		
Bulgarski Koraben Registar	1		
Bureau Veritas (France)	17		
China Corporation Register of Shipping	2		
Det Norske Veritas (Norway)	11	1	
Germanischer Lloyd	12	1	
Hellenic Register of Shipping (Greece)	8		
Honduras Int. Survey and Insp. Bureau	1		
Indian Register of Shipping	1	1	
International Naval Surveys Bureau (Greece)	8		
International Register of Shipping (USA)	10		
Isthmus Bureau of Shipping (Panama)	1		
Korean Register of Shipping	3		
Lloyd's Register of Shipping (U.K.)	23	1	
Nippon Kaiji Kyokai (Japan)	7		
Panama Maritime Documentation Service	1		
Polski Rejestr Statkow (Poland)	4		
Register of Shipping (Albania)	9	1	1
Register of Shipping (Korea, DPR)	1		
Rigistro Italiano Navale (Italy)	1		
RINAVE Portuguesa (Portugal)		1	
Russian Maritime Register of Shipping	24		
Shipping Register of Ukraine	3		
Turkisch Lloyd (Turkey)	3	1	

<sup>6</sup> Where a country is shown after a classification society this indicates its location and not necessarily any connection with the maritime administration of that country.

## Model 4 Detentions of ships with class related detainable deficiencies per flag State

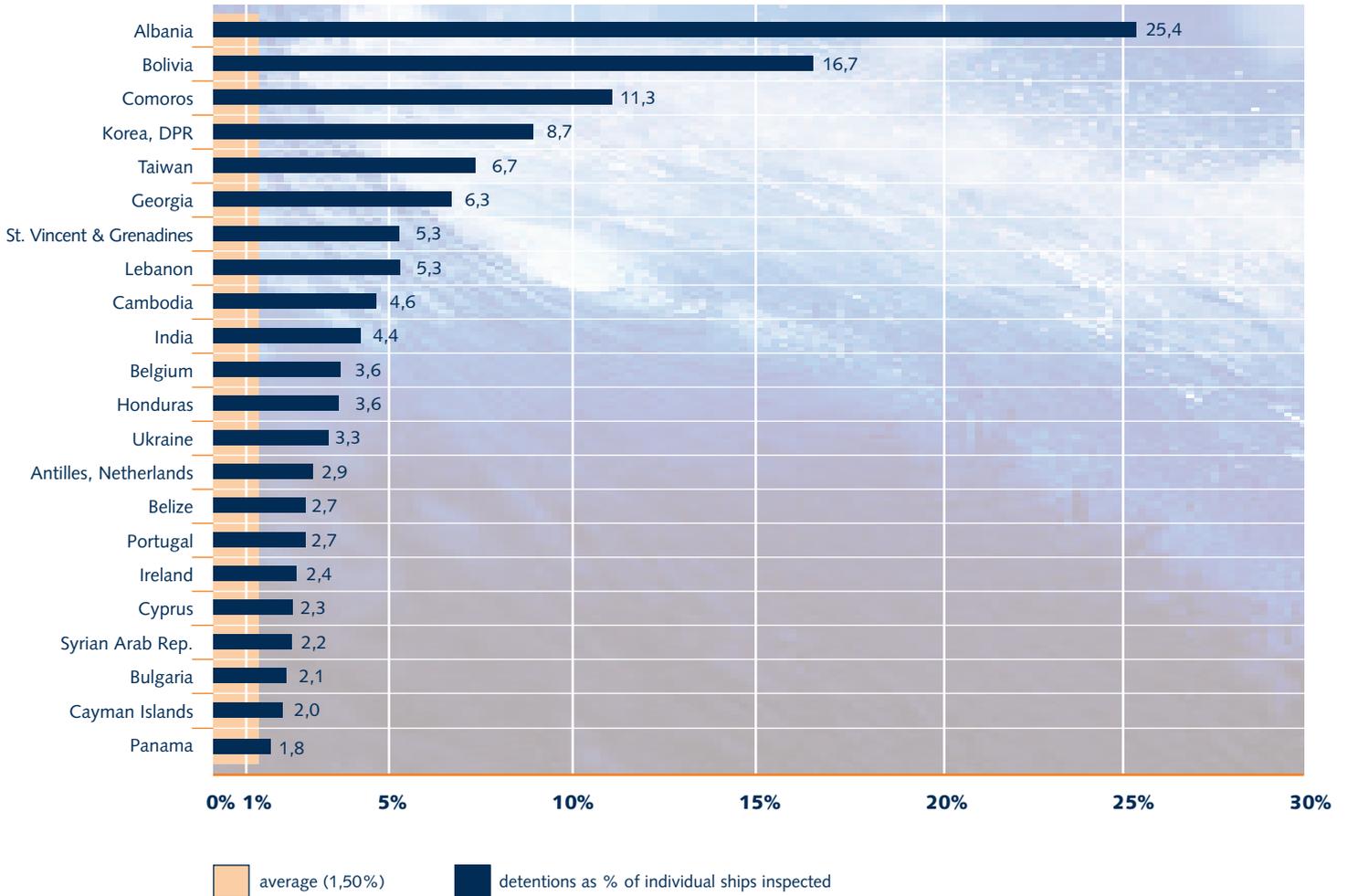
Flag State	Number of individual ships inspected	Number of ships detained (ships with class related deficiencies)	Detentions as % of individual ships inspected	+/- Percentage of average
Albania	59	15	25,42	23,92
Algeria	26	-	0,00	-1,50
Antigua & Barbuda	753	3	0,40	-1,10
Antilles, Netherlands	136	4	2,94	1,44
Austria	5	-	0,00	-1,50
Azerbaijan	27	-	0,00	-1,50
Bahamas	717	1	0,14	-1,36
Bahrain	2	-	0,00	-1,50
Barbados	58	-	0,00	-1,50
Belgium	28	1	3,57	2,07
Belize	111	3	2,70	1,20
Bermuda	71	-	0,00	-1,50
Bolivia	12	2	16,67	15,17
Brazil	10	-	0,00	-1,50
Bulgaria	47	1	2,13	0,63
Cambodia	131	6	4,58	3,08
Canada	4	-	0,00	-1,50
Cayman Islands	99	2	2,02	0,52
Chile	1	-	0,00	-1,50
China	66	-	0,00	-1,50
Comoros	62	7	11,29	9,79
Cook Islands	2	-	0,00	-1,50
Croatia	52	-	0,00	-1,50
Cuba	1	-	0,00	-1,50
Cyprus	652	15	2,30	0,80
Denmark	254	1	0,39	-1,11
Dominica	12	-	0,00	-1,50
Dominican Republic	6	-	0,00	-1,50
Egypt	29	-	0,00	-1,50
Eritrea	1	-	0,00	-1,50
Estonia	46	-	0,00	-1,50
Ethiopia	5	-	0,00	-1,50
Faroe Islands	10	-	0,00	-1,50
Finland	97	-	0,00	-1,50
France	56	-	0,00	-1,50
Georgia	144	9	6,25	4,75

Flag State	Number of individual ships inspected	Number of ships detained (ships with class related deficiencies)	Detentions as % of individual ships inspected	+/- Percentage of average
Germany	223	-	0,00	-1,50
Gibraltar	134	-	0,00	-1,50
Greece	396	3	0,76	-0,74
Honduras	28	1	3,57	2,07
Honk Kong, China	279	-	0,00	-1,50
Hungary	1	-	0,00	-1,50
Iceland	1	-	0,00	-1,50
India	45	2	4,44	2,94
Indonesia	1	-	0,00	-1,50
Iran, Islamic Republic of	59	-	0,00	-1,50
Ireland	41	1	2,44	0,94
Israel	16	-	0,00	-1,50
Italy	321	-	0,00	-1,50
Jamaica	5	-	0,00	-1,50
Japan	13	-	0,00	-1,50
Jordan	3	-	0,00	-1,50
Korea, DPR	115	10	8,70	7,20
Korea, Republic of	30	-	0,00	-1,50
Kuwait	8	-	0,00	-1,50
Latvia	24	-	0,00	-1,50
Lebanon	38	2	5,26	3,76
Liberia	721	6	0,83	-0,67
Libyan Arab Jamahiriya	3	1	33,33	31,83
Lithuania	60	-	0,00	-1,50
Luxembourg	37	-	0,00	-1,50
Malaysia	40	-	0,00	-1,50
Malta	912	12	1,32	-0,18
Man, Isle of	181	-	0,00	-1,50
Marshall Islands	260	1	0,38	-1,12
Mexico	1	-	0,00	-1,50
Moldova, Rep. of	2	-	0,00	-1,50
Mongolia	20	-	0,00	-1,50
Morocco	35	-	0,00	-1,50
Myanmar	4	-	0,00	-1,50
Namibia	1	-	0,00	-1,50
Netherlands	569	1	0,18	-1,32

Flag State	Number of individual ships inspected	Number of ships detained (ships with class related deficiencies)	Detentions as % of individual ships inspected	+/- Percentage of average
New Zealand	1	-	0,00	-1,50
Nigeria	3	1	33,33	31,83
Norway	602	2	0,33	-1,17
Pakistan	4	-	0,00	-1,50
Panama	1556	28	1,80	0,30
Philippines	59	-	0,00	-1,50
Poland	22	-	0,00	-1,50
Portugal	112	3	2,68	1,18
Qatar	6	-	0,00	-1,50
Register Withdrawn	1	-	0,00	-1,50
Romania	19	-	0,00	-1,50
Russian Federation	556	8	1,44	-0,06
Saudi Arabia	11	-	0,00	-1,50
Serbia and Montenegro	4	-	0,00	-1,50
Seychelles	1	-	0,00	-1,50
Singapore	188	-	0,00	-1,50
Slovakia	25	-	0,00	-1,50
Spain	71	-	0,00	-1,50
Sri Lanka	1	-	0,00	-1,50
St. Vincent & Grenadines	451	24	5,32	3,82
Sweden	193	1	0,52	-0,98
Switzerland	13	-	0,00	-1,50
Syrian Arab Republic	46	1	2,17	0,67
Taiwan	15	1	6,67	5,17
Thailand	50	-	0,00	-1,50
Tonga	7	-	0,00	-1,50
Tunisia	8	-	0,00	-1,50
Turkey	442	1	0,23	-1,27
Tuvalu	5	-	0,00	-1,50
Ukraine	153	5	3,27	1,77
United Arab Emirates	9	-	0,00	-1,50
United Kingdom	342	-	0,00	-1,50
United States of America	57	-	0,00	-1,50
Vanuatu	27	-	0,00	-1,50
Vietnam	1	-	0,00	-1,50

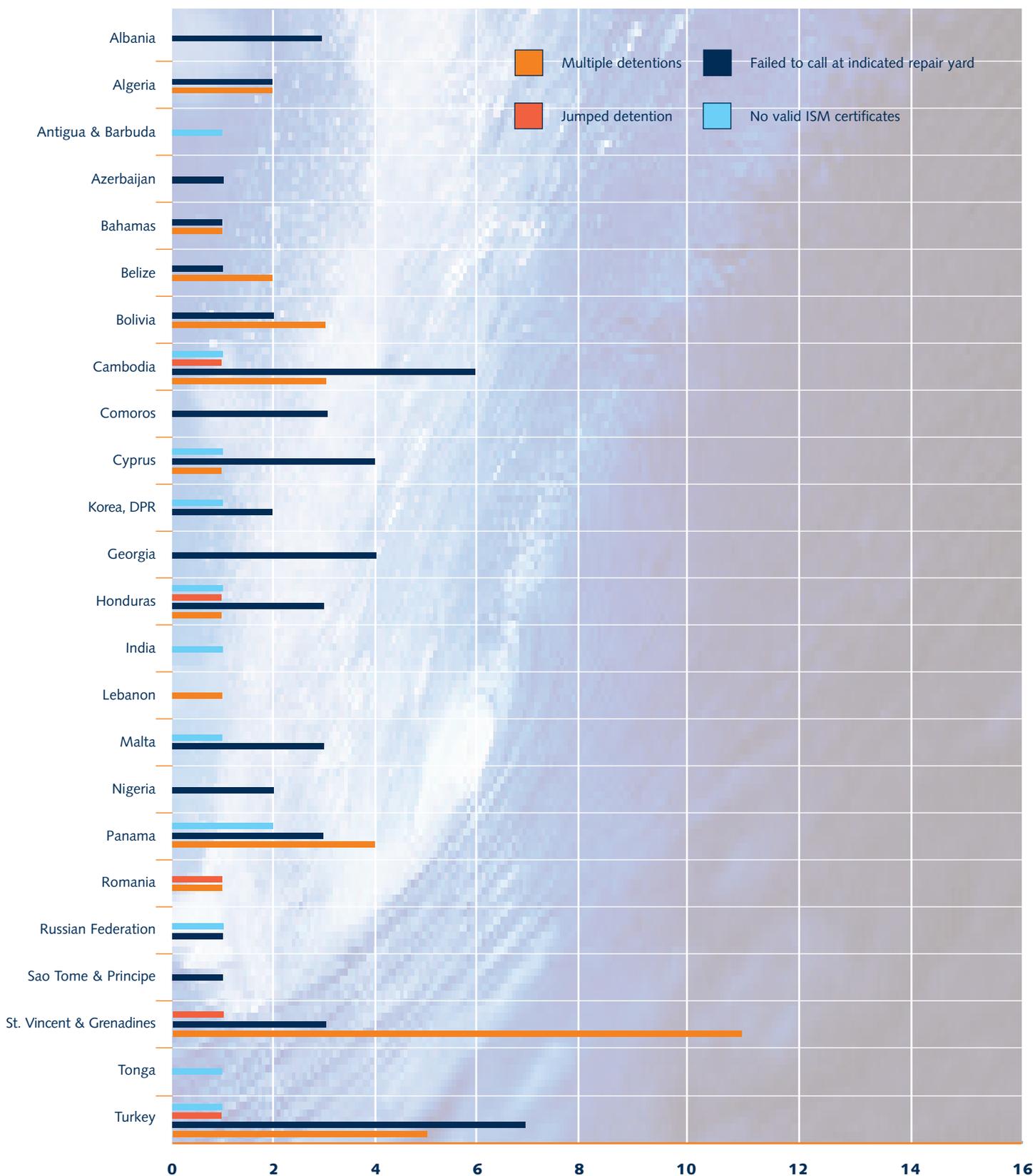
### Model 4 Detentions of ships with class related detainable deficiencies per flag state above average

(cases in which more than 10 individual ships are inspected)



## Banning and Banning reasons per flag State 2001 - 2004

Flag	Banned ships	No valid ISM certificates	Jumped detention	Failed to call at indicated repair yard	Multiple detentions
Albania	3			3	
Algeria	2			1	1
Antigua & Barbuda	1	1			
Azerbaijan	1			1	
Bahamas	2			1	1
Belize	3			1	2
Bolivia	5			2	3
Cambodia	11	1	1	6	3
Comoros	3			3	
Cyprus	6	1		4	1
Georgia	4			4	
Honduras	6	1	1	3	1
India	1	1			
Korea, DPR	3	1		2	
Lebanon	1				1
Malta	4	1		3	
Mongolia	1		1		
Nigeria	2			2	
Panama	9	2		3	4
Romania	2		1		1
Russian Federation	2	1		1	
Sao Tome & Principe	1			1	
St. Vincent & Grenadines	15		1	3	11
Syrian Arab Republic	2	1			1
Tonga	1	1			
Turkey	14	1	1	7	5
<b>Totals</b>	<b>105</b>	<b>13</b>	<b>6</b>	<b>51</b>	<b>35</b>



## CIC on ILO

Port State	Inspections	Inspections with ILO deficiencies	ILO deficiency rate
Belgium	345	50	14,49%
Canada	143	22	15,38%
Croatia	106	36	33,96%
Denmark	187	31	16,58%
Finland	81	9	11,11%
France	292	112	38,36%
Germany	360	87	24,17%
Greece	172	60	34,88%
Iceland	14	2	14,29%
Ireland	84	41	48,81%
Italy	620	263	42,42%
Netherlands	349	118	33,81%
Norway	128	22	17,19%
Poland	103	32	31,07%
Portugal	221	79	35,75%
Russian Federation	256	135	52,73%
Slovenia	42	17	40,48%
Spain	421	207	49,21%
Sweden	246	32	13,01%
United Kingdom	414	191	46,14%
<b>Total</b>	<b>4584</b>	<b>1546</b>	<b>33,37%</b>

## Flags with detentions on ILO grounds

Flag State	Inspections	Detentions on ILO grounds	Detention percentage
Algeria	15	3	20,00%
Albania	24	2	8,33%
Panama	496	2	0,40%
Antilles, Netherlands	54	1	1,85%
Honduras	12	1	8,33%
Turkey	172	1	0,58%
Korea, DPR	41	1	2,44%
Comoros	23	1	4,38%
Syrian Arab Rep.	10	1	10,00%
Cambodia	40	1	2,50%
Malta	349	1	0,29%
Italy	83	1	1,20%
Egypt	14	1	7,14%
St. Vincent & Grenadines	153	1	0,65%
Slovakia	10	1	10,00%
Vietnam	1	1	100,00%
Lithuania	22	1	4,55%

## CIC on Security

Port State	Inspections	Detentions on Security grounds	Detention rate
Belgium	376	1	0,3%
Canada	120	0	0,0%
Croatia	100	3	3,0%
Denmark	128	6	4,7%
Finland	74	1	1,4%
France	369	4	1,1%
Germany	470	0	0,0%
Greece	241	7	2,9%
Iceland	18	0	0,0%
Ireland	75	1	1,3%
Italy	401	12	3,0%
Netherlands	366	2	0,5%
Norway	102	0	0,0%
Poland	150	0	0,0%
Portugal	194	13	6,7%
Russia	267	6	2,2%
Slovenia	64	3	4,7%
Spain	276	4	1,4%
Sweden	128	2	1,6%
United Kingdom	436	3	0,7%
<b>Total</b>	<b>4355</b>	<b>68</b>	<b>1,46%</b>

Flags with more than 10 inspections and more than one detention  
with detention percentages above average

Flag State	Inspections	Detentions on Security grounds	Detention percentage
Georgia	56	5	8,9%
Korea, DPR	22	5	22,7%
Panama	471	10	2,1%
Russian Federation	205	11	5,4%
St. Vincent & Grenadines	186	3	1,6%
Syrian Arab Republic	20	2	10,0%

## Explanatory note – Black, Grey and White lists

The new normative listing of flag States provides an independent categorization that has been prepared on the basis of Paris MOU port State inspection results. Compared to the calculation method of previous year, this system has the advantage of providing an excess percentage that is significant and also reviewing the number of inspections and detentions over a 3-year period at the same time, based on binomial calculus.

The performance of each flag State is calculated using a standard formula for statistical calculations in which certain values have been fixed in accordance with agreed Paris MOU policy. Two limits have been included in the new system, the 'black to grey' and the 'grey to white' limit, each with its own specific formula:

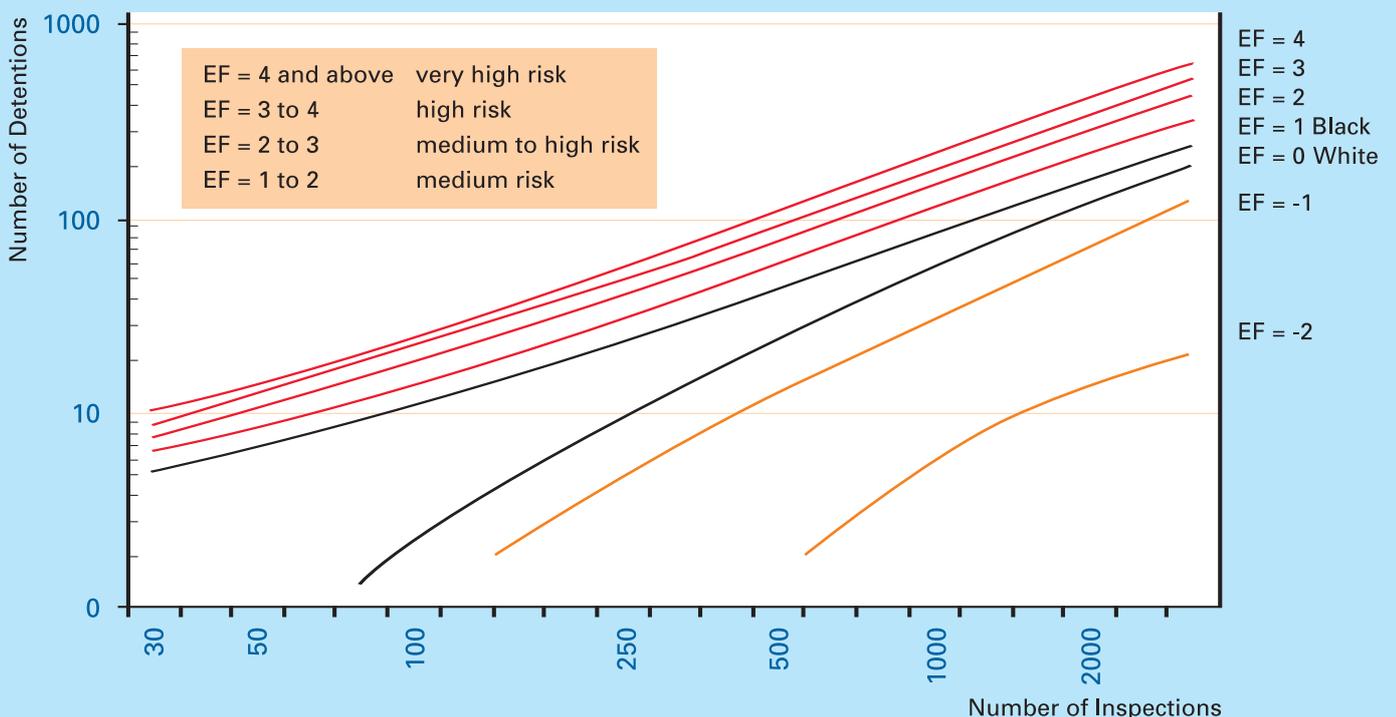
$$u_{black-to-grey} = N \cdot p + 0.5 + z\sqrt{N \cdot p \cdot (1-p)}$$

$$u_{white-to-grey} = N \cdot p - 0.5 - z\sqrt{N \cdot p \cdot (1-p)}$$

In the formula "N" is the number of inspections, "p" is the allowable detention limit (yardstick), set to 7% by the Paris MOU Port State Control Committee, and "z" is the significance requested (z=1.645 for a statistically acceptable certainty level of 95%). The result "u" is the allowed number of detentions for either the black or white list.

The "u" results can be found in the table A number of detentions above this 'black to grey' limit means significantly worse than average, where a number of detentions below the 'grey to white' limit means significantly better than average. When the amount of detentions for a particular flag State is positioned between the two, the flag State will find itself on the grey list. The formula is applicable for sample sizes of 30 or more inspections over a 3-year period.

To sort results on the black or white list, simply alter the target and repeat the calculation. Flags which are still significantly above this second target, are worse than the flags which are not. This process can be repeated, to create as many refinements as desired. (Of course the maximum detention rate remains 100%!) To make the flags' performance comparable, the excess factor (EF) is introduced. Each incremental or decremental step corresponds with one whole



EF-point of difference. Thus the excess factor EF is an indication for the number of times the yardstick has to be altered and recalculated. Once the excess factor is determined for all flags, the flags can be ordered by EF. The excess factor can be found in the last column the black, grey or white list. The target (yardstick) has been set on 7% and the size of the increment and decrement on 3%. The Black/Grey/White lists have been calculated in accordance with the above principles. The graphical representation of the system, below, is showing the direct relations between the number of inspected ships and the number of detentions. Both axis have a logarithmic character as the 'black to grey' or the 'grey to white' limit.

**Example flag on Black list:**

Ships of Tonga were subject to 117 inspections of which 48 resulted in a detention. The "black to grey limit" is 13 detentions. The excess factor is 9,81.

- N = total inspections
- P = 7%
- Q = 3%
- Z = 1.645

How to determine the "black to grey limit":

$$u_{blackto\ grey} = N \cdot p + 0.5 + z\sqrt{N \cdot p \cdot (1-p)}$$

$$u_{blackto\ grey} = 117 \cdot 0.07 + 0.5 + 1.645\sqrt{117 \cdot 0.07 \cdot 0.93}$$

$$u_{blackto\ grey} = 13$$

The excess factor is 9,81. This means that "p" has to be adjusted in the formula. The "black to grey limit" has an excess factor of 1, so to determine the new value for "p", "q" has to be multiplied with 8,81, and the outcome has to be added to the normal value for "p" :  $p + 8,81q = 0,07 + (8,81 \cdot 0,03) = 0,3343$

$$u_{excess\ factor} = 117 \cdot 0,3343 + 0,5$$

$$+ 1,645\sqrt{117 \cdot 0,3343 \cdot 0,6657}$$

$$u_{excess\ factor} = 48$$

**Example flag on Grey list:**

Ships of Gibraltar were subject to 569 inspections, of which 35 resulted in a detention. The "black to grey limit" is 50 and the "grey to white limit" is 29. The excess factor is 0.27.

How to determine the "black to grey limit":

$$u_{blackto\ grey} = 569 \cdot 0.07 + 0.5 + 1.645\sqrt{569 \cdot 0.07 \cdot 0.93}$$

$$u_{blackto\ grey} = 50$$

How to determine the "grey to white limit":

$$u_{greyto\ white} = N \cdot p - 0.5 - z\sqrt{N \cdot p \cdot (1-p)}$$

$$u_{greyto\ white} = 569 \cdot 0.07 - 0.5 - 1.645\sqrt{569 \cdot 0.07 \cdot 0.93}$$

$$u_{greyto\ white} = 29$$

To determine the excess factor the following formula is used:

$$ef = \frac{\text{Detentions} - \text{grey to white limit}}{\text{grey to black limit} - \text{grey to white limit}}$$

$$ef = \frac{35 - 29}{50 - 29}$$

$$ef = 0,27$$

**Example flag on White list:**

Ships of the Bahamas were subject to 3303 inspections of which 124 resulted in detention. The "grey to white limit" is 207 detentions. The excess factor is -0,88.

How to determine the "grey to white limit":

$$u_{greyto\ white} = N \cdot p - 0.5 - z\sqrt{N \cdot p \cdot (1-p)}$$

$$u_{greyto\ white} = 3303 \cdot 0.07 - 0.5 - 1.645\sqrt{3303 \cdot 0.07 \cdot 0.93}$$

$$u_{greyto\ white} = 207$$

The excess factor is -0,88 This means that "p" has to be adjusted in the formula. The "grey to white limit" has an excess factor of 0, so to determine the new value for "p", "q" has to be multiplied with -0,88, and the outcome has to be added to the normal value for "p":

$$p + (-0.88q) = 0.07 + (-0.88 \cdot 0.03) = 0.0436$$

$$u_{excess\ factor} = 3303 \cdot 0.0436 - 0.5$$

$$- 1.645\sqrt{3303 \cdot 0.0436 \cdot 0.9564}$$

$$u_{excess\ factor} = 124$$



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#### Layout and design

Secretariat Paris MOU  
 LMP Communicatiestrategie & Creatie, Den Haag

#### Photographs

Richard W. J. Schiferli  
 Paris MOU Authorities  
 Ministry of Transport  
 Port of Copenhagen (cover)

#### Litho and print

Grafisch Bedrijf Tuijtel

#### Web site

The Paris MOU maintains a website which can be found at [www.parismou.org](http://www.parismou.org). The site contains information on operation of the Paris MOU and a database of inspection results.

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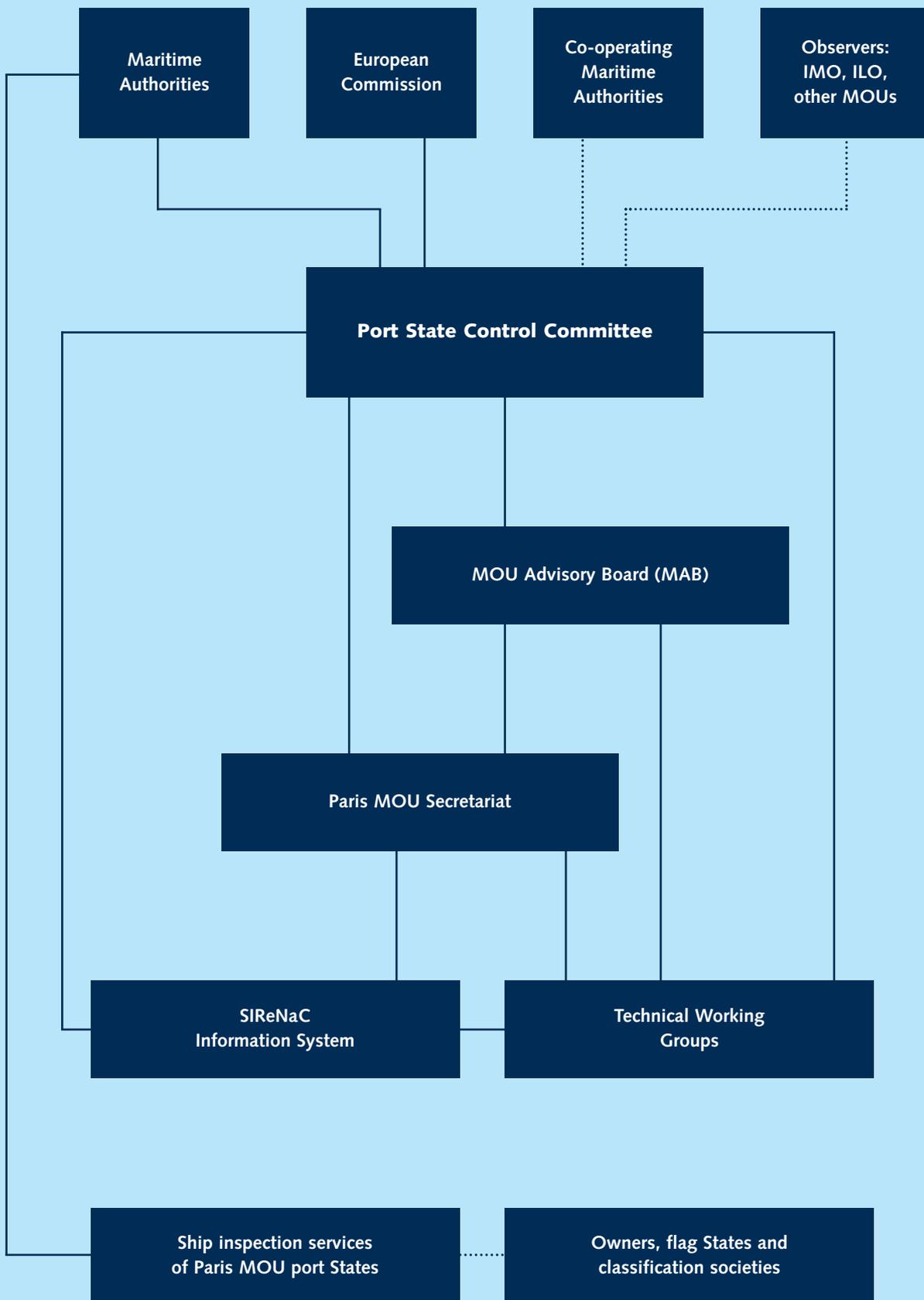
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## Paris MOU fact sheet - organizational structure









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