# PORT STATE CONTROL

Voyage completed, a new horizon ahead









# Annual report

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**BLACK LIST GREY LIST** WHITE LIST



#### Statement by Paris MoU chairman



#### Paris MoU meets in Dublin

This year the Paris MoU held the 43<sup>rd</sup> Session of the Port State Control Committee (PSCC) in Dublin, Ireland in May 2010. The meeting formally adopted the New Inspection Regime (NIR). This saw the culmination of a significant amount of work over many years and will see the introduction of the New Inspection Regime from the 1<sup>st</sup> of January 2011. All of those who took part in the various task forces and groups, which developed the NIR and THETIS, are to be complimented on their work. The Committee meeting also adopted several other significant matters including a new instruction on the ISM Code and agreed to carrying out a concentrated inspection campaign on the damage stability of tankers.

Again in 2010 the port State control officers of our member Authorities continued their work to promote quality shipping and to reward responsible shipowners and operators. During 2010 the "White List" continued to be a key industry benchmark for quality shipping and this is pleasing to see as it testifies to the success of the partnership between the Paris MoU and the industry. However, there still continues to be a number of flags on the black list.

The Paris MoU relationship with the other PSC MoUs and the United States Coast Guard is growing and the Paris MoU is very proud of this and I would like to thank them for their co-operation and friendship. The Paris MoU is also very appreciative of the role, which the Member States of the International Maritime Organization allow the regional MoUs to play in the IMO especially at the Flag State Implementation (FSI) sub-committee. Many important decisions were taken at FSI during 2010 and we are pleased to actively participate in this sub-committee.

The PMoU Secretariat again continued to serve its members well and the Secretariat continued with the implementation of a quality management system based on the ISO 9001 standard. This is very important for the Paris MoU. The Secretariat arranged training courses and seminars for PSCOs and supported the effective achievement of the MOU work programme. I also wish to thank the members of the MoU Advisory Board (MAB) who continued to serve the PMoU throughout the year. I would especially like to thank the French Maritime Administration for the work carried out by SDSI in supporting SIReNac during the year. This is much appreciated as the SIReNaC information system is being replaced by the new information system THETIS from the 1<sup>st</sup> of January 2011. I would also like to thank the European Commission and the European Maritime Safety Agency (EMSA) for their substantial contribution to the development of the NIR and THETIS, this support and co-operation with the PMoU ensures the effectiveness of port State control throughout our region. In conclusion, the port State control officers and administrators in each of our member Authorities are the people who ensure the success of our endeavours and they are the ones who are the core of the PMoU in achieving our goal of safer shipping.

Brian Hogan

#### Statement by the General-Secretary



#### The Times They Are a Changin': a new inspection regime

The year under review has been focussed on the introduction of a new inspection regime. All members of the Memorandum have been actively involved, together with the European Commission and the European Maritime Safety Agency to develop procedures, guidelines and the THETIS information system.

In May the Port State Control Committee adopted the revised text of the Memorandum and gave a green light to go ahead. Introduction of the inspection regime could now start on 1 January 2011. Of course these changes will have a major impact, not only on the Paris MoU members, but on the shipping community.

Port States need to have resources available not only on weekdays, but also on weekends. Inspections are not limited to ports but also include anchorages. Refusal of access after multiple detentions has been extended to general cargo ships. Every ship has a risk profile. Ships marked as "high risk" are subject to expanded inspections every 6 months. Ships with a "low risk" profile are rewarded with substantially longer inspection intervals. Just a few elements to indicate that inspection schemes had to be modified and Port State Control Officers have received additional training. Reporting arrangements also had to be implemented for ship arrival notices in order to feed the THETIS information system.

Equally important was to provide timely information to the maritime industry on the changes to come and the possible impact this would have. The Secretariat has actively sought a dialogue with various organizations to provide information and clarification. Presentations were held at meetings of the IMO (FSI), International Chamber of Shipping, Intermanager, Intertanko, IUMI and various other parties. Detailed information was also provided through the Paris MoU web site and various press releases. Many questions from the industry and flag States were answered and made available on the web site.

In the middle of December 2010 data was transferred from the SIReNaC information system to the THETIS system, and access to the system was provided for entering inspections.

After a long development period we are now ready to embark on a new voyage in the history of the Paris Memorandum on Port State Control. Of course these changes will take some time to get used to and to settle. The system will be closely monitored and adjusted where necessary. But I am confident that with the support from our members and the industry we can substantially reduce the operation of sub-standard ships and their operators in our region. At the same time it should be possible to prevent them from seeking employment elsewhere in the world. If other regional port State control agreements adopt a similar regime, this could be realised and the maritime safety on a global basis could benefit.

Richard W.J. Schiferli

Considered to be the worldwide index for flag performance, the Paris MoU "Black, Grey and White Lists" indicate further improvements towards quality shipping. Last year Panama was congratulated for its efforts to move up to the Grey List. This year Panama can be congratulated once more: the flag has managed to enter the White List. A very successful achievement and an example for other flags that through determined actions and political courage changes can be made.



There are now 42 flags on the "White List", 3 more compared with last year. Some flags have moved position with Bermuda (UK) still leading the list, followed by Germany and Sweden.

DPR Korea has earned a much more questionable reputation for leading the Black List several years in a row.

Since 2007 the detention percentage has been decreasing gradually. The trend has continued and in 2010 the percentage reached 3.3%, an all-time low over the past decade. The efforts by the Paris MoU members are paying off.

The number of detentions has dropped significantly from 1,059 in 2009 to 790 in 2010. It is likely that some ships with the introduction of the new inspection regime in mind, have already moved to other trading areas.



In 2010 a total of 6 ships were banned. 7 less compared with last year. Failing to call at an indicated repair yard was the most common reason for banning in 2010.

With 7,219 inspections and 1,018 detentions the ships flying a "black listed flag" score a detention rate of 14.1 %. For ships flying a "grey listed flag" the detention rate is 6.4% (3,799 inspections, 242 detentions) and ships flying a "white listed flag" 2.9% (61,552 inspections and 1,776 detentions).

Recognized Organizations are responsible for carrying out most of the statutory surveys on behalf of flags. Flags have delegated this responsibility to them. For this very reason it is important to monitor their performance. The best performing RO over the period 2008-2010 is Registro Italiano Navale (RINA); followed by American Bureau of Shipping (ABS) and Det Norske Veritas (DNV). The worst performing RO is Phoenix Register of Shipping (PH.R.S), located in Piraeus, in Greece. Several flags that have delegated to PH.R.S appear on the Paris MoU Black List.

The 2010 figures will be the close of reporting on the "traditional" PSC regime under the Paris MoU since its inception in 1982. Although the system has been modified on a number of occasions some elements, like the 25% inspection commitment for the MoU members has remained the same.

Since the new inspection regime will bring many changes in targeting ships for priority, inspections and possible sanctions, this will have an effect on the future statistics.

Some statistical tables and graphs will no longer appear in next year's report. And new tables will be added to report on the new features starting in 2011. 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 2010, 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 was in 2010 composed of participants from Iceland, the Netherlands, Croatia, Malta and the European Commission.

#### Port State Control Committee

The Port State Control Committee held its 43<sup>rd</sup> meeting in Dublin, Ireland from 10-14 May 2010. The MoU has 27 member States. The Committee adopted the proposed amendments of the Memorandum and the Annexes to reflect the incorporation of the New Inspection Regime (NIR), which will enter into force on 1 January 2011, replacing the existing Port State Control system. The NIR is a significant departure as it is a risk based targeting mechanism, which will reward quality shipping with a smaller inspection burden and concentrate on highrisk ships, which will be subject to more in-depth and more frequent inspections. Full implementation of the NIR will rely on collection of port call information. The NIR will be supported by a new information system THETIS that will replace the current SIReNaC system located in St. Malo, France. A jointly developed and mutually agreed common system for coding PSC related information will be used by the Paris and Tokyo MoUs as a basis for PSC data collecting and recording. The new coding system will also take effect on 1 January 2011 with the information system THETIS.

The Committee recognised that the International Labour Organization's Consolidated Maritime Labour Convention 2006 may become a relevant instrument from 2011 onwards and decided to develop guidelines for Port State Control Officers in respect of the implementation of the port State control requirements of the Convention. These guidelines will be based on the MLC 2006 and should become a practical tool for inspections on working and living conditions.



The Committee also adopted new guidance on control of ISM requirements, taking into account experience gained since the entry into force of the ISM Code.

The Committee continued to take actions in response to the 2<sup>nd</sup> Joint Ministerial Conference of the Paris and Tokyo MoUs held in Vancouver in 2004 and agreed that all actions have been completed or will be monitored on a continuous basis. It gave high importance to Concentrated Inspection Campaigns and scheduled a CIC on tanker damage stability from September to November 2010.

In addition the Committee considered a number of options for further joint CICs with the Tokyo MoU in 2011 and beyond. A CIC on Structural Safety and Load Lines will be carried out during 2011. The report of the CIC on Lifeboat Launching Appliances carried out in 2009 was presented to PSCC43. The results will be presented to the IMO in 2011.

#### **Technical Evaluation Group**

The Technical Evaluation Group (TEG) convened in March 2010 in Funchal Madeira, Portugal and in November 2010 in Antwerp, Belgium. Several task forces submitted reports to the TEG for evaluation before submission to the Port State Control Committee. Issues considered by the TEG included:

- The implementation and transition to the new inspection regime including the THETIS information system
- Evaluation of Paris MoU statistics
- Revision of the guidelines on ISM
- Revision of the guidelines on ECDIS
- Development of guidelines for PSCOs for the Maritime Labour Convention.

- Development of an evaluation procedure for the training policy
- Development of CICs on tanker damage stability (2010) and Structural Safety and Load Lines (2011).

#### 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 harmonisation and standardisation in inspections throughout the region. The Secretariat organises three different training programmes for Port State Control Officers:

- Seminars (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 such as inspection campaigns and new requirements.

Expert and Specialized Training aims to promote a higher degree of professional knowledge and harmonisation of more complex port State control issues and procedures. These 5-day training sessions are concluded with an assessment and certification.

#### PSC Seminar 50

The 50<sup>th</sup> Port State Control Seminar was held from 8 to 10 June 2010 in Riga, Latvia. Port State Control Officers from the Paris MoU attended the Seminar, as well as participants from the Black Sea MoU. The main topics of discussion were developments with regard to the new inspection regime, the guidelines for LRIT and the CIC on lifeboat launching arrangements.

#### 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. In 2010 this training dealt with Bulk Cargoes and the problems Port State Control Officers may encounter. Both training programmes are intended for experienced PSCOs. Using that experience, the participants can work together to establish a higher degree of harmonisation and standardisation of their inspection practice.

Lecturers for the training programmes are recruited from the maritime Administrations of the member States, international organizations and the maritime industry. For the training programmes in 2010 the United Kingdom, the Netherlands, Spain and different ROs and service companies, among others, provided lecturers.

#### The 9<sup>th</sup> Expert Training "The Human Element"

In October 2010 the ninth Expert Training programme was held in The Hague with the Human Element as the central theme. Participants from member States took part in this training. The issues discussed during the training session were the ILO and STCW conventions, the Code of Good Practice and inter-cultural communication.



*The 6<sup>th</sup> Expert Training "Safety and Environment"* The sixth Expert Training programme was held in The Hague in February 2010. Important issues during this training were the IMDG Code, Load Lines, life saving appliances and oil filtering equipment.

#### Train the trainer programme for the CIC on Tanker Damage Stability

In June 2010 a special one day train the trainer programme was conducted for the CIC on tanker damage stability. The programme focussed on the questionnaire and the guidelines.

*Training in cooperation with EMSA* The Paris MoU is also assisting EMSA in



the training delivered to PSCOs, including the delivery of New Entrant and Refresher programmes for PSCOs from throughout the region or contributing in development of Distance Learning Programmes.

#### New Entrant PSC Seminar

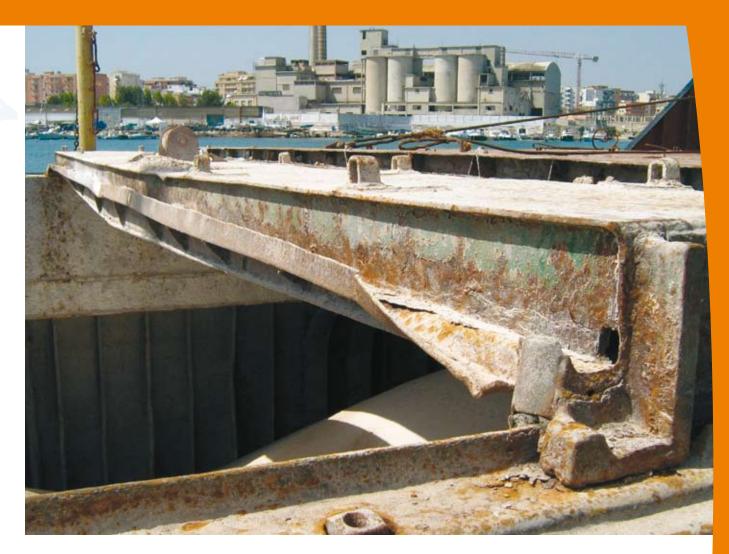
Following the practice established in 2008 and 2009, two more New Entrant seminars were held during the first half of 2010. The New Entrant (NE) seminar is a mandatory element in the qualification process for any Port State Control Officer. The fifth NE seminar was held from 01 to 05 February in Lisbon and was attended by 43 participants from 18 Paris MoU member States. The sixth NE seminar was held from 26 to 30 April and attended by 45 participants from 14 member States. Both seminars followed an inspection scenario from selection to possible final actions, aimed at familiarisation of the participants with the agreed procedures for port State control inspections. Logistical arrangements for the sixth seminar were particularly difficult due to the eruption of the Icelandic volcano, but the attendance was not affected.



#### Refresher PSC Seminars

Separate from and in addition to the New Entrant seminars, the ninth Refresher PSC seminars was organised in Lisbon from 22 to 26 March. This seminar was attended by 43 participants from 17 Paris MoU member States. Again during these seminars a ship inspection scenario was used. However, the aim of the Refresher seminars is not to familiarise PSCOs with inspection procedures but to harmonise their application and to share best practises. During the seminar PSCO tools such as PSC Instructions, the manual for PSCOs and RuleCheck were used in order to enhance knowledge and common understanding. Due to the preparations for the transition to a new Regime, the organisation of further Refresher seminars was suspended until 2011.

THETIS and New Inspection Regime Training Following agreement on the text of the New Inspection Regime during the annual meeting of the Paris MoU in May 2010, a dedicated set of trainings was organised to ensure that all member States were prepared with the knowledge necessary for both the New Inspection Regime and the supporting information system THETIS. The objective of these training sessions was to ensure a smooth transition from the old regime to the new regime. The introduction consisted of four separate sessions of one week each during which a total of 79 participants drawn from all Paris MoU member States were trained. A combination of provisions of the NIR with practical exercises on the system was offered. The 79 participants were trained to a suitable



level to allow them to deliver training to their colleagues and to become the first line helpdesk once the new regime is in place.

#### **Detention Review Panel**

Flag States or recognized organizations that cannot resolve a dispute concerning a detention with the port State may submit their case for review. The detention review panel is composed of representatives of four different MoU Authorities, on a rotating basis, plus the Secretariat.

In 2010 the Secretariat received 18 requests for review.

Eight cases did not comply with the requirements for consideration. These cases were either submitted beyond the 120 days limit, were handled at National Courts or originated from ship owners instead of flag States or ROs. Ten cases were recorded by the Secretariat and submitted to MoU members for review. In three cases the detention review panel concluded that the port State's decision to detain was not justified. The panel advised the port State to reconsider the detention. In seven cases the panel concluded that the detaining port States would not have to reconsider the decision to detain.

#### Quality management

In 2008 the Paris MoU Secretariat started the process to develop and implement the ISO2001:2008 quality management system for the services and products of the Secretariat. It is expected that certification will be completed in March 2011.

#### Paris MoU on the Internet

The Paris MoU website continued in 2010, to enjoy an ever increasing demand from a variety of visitors. In particular from flag and port States, government agencies, charterers, insurers and classification societies. They were able to monitor their performance and the

#### Paris MoU developments

performance of others on a continuous basis. The port State enters ships that are currently under detention in a listing. Validated port State control reports could be accessed and offered visitors more detailed information.

The development of the new website started at the beginning of 2010. The website retains icons for the most used items and regular publication of statistics derived from the BI tool. The feature "detained ships in the spotlights" again focused on ships that were



detained 5 or more times during 24 months in the PMoU region.

To increase public awareness of unsafe ships caught by port State control, particularly serious detentions are published under the heading "Caught in the Net'. These detentions are described in detail with photographs.

In 2010 details were published of the following ships:

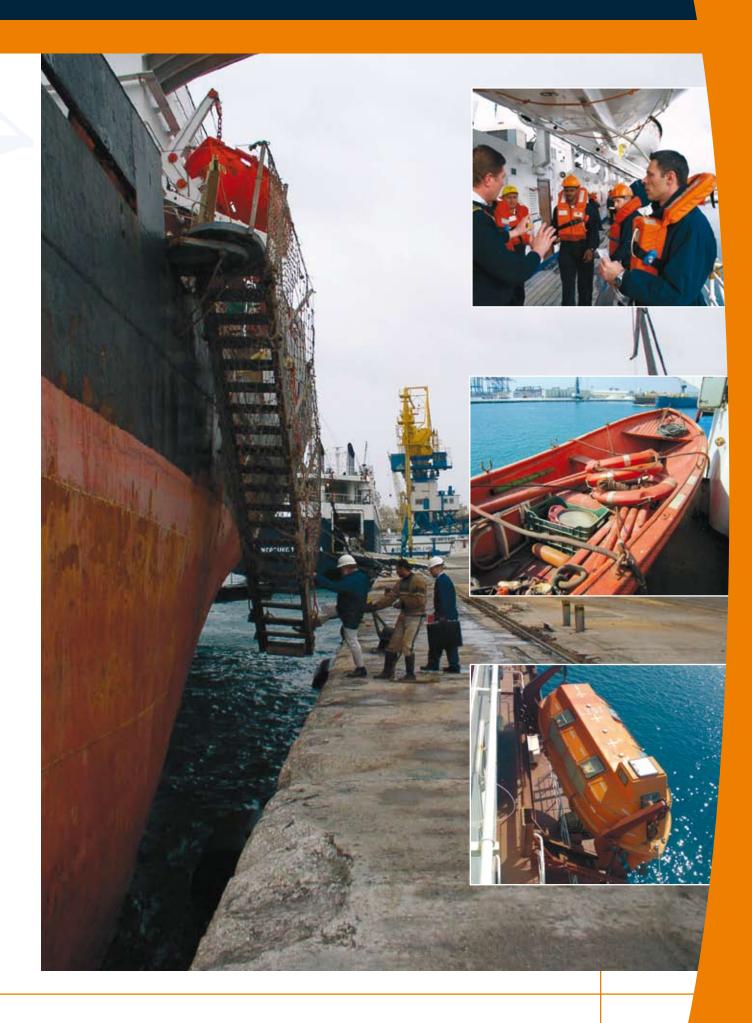
- M/V Gorgonilla registered in Panama and detained in Germany
- M/V Almarwa registered in Libya and detained in Italy
- M/V Lady Lina registered in Republic of Togo and detained in Italy

The annual award for the best contribution to the "Caught in the Net" has been presented to Germany.

Other information of interest such as the monthly list of detentions, the Annual Report and news items can be downloaded from the website, which is found at www.parismou.org.

#### 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.



#### CIC 2010 Tanker Damage Stability

In the period from 1 September to 30 November 2010 a total of 1,065 inspections with CIC questionnaires were completed. The majority of ships were only inspected once, 14 ships were inspected twice.

During this campaign the 27 member Authorities focussed on compliance of oil, gas and chemical tankers with the IMO requirements for damage stability from the respective conventions and codes. In total 94 CIC related deficiencies were recorded during the inspections.

During the 3-month period 14 ships were detained. 29% of these detentions were CIC related. This means that in 4 cases the IMO requirements for damage stability had deficiencies that were serious enough to detain the ship.

A matter of serious concern is that a total of 173 tankers, 16.2% (77 oil tankers, 84 chemical tankers and 12 gas tankers) could not demonstrate that they were normally loaded in accordance with the Stability Information Booklet (SIB).

Flags with 1 CIC related detention were Gibraltar (UK) and Greece. Flag State Malta had 2 CIC related detentions.

4 ships (2 oil tankers; 2 chemical tankers), (0.35%) were detained as a direct result of the CIC. The objective of the CIC was to establish to what extent oil, gas and chemical tankers were complying with the IMO requirements for damage stability from the respective conventions and codes. It may seem that only 4 detentions is a very small number, considering the number of ships that could not show that they were loaded in compliance with their Stability Information Booklet. It was agreed however, during the CIC, that detention was a last resort. Only for cases where the ship was loaded for the forthcoming voyage and could not show damage stability compliance prior to departure, a detention order was issued. Therefore tanker damage stability should remain an area of attention in the future.

#### CIC Campaigns 2011 and 2012

For 2011, the PSC Committee decided on a Concentrated Inspection Campaign on Structural Safety and International Convention on Load Lines.

For 2012, the Committee agreed that there will be a CIC campaign on Fire Safety Systems.

#### Co-operation with other organizations

The strength of regional regimes of port State control, which are bound by geographical circumstances and interests, is widely recognised. Nine regional MoUs have been established. The Committee has expressed concern that members who have not made efforts to exercise effective control over their own fleet dominate some of these MoUs. 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 or observer status.

Five regional agreements have official observer status to the Paris MoU: the Tokyo MoU, Caribbean MoU, Mediterranean MoU, Black Sea MoU and Riyadh MoU. The United States Coast Guard is also an observer at Paris MoU meetings.

The International Labour Organization and the International Maritime Organization have participated in the meetings of the Paris MoU on a regular basis since 1982. In 2006 the Paris MoU obtained official status at the IMO as an Inter Governmental Organization. A delegation of the MoU participated in the 18th session of the Sub-Committee on Flag State Implementation in July 2010. The 2008 Annual Report including inspection data, an analysis of 2008 statistics, a combined list of flags targeted by the Paris MoU, Tokyo MoU and USCG and the results of the CIC on SOLAS Chapter V - Safety of Navigation, were submitted to the Sub-Committee on Flag State Implementation in July 2010.

#### Membership of the Paris MoU

The Paris MoU currently has 6 members with dual or even triple membership: Canada and the Russian Federation with the Tokyo MoU, while the Russian Federation is also a member of the Black Sea MoU. With Bulgaria and Romania there are further ties with the Black Sea MoU. Malta and Cyprus are also members of the Mediterranean MoU.

For all these members the Paris MoU standards will prevail.

#### Facts and figures 2010

In the following pages the facts and figures of 2010 are listed. The figures show a decrease in the number of inspections, inspected ships, deficiencies and the number of detentions.

#### Inspections

With a total number of 24,058 inspections performed in 2010 the inspection figures showed a decrease of 0.5% compared with the figures of 2009. Each individual ship was inspected an average of 1.6 times per year, a rate which has changed little since 1999.

The overall inspection effort, which is the ratio of the number of inspections to the number of individual ship calls in members' ports, was 30.03%. With the exception of Latvia and Portugal all member States reached the 25% inspection effort commitment of the Memorandum.

#### Deficiencies

In 2008 the number of deficiencies recorded was 83,751; in 2009, 71,911 deficiencies were recorded. In 2010 this number decreased to a total of 64,698 deficiencies. Compared with 2009 this is a decrease of deficiencies of 10%.

In 55% of all inspections performed, one or more deficiencies were recorded. In 2009 this figure was 57%.

The average number of deficiencies per inspection also decreased from 3 in 2009 to 2,7 in 2010. The Concentrated Inspections Campaign on tanker damage stability does have an influence on the number of deficiencies recorded.

#### Detentions

Some deficiencies are clearly hazardous to safety, health or the environment and the ship is detained until they are rectified. Detention rates are expressed as a percentage of the number of inspections, rather than the number of individual ships inspected to take account of the fact that some ships are detained more than once a year.

Compared with 2009, the number of detentions has decreased from 1,059 to 790 detentions. The average detention rate in 2010 is 3.28%, the lowest rate ever. Overall, the last decade shows a trend towards a decrease in detentions.

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

The "Black, Grey and White (BGW) List" presents the full spectrum, from quality flags to flags with a poor performance that are considered high or very high risk. It is based on the total number of inspections and detentions over a 3-year rolling period for flags with at least 30 inspections in the period.

On the "Black, Grey and White list" for 2010 a total number of 84 flags are listed: 18 on the "Black list", 24 on the "Grey list", and 42 on the "White list". In 2009 the number of flags listed totalled 82 flags, namely 24 on the "Black List", 19 on the "Grey List" and 39 on the "White List".



Most flags that were categorised as very high risk in previous years remain so in 2010. The poorest performing flags are DPR Korea, Libyan Arab Jamahiriya, Togo, Sierra Leone and Montenegro. New on the "Black List" are the flags of Tanzania United Republic and Azerbaijan (both medium risk).

Flags 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. On this year's "Grey List" a total number of 24 flags is recorded. Last year the "Grey List" recorded 19 flags. New on the "Grey List" are Egypt, Viet Nam, Dominica, Slovakia, Jamaica, Honduras, Belize and Mongolia, last year still on the "Black List".

The "White List" represents quality flags with a consistently low detention record. Compared with last year, the number of flags on the "White List" has increased by 3 flags to a total number of 42 flags.

Bermuda (United Kingdom) has been placed highest on the list in terms of performance. The next in line of the best performing flags in 2010 are Germany, Sweden, the United Kingdom and the Netherlands.

A new graph of the distribution of listed and not listed flags it is indicating that only 0.4% of the ships inspected are from flags not listed on the BGW list.

#### Facts and figures 2010

#### Ship type

In 2010 the detention rate of general dry cargo ships (5.47%) is higher than the detention rate of other ship types. Ship types like refrigerated cargo vessels and bulk carriers have a lower detention rate of 3.09% and 2.77% respectively. The other ship types have even lower detention rates.

#### Performance of Recognized Organizations

For several years the Committee has closely monitored the performance of classification societies acting as recognized organizations for flag States. To calculate the performance of the recognized organizations (RO), the same formula to calculate the excess factor of the flags is used. A minimum number of 60 inspections per RO are needed before the performance is taken into account for the list. In 2010 28 ROs are recorded on the performance list.

Among the best performing recognized organizations were:

- Registro Italiano Navale (Italy) (RINA)
- American Bureau of Shipping (ABS)
- Det Norske Veritas (DNV)



The lowest performing organizations were:

- Phoenix Register of Shipping (Greece) (PHRS)
- Register of Shipping (Albania) (RSA)
- International Register of Shipping (USA) (IS)
- Bulgarski Koraben Registar (BKR)

Compared with last year's performance level, a small shift in RO performance in 2010 can be noticed. This year more organizations have been placed on the high and low performing part of the list and fewer organizations have been placed on the medium part of the list.

Details of the responsibility of recognized organizations for detainable deficiencies have been published since 1999. When one or more detainable deficiencies are attributed to a recognized organization in accordance with the criteria it is recorded and the RO is informed. Out of 790 detentions recorded in 2010, 84 or 10.6% were considered RO related which is a decrease compared with the 11.2% of the previous year.

#### Refusal of access of ships

A total of 6 ships were banned from the Paris MoU region in 2010 for reasons of failure to call at an agreed repair yard (4), jumping detention (1) or no valid ISM code certificate (1). A number of ships remain banned from previous years.

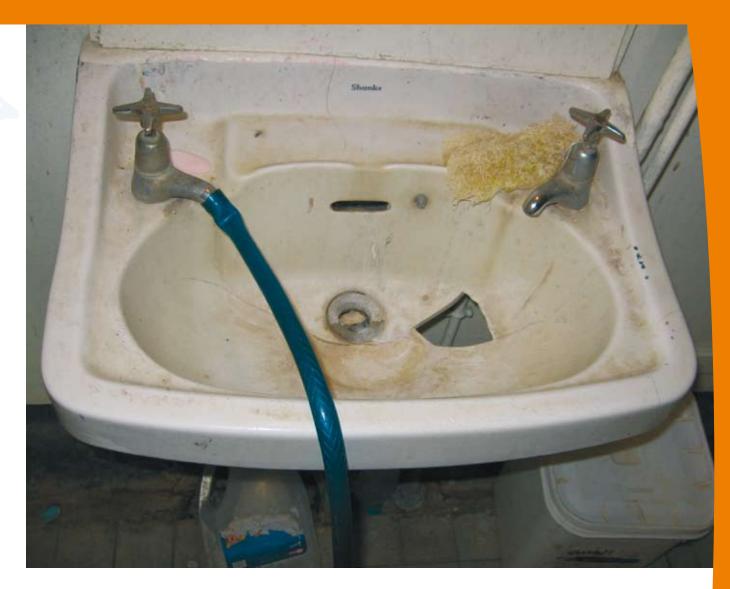
#### Deficiencies per major category

The number of deficiencies in areas such as equipment and machinery and safety and fire appliances accounted for about 46% of the total number of deficiencies.

Other areas where deficiencies are found are in the areas of ship and cargo operations (12.4%), working and living conditions (11.1%), stability and structure (12.5%) and certificates (11.0%) The trends in these areas are clarified below. More detailed information may be found in the statistical Annexes to this report.

#### Certification of ship

Deficiencies in ships' certificates and documents indicated a decrease of 16% from 5,269 in 2009 to 4,426 in 2010.



#### Equipment and machinery

The deficiencies in Safety of Navigation show a decrease of 10%, from 9,389 in 2009 to 8,443 deficiencies in 2010.

#### Safety and fire appliances

In 2010 deficiencies in safety areas such as life saving appliances, fire fighting equipment, alarm signals, structural safety, accounted for 21.2% of the total number of deficiencies. The number of deficiencies in these areas decreased almost 13.1% from 15,800 in 2009 to 13,728 in 2010.

#### Ship and cargo operations

Deficiencies in MARPOL Annex V show a decrease of 19.2% in 2010 (617), compared with 2009 (764). Deficiencies in MARPOL Annex VI show an increase of 100% in 2010 (292), compared with 2009 (146).

#### Working and living conditions

Major categories of deficiencies related to working and living conditions are 'crew and accommodation', 'food and catering', 'working spaces' and 'accident prevention' under the ILO 147 Conventions. Deficiencies in these areas decreased by 7.9% from 7,846 in 2009 to 7,223 in 2010. In 2009 a new item in the Working and Living conditions was the ILO180 convention with 62 deficiencies in 2009. In 2010 the number of deficiencies for this item is 1,275.

#### Management

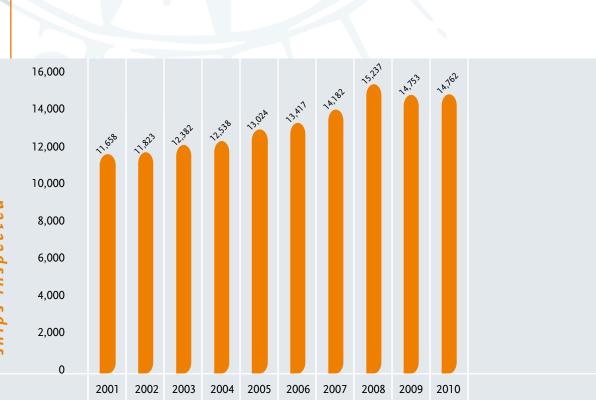
Deficiencies in this area with ISM related deficiencies showed a decrease of 19.4%, compared with 2009.

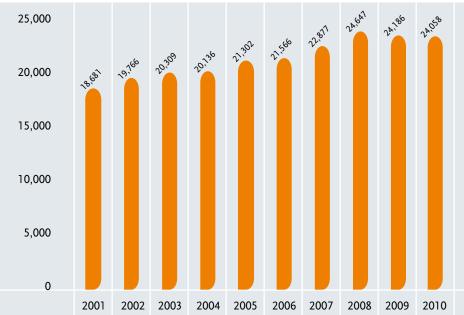




# STATISTICAL ANNEXES annual report 2010

## Basic port state control figures

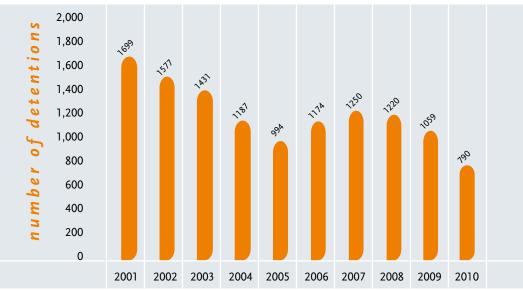


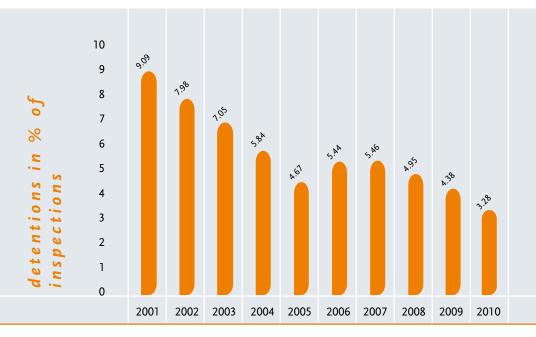


number of individual ships inspected

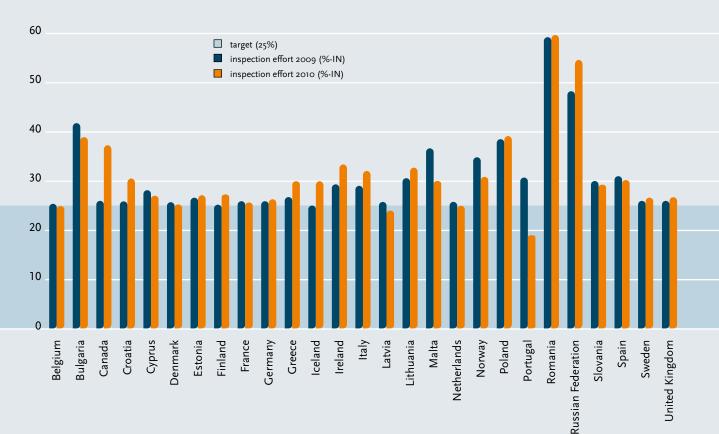




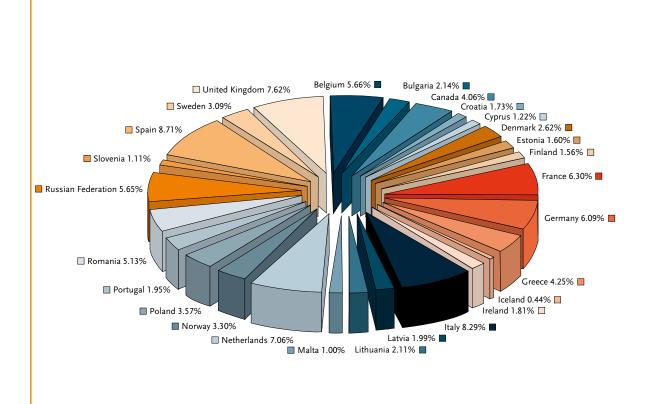




### Inspection efforts



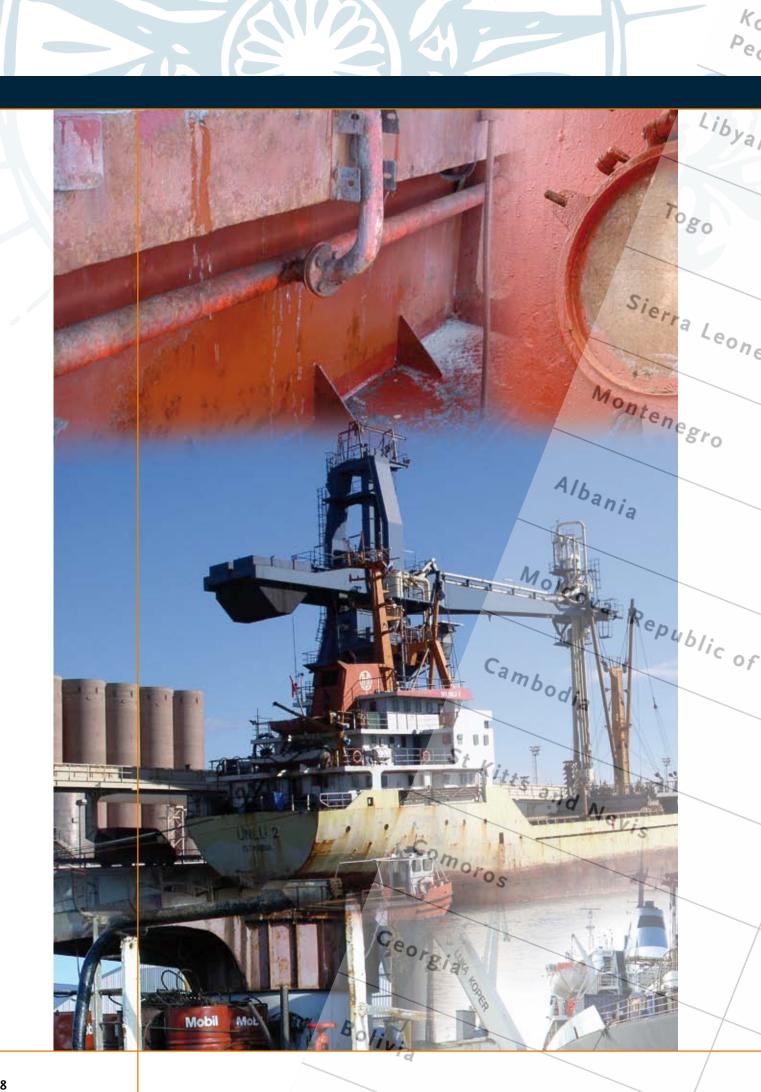




#### MOU port States' individual contribution to the total amount of inspections

MOU port State	Individual Ships Calls	Inspections	Inspections with deficiencies	Detentions	Detents with RO related deficiencies	-Insp. with deficiencies	Detained	Individual Ships inspected (25 commitment)	Inspection of MOU total
Belgium	5,443	1,361	690	37	2	50.70	2.72	25.00	5.66
Bulgaria	1,315	514	394	25	7	76.65	4.86	39.09	2.14
Canada	2,581	976	443	19	3	45.39	1.95	37.81	4.06
Croatia	1,366	417	252	16	2	60.43	3.84	30.53	1.73
Cyprus	1,062	293	173	27	3	59.04	9.22	27.59	1.22
Denmark	2,511	630	287	8	0	45.56	1.27	25.09	2.62
Estonia	1,393	384	111	1	1	28.91	0.26	27.57	1.60
Finland	1,369	376	104	1	0	27.66	0.27	27.47	1.56
France	5,882	1,515	913	57	6	60.26	3.76	25.76	6.30
Germany	5,496	1,466	733	36	8	50.00	2.46	26.67	6.09
Greece	3,369	1,021	559	47	12	54.75	4.60	30.31	4.25
Iceland	351	106	37	3	0	34.91	2.83	30.20	0.44
Ireland	1,302	436	185	11	4	42.43	2.52	33.49	1.81
Italy	6,399	1,993	1,191	119	21	59.76	5.97	31.15	8.29
Latvia	2,002	479	121	1	0	25.26	0.21	23.93	1.99
Lithuania	1,506	507	310	5	0	61.14	0.99	33.67	2.11
Malta	804	241	175	10	0	72.61	4.15	29.98	1.00
Netherlands	6,817	1,698	859	34	0	50.59	2.00	24.91	7.06
Norway	2,534	793	262	18	0	33.04	2.27	31.29	3.30
Poland	2,223	858	474	22	1	55.24	2.56	38.60	3.57
Portugal	2,698	468	291	13	2	62.18	2.78	17.35	1.95
Romania	1,952	1,233	708	48	10	57.42	3.89	63.17	5.13
Russian Federation'	2,474	1,358	935	54	8	68.85	3.98	54.89	5.65
Slovenia	898	267	163	28	8	61.05	10.49	29.73	1.11
Spain	6,844	2,093	1,428	95	11	68.23	4.54	30.58	8.71
Sweden	2,728	743	251	5	0	33.78	0.67	27.24	3.09
United Kingdom	6,800	1,832	1,233	50	3	67.30	2.78	26.94	7.62
Total	80,119	24,058	13,282	790	112	55.21	3.28	30.03	100.00

 $^{\circ}$  Only movements to the Russian ports of the Baltic, Azov, Caspian and Barents Seas are included



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Prea, De Pple's	mocr		20	008.	D	eten.	
	Black list				,		
" Arab j		Inspec- tions 2008- 2010	Detenti- ons	Black to Grey limit	Grey to White limit	Excess Factor	
	Black list			1			
	Korea, Democratic People's Rep.	45	17	6		7.31	
	Libyan Arab Jamahiriya	47	14	7		5.09	
	Togo	150	37	16	very high risk	5.02	
	Sierra Leone	570	114	50		4.44	
	Montenegro	34	10	5		4.43	
	Albania	222	44	22		3.86	
	Moldova, Republic of	461	77	42	high risk	3.31	6
	Cambodia	863	135	73		3.22	
	St Kitts and Nevis	488	76	44		2.99	
	Comoros	644	98	56		2.99	-
	Georgia	776	106	67	-	2.57	-
	Bolivia	40	8	6	medium to high risk	2.24	+
	Lebanon	72	12	9	. Hok	2.04	-
1	Syrian Arab Republic	246	33	24		2.02	
	Tanzania United Rep.	65	10	8	8	1.62	 !
	Ukraine	471	50	43	medium	1.47	-
	St Vincent and the Grenadines	1,957	168	156	risk	1.19	
6	Azerbaijan	69	9	9		1.07	
	/		I			1	



Curaco

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Cook							2
	Grey list						
liet Na	Flag	Inspec- tions 2008-2010	Deten- tions 2008-2010	Black to Grey limit	Grey to White limit	Excess Factor	
ninica	Grey list						
"'ca	Egypt	112	12	13	3	0.92	_
	Cook Islands	150	15	16	5	0.90	
9	Viet Nam	37	5	6	0	0.89	
	Dominica	167	16	18	6	0.86	<u> </u>
	Algeria	98	10	12	2	0.84	5
	Slovakia	234	21	23	9	0.83	
	Honduras	65	7	8	1	0.82	/
	Tunisia	57	6	8	0	0.77	
	Jamaica	48	5	7	0	0.74	<u> </u>
	Mongolia	43	4	6	0	0.65	
	Tuvalu	36	3	6	0	0.58	
	Morocco	153	11	16	5	0.53	
	Saudi Arabia	62	3	8	1	0.32	
	Bulgaria	230	13	23	9	0.27	
	Belize	660	40	57	35	0.23	
	Curacao	599	35	53	31	0.18	
	Malaysia	74	2	9	1	0.11	-
	Switzerland	94	3	11	2	0.11	
	Faroe Islands	157	6	17	5	0.07	
	Vanuatu	177	7	18	6	0.06	-
	Latvia	144	5	16	5	0.04	1
	Iran, Islamic Republic of	146	5	16	5	0.03	/
	Thailand	128	4	14	4	0.03	
	United States of America	128	4	14	4	0.03	-
	°2 /						F

2008-2010

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# White list

Philippines

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Public	_ /			$\checkmark$	
Flag	Inspec- tions 2008-2010	Deten- tions 2008-2010	Black to Grey limit	Grey to White limit	Exce: Facto
White list					<u> </u>
Kazakhstan	30	0	5	0	
Qatar	30	0	5	0	
Philippines	231	8	23	9	-
Panama	8,385	476	626	548	-
Korea, Republic of	201	6	21	8	-
India	138	3	15	4	-
Japan Turkey Lithuania	89	1	11	2	-
Turkey	2,294	108	181	140	-
Lithuania	227	6	23	9	
Spain	278	8	27	12	
-	1,965	80	157	118	
Barbados	527	15	47	27	
Cayman Islands, UK	286	6	28	12	
Antigua and Barbuda	5,235	195	397	336	
Russian Federation Barbados Cayman Islands, UK Antigua and Barbuda Luxembourg	196	3	20	7	
Malta					
Poland	5,569	200	422	358	
	202	3	21	8	
Portugal	542	13	48	28	
Croatia	178	2	19	6	
Liberia	4,461	132	341	284	
Cyprus	2,694	76	211	166	
Estonia	104	0	12	2	
Gibraltar, UK	1,301	29	107	75	
Belgium	231	2	23	9	
Norway	2,323	51	183	142	
Marshall Islands	2,260	49	179	138	
Ireland	182	1	19	7	
Bahamas	3,628	75	280	228	
Singapore	1,375	24	112	80	
Hong Kong, China	1,422	22	116	83	
Italy	1,487	22	121	87	
Man, Isle of, UK	883	11	75	49	
China	250	1	25	10	
Greece	1,475	21	120	87	
Finland	624	6	55	33	
Denmark	1,385	17	113	81	
France	355	2	33	16	-
Netherlands	3,860	54	297	244	-
United Kingdom	2,007	25	160	121	-
Sweden	984	9	83	55	-
Germany	1,388	14	113	81	-

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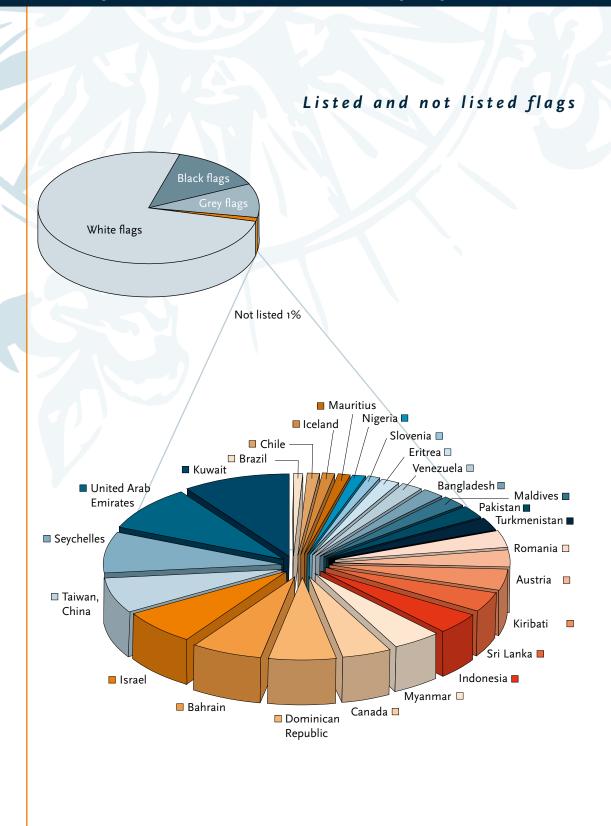
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2008-20

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## Distribution of listed and not listed flags



# Inspections, detentions and deficiencies 2010

Flag	Inspections	Detentions	Inspections with deficiencies	Individual Ships	Inspection % with deficiencies	Detention %
Albania	73	12	60	23	82.19	16.44
Algeria	24	2	21	14	87.50	8.33
Antigua and Barbuda	1,800	72	1,080	845	60.00	4.00
Azerbaijan	2	0	1	2	50.00	0.00
Bahamas	1,190	17	580	756	48.74	1.43
Bahrain	6	0	3	4	50.00	0.00
Bangladesh	4	0	4	3	100.00	0.00
Barbados	167	3	86	87	51.50	1.80
Belgium	80	1	31	59	38.75	1.25
Belize	243	8	188	127	77.37	3.29
Bermuda,UK	106	0	38	69	35.85	0.00
Bolivia	18	4	16	13	88.89	22.22
Brazil	2	0	1	2	50.00	0.00
Bulgaria	53	6	41	28	77.36	11.32
Cambodia	238	28	217	135	91.18	11.76
Canada	4	1	3	3	75.00	25.00
Cape Verde	1	1	1	1	100.00	100.00
Cayman Islands,UK	94	1	33	64	35.11	1.06
Chile	1	0	0	1	0.00	0.00
China	107	1	45	91	42.06	0.93
Comoros	223	29	208	98	93.27	13.00
Cook Islands	54	5	43	29	79.63	9.26
Croatia	54	0	27	34	50.00	0.00
Curacao	178	7	108	85	60.67	3.93
Cyprus	866	23	437	514	50.46	2.66
Denmark	471	6	205	309	43.52	1.27
Dominica	59	3	51	23	86.44	5.08
Dominican Republic	2	0	1	2	50.00	0.00
Egypt	33	2	27	22	81.82	6.06
Estonia	28	0	10	19	35.71	0.00

# Inspections, detentions and deficiencies 2010

Flag         so pyod set pyod set pyod set set pyod set set set set set set set set set set							
Faroe Islands691323846.381.45Finland203410111149.751.97France1100677260.910.00Georgia2702923411586.6710.74Germany469321629946.060.64Gibraltar,UK469720222143.071.49Greece478420836243.510.84Crenada10010.00100.00Guinea111100.00100.00Hong Kong,China532422743042.670.75Iceland1011100.000.001.00Indonesia2022100.000.00Ireland681343450.001.47Israel503460.000.00Italy5141027635353.701.95Japan300112636.670.00Kazakhstan13021315.380.00	Flag	Inspections	Detentions	Inspections with deficiencies	Individual Ships	Inspection % with deficiencies	Detention %
Finland         203         4         101         111         49.75         1.97           France         110         0         67         72         60.91         0.00           Ceorgia         270         29         234         115         86.67         10.74           Germany         469         3         216         299         46.06         0.64           Gibraltar,UK         469         7         202         221         43.07         1.49           Greece         478         4         208         362         43.51         0.84           Grenada         1         0         0         1         0.00         0.00           Guinea         1         1         1         100.00         0.000           Hong Kong,China         532         4         227         430         42.67         0.75           Iceland         1         0         1         1         100.00         0.00           India         38         1         22         30         57.89         2.63           Indonesia         2         0         2         2         100.00         0.00           Irel	Falkland Islands	1	0	0	1	0.00	0.00
France1100677260.910.00Georgia2702923411586.6710.74Germany469321629946.060.64Gibraltar,UK469720222143.071.49Greece478420836243.510.84Grenada10010.000.00Guinea1111100.00100.00Honduras233181178.2613.04Hong Kong,China532422743042.670.75Iceland1011100.000.001Indonesia2022100.000.00Iran Islamic Rep.of451233450.001.47Israel5103460.000.00Italy5141027635353.701.95Jamaica1229975.0016.67Japan300112636.670.00	Faroe Islands	69	1	32	38	46.38	1.45
Georgia2702923411586.6710.74Germany469321629946.060.64Gibraltar,UK469720222143.071.49Greece478420836243.510.84Grenada10010.000.00Guinea1111100.00100.00Guinea1111100.000.00Honduras233181178.2613.04Hong Kong,China532422743042.670.75Iceland1011100.000.00Indonesia2022100.000.00Iran Islamic Rep.of451233251.112.22Ireland5141027635353.701.95Jamaica1229975.0016.67Japan300112636.670.00Kazakhstan13021315.380.00	Finland	203	4	101	111	49.75	1.97
Germany469321629946.060.64Gibraltar,UK469720222143.071.49Greece478420836243.510.84Grenada100110.000.00Guinea1111100.00100.00Honduras233181178.2613.04Hong Kong,China532422743042.670.75Iceland1011100.000.00India381223057.892.63Indonesia2022100.000.00Iran Islamic Rep.of451233251.112.22Ireland51410027635353.701.95Jamaica1229975.0016.67Japan300112636.670.00Kazakhstan13021315.380.00	France	110	0	67	72	60.91	0.00
Gibraltar,UK         469         7         202         221         43.07         1.49           Greece         478         4         208         362         43.51         0.84           Grenada         1         0         0         1         0.00         0.00           Guinea         1         1         1         1         100.00         100.00           Honduras         23         3         18         11         78.26         13.04           Hong Kong,China         532         4         227         430         42.67         0.75           Iceland         1         0         1         1         100.00         0.00           India         38         1         22         30         57.89         2.63           Indonesia         2         0         2         2         100.00         0.00           Iral Islamic Rep.of         45         1         23         32         51.11         2.22           Ireland         68         1         34         34         50.00         1.47           Israel         514         10         276         353         53.70         1.95	Georgia	270	29	234	115	86.67	10.74
Greece         478         4         208         362         43.51         0.84           Grenada         1         0         0         1         0.00         0.00           Guinea         1         1         1         1         0.00         100.00           Honduras         23         3         18         11         78.26         13.04           Hong Kong, China         532         4         227         430         42.67         0.75           Iceland         1         0         1         1         100.00         0.00           India         38         1         22         30         57.89         2.63           Indonesia         2         0         2         2         100.00         0.00           Iran Islamic Rep.of         45         1         23         32         51.11         2.22           Ireland         68         1         34         34         50.00         1.47           Israel         514         10         276         353         53.70         1.95           Jamaica         12         2         9         9         75.00         16.67	Germany	469	3	216	299	46.06	0.64
Crenada         1         0         0         1         0.00         0.00           Guinea         1         1         1         1         100.00         100.00           Honduras         23         3         18         11         78.26         13.04           Hong Kong, China         532         4         227         430         42.67         0.75           Iceland         1         0         1         1         100.00         0.00           India         38         1         22         30         57.89         2.63           Indonesia         2         0         2         2         100.00         0.00           Iran Islamic Rep.of         45         1         23         32         51.11         2.22           Ireland         68         1         34         34         50.00         1.47           Israel         514         10         276         353         53.70         1.95           Jamaica         12         2         9         9         75.00         16.67           Japan         13         0         2         13         15.38         0.00	Gibraltar,UK	469	7	202	221	43.07	1.49
Guinea       1       1       1       1       100.00         Honduras       23       3       18       11       78.26       13.04         Hong Kong, China       532       4       227       430       42.67       0.75         Iceland       1       0       1       1       100.00       0.00         India       38       1       22       30       57.89       2.63         Indonesia       2       0       2       2       100.00       0.00         Iran Islamic Rep.of       45       1       23       32       51.11       2.22         Ireland       68       1       34       34       50.00       1.47         Israel       514       10       276       353       53.70       1.95         Jamaica       12       2       9       9       75.00       16.67         Japan       30       0       11       26       36.67       0.00         Kazakhstan       13       0       2       13       15.38       0.00	Greece	478	4	208	362	43.51	0.84
Honduras         23         3         18         11         78.26         13.04           Hong Kong,China         532         4         227         430         42.67         0.75           Iceland         1         0         1         1         100.00         0.00           India         38         1         22         30         57.89         2.63           Indonesia         2         0         2         2         100.00         0.00           Iran Islamic Rep.of         45         1         23         32         51.11         2.22           Ireland         68         1         34         34         50.00         1.47           Israel         5         0         3         4         60.00         0.00           Italy         514         10         276         353         53.70         1.95           Jamaica         12         2         9         9         75.00         16.67           Japan         30         0         11         26         36.67         0.00	Grenada	1	0	0	1	0.00	0.00
Hong Kong,China         532         4         227         430         42.67         0.75           Iceland         1         0         1         1         100.00         0.00           India         38         1         22         30         57.89         2.63           Indonesia         2         0         2         2         100.00         0.00           Iran Islamic Rep.of         45         1         23         32         51.11         2.22           Ireland         68         1         34         34         50.00         1.47           Israel         514         10         276         353         53.70         1.95           Jamaica         12         2         9         9         75.00         16.67           Japan         30         0         11         26         36.67         0.00	Guinea	1	1	1	1	100.00	100.00
Iceland       1       0       1       1       100.00       0.00         India       38       1       22       30       57.89       2.63         Indonesia       2       0       2       2       100.00       0.00         Iran Islamic Rep.of       45       1       23       32       51.11       2.22         Ireland       68       1       34       34       50.00       1.47         Israel       5       0       3       4       60.00       0.00         Italy       514       10       276       353       53.70       1.95         Jamaica       12       2       9       9       75.00       16.67         Japan       30       0       11       26       36.67       0.00         Kazakhstan       13       0       2       13       15.38       0.00	Honduras	23	3	18	11	78.26	13.04
India         38         1         22         30         57.89         2.63           Indonesia         2         0         2         2         100.00         0.00           Iran Islamic Rep.of         45         1         23         32         51.11         2.22           Ireland         68         1         34         34         50.00         1.47           Israel         5         0         3         4         60.00         0.00           Italy         514         10         276         353         53.70         1.95           Jamaica         12         2         9         9         75.00         16.67           Kazakhstan         13         0         2         13         15.38         0.00	Hong Kong,China	532	4	227	430	42.67	0.75
Indonesia         2         0         2         2         100.00         0.00           Iran Islamic Rep.of         45         1         23         32         51.11         2.22           Ireland         68         1         34         34         50.00         1.47           Israel         5         0         3         4         60.00         0.00           Italy         514         10         276         353         53.70         1.95           Jamaica         12         2         9         9         75.00         16.67           Japan         30         0         11         26         36.67         0.00	Iceland	1	0	1	1	100.00	0.00
Iran Islamic Rep.of         45         1         23         32         51.11         2.22           Ireland         68         1         34         34         50.00         1.47           Israel         5         0         3         4         60.00         0.00           Italy         514         10         276         353         53.70         1.95           Jamaica         12         2         9         9         75.00         16.67           Japan         30         0         11         26         36.67         0.00 <th>India</th> <th>38</th> <th>1</th> <th>22</th> <th>30</th> <th>57.89</th> <th>2.63</th>	India	38	1	22	30	57.89	2.63
Ireland         68         1         34         34         50.00         1.47           Israel         5         0         3         4         60.00         0.00           Italy         514         10         276         353         53.70         1.95           Jamaica         12         2         9         9         75.00         16.67           Japan         30         0         11         26         36.67         0.00	Indonesia	2	0	2	2	100.00	0.00
Israel         5         0         3         4         60.00         0.00           Italy         514         10         276         353         53.70         1.95           Jamaica         12         2         9         9         75.00         16.67           Japan         30         0         11         26         36.67         0.00	Iran Islamic Rep.of	45	1	23	32	51.11	2.22
Italy         514         10         276         353         53.70         1.95           Jamaica         12         2         9         9         75.00         16.67           Japan         30         0         11         26         36.67         0.00           Kazakhstan         13         0         2         13         15.38         0.00	Ireland	68	1	34	34	50.00	1.47
Jamaica       12       2       9       9       75.00       16.67         Japan       30       0       11       26       36.67       0.00         Kazakhstan       13       0       2       13       15.38       0.00	Israel	5	0	3	4	60.00	0.00
Japan         30         0         11         26         36.67         0.00           Kazakhstan         13         0         2         13         15.38         0.00	Italy	514	10	276	353	53.70	1.95
Kazakhstan         13         0         2         13         15.38         0.00	Jamaica	12	2	9	9	75.00	16.67
	Japan	30	0	11	26	36.67	0.00
Kiribati         5         1         4         3         80.00         20.00	Kazakhstan	13	0	2	13	15.38	0.00
	Kiribati	5	1	4	3	80.00	20.00
Korea Dem.Peop.Rep.         8         1         8         4         100.00         12.50	Korea Dem.Peop.Rep.	8	1	8	4	100.00	12.50
Korea Republic of         51         0         29         45         56.86         0.00	Korea Republic of	51	0	29	45	56.86	0.00
Kuwait 8 0 0 6 0.00 0.00	Kuwait	8	0	0	6	0.00	0.00
Latvia 39 0 26 19 66.67 0.00	Latvia	39	0	26	19	66.67	0.00
Lebanon 28 4 24 14 85.71 14.29	Lebanon	28	4	24	14	85.71	14.29
Liberia 1,523 33 759 1,113 49.84 2.17	Liberia	1,523	33	759	1,113	49.84	2.17
Libyan Arab Jamahiriya 20 4 12 11 60.00 20.00	Libyan Arab Jamahiriya	20	4	12	11	60.00	20.00

Flag	Inspections	Detentions	Inspections with deficiencies	Individual Ships	Inspection % with deficiencies	Detention %
Lithuania	75	2	35	44	46.67	2.67
Luxembourg	81	2	47	51	58.02	2.47
Malaysia	17	0	3	14	17.65	0.00
Maldives	1	0	1	1	100.00	0.00
Malta	1,900	51	1,029	1,164	54.16	2.68
Man,Isle of,UK	297	2	108	188	36.36	0.67
Marshall Islands	786	14	342	621	43.51	1.78
Mauritius	1	0	0	1	0.00	0.00
Moldova, Rep.of	241	39	214	96	88.80	16.18
Mongolia	6	0	6	6	100.00	0.00
Morocco	49	4	41	23	83.67	8.16
Myanmar	3	0	2	1	66.67	0.00
Netherlands	1,418	15	653	760	46.05	1.06
Norway	682	13	361	441	52.93	1.91
Panama	2,659	86	1,493	1,889	56.15	3.23
Philippines	85	2	61	64	71.76	2.35
Poland	63	1	35	43	55.56	1.59
Portugal	182	2	89	97	48.90	1.10
Qatar	9	0	2	6	22.22	0.00
Romania	1	0	1	1	100.00	0.00
Russian Federation	542	19	332	368	61.25	3.51
Saudi Arabia	23	1	15	18	65.22	4.35
Seychelles	7	0	3	4	42.86	0.00
Sierra Leone	160	25	148	77	92.50	15.63
Singapore	477	6	213	358	44.65	1.26
Slovakia	51	4	42	21	82.35	7.84
Spain	88	1	45	52	51.14	1.14
Sri Lanka	6	0	3	4	50.00	0.00
St Vincent & Grenadines	561	35	402	270	71.66	6.24
St.Kitts and Nevis	140	23	122	72	87.14	16.43

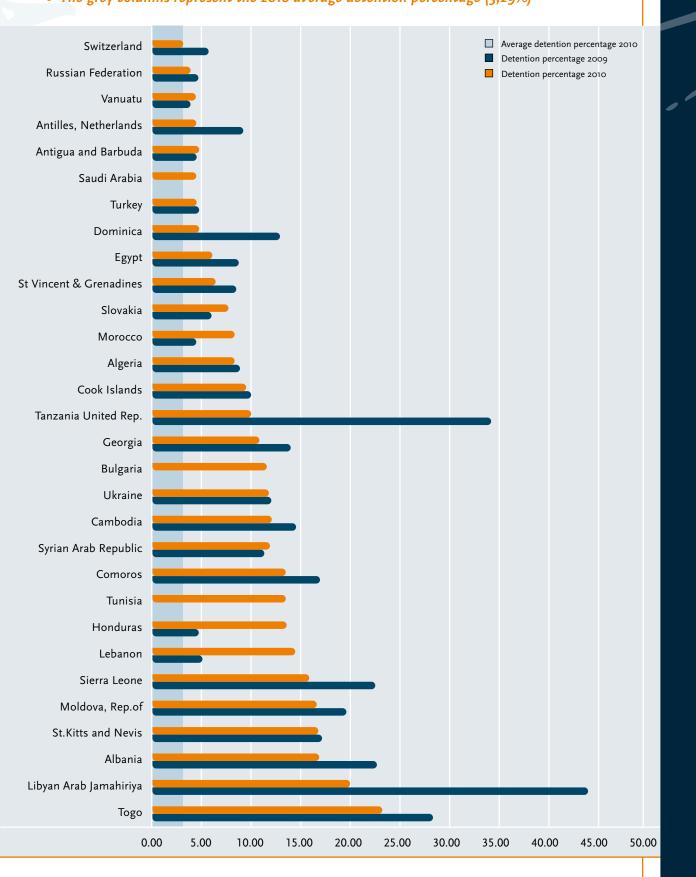
# Inspections, detentions and deficiencies 2010

Flag	Inspections	Detentions	Inspections with deficiencies	Individual Ships	Inspection % with deficiencies	Detention %
Sweden	286	2	124	173	43.36	0.70
Switzerland	30	1	19	22	63.33	3.33
Syrian Arab Republic	58	7	51	32	87.93	12.07
Taiwan,China	3	0	2	3	66.67	0.00
Tanzania, United Rep.	52	5	50	29	96.15	9.62
Thailand	24	0	14	22	58.33	0.00
Togo	78	18	70	40	89.74	23.08
Tunisia	23	3	20	11	86.96	13.04
Turkey	782	34	451	479	57.67	4.35
Turkmenistan	4	0	1	3	25.00	0.00
Tuvalu	13	1	9	8	69.23	7.69
U.S.A.	44	1	25	35	56.82	2.27
Ukraine	130	15	114	73	87.69	11.54
United Arab Emirates	10	0	6	7	60.00	0.00
United Kingdom	618	8	338	481	54.69	1.29
Vanuatu	57	2	33	41	57.89	3.51
Viet Nam	15	0	12	13	80.00	0.00

### 2010 detentions per flag

EXCEEDING AVERAGE PERCENTAGE

Only flags with 20 and more port State control inspections in 2010 are recorded and with a detention percentage exceeding the average percentage of 3,29% in this table and graph
The grey columns represent the 2010 average detention percentage (3,29%)



## Detentions per flag in 2010

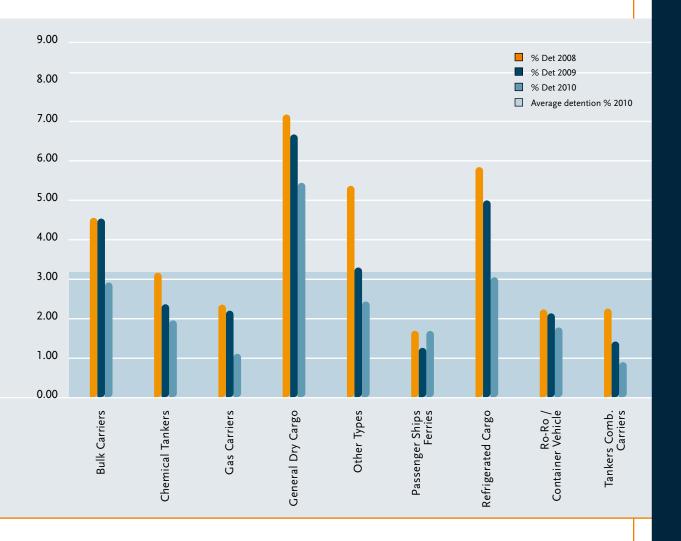
EXCEEDING AVERAGE PERCENTAGE

Flag	Inspections	Detentions	Detentions % 2010	Excess of average 2010	Detentions % 2009	Excess of average 2009
Switzerland	30	1	3.33	0.04	5.26	0.88
Russian Federation	542	19	3.51	0.22	4.71	0.33
Vanuatu	57	2	3.51	0.22	2.90	-1.48
Curacao	178	7	3.93	0.64	8.87	4.49
Antigua and Barbuda	1800	72	4.00	0.71	3.81	-0.57
Saudi Arabia	23	1	4.35	1.06	0.00	-4.38
Turkey	782	34	4.35	1.06	4.61	0.23
Dominica	59	3	5.08	1.80	12.50	8.12
Egypt	33	2	6.06	2.77	9.30	4.92
St Vincent & Grenadines	561	35	6.24	2.95	8.56	4.18
Slovakia	51	4	7.84	4.55	5.71	1.33
Morocco	49	4	8.16	4.87	4.26	-0.12
Algeria	24	2	8.33	5.04	8.57	4.19
Cook Islands	54	5	9.26	5.97	10.20	5.82
Tanzania, United Rep.	52	5	9.62	6.33	38.46	34.08
Georgia	270	29	10.74	7.45	13.66	9.28
Bulgaria	53	6	11.32	8.03	0.00	-4.38
Ukraine	130	15	11.54	8.25	11.64	7.26
Cambodia	238	28	11.76	8.47	14.33	9.95
Syrian Arab Republic	58	7	12.07	8.78	11.76	7.38
Comoros	223	29	13.00	9.71	15.95	11.57
Tunisia	23	3	13.04	9.75	0.00	-4.38
Honduras	23	3	13.04	9.75	4.55	0.17
Lebanon	28	4	14.29	11.00	5.00	0.62
Sierra Leone	160	25	15.63	12.34	21.65	17.27
Moldova, Rep.of	241	39	16.18	12.89	19.61	15.23
St.Kitts and Nevis	140	23	16.43	13.14	16.57	12.19
Albania	73	12	16.44	13.15	22.41	18.03
Libyan Arab Jamahiriya	20	4	20.00	16.71	43.75	39.37
Togo	78	18	23.08	19.79	27.27	22.89

## Inspections and detentions

PER SHIP TYPE

Ship type	Inspections	Inspections with deficiencies	% of inspections with deficiencies	Individual ships	Detentions	Detention % 2010	Detention % 2009	Detention % 2008	+/- average detention %
Bulk Carriers	3,362	1,926	57.29	2,528	93	2.77	4.60	4.61	-0.51
Chemical Tankers	2,333	1,012	43.38	1,507	48	2.06	2.36	3.19	-1.22
Gas Carriers	535	238	44.49	359	6	1.12	2.22	2.38	-2.16
General Dry Cargo	9,139	5,831	63.82	4,548	500	5.47	6.78	7.29	2.17
Other Types	1,445	853	59.03	1,134	34	2.35	3.32	5.44	-0.93
Passenger Ships Ferries	1,066	617	57.88	588	18	1.69	1.24	1.68	-1.59
Refrigerated Cargo	648	442	68.21	417	20	3.09	5.05	5.93	-0.19
Ro-Ro / Container Vehicle	3,578	1,695	47.37	2,383	54	1.51	2.17	2.23	-1.77
Tankers / Comb. Carriers	1,934	691	35.73	1,503	17	0.88	1.40	2.26	-2.40



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# Major categorie of deficiencies 2008 - 2010

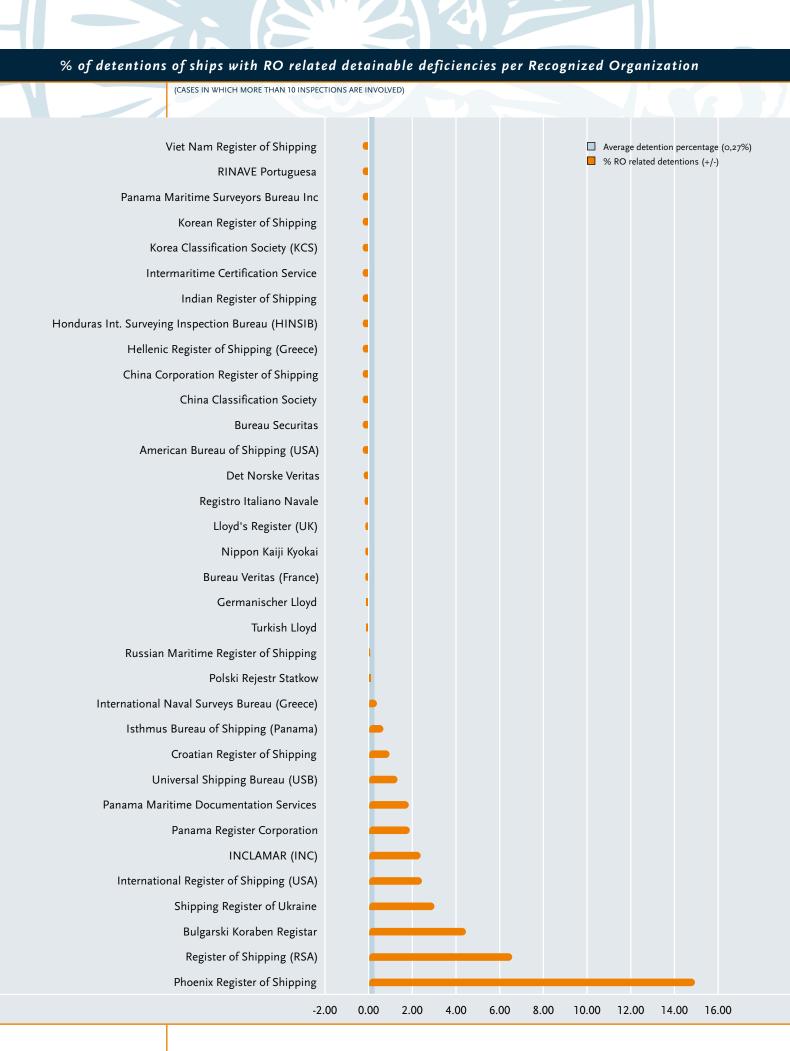
		20	08	20	09	20	10
Def. Main Group	Category of deficiencies	Def	Def %	Def	Def %	Def	Def %
Certificates	Crew certificates	3,341	3.99	2,704	3.76	2,713	4.19
Certificates	Ship's certificates and documents	5,485	6.55	5,269	7.33	4,426	6.84
Total Certificates		8,826	10.54	7,973	11.09	7,139	11.03
	Mooring arrangements	1,343	1.60	956	1.33	1,026	1.59
Equipment and Machinery	Propulsion and auxiliary mach.	6,283	7.50	5,076	7.06	4,762	7.36
Equipment and Machinery	Radio communications	3,009	3.59	2,243	3.12	2,021	3.12
	Safety of navigation	10,174	12.14	9,389	13.06	8,443	13.05
Total Equipment and Machinery		20,809	24.83	17,664	24.56	16,252	25.12
Management	ISM related deficiencies	4,641	5.54	4,260	5.92	3,432	5.30
Total Management		4,641	5.54	4,260	5.92	3,432	5.30
	Alarm signals	608	0.73	600	0.83	496	0.77
Safety and Fire Appliances	Fire safety measures	10,039	11.98	8,407	11.69	7,675	11.86
	Life saving appliances	6,465	7.71	6,793	9.45	5,557	8.59
Total Safety and Fire Appliances		17,112	20.42	15,800	21.97	13,728	21.22
Security	Maritime security	951	1.13	764	1.06	865	1.34
Total Security		951	1.13	764	1.06	865	1.34
	AFS Convention			58	0.08	36	0,06
	Gargoes	689	0.82	505	0.70	469	0.72
	Gas and chemical carriers	291	0.35	208	0.29	196	0.30
	MARPOL - annex I	5,034	6.01	3,764	5.23	3,434	5.31
	MARPOL - annex II	98	0.12	85	0.12	50	0.08
Ship and Cargo Operations	MARPOL - annex III	0	0.00	13	0.02	8	0.01
	MARPOL - annex IV	149	0.18	265	0.37	295	0.46
	MARPOL - annex V	790	0.94	764	1.06	617	0.95
	MARPOL - annex VI	176	0.21	146	0.20	292	0.45
	MARPOL related operational deficiencies	192	0.23	213	0.30	244	0.38
	Operational deficiencies	2,756	3.29	2,689	3.74	2,356	3.64
Total Ship and Cargo Operations		10,175	12.15	8,710	12.11	7,997	12.36
	Bulk carriers	328	0.39	282	0.39	180	0.28
Stability and Structure	Load lines	4,204	5.02	3,209	4.46	2,819	4.36
	Structural safety	6,882	8.21	5,403	7.51	5,063	7.83
Total Stability and Structure		11,414	13.62	8,894	12.37	8,062	12.46
	Accident prevention (ILO147)	1,829	2.18	1,401	1.95	154	0.24
	ILO 180			62	0,09	1,275	1.97
Working and Living Conditions	Accommodation	2,366	2.82	1823	2.54	1,550	2.40
	Food and catering	1,989	2.37	1567	2.18	1,359	2.10
	Working spaces	3,639	4.34	2,993	4.16	2,885	4.46
Total Working and Living Conditi	ons	9,823	11.71	7,846	10.91	7,223	11.16
End Total		83,751		71,911		64,698	100.00

### Detentions of ships with RO related detainable deficiencies per Recognized Organization

(CASES IN WHICH MORE THAN 10 INSPECTIONS ARE INVOLVED)

Recognized organization*		Total number of inspections	Number of individual ships inspected	Total number of detentions	Detention-% of total number of inspections	+/- Percen- tage of Average (o,27%)	Detention-% of individual ships	+/- Percentage of Average
American Bureau of Shipping	ABS	2,072	1,544	0	0.00	-0.27	0.00	-0.42
Bulgarski Koraben Registar	BKR	148	65	7	4.73	4.46	10.77	10.35
Bureau Securitas (Malta)	BS	20	15	0	0.00	-0.27	0.00	-0.42
Bureau Veritas (France)	BV	4,946	2,885	7	0.14	-0.12	0.24	-0.18
China Classification Society	ccs	325	257	0	0.00	-0.27	0.00	-0.42
China Corporation Register of Shipping	CCRS	17	13	0	0.00	-0.27	0.00	-0.42
Croatian Register of Shipping	CRS	82	46	1	1.22	0.95	2.17	1.75
Det Norske Veritas	DNVC	4,508	3,060	2	0.04	-0.22	0.07	-0.36
Germanischer Lloyd	GL	5,803	3,200	9	0.16	-0.11	0.28	-0.14
Hellenic Register of Shipping	HRS	141	82	0	0.00	-0.27	0.00	-0.42
Honduras Int. Surveying Inspection Bureau	HINSIB	12	7	0	0.00	-0.27	0.00	-0.42
INCLAMAR (Cyprus)	INC	38	17	1	2.63	2.37	5.88	5.46
Indian Register of Shipping	IRS	36	30	0	0.00	-0.27	0.00	-0.42
Intermaritime Certification Service (Panama)	ICS	18	13	0	0.00	-0.27	0.00	-0.42
International Naval Surveys Bureau (Greece)	INSB	313	162	2	0.64	0.37	1.23	0.81
International Register of Shipping (USA)	IS	406	202	11	2.71	2.44	5.45	5.02
Isthmus Bureau of Shipping (Panama)	IBS	108	64	1	0.93	0.66	1.56	1.14
Korea Classification Society (Korea, DPR)	KCS	13	8	0	0.00	-0.27	0.00	-0.42
Korean Register of Shipping (Korea, Rep of)	KRS	289	245	0	0.00	-0.27	0.00	-0.42
Lloyd's Register (UK)	LR	4,925	3,241	6	0.12	-0.14	0.19	-0.24
Nippon Kaiji Kyokai	NKK	2,353	1,838	3	0.13	-0.14	0.16	-0.26
Panama Maritime Documentation Services	PMDS	48	35	1	2.08	1.82	2.86	2.44
Panama Maritime Surveyors Bureau Inc	PMSB	11	8	0	0.00	-0.27	0.00	-0.42
Panama Register Corporation	PRC	47	31	1	2.13	1.86	3.23	2.80
Phoenix Register of Shipping (Greece)	PHRS	46	17	7	15.22	14.95	41.18	40.76
Polski Rejestr Statkow	PRS	267	154	1	0.37	0.11	0.65	0.23
Register of Shipping (Albania)	RS	73	24	5	6.85	6.58	20.83	20.41
Registro Italiano Navale	RINA	1123	734	1	0.09	-0.18	0.14	-0.28
RINAVE Portuguesa	RP	21	9	0	0.00	-0.27	0.00	-0.42
Russian Maritime Register of Shipping	RMRS	2,162	1,206	7	0.32	0.06	0.58	0.16
Shipping Register of Ukraine	SRU	274	147	9	3.28	3.02	6.12	5.70
Turkish Lloyd	TL	531	305	1	0.19	-0.08	0.33	-0.09
Universal Shipping Bureau (Panama)	USB	63	38	1	1.59	1.32	2.63	2.21
Viet Nam Register of Shipping	VRS	14	14	0	0.00	-0.27	0.00	-0.42

\* Where a country is shown after a Recognized Organization this indicates its location and not necessarily any connection with the maritime administration of that country.



## Recognized Organization performance table (2008-2010)

Recognized organization*		Inspections	Detentions	Low / medium limit	Medium / high limit	Excess factor	Performance level
Phoenix Register of Shipping (Greece)	PHRS	86	10	4	0	5.63	
Register of Shipping (Albania)	RSA	218	17	8	0	4.12	wany law
International Register of Shipping (USA)	IRS	1,427	63	38	19	2.57	very low
Bulgarski Koraben Registar	BKR	422	20	14	3	2.21	
Universal Shipping Bureau (Panama)	USB	224	9	8	1	1.19	low
Shipping Register of Ukraine	SRU	720	16	21	8	0.62	
Panama Maritime Documentation Services	PMDS	168	4	7	0	0.59	
Panama Register Corporation	PRC	174	3	7	0	0.43	
China Corporation Register of Shipping	CCRS	78	1	4	0	0.39	
Isthmus Bureau of Shipping (Panama)	IBS	410	7	13	3	0,38	medium
Croatian Register of Shipping	CRS	277	4	10	1	0.32	
Indian Register of Shipping	IRS	153	1	6	0	0.19	
INCLAMAR (Cyprus)	INC	161	1	7	0	0.18	
International Naval Surveys Bureau (Greece)	INSB	1,052	14	29	13	0.06	
RINAVE Portuguesa	RP	66	0	4	0	0.00	
Hellenic Register of Shipping (Greece)	HRS	688	7	20	7	-0.04	
Polski Rejestr Statkow	PRS	933	6	26	11	-0.70	
Russian Maritime Register of Shipping	RMRS	7,072	38	161	122	-1.32	
China Classification Society	ccs	976	2	27	12	-1.46	
Turkish Lloyd	TL	1,654	4	43	23	-1.54	
Nippon Kaiji Kyokai	NKK	7,007	21	160	120	-1.62	
Korean Register of Shipping (Korea, Rep. of)	KRS	880	1	25	10	-1.62	high
Bureau Veritas (France)	BV	14,172	28	311	256	-1.77	
Lloyd's Register (UK)	LR	15,364	29	336	278	-1.78	
Germanischer Lloyd	GL	17,086	27	372	311	-1.82	
Det Norske Veritas	DNCV	13,838	21	304	249	-1.82	
American Bureau of Shipping	ABS	6,111	4	141	104	-1.91	
Registro Italiano Navale	RINA	3,329	1	80	53	-1.94	

In this table only Recognized Organizations that had more than 60 inspections are taken into account. The formula used is identical to the one used for the Black Grey and White list. However, the values for P and Q are adjusted to P=0,02 and Q=0,01

\* Where a country is shown after a Recognized Organization this indicates its location and not necessarily any connection with the maritime administration of that country

# Number of certificates covering RO responsible detainable deficiencies

		Total certificates							
		Certificates	RO detdef	%					
American Bureau of Shipping	ABS	11,166	0	0.00					
Bulgarski Koraben Registar	BKR	1.057	27	2.55					
Bureau Veritas	BV	23,605	12	0.05					
China Classification Society	ccs	1,783	0	0.00					
China Corporation Register of Shipping	CCRS	51	0	0.00					
Croatian Register of Shipping	CRS	540	1	0.19					
Det Norske Veritas	DNVC	22,920	2	0.01					
Germanischer Lloy	GL	33,676	12	0.04					
Hellenic Register of Shipping	HRS	488	0	0.00					
Honduras Int. Surveying Inspection Bureau	HINSIB	67	0	0.00					
INCLAMAR (Inspection y Classification Maritime)	INC	177	5	2.82					
Indian Register of Shipping	IRS	88	0	0.00					
International Naval Surveys Bureau	INSB	1,856	4	0.22					
International Register of Shipping	IS	2,237	23	1.03					
Isthmus Bureau of Shipping	IBS	405	7	1,73					
Korea Classification Society	ксѕ	60	0	0.00					
Korean Register of Shipping	KRS	2,032	0	0.00					
Lloyd's Register	LR	22,745	16	0.07					
Nippon KaijiKyokai	NKK	14,899	5	0.03					
Panama Maritime Documentation Services	PMDS	218	0	0,00					
Panama Maritime Surveyors Bureau Inc	PMSB	51	2	3.92					
Panama Register Corporation	PRC	136	4	2.94					
Phoenix Register of Shipping	PHRS	293	15	5,12					
Polski Rejestr Statkow	PRS	1.234	2	0,16					
Register of Shipping (Albania)	RSA	601	17	2.83					
Registro Italiano Navale	RINA	4,977	1	0.02					
RINAVE Portuguesa	RP	62	0	0.00					
Russian Maritime Register of Shipping	RMRS	13,626	14	0.10					
Shipping Register of Ukraine	SRU	1,732	18	1.04					
Turkish Lloyd	ΤL	1,900	3	0.16					
Universal Shipping Bureau	USB	273	3	1,10					
Viet Nam Register of Shipping	VRS	97	0	0.00					
Total		176,937	479	0.27					

JATOT		27	12	-	2	12	5	4	23	7	16	S	2	4	15	2	17	-	14	18	3	3	193
	≥18																			-			-
Tankers	6-11										ŝ												m
	0-5		ŝ																				ŝ
Ro ro container	≥18		-			2					-				3			1	L				6
Refrigerated cargo	≥18								2										4	-			7
Passenger Ships	≥18				-											2							m
Other	≥18								°,					4									7
	≥18	20	S			9	S	4	18				2		12		17		7	16	3	3	118
Ceneral cargo	12-17					-		<u> </u>			-											<u> </u>	2
	6-11					-																	-
Chemical tankers	≥18				-						S												9
	≥18	7	æ	-		2				7	9	4							L				31
Bulk carriers	6-11																		L				-
	0-5											-											-
		BKR	BV	CRS	DNVC	ป	cr	INSB	SI	IBS	LR	NKK	PMSB	PRC	PHRS	PRS	RSA	RINA	RMRS	sru	ц	RMRS	
Recognized organization		Bulgarski Koraben Registar	Bureau Veritas	Croatian Register of Shipping	Det Norske Veritas	Germanischer Lloyd	INCLAMAR (Inspection y Classification Maritime)	International Naval Surveys Bureau	International Register of Shipping	lsthmus Bureau of Shipping	Lloyd's Register	Nippon Kaiji Kyokai	Panama Maritime Surveyors Bureau Inc	Panama Register Corporation	Phoenix Register of Shipping	Polski Rejestr Statkow	Register of Shipping (Albania)	Registro Italiano Navale	Russian Maritime Register of Shipping	Shipping Register of Ukraine	Turkish Lloyd	Russian Maritime Register of Shipping	Total

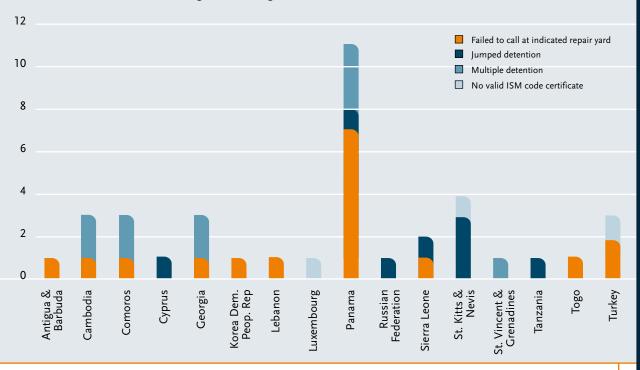
# Number of certificates covering RO related detainable deficiencies per flag

																			Į				
Flag / RO	вкв	ВЛ	свз	DNVC	כו	ЭNI	8SNI	SI	SBI	רא	NKK	PBC	ьныг ькс	Sgq	RSA	АИІЯ	вика	ระก	٦L	SU	lstoT	%	
Albania															17						17	8,81	
Algeria		-																			L	0,52	_
Antigua and Barbuda					5												5				10	5,18	
Cambodia								2													2	1,04	
Comoros	~						3						3					-			15	7,77	
Cyprus					-									2							3	1,55	
Dominica						5															5	2,59	
Georgia	7				-			2										ß			13	6,74	
Gibraltar, UK		8																			3	1,55	
Liberia		4								5							L				10	5,18	$\geq$
Malta					2					L	2										5	2,59	
Marshall Islands					2																2	1,04	
Moldova, Rep.of	12				L												L	8			22	11,40	
Morocco										L											L	0,52	
Netherlands										4											4	2,07	
Panama		-		-				3	7	5	-	2	4			-				3	28	14,51	
Sierra Leone								3					12	2							15	77,7	
St Vincent & Grenadines		2	L				L										9				10	5,18	
St.Kitts and Nevis								13									-				14	7,25	
Turkey		-									2								°		9	3,11	
Ukraine																		9			9	3,11	
United Kingdom				-																	-	0,52	
Total	27	12	-	2	12	S	4	23	۰ ۲	16	<u>د</u>	2	4 15	5 2	17	-	14	18	m	m	193	100,00	

## Refusal of access (banning) per flag state 2008 - 2010

Flag	Failed to call at indicated repair yard	Jumped detention	M ultiple detentions	No valid ISM code certifi- cate	Total Banned ships
Antigua & Barbuda	1				1
Cambodia	1		2		3
Comoros	1		2		3
Cyprus		1			1
Georgia	1		2		3
Korea Dem. Peop. Rep	1				1
Lebanon	1				1
Luxembourg				1	1
Panama	7	1	3		11
Russian Federation		1			1
Sierra Leone	1		1		2
St. Kitts & Nevis			3	1	4
St. Vincent & Grenadines			1		1
Tanzania		1			1
Тодо	1				1
Turkey	2			1	3
Total	17	4	14	3	38

### Refusal of access 2008-2010

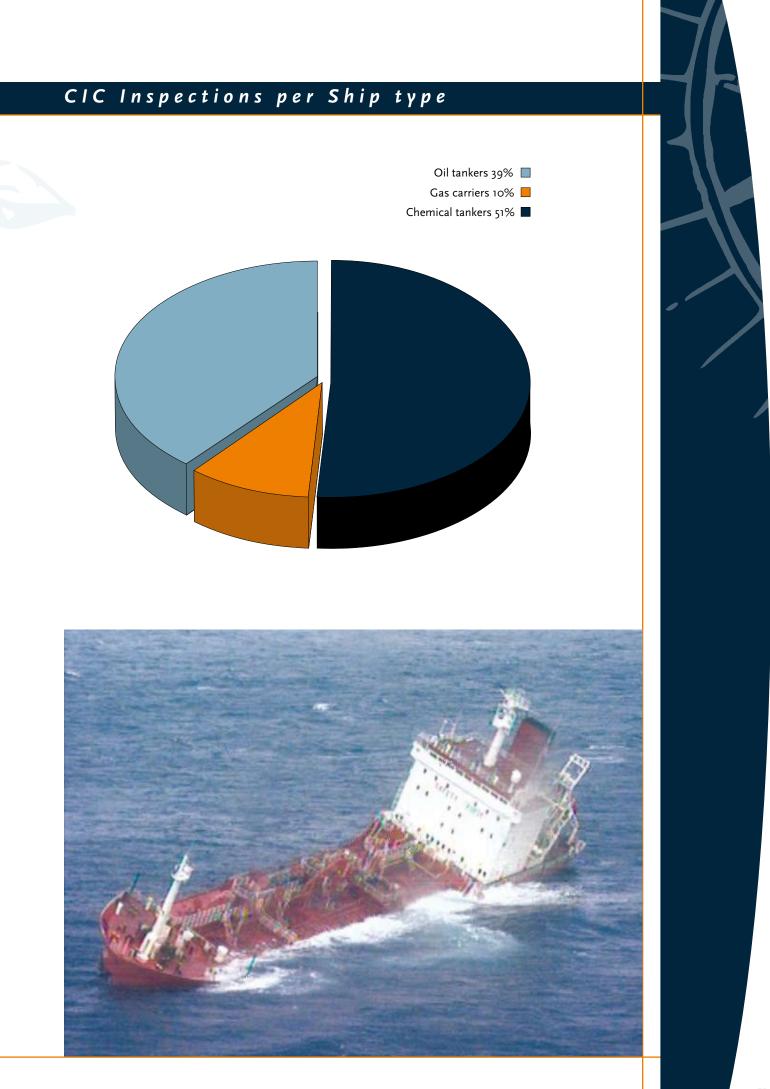


## CIC 2010 Tanker Damage Stability statistics

Number of individual ships inspected during CIC	Number of individual IMO numbers	Number of inspections performed with CIC	Number of inspections without a CIC questionnaire
Detentions	14	14	N/A
Detentions with CIC-topic related deficiencies	4	4	N/A
Total	1,051	1,065	5,083

Number of Inspections during CIC campaign	Number of ships	% of total
1 x inspected	1,051	98.69
2 x inspected	14	1.31
3 x inspected	0	0.00
Total	1,065	100.00

Ship type	Number of individual ships	Inspections	Detentions	Detentions as % of inspections	Detentions CIC-topic related	Detentions CIC-topic related as % of inspections
Chemical tankers	529	538	8	1.49	2	0.37
Gas carriers	107	108	1	0.93	0	0.00
Oil Tankers	415	419	5	1.19	2	0.48
Total	1,051	1,065	14	1.31	4	0.38



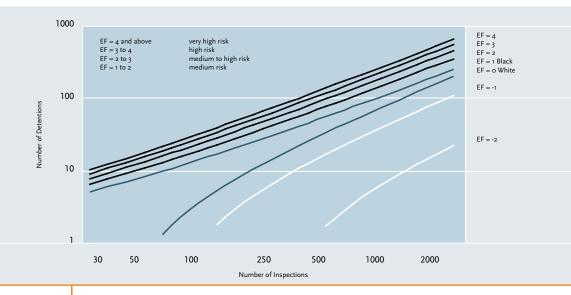
### Explanatory note - Black, Grey and White list

The new normative listing of Flags 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 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:

$$\begin{split} u_{black\_to\_grey} &= N \cdot p + 0.5 + z \sqrt{(N \cdot p \cdot (1 - p))} \\ u_{white\_to\_grey} &= N \cdot p - 0.5 - z \sqrt{(N \cdot p \cdot (1 - p))} \end{split}$$

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 is positioned between the two. the Flag 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 axes have a logarithmic character as the 'black to grey' or the 'grey to white' limit.

#### Example flag on Black list:

Ships of Flag A were subject to 108 inspections of which 25 resulted in a detention . The "black to grey limit" is 12 detentions. The excess factor is 4,26

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

How to determine the black to grey limit:  $\mu_{blacktogrey} = N \cdot p + 0.5 + z \sqrt{N \cdot p \cdot (1 - p)}$   $\mu_{blacktogrey} = 108 \cdot 0.07 + 0.5 + 1.645 \sqrt{108 \cdot 0.07 \cdot 0.93}$   $\mu_{blacktogrey} = 12$ 

The excess factor is 4,26. 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 3,26 and the outcome has to be added to the normal value for 'p':

 $p + 3,26q = 0,07 + (3,26 \cdot 0,03) = 0,1678$  $\mu_{excessfactor} = 108 \cdot 0.1678 + 0.5 + 1.645\sqrt{108 \cdot 0.1678 \cdot 0.8322}$  $\mu_{excessfactor} = 25$ 

#### Example flag on Grey list:

Ships of Flag B were subject to 141 inspections, of which 10 resulted in a detention. The ' black to grey limit" is 15 and the " grey to white limit" is 4. The excess factor is 0.51. How to determine the black to grey limit:  $\mu_{blacktogrey} = 141 \cdot 0.07 + 0.5 + 1.645\sqrt{141 \cdot 0.07 \cdot 0.93}$ 

 $\mu_{blactogrey} = 15$ 

How to determine the <u>grey to whi</u>te limit:  $\mu_{greytowhite} = N \cdot p - 0.5 - z \sqrt{N \cdot p \cdot (1 - p)}$   $\mu_{greytowhite} = 141 \cdot 0.07 - 0.5 - 1.645 \sqrt{141 \cdot 0.07 \cdot 0.93}$   $\mu_{greytowhite} = 4$ 

To determine the excess factor the following formula is used:

ef = Detentions – grey to white limit / grey to black limit – grey to white limit ef = (10-4)/(15-4)ef = 0.51

-0,51

Example flag on White list:

Ships of Flag C were subject to 297 inspections of which 11 resulted in detention. The "grey to white limit" is 13 detentions. The excess factor is -0.28.

How to determine the grey to white limit:  $\mu_{\text{greytowhite}} = N \cdot p - 0.5 - z \sqrt{N \cdot p(1-p)}$   $\mu_{\text{greytowhite}} = 297 \cdot 0.07 - 0.5 - 1.645 \sqrt{297 \cdot 0.07 \cdot 0.93}$   $\mu_{\text{greytowhite}} = 13$ 

The excess factor is -0.28 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 -0.28, and the outcome has to be added to the normal value for 'p':

 $\begin{aligned} p + (-0.28q) &= 0.07 + (-0.28 \cdot 0.03) = 0.084 \\ \mu_{excessfactor} &= 297 \cdot 0.084 - 0.5 - 1.645 \sqrt{297 \cdot 0.084 \cdot 0.9916} \\ \mu_{excessfactor} &= 11 \end{aligned}$ 

### Secretariat Paris Memorandum of Understanding on Port State Control



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The Paris MoU maintains a website which can be found at www.parismou.org. The site contains information on operation of the Paris MoU and a database of inspection results.

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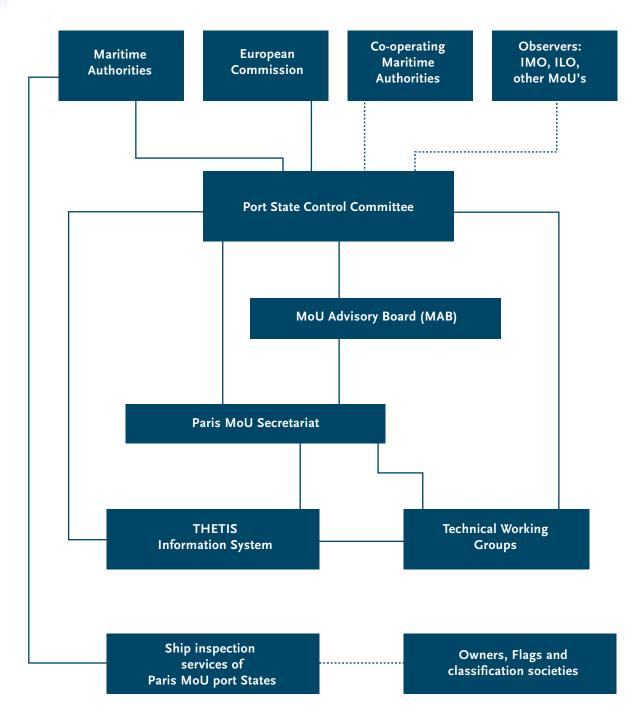
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### Paris MoU fact sheet - organizational structure



### notes



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