

# Port State Control

Taking port State control to the next level

## Annual Report

2012

THE PARIS MEMORANDUM OF UNDERSTANDING ON PORT STATE CONTROL



**Paris MoU**



30<sup>th</sup> Anniversary

on Port State Control





# Annual Report

## 2012

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The year 2012 started out with maritime safety in the headlines of the world's news with the grounding of the "M/V Costa Concordia". This event was a shock to the Paris MoU and should be taken as a sign to increase our efforts on verifying the safety of all ships operating in our waters. I wish to extend my sympathy and that of the Paris MoU to all the families of those touched by this tragedy. While the casualty report will detail the lessons to be learnt, the Paris MoU considered that the issue of cruise ship safety should be addressed. With this in mind the Paris MoU developed a harmonized inspection campaign for cruise ships during 2012 to commence from the 1st of January 2013.

# Statement by Paris MoU chairman

## 30th Anniversary of the Paris MoU: Taking port State Control to the next level

We held our Port State Control Committee's 45th Session in Riga, Latvia in May 2012 and this was an important occasion. The meeting adopted several significant matters improving the port State control regime, many of which you can read about in this annual report. The meeting itself was a success and strengthens the Paris MoU for the future and Latvia is to be complimented on hosting our meeting.

During 2012 we celebrated our thirtieth anniversary with the theme "Taking Port State Control to the Next Level". This was marked with





a reception at the International Maritime Organization during the Flag State Implementation Committee's twentieth session in London. This was an opportunity to thank the members of the IMO together with the observer organizations and the IMO Secretariat for the close co-operation with the Paris MoU over the years. The Paris MoU relationship with other Port State Control Memoranda is growing and we are very proud of our co-operation with other MoUs, the United States Coast Guard and with the role played by the IMO in working with the MoUs in achieving our common goal of safe ships on clean seas.

The Paris MoU Secretariat again continued to serve its Members well during the year and I would like to thank them for their contribution. I also wish to thank the Member Authorities for their contributions to all of the different fora of the Paris MoU including the Technical Evaluation Group (TEG) and its Chairman and all of the contributors to our Task Forces and to the members of the MoU Advisory Board (MAB), all of whom have made a tremendous contribution during the year. I would also like to thank the European Commission and the European Maritime Safety Agency (EMSA) for the excellent co-operation

and strong working relationship with the Paris MoU. In conclusion, the Port State Control Officers and Administrators in the Member Authorities of the Paris MoU are the people who ensure the success of our endeavours and they are the ones who are the core of the Paris MoU and continue to deliver on our common objectives and they deserve our special thanks and appreciation.

Brian Hogan

This year we have commemorated the 30th anniversary of the Paris MoU. An opportunity to reflect on what has been accomplished and plan a course for the future. The introduction of a new inspection regime in 2011 has now settled and feedback of the maritime industry has been positive and supportive.



# Statement by the Secretary General

## 30th Anniversary Paris MoU On Port State Control

I would like to thank our Members and the European Commission, as well as EMSA, for their continued support to achieve this. In particular I would like to bring a salute to the Port State Control Officers throughout the region for their dedication and professionalism.

Although we are on course, there is no time for complacency. Some serious casualties this year may indicate that the human error remains an area of concern.



The disaster with the Costa Concordia made clear that human error can have dramatic consequences. The Paris MoU has agreed to investigate the operational preparedness on board cruise ships and announced a harmonized verification programme for 2013.

In order to deliver quality inspections, we have to invest in the knowledge and professionalism of those who represent our organization. Although it may be tempting in times of austerity

measures to cut back on training, it should be realized that training is a long term investment. The challenges in the maritime sector are many and we need to be prepared.

The introduction of the Maritime Labour Convention in 2013 will be a significant step forward in securing acceptable working and living conditions on board. The aim of the Paris MoU has been to remove substandard ships from our seas. Coöperation with other regional

PSC agreements, the IMO and the ILO will be the way forward in this effort. A joint approach to become more effective is of vital importance. A positive development in this direction is that other PSC regions are developing or considering a similar risk based approach.

Richard W.J. Schiferli

Considered to be the worldwide index for flag performance, the Paris MoU “White, Grey and Black Lists” indicate further improvements towards quality shipping.

# Executive summary



Last year Faroe Islands, Iran, Latvia and Vanuatu were congratulated for their efforts to move up to the White List. This year Thailand and the United States of America moved from the “Grey List” to the “White List”. A very successful achievement and an example for other flags that, through determined actions and political courage, changes can be made. Syrian Arab Republic and Ukraine moved from the “Black List” to the “Grey List”.

There are now 45 flags on the “White List”, 2 more compared with last year. France is now leading the list, followed by Germany and Hong Kong. Several flags have made a significant move upwards on the “White List” in the top 10: France, Hong Kong (China), Greece, Norway and Bahamas. Other flags have





made a significant move downwards in the “White List” and are no longer in the top 10: United Kingdom, Netherlands and Singapore.

Recognized Organizations are delegated by flag States and carry out most of the statutory surveys on behalf of flags. For this very reason it is important to monitor their performance. The best performing RO over the period 2010-2012 is the American Bureau of Shipping followed by Det Norske Veritas and Lloyds Register. Germanischer Lloyd has dropped out of the top 5 and has been replaced by Korean Register.

The worst performing RO is Phoenix Register of Shipping (PH.R.S), located in Piraeus, in Greece. A joint submission with the Tokyo MoU has

addressed the correlation between ROs and flags by submitting a paper to the International Maritime Organization based on 2011 figures. The combination of Sierra Leone and Phoenix Register of Shipping resulted in a 41% detention rate. The Republic of Moldova with Dromon Bureau of Shipping scored a 33% detention rate, followed by Saint Kitts and Nevis and International Register of Shipping with 12%.

The introduction of the New Inspection Regime last year has also had an impact on the 2012 figures. A decrease in total number of inspections has continued, as well as the total number of deficiencies. Compared to 2011 the detention percentage has stabilized on 3.6%. Italy, the Netherlands, Spain and the United Kingdom contribute most to

the overall inspection efforts in terms of percentage.

In 2012 a total of 15 ships were banned. 5 less compared with last year. Multiple detentions was the most common reason for banning in 2012.

With 1,090 inspections and 114 detentions the ships flying a “black listed flag” score a detention rate of 10.46%. For ships flying a “grey listed flag” the detention rate is 6.39% (1,017 inspections, 65 detentions) and ships flying a “white listed flag” 2.99% (16,092 inspections and 482 detentions).

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.

# Paris MoU

## developments

The task forces, of which 14 were active in 2012, 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 2012 composed of participants from Croatia, Italy, Norway, Malta and the European Commission.

### Port State Control Committee

The Port State Control Committee

held its 45th meeting in Riga, Latvia from 7-11 May 2012. The MoU has 27 member States. The Committee agreed that the first year of the new inspection regime (NIR) had been largely successful.

An important goal of the NIR is to concentrate inspection efforts on high risk ships and reward quality shipping with a reduced inspection burden.

The NIR makes use of company performance and the Voluntary IMO Member State Audit Scheme (VIMSAS) for identifying the risk profile of ships together with the performance of the flag State and the recognised organization. The inspection history of the ship as well as the ship's age and ship type influences the targeting. The information system THETIS is hosted and managed by EMSA.

The Committee recognised the need to focus on passenger ship safety and agreed to do so in the form of a

Harmonized Verification Programme (HAVEP) on operational controls on passenger ships in 2013. The HAVEP will run for a period of twelve months, during which period PSCOs focus their attention on compliance with regulations concerning operational emergency drills. The Committee noted that the detention rate of passenger ships increased in 2011 to 4,4% compared with 1,6% in 2010 and 2009.

Since the Maritime Labour Convention 2006 (MLC 2006) is expected to enter into force in 2013, the Committee agreed in principle on amendments to the Paris MoU text, introducing the MLC 2006 as a relevant instrument. Guidelines on operational controls on passenger ships/ferries, PSC on pleasure yachts and ECDIS were also adopted. The Committee agreed to publish relevant inspection guidelines on the public website.

High importance was given to Concentrated Inspection Campaigns (CICs). A CIC on Fire Safety Systems



had been scheduled from September to November 2012, a CIC on Propulsion and Auxiliary Machinery in 2013 and a CIC focussing on Hours of Work or Rest in 2014. The campaigns will be carried out jointly with the Tokyo MoU. In addition the Committee considered a number of options for other joint CICs with the Tokyo MoU for 2014 and beyond.

The report of the CIC on Structural Safety and the International Convention on Load Lines, carried out in September, October and November of 2011, was presented to PSCC45 and the results will be published and submitted to the IMO in 2013.

The Committee also adopted the 2011 Annual Report, including the new White, Grey and Black List and the performance list of Recognised Organizations. The Faroe Islands, Vanuatu, Latvia and Iran moved from the “Grey List” to the “White List”.

#### Technical Evaluation Group

The Technical Evaluation Group (TEG) convened in Leiden, The Netherlands in December 2012. Fourteen task forces submitted reports to the TEG for evaluation before submission to the Port State Control Committee.

Issues considered by the TEG included:

- Improvement of the THETIS information system
- Evaluation of Paris MoU statistics
- Revision of the guidelines on operational controls
- Development of guidelines for PSCOs regarding Human Element issues
- Development of guidelines for PSCOs for the Maritime Labour Convention
- Development of the training policy
- Development of a Harmonized Verification Programme for Passenger Ships 2013
- Development of a CIC on Propulsion and aux. Machinery with the Tokyo MoU 2013

- Revision of the guidelines on MARPOL 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 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 aim to promote a higher degree of professional knowledge and





harmonisation of more complex port State control issues and procedures.

The Paris MoU is also assisting EMSA in the preparation and delivery of New Entrant and Refresher Programmes for PSCOs from throughout the region.

#### **PSC Seminar 53**

The 53rd Port State Control Seminar was held from 19-21 June 2012 in Szczecin, Poland. Port State Control Officers from the Paris MoU, the Tokyo MoU, the Black Sea MoU and the Riyadh MoU as well as participants from Montenegro attended the Seminar. The main topics of discussion were the Train the Trainer for the CIC on Fire Safety Systems. Furthermore there were presentations on the Surveyor Simulation program developed by Det Norske Veritas and several case studies on the application of Paris MoU procedures. The Secretariat presented an overview on the decisions

and discussions coming from PSCC45 and a representative from EMSA gave a presentation on the developments within the EU and EMSA.

#### **PSC Seminar 54**

The 54th Port State Control Seminar was held from 6 to 8 November 2012 in Genoa, Italy. Port State control officers from the Paris MoU attended the Seminar as well as participants from the Mediterranean MoU. The main topics of discussion were the HAVEP on Passenger Ships which will be held in 2013 and the changes to the different MARPOL Annexes which will enter into force in 2013. The Secretariat presented an overview of developments in the Paris MoU and a representative from EMSA gave a presentation on the developments within the EU and EMSA.

#### **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 2012 this training dealt with the inspection of Passenger Ships 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 maritime organizations and the maritime industry. For the training programmes in 2012 the United Kingdom, Germany, the Netherlands, Spain, Italy and different ROs and service companies, among others, provided lecturers. In 2012 the IMO was able to sponsor several



representatives from other MoUs to take part in the training programmes. It was agreed that one representative from each MoU can attend the Expert or Specialized Training programme. Not every MoU was able to send a PSCO to the training programmes.

#### **The 8th Expert Training “Safety and Environment”**

The eighth Expert Training programme was held in The Hague in February 2012. Important issues during this training were the IMDG Code, Load Lines, life saving appliances and oil filtering equipment. Participants from the Black Sea MoU, Indian Ocean MoU, Caribbean MoU, Mediterranean MoU, Riyadh MoU and the Viña del Mar Agreement took part in the training.

#### **The 4th Specialized Training on the Inspection of Passenger Ships**

The fourth Specialized Training on the Inspection of Passenger ships was held in Venice, Italy in April 2012. During the training construction and certification, and the more detailed and expanded inspection procedures were discussed. A highlight of the training was the visit to a ship yard, where the whole construction (and certification) procedure was discussed with an extensive tour of the shipyard.

#### **The 11th Expert Training “The Human Element”**

In October 2012 the eleventh 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.

One representative from another MoU attended the training.

#### **BI-Tool training**

In 2012 10 representatives from member States attended a new training for the BI-tool. To facilitate both new and experienced users of the BI-tool there was a separate one day programme for new users. This training focussed on the use of pivot tables and charts in Excel. The second part of the training, for all attendees, was centred on different assignments in the use of the BI-tool. Both general assignments as well as specific assignments for member states were used.

#### **Training in cooperation with EMSA**

The Paris MoU is assisting EMSA in the training delivered to PSCOs from throughout the region.

#### **New Entrant and Refresher PSC Seminars**

In 2012 the fully established Professional Development Scheme of the Paris MoU encompassed 2 seminars for New Entrant PSCOs and 4 Refresher seminars for experienced PSCOs. The New Regime focuses on sub-standard shipping and introduces a reward in terms of the inspection frequency for good performing ships. It translates to “less, but better inspections”. The New Regime also forced new and enhanced procedures to be implemented, all aiming at providing more guidance for better inspections. These changes meant that adherence to the established procedures became of paramount importance.

For the seminars organised for New Entrants and Refreshers held during 2012 the approach adopted the previous year has been followed to

raise the awareness concerning the procedures governing PSC inspections.

As with the seminars organised in earlier years, the main objective remained the establishment of a common understanding and harmonised approach in the area of the Paris MoU. Feedback sessions with participants during the seminars indicated that indeed a wider understanding of the procedures and the available tools such as the Paris MoU manual, RuleCheck and the Distance Learning modules was established by the seminars. This suggests that the adapted concept of the seminars is conducive in achieving the objective.

All seminars were organised by EMSA and held at its premises in Lisbon. Lecturers were provided both by EMSA and the Paris MoU Secretariat. The 262 participants attending the New Entrant and the Refresher seminars during 2012 originated from all Paris MoU member States.

#### **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 2012 the Secretariat received 13 requests for review. Four 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 RO's. Nine cases met the criteria and were 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 these port States to reconsider the detention. In six cases the panel concluded that the detaining port States would not have to reconsider the decision to detain.

#### Quality management

Since 15 March 2011 the Paris MoU Secretariat has been ISO 9001:2008 certified for the services and products of the Secretariat. The Secretariat has continued to develop the quality system in 2012 in order to improve service levels combined with efficient use of the available resources.

#### Paris MoU on the Internet

After the launch at the beginning of 2011, the new website enjoyed in 2012 an ever increasing demand, in particular from flag and port States, government agencies, charterers, insurers and classification societies. They were able to monitor their performance and the 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.

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 2012 only details of the ship "TERRY SIETE" were published. The annual

award for the best contribution to the “Caught in the Net” therefore has been presented to the United Kingdom.

Other information of interest such as the monthly list of detentions, the Annual Report, current detentions, the performance lists and news items can be downloaded from the website, which is found at [www.parismou.org](http://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 2012 Fire Safety Systems

In the period from 1 September 2012 to 30 November 2012 a Concentrated Inspection Campaign was carried out on Fire Safety Systems.

The CIC questionnaire was completed during 4,014 inspections, a total of 1,958 CIC-related deficiencies were recorded and 103 ships (2,6%) were detained for CIC-related deficiencies.

Problem areas included fire pumps and its pipes, fire fighting equipment and

appliances, and the fire control plan.

During the campaign most inspections concerned general cargo/multi-purpose ships with 1,347 (34%) inspections, followed by bulk carriers with 766 (19%) inspections, container ships with 422 (11%) inspections, chemical tankers with 343 (9%) inspections and oil tankers with 308 (8%) inspections.

59 (57%) of the ships detained for CIC-related deficiencies were general cargo/multipurpose ships and 14 (14%) were bulk carriers. Among the other detained ships were 9 container ships, 4 offshore supply ships and 4 Ro-Ro cargo ships. 51% of the detained ships were 30 years or older.





Analysis of the recorded deficiencies shows that most deficiencies relate to fire pumps and its pipes (13%), fire fighting equipment and appliances (11%) and the fire control plan (9%).

Most inspections were carried out on ships under the flags of Panama with 445 (11%) inspections, Liberia with 308 (8%) inspections, Malta with 306 (8%) inspections and Antigua and Barbuda with 282 (7%) inspections. The flags with the highest CIC-topic related detention rate were Dominica with 28,6% (2 CIC-topic related detentions during 7 inspections), Sierra Leone with 21,2% (7 CIC-topic related detentions during 33 inspections) and Togo with 18,2% (4 CIC-topic related detentions during 22 inspections).

The background for this CIC was that, as an average for the last 8 years, deficiencies related to fire safety systems accounted for 14% of the total number of deficiencies.

#### **CIC Campaigns 2013 and 2014**

For 2013, the PSC Committee decided on a Concentrated Inspection Campaign on Propulsion and Auxiliary Machinery. For 2014, the Committee agreed on a CIC on STCW Hours of Rest.

#### **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.

In order to provide co-operation to these MoUs, they may apply for associate or observer status. 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.

Six regional agreements have obtained official observer status to the Paris MoU: the Tokyo MoU, Caribbean MoU, Mediterranean MoU, Black Sea MoU, Riyadh MoU and Acuerdo de Viña del Mar. The United States Coast Guard is also an observer at Paris MoU meetings.







The West and Central Africa MoU obtained an associate status. It will not be represented in the Committee, but there is a commitment from the Paris MoU to assist them on a technical and administrative basis, including participation in seminars and technical 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 20th session of the Sub-Committee on Flag State Implementation in March 2012.

The 2010 Annual Report including inspection data in a new format, the

performance of flag Administrations and Recognized Organizations, a combined list of flags targeted by the Paris MoU, Tokyo MoU and USCG and the results of the 2010 CIC on tanker damage stability, as well preliminary results of the 2011 CIC on Structural Safety and Load Lines, information on the improvement of flag performance and a new Guideline for PSCOs on certification of Seafarers' Rest Hours were submitted to the Sub-Committee on Flag State Implementation.

#### **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/associate status for other PSC regions. Specific criteria, including a self-evaluation

exercise, have to be made before co-operating status can be granted.

In 2011 the maritime Authority of Montenegro joined the MoU as a co-operating member with the prospect of becoming a full member in the future.

The Paris MoU currently has 8 members with dual or even triple membership of MoU's on PSC: Canada and the Russian Federation have also ties 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. The Netherlands is member of the Caribbean MoU and France is member of the Indian Ocean MoU.

For all these members the Paris MoU standards will prevail.

In the following pages the facts and figures of 2012 are listed. The trend that began in 2011 when the New Inspection Regime entered into force has continued. For the second year in a row the inspection figures show a decrease in the number of inspections, deficiencies and detentions, but an increase in the detention rate.

# Facts & Figures

## 2012

### Inspections

With a total number of 18,308 inspections performed in 2012 the inspection figures showed a decrease of 4% compared with the figures of 2011. Each individual ship was inspected an average of 1.3 times per year, a rate which has slightly increased since 2011 (1.2).

The drop in the number of inspections that set in with the introduction of the New Inspection Regime in January 2011, has continued in 2012. New features of this inspections regime are that the annual inspection target for each Member State is based on ship movement data rather than individual ship calls and that dedicated quality shipping is awarded with larger inspection intervals. As a result the number of inspections performed in the region has dropped, but the detention rate increases.

### Deficiencies

In 2010 the number of deficiencies recorded was 64,698. In 2011 the number of deficiencies was 50,738. In 2012 the number of deficiencies decreased further to 49,261. Compared with 2011 this is a decrease of 3%.

In 57% of all inspections performed, one or more deficiencies were recorded. In 2011 this figure was 56%.

The average number of deficiencies per inspection also increased from 2.6 in 2011 to 2.7 in 2012.

### 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 2011, the number of detentions has decreased from 688 to 669 detentions. The average detention rate in 2012 is 3.65%. In 2011 the detention rate was 3.61%. In 2010 the detention rate was 3.28%, the lowest detention rate ever. This is the second year that the average detention rate has increased.

### “White, Grey and Black List”

The “White, Grey and Black (WGB) 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 “White, Grey and Black list” for 2012 a total number of 78 flags are



listed: 45 on the “White List”, 19 on the “Grey List” and 14 on the “Black List”. In 2011 the number of flags listed totalled 80 flags, namely 43 on the “White List”, 20 on the “Grey List” and 17 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 2 flags to a total number of 45 flags. New on the “White List” are the United States and Thailand, last year still on the “Grey List”.

France has been placed highest on the list in terms of performance. The next in line of the best performing flags in 2012 are Germany, Hong Kong, Sweden and Greece.

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 19 flags is recorded. Last year the “Grey List” recorded 20 flags. New on the “Grey List” are the Syrian Arab Republic and Ukraine, last year still on the “Black List”.

The poorest performing flags are Bolivia, Tanzania and Togo.

A graph of the distribution of listed and not listed flags indicates that only 0.5% of the ships inspected are from flags not listed on the WGB list.

#### Ship type

In 2012 the detention rate of heavy

load ships (9.68%) and general cargo/multipurpose ships (5.99%) was higher than the detention rate of other ship types. Ship types like other special activities ships, refrigerated cargo ships and tugs have a lower detention rate of 4.34%, 4.23% and 3.39% 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, 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 2012 30 ROs are recorded on the performance list.



Among the best performing recognized organizations were:

- American Bureau of Shipping (ABS)
- Det Norske Veritas (DNV)
- Lloyd's Register (UK) (LR)

The lowest performing organizations were:

- Phoenix Register of Shipping (Greece) (PHRS)
- INCLAMAR (Cyprus)
- Register of Shipping (Albania) (RSA)

Compared with last year's performance level, a small shift in RO performance in 2012 can be noticed. This year fewer

organizations have been placed on the high and very low performing part of the list and more 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 "RO responsible" and the RO is informed. Out of 669 detentions recorded in 2012, 107 or 16% were considered RO related which

is an increase compared with the 13.2% of the previous year.

#### Refusal of access of ships

A total of 15 ships were banned from the Paris MoU region in 2012 for reasons of multiple detentions (11), failure to call at an indicated repair yard (3) and jumping detention (1). A number of ships remain banned from previous years.

#### Deficiencies per major category

The number of deficiencies in areas such as certificate & documentation, fire safety, safety of navigation and







working & living conditions accounted for approximately 65% of the total number of deficiencies. The trends in these areas are clarified below. In 2011 a new coding system has taken effect. More detailed information may be found in the statistical Annexes to this report. The data of 2010 has been regrouped accordingly and is therefore not comparable with the data as published in the Annual Report of 2010.

#### **Certificate & Documentation**

Deficiencies in ships' certificates, crew certificates and documents indicated a decrease of 6.3% from 7,638 in 2011 to 7,158 in 2012.

#### **Safety of navigation**

The deficiencies in Safety of Navigation show an increase of 4.4%, from 6,528 deficiencies in 2011 to 6,816 in 2012.

#### **Fire safety**

In 2012 deficiencies in fire safety accounted for approximately 15% of the total number of deficiencies. The number of deficiencies in these areas increased with 13.6% from 6,591 in 2011 to 7,488 in 2012.

#### **Pollution prevention**

Deficiencies in MARPOL Annex I show a decrease of 14.5% in 2012 (1,127), compared with 2011 (1,318).

Deficiencies in MARPOL Annex IV show an increase of 28.1% in 2012 (324), compared with 2011 (253). Deficiencies in MARPOL Annex VI show an increase of 25.4% in 2012 (449), compared with 2011 (358).

#### **Working and living conditions**

Deficiencies in working conditions decreased with 3.5% from 5,252 in 2011 to 5,067 in 2012. Deficiencies in living conditions decreased with 5.7% from 2,313 in 2011 to 2,182 in 2012.

#### **Management**

The number of ISM related deficiencies showed an increase of 5.6% from 1,644 in 2011 to 1,736 in 2012.

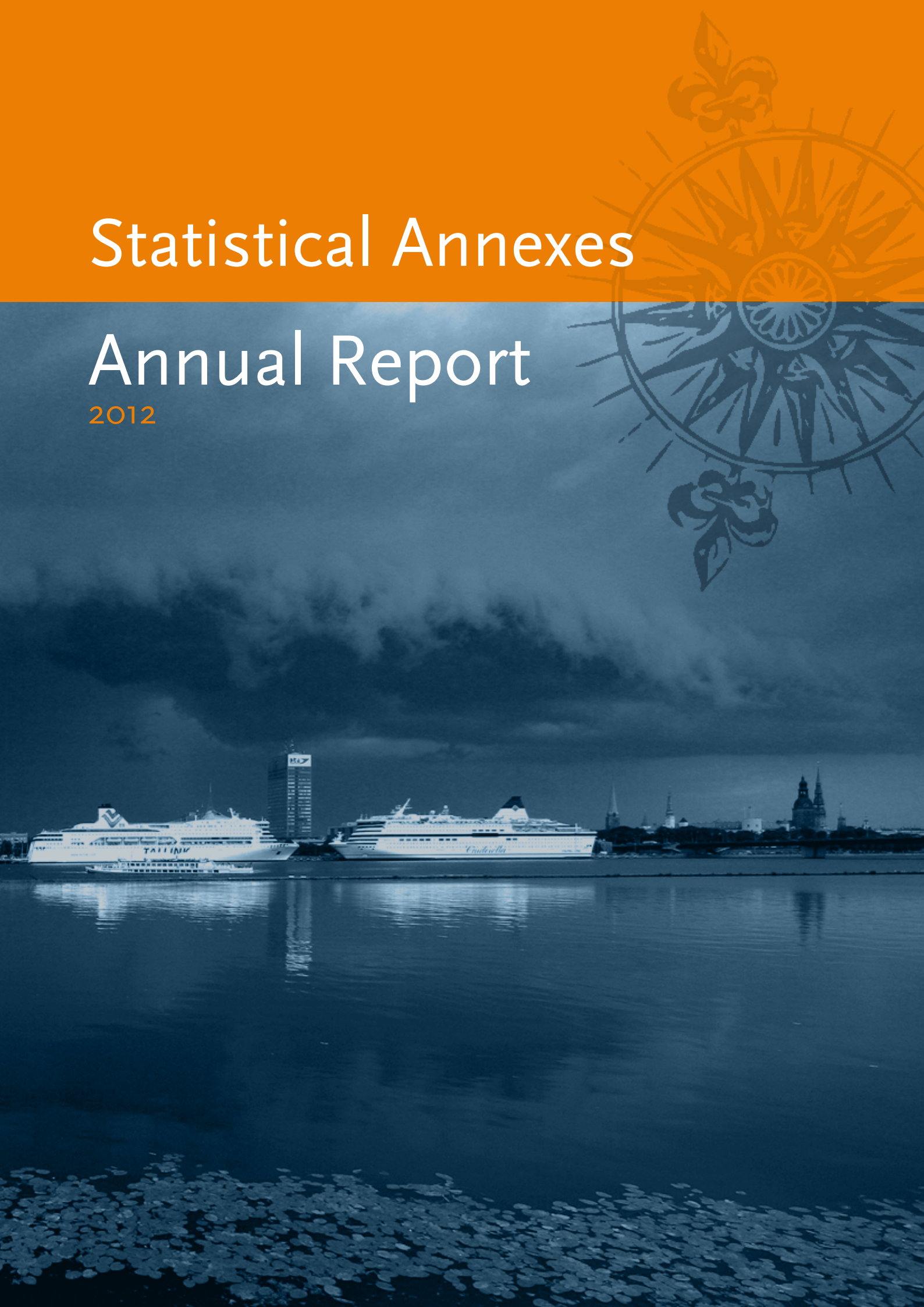




# Statistical Annexes

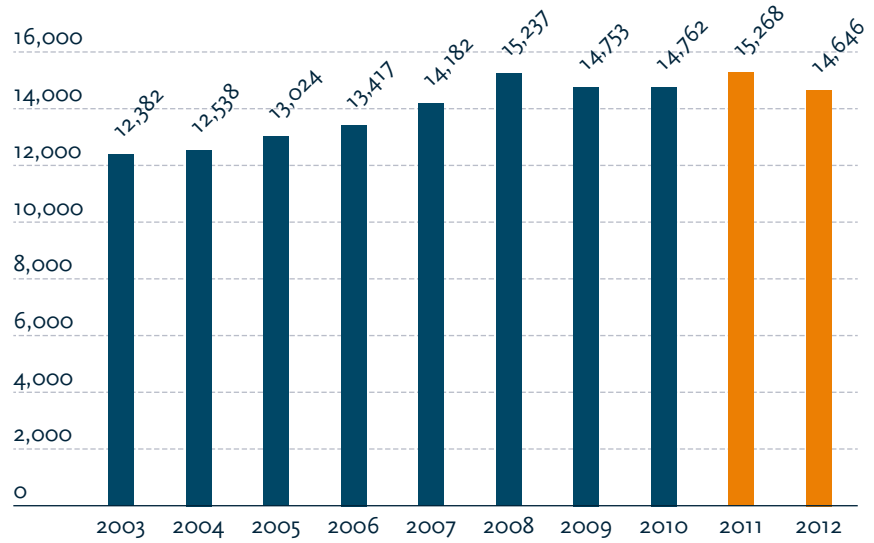
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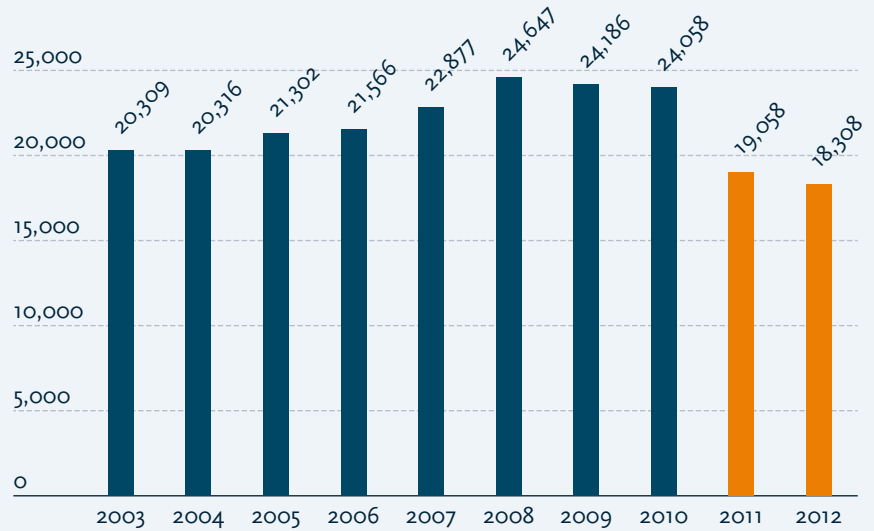


# Basic port State control figures 2012

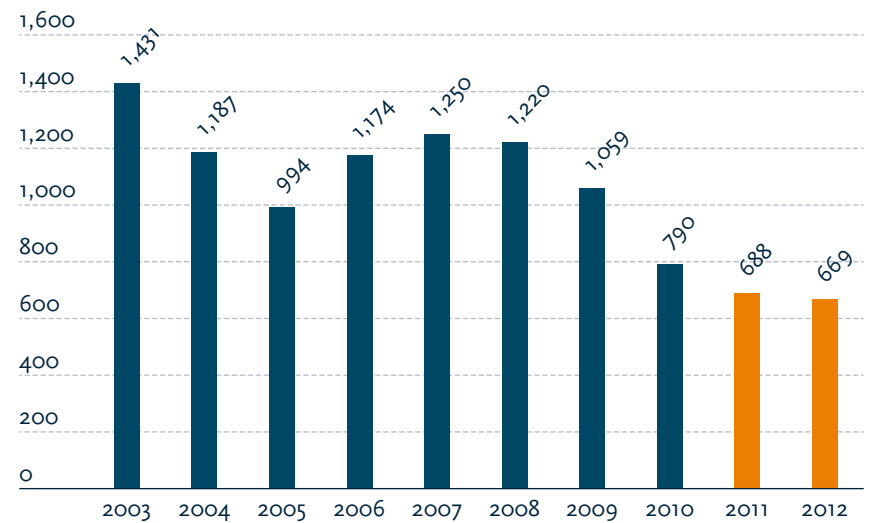
Number of individual ships inspected



Number of inspections

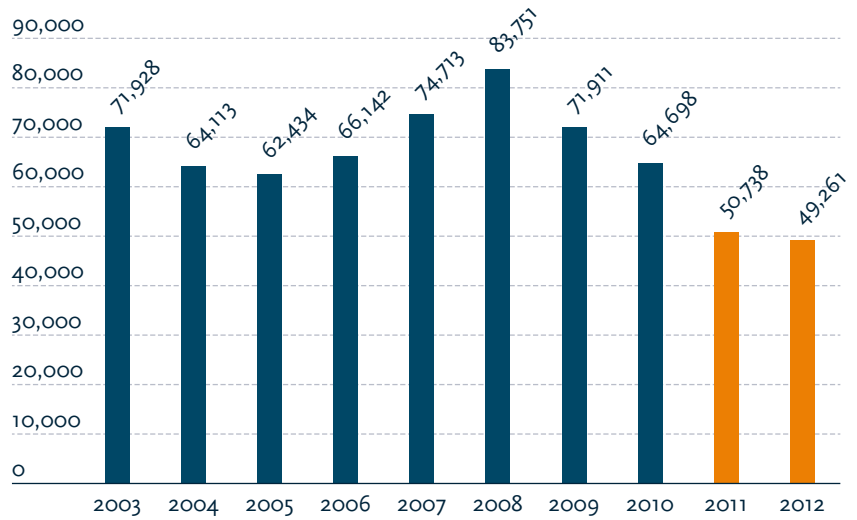


Number of detentions

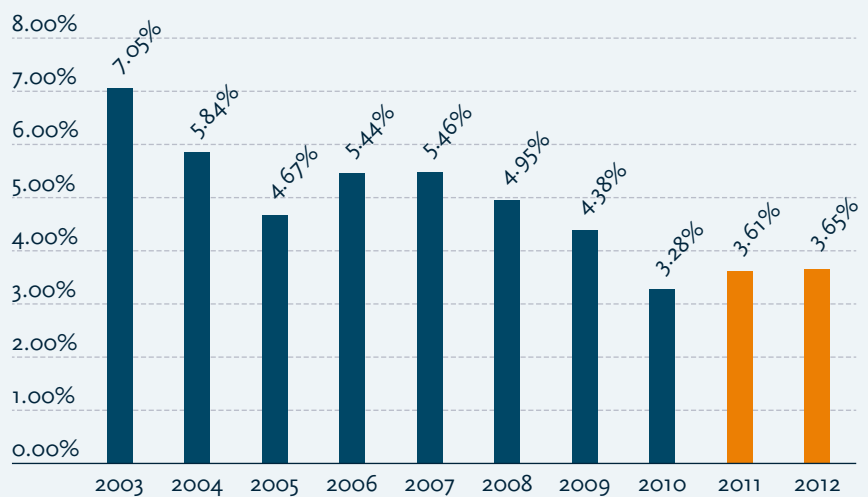




## Number of deficiencies



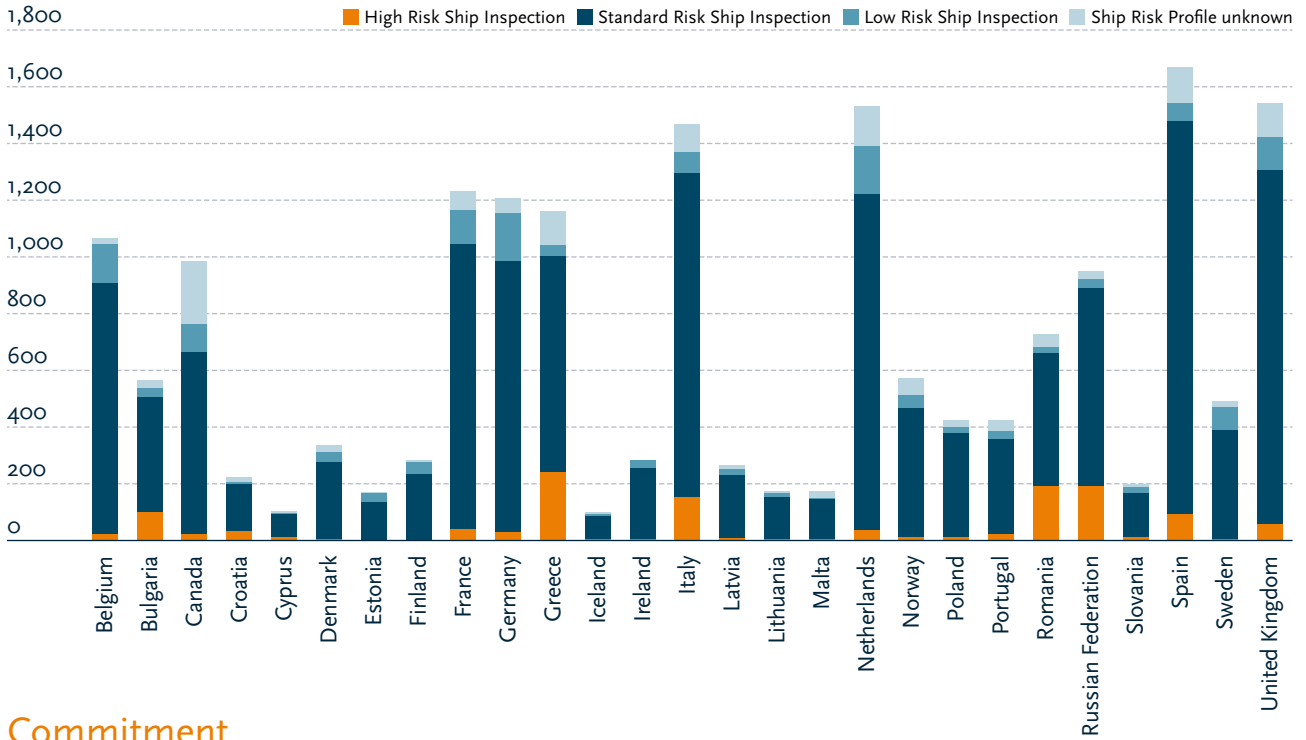
## Detentions in % of inspections



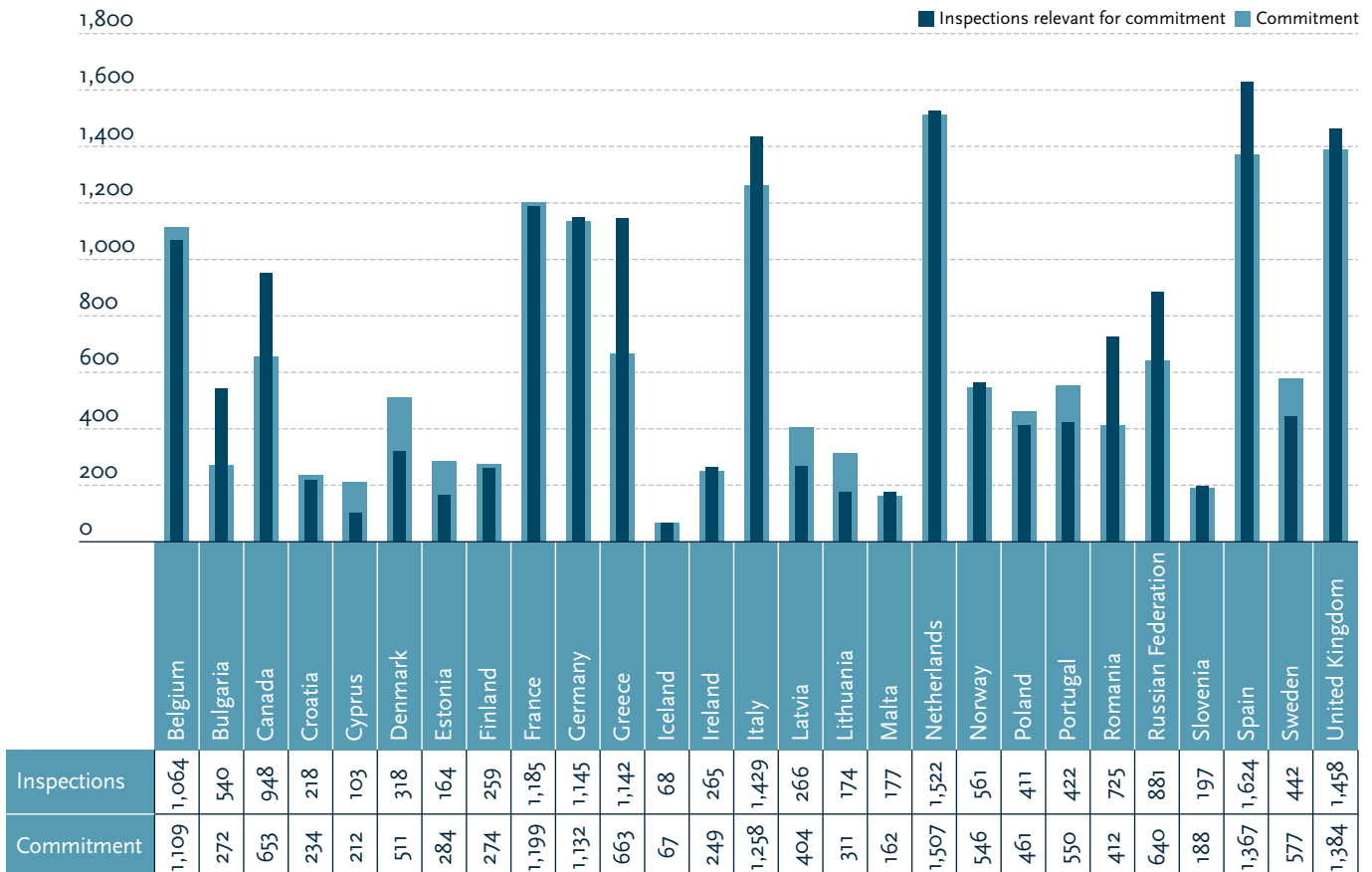
Note: The New Inspection Regime entered into force on the 1st of January 2011. Consequently the targeting of ships for inspection has changed; inspection figures from 2011 onwards should not be compared to the ones from 2010 and before.

# Inspection efforts 2012

## HRS, SRS and LRS inspections per member state

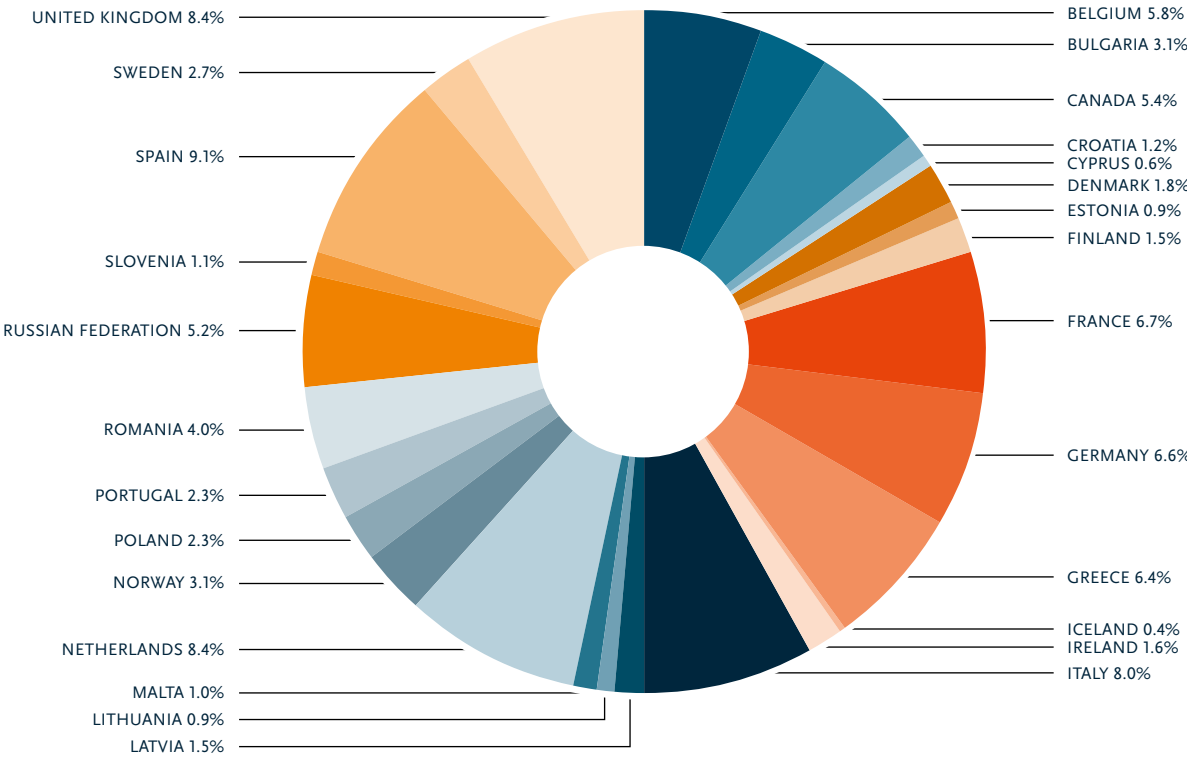


## Commitment





## Inspection efforts of members as percentage of MoU total





## MoU port States's individual contributions to the total amount of inspections

Flag	Total nr of Inspections	Inspections with deficiencies	Inspections with detentions	Inspections with RO related detainable deficiencies	% Inspections with deficiencies	% Detentions	% Inspection of MoU total	% HRS	% SRS	% LSR	% SRP Unknown
Belgium	1,068	666	13	3	62.4	1.22	5.83	2.25	82.77	12.83	2.15
Bulgaria	567	418	25	11	73.7	4.41	3.10	17.64	71.25	6.17	4.94
Canada	983	522	27	4	53.1	2.75	5.37	2.24	65.41	10.07	22.28
Croatia	223	128	5		57.4	2.24	1.22	14.35	74.44	3.14	8.07
Cyprus	103	50	6	1	48.5	5.83	0.56	13.59	76.70	1.94	7.77
Denmark	334	139	4		41.6	1.20	1.82	2.10	80.84	9.58	7.49
Estonia	169	56	1		33.1	0.59	0.92	1.78	78.70	17.16	2.37
Finland	283	95	1		33.6	0.35	1.55	0.35	82.69	14.84	2.12
France	1,233	756	45	4	61.3	3.65	6.73	3.33	81.35	9.89	5.43
Germany	1,208	646	46	5	53.5	3.81	6.60	2.57	78.89	14.07	4.47
Greece	1,164	683	42	12	58.7	3.61	6.36	20.70	65.55	3.18	10.57
Iceland	70	19	0		27.1	0.00	0.38	4.29	84.29	7.14	4.29
Ireland	285	187	21	1	65.6	7.37	1.56	2.46	87.02	9.47	1.05
Italy	1,468	908	110	23	61.9	7.49	8.02	10.49	77.66	5.11	6.74
Latvia	267	63	2	1	23.6	0.75	1.46	3.75	83.15	7.87	5.24
Lithuania	173	89	5	1	51.4	2.89	0.94	3.47	84.39	8.67	3.47
Malta	176	116	12	2	65.9	6.82	0.96	3.41	78.98	1.70	15.91
Netherlands	1,531	762	36	3	49.8	2.35	8.36	2.48	77.40	10.84	9.27
Norway	572	182	11		31.8	1.92	3.12	2.10	79.37	8.04	10.49
Poland	425	325	17	2	76.5	4.00	2.32	3.06	86.35	4.94	5.65
Portugal	424	153	4	1	36.1	0.94	2.32	5.66	79.01	6.13	9.20
Romania	728	395	16	3	54.3	2.20	3.98	26.65	64.15	2.75	6.46
Russian Federation <sup>1</sup>	951	717	29	3	75.4	3.05	5.19	20.29	73.29	3.58	2.84
Slovenia	199	102	6		51.3	3.02	1.09	7.04	77.89	9.05	6.03
Spain	1,668	1,032	117	23	61.9	7.01	9.11	5.58	83.21	3.78	7.43
Sweden	493	168	5		34.1	1.01	2.69	1.01	78.09	16.02	4.87
United Kingdom	1,543	1,083	63	5	70.2	4.08	8.43	3.82	80.75	7.71	7.71
<b>Total</b>	<b>18,308</b>	<b>10,460</b>	<b>669</b>	<b>108</b>	<b>57.1</b>	<b>3.65</b>	<b>100.00</b>	<b>7.36</b>	<b>77.37</b>	<b>7.92</b>	<b>7.35</b>

<sup>1</sup> Only inspections in the Russian ports of the Baltic, Azov, Kaspian and Barents Sea are included.







13	Isl
14	Unl
15	Libe
16	Nethe
17	Singap
18	Korea, R
19	Marshall
20	Belgium
21	China
22	Gibraltar, UK
23	Cyprus
24	Malta
25	Cayman Islands,
26	Latvia
27	Bermuda, UK
28	Ireland
29	Russian Federation
30	Estonia
31	Barbados
32	Japan
33	Panama
34	Spain
35	Iran, Islamic Republic of
36	Faroe Islands, DK
37	Antigua and Barbuda
38	Turkey
39	Poland
40	United States of A
	Philin



# White list

RANK	FLAG	INSPECTIONS 2010-2012	DETENTIONS 2010-2012	BLACK TO GREY LIMIT	GREY TO WHITE LIMIT	EXCESS FACTOR
<b>WHITE LIST</b>						
1	France	306	0	29	14	-1.95
2	Germany	1,099	10	91	63	-1.82
3	Hong Kong, China	1,559	19	126	92	-1.74
4	Sweden	630	6	55	33	-1.71
5	Greece	1,154	14	96	66	-1.71
6	Denmark	1,233	16	102	71	-1.68
7	Norway	1,697	24	137	101	-1.68
8	Bahamas	2,868	47	224	178	-1.64
9	Italy	1,384	21	113	81	-1.61
10	Croatia	151	0	16	5	-1.61
11	Finland	477	5	43	24	-1.60
12	Isle of Man, UK	755	10	65	41	-1.59
13	United Kingdom	1,683	28	136	100	-1.58
14	Liberia	4,179	80	320	265	-1.57
15	Netherlands	3,441	68	266	216	-1.53
16	Singapore	1,408	25	115	82	-1.52
17	Korea, Republic of	123	0	14	3	-1.44
18	Marshall Islands	2,427	56	191	149	-1.38
19	Belgium	250	3	25	10	-1.28
20	China	238	3	24	10	-1.22
21	Gibraltar, UK	1,072	26	89	61	-1.22
22	Cyprus	2,157	61	171	131	-1.17
23	Malta	4,922	159	374	315	-1.11
24	Cayman Islands, UK	315	6	30	14	-1.06
25	Latvia	91	0	11	2	-1.05
26	Bermuda, UK	275	5	27	12	-1.03
27	Ireland	127	1	14	4	-0.98
28	Russian Federation	1,458	49	119	86	-0.91
29	Estonia	81	0	10	1	-0.90
30	Barbados	395	10	36	19	-0.89
31	Japan	80	0	10	1	-0.88
32	Panama	6,876	277	517	446	-0.85
33	Spain	230	5	23	9	-0.78
34	Iran, Islamic Republic of	107	1	12	3	-0.75
35	Faroe Islands, DK	223	5	22	9	-0.73
36	Antigua and Barbuda	4,364	202	334	277	-0.60
37	Turkey	1,930	88	154	116	-0.53
38	Poland	172	4	18	6	-0.52
39	United States of America	236	7	23	10	-0.46
40	Philippines	234	7	23	9	-0.44
41	Lithuania	198	6	20	7	-0.32
42	Portugal	439	19	40	21	-0.22
43	Thailand	53	0	7	0	-0.18
44	Vanuatu	203	7	21	8	-0.16
45	Luxembourg	197	7	20	7	-0.09



51	India
52	Belize
53	Viet Nam
54	Algeria
55	Morocco
56	Tunisia

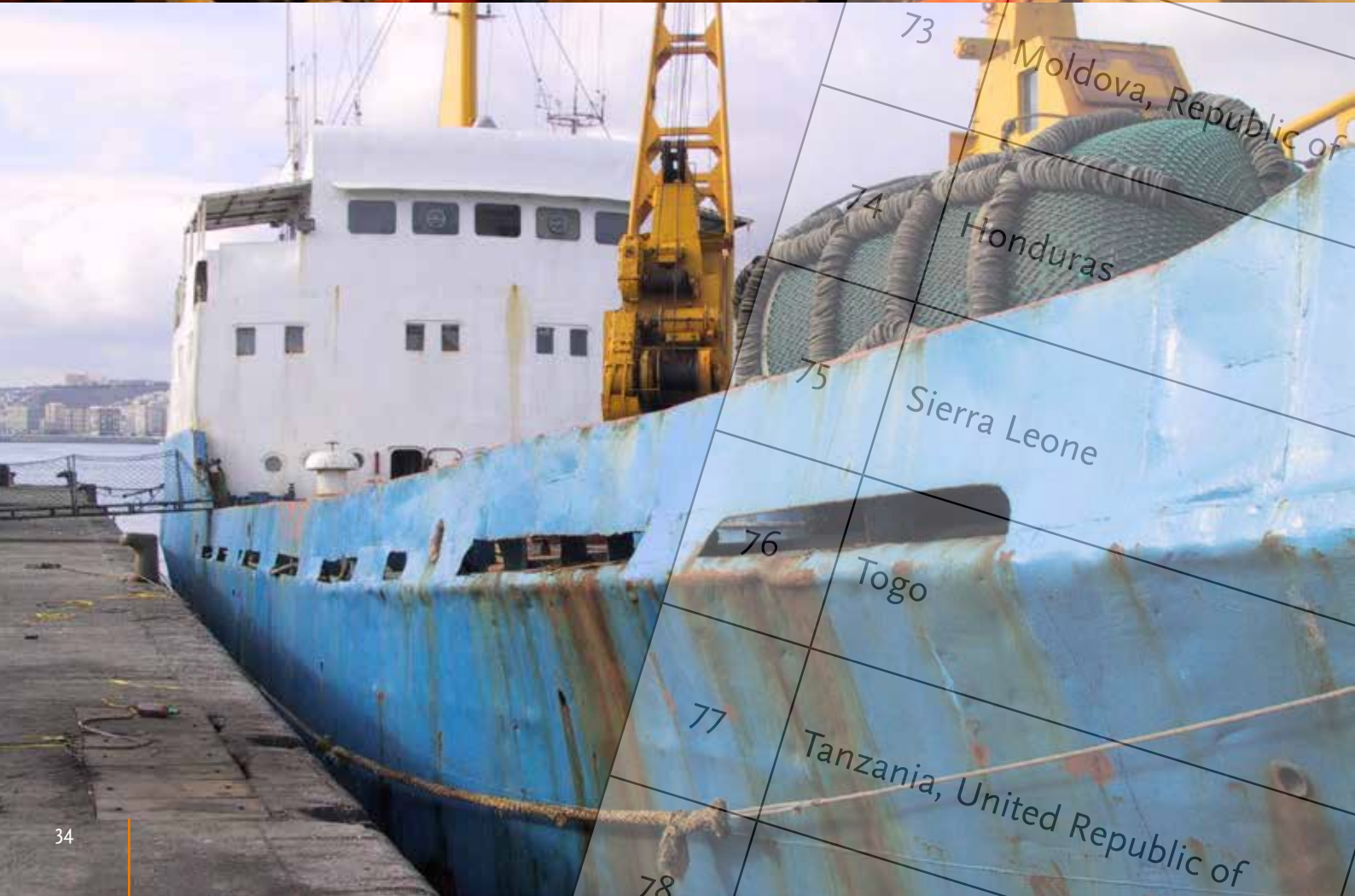


57	Egypt
58	Slovakia
59	Bulgaria
60	Saint Vincent and the Grenadines
61	Cook Islands
62	Syrian Arab Republic

# Grey list

RANK	FLAG	INSPECTIONS 2010-2012	DETENTIONS 2010-2012	BLACK TO GREY LIMIT	GREY TO WHITE LIMIT	EXCESS FACTOR
<b>GREY LIST</b>						
46	Kazakhstan	47	0	7	0	0.01
47	Switzerland	89	2	11	2	0.03
48	Curacao	372	18	35	17	0.03
49	Malaysia	65	1	8	1	0.04
50	Saudi Arabia	58	1	8	0	0.09
51	India	115	4	13	3	0.10
52	Belize	616	36	54	32	0.17
53	Viet Nam	34	1	5	0	0.27
54	Algeria	73	4	9	1	0.36
55	Morocco	101	7	12	2	0.49
56	Tunisia	57	4	8	0	0.50
57	Egypt	85	6	10	2	0.51
58	Slovakia	75	6	9	1	0.59
59	Bulgaria	99	8	12	2	0.61
60	Saint Vincent and the Grenadines	1,277	96	105	74	0.71
61	Cook Islands	187	16	19	7	0.73
62	Syrian Arab Republic	94	9	11	2	0.76
63	Tuvalu	44	5	6	0	0.79
64	Ukraine	308	29	29	14	0.97





69	Libya
70	Dominica
71	Comoros
72	Albania
73	Moldova, Republic of
74	Honduras
75	Sierra Leone
76	Togo
77	Tanzania, United Republic of
78	

# Black list

RANK	FLAG	INSPECTIONS 2010-2012	DETENTIONS 2010-2012	BLACK TO GREY LIMIT	GREY TO WHITE LIMIT	EXCESS FACTOR
<b>BLACK LIST</b>						
65	Cambodia	629	59	55	Medium Risk	1.19
66	Georgia	428	42	39		1.20
67	Saint Kitts and Nevis	344	35	32		1.23
68	Lebanon	82	11	10		1.31
69	Libya	44	7	6		1.35
70	Dominica	140	18	15		1.54
71	Comoros	483	55	44		1.71
72	Albania	159	21	17	1.72	
73	Moldova, Republic of	654	84	57	Medium to High Risk	2.26
74	Honduras	45	9	6		2.39
75	Sierra Leone	412	58	38		2.46
76	Togo	231	35	23		2.50
77	Tanzania, United Republic of	234	37	23		2.70
78	Bolivia	39	10	6	High Risk	3.66

## Flags meeting criteria for Low Risk Ships 2012

Flags meeting criteria for Low Risk Ships (as per 31 December 2012)	
Bahamas	Japan
Belgium	Korea, Republic of
Bermuda, UK	Latvia
Cayman Islands, UK	Liberia
China	Lithuania
Cyprus	Luxembourg
Denmark	Malta
Estonia	Marshall Islands
Faroe Islands, DK	Netherlands
Finland	Norway
France	Panama
Germany	Poland
Gibraltar, UK	Russian Federation
Greece	Singapore
Hong Kong, China	Spain
Ireland	Sweden
Isle of Man, UK	United Kingdom
Italy	

To meet the criteria for Low Risk Ships, flags should be on the Paris MoU White list and have submitted evidence of having undergone an IMO VIMSAS Audit.

Non listed flags having undergone IMO VIMSAS Audit	
Australia	Canada

Flags who's total number of inspections over a 3-years rolling period does not meet the minimum of 30 are not included in the Paris MoU White list. Consequently some flags cannot meet the criteria for their ships to qualify as Low Risk Ships under the Paris MoU, despite having undergone the IMO VIMSAS Audit.

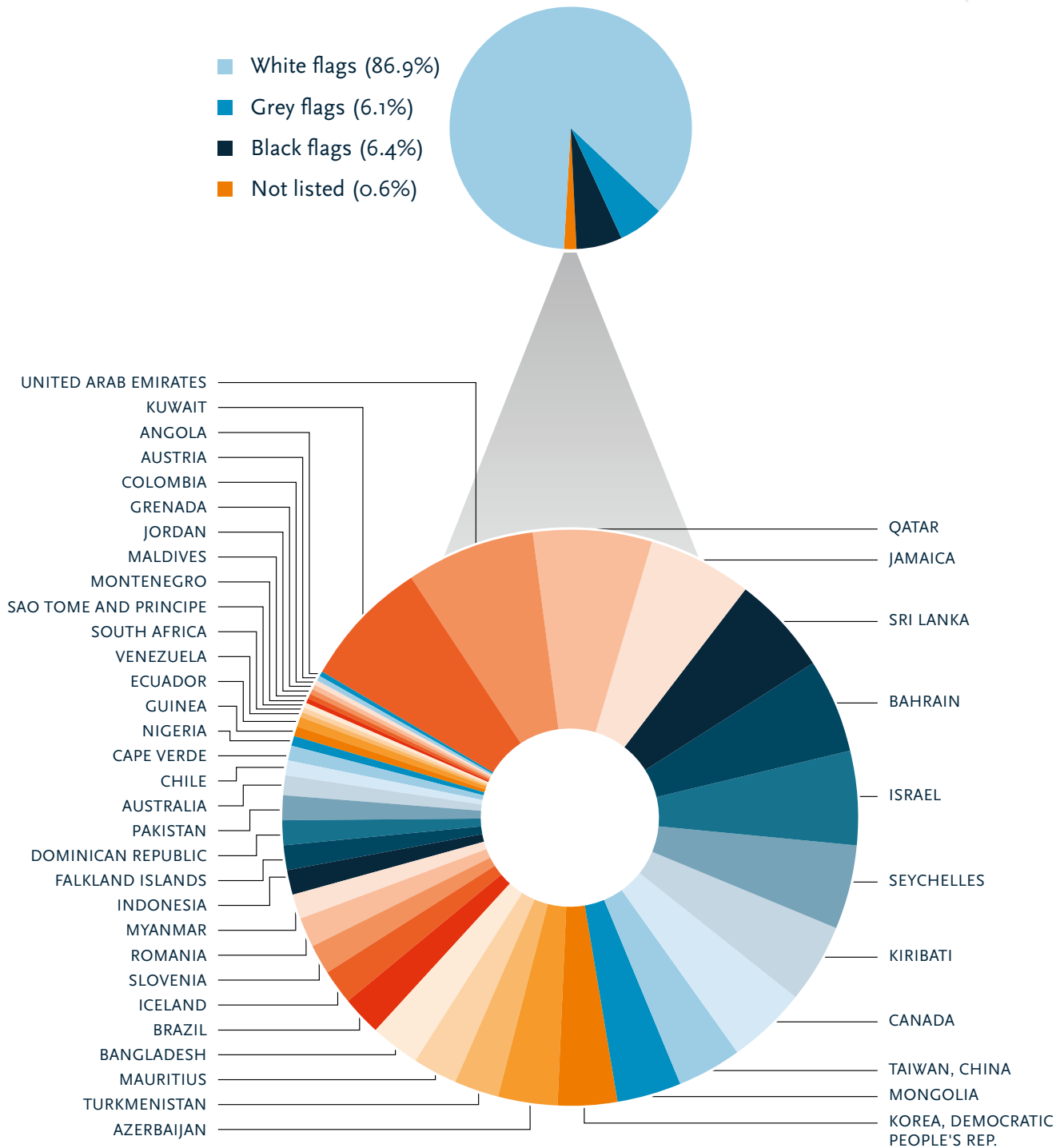
Non listed flags with no detentions 2010-2012*				
Angola (1)	Chile (3)	Iceland (7)	Montenegro (1)	Seychelles (16)
Australia (4)	Colombia (1)	Indonesia (5)	Myanmar (5)	Slovenia (6)
Austria (1)	Dominican Republic (5)	Israel (18)	Pakistan (4)	South Africa (1)
Bahrain (19)	Falkland Islands (5)	Jordan (1)	Qatar (23)	Sri Lanka (19)
Brazil (8)	Grenada (1)	Maldives (1)	Sao Tome and Principe (1)	Turkmenistan (9)

Flags who's total number of inspections over a 3-years rolling period does not meet the minimum of 30 are not included in the Paris MoU White, Grey and Black lists. The flags in this table had too few inspections to be included in the lists, but had no detentions in the period 2010-2012.

\*Note: The flags are listed in alphabetical order. The number of inspections over the period 2010-2012 taken into account is shown in brackets. Flags on this list do not meet the criteria for Low Risk Ships.



# Distribution of listed and non listed flags 2010-2012



# Inspections, detentions and deficiencies 2012

Flag	Nr of Inspections	Inspections with detentions	Inspections with deficiencies	Nr of Individual ships inspected	% of Inspections with detentions	% of Inspections with deficiencies
Albania	42	2	37	15	4.76	88.10
Algeria	23	1	17	18	4.35	73.91
Angola	1	0	1	1	0.00	100.00
Antigua and Barbuda	1,301	71	820	880	5.46	63.03
Australia	3	0	2	3	0.00	66.67
Azerbaijan	2	0	0	2	0.00	0.00
Bahamas	803	12	424	642	1.49	52.80
Bahrain	6	0	3	4	0.00	50.00
Bangladesh	2	1	1	2	50.00	50.00
Barbados	120	5	83	82	4.17	69.17
Belgium	89	2	41	77	2.25	46.07
Belize	191	15	157	138	7.85	82.20
Bermuda, UK	87	2	40	73	2.30	45.98
Bolivia	9	1	6	9	11.11	66.67
Brazil	2	0	1	2	0.00	50.00
Bulgaria	16	1	13	13	6.25	81.25
Cambodia	175	13	166	107	7.43	94.86
Canada	5	0	3	4	0.00	60.00
Cayman Islands, UK	119	2	61	115	1.68	51.26
Chile	1	0	0	1	0.00	0.00
China	69	0	28	64	0.00	40.58
Colombia	1	0	1	1	0.00	100.00
Comoros	122	16	120	73	13.11	98.36
Cook Islands	76	7	57	48	9.21	75.00
Croatia	49	0	28	42	0.00	57.14
Curacao	85	4	59	59	4.71	69.41
Cyprus	632	24	351	476	3.80	55.54
Denmark	331	7	145	271	2.11	43.81
Dominica	36	7	27	25	19.44	75.00
Dominican Republic	2	0	1	1	0.00	50.00
Ecuador	2	1	1	1	50.00	50.00
Egypt	23	1	19	19	4.35	82.61
Estonia	26	0	9	18	0.00	34.62
Falkland Islands, UK	2	0	0	2	0.00	0.00
Faroe Islands, DK	76	2	36	59	2.63	47.37

Flag	Nr of Inspections	Inspections with detentions	Inspections with deficiencies	Nr of Individual ships inspected	% of Inspections with detentions	% of Inspections with deficiencies
Finland	122	1	51	99	0.82	41.80
France	93	0	54	76	0.00	58.06
Georgia	8	1	7	6	12.50	87.50
Germany	280	5	135	230	1.79	48.21
Gibraltar, UK	290	10	144	212	3.45	49.66
Greece	311	3	115	295	0.96	36.98
Honduras	8	2	7	6	25.00	87.50
Hong Kong, China	532	7	256	492	1.32	48.12
Iceland	2	0	1	2	0.00	50.00
India	26	0	14	23	0.00	53.85
Indonesia	1	0	1	1	0.00	100.00
Iran, Islamic Republic of	23	0	15	20	0.00	65.22
Ireland	19	0	15	17	0.00	78.95
Isle of Man, UK	247	3	97	225	1.21	39.27
Israel	5	0	2	5	0.00	40.00
Italy	421	5	230	351	1.19	54.63
Jamaica	4	0	3	2	0.00	75.00
Japan	25	0	9	21	0.00	36.00
Jordan	1	0	1	1	0.00	100.00
Kazakhstan	18	0	6	18	0.00	33.33
Kiribati	6	1	5	3	16.67	83.33
Korea, Democratic People's Republic of	3	0	3	3	0.00	100.00
Korea, Republic of	39	0	30	38	0.00	76.92
Kuwait	6	1	2	6	16.67	33.33
Latvia	24	0	16	13	0.00	66.67
Lebanon	28	2	25	19	7.14	89.29
Liberia	1,385	21	726	1,214	1.52	52.42
Libya	14	0	5	12	0.00	35.71
Lithuania	57	3	34	38	5.26	59.65
Luxembourg	60	5	38	43	8.33	63.33
Malaysia	29	0	17	22	0.00	58.62
Malta	1,447	46	826	1,099	3.18	57.08
Marshall Islands	833	14	360	757	1.68	43.22
Mauritius	5	0	3	5	0.00	60.00
Moldova, Republic of	217	26	191	121	11.98	88.02
Mongolia	4	2	4	4	50.00	100.00
Montenegro	1	0	0	1	0.00	0.00



Flag	Nr of Inspections	Inspections with detentions	Inspections with deficiencies	Nr of Individual ships inspected	% of Inspections with detentions	% of Inspections with deficiencies
Morocco	17	2	16	11	11.76	94.12
Netherlands	1,037	35	545	778	3.38	52.56
Nigeria	2	1	2	1	50.00	100.00
Norway	507	7	255	452	1.38	50.30
Pakistan	2	0	0	2	0.00	0.00
Panama	2,006	94	1,174	1,712	4.69	58.52
Philippines	61	3	40	55	4.92	65.57
Poland	53	3	30	43	5.66	56.60
Portugal	129	12	77	90	9.30	59.69
Qatar	6	0	0	6	0.00	0.00
Romania	2	1	2	2	50.00	100.00
Russian Federation	451	19	301	367	4.21	66.74
Saint Kitts and Nevis	103	4	90	70	3.88	87.38
Saint Vincent and the Grenadines	322	24	246	214	7.45	76.40
Sao Tome and Principe	1	0	1	1	0.00	100.00
Saudi Arabia	19	0	10	18	0.00	52.63
Seychelles	4	0	1	3	0.00	25.00
Sierra Leone	130	15	122	77	11.54	93.85
Singapore	487	11	213	445	2.26	43.74
Slovakia	5	1	5	4	20.00	100.00
Slovenia	2	0	0	2	0.00	0.00
South Africa	1	0	1	1	0.00	100.00
Spain	67	4	41	54	5.97	61.19
Sri Lanka	7	0	2	6	0.00	28.57
Sweden	164	3	65	122	1.83	39.63
Switzerland	31	1	20	26	3.23	64.52
Syrian Arab Republic	13	0	12	10	0.00	92.31
Taiwan, China	7	0	3	7	0.00	42.86
Tanzania, United Republic of	117	17	109	70	14.53	93.16
Thailand	13	0	9	13	0.00	69.23
Togo	81	8	74	52	9.88	91.36
Tunisia	17	1	16	10	5.88	94.12
Turkey	561	26	348	447	4.63	62.03
Turkmenistan	3	0	1	3	0.00	33.33
Tuvalu	16	3	13	11	18.75	81.25
Ukraine	82	4	75	60	4.88	91.46
United Arab Emirates	5	0	1	5	0.00	20.00
United Kingdom	480	12	231	395	2.50	48.13
United States	97	0	50	92	0.00	51.55
Vanuatu	69	3	46	56	4.35	66.67
Viet Nam	8	0	7	6	0.00	87.50



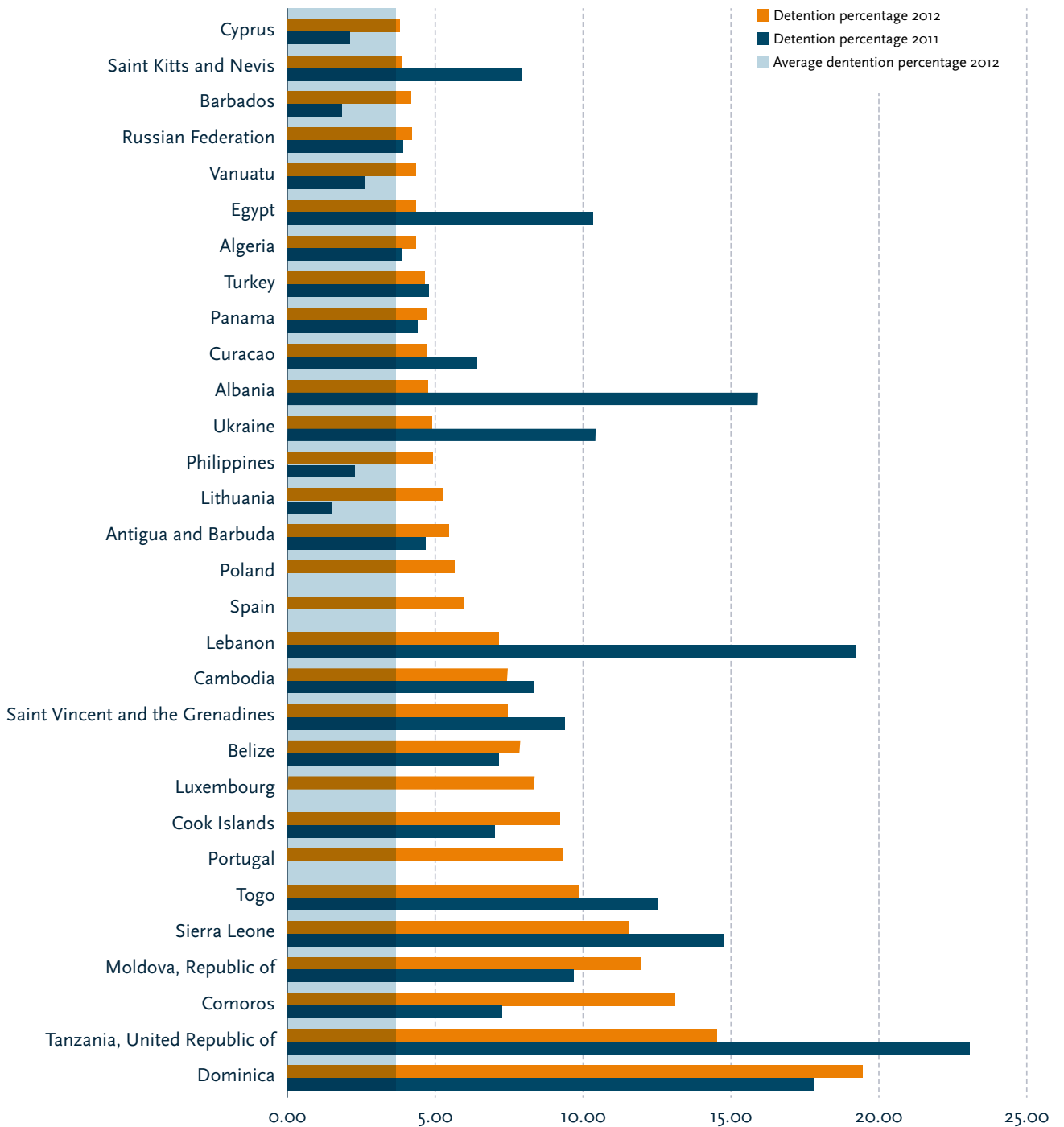
## 2012 detentions per flag, exceeding average percentage

Flag	Nr of Inspections	Inspections with detentions	% of Inspections with detentions	Excess of average 2012	Detentions % 2011	Excess of average 2011
Cyprus	632	24	3.80	0.15	2.12	-1.49
Saint Kitts and Nevis	103	4	3.88	0.23	7.92	4.31
Barbados	120	5	4.17	0.52	1.85	-1.76
Russian Federation	451	19	4.21	0.56	1.85	-1.76
Algeria	23	1	4.35	0.70	3.85	0.24
Egypt	23	1	4.35	0.70	10.34	6.73
Vanuatu	69	3	4.35	0.70	2.60	-1.01
Turkey	561	26	4.63	0.98	4.78	1.17
Panama	2,006	94	4.69	1.04	4.39	0.78
Curacao	85	4	4.71	1.06	6.42	2.81
Albania	42	2	4.76	1.11	15.91	12.30
Ukraine	82	4	4.88	1.23	10.42	6.81
Philippines	61	3	4.92	1.27	2.27	-1.34
Lithuania	57	3	5.26	1.61	1.52	-2.09
Antigua and Barbuda	1,301	71	5.46	1.81	4.67	1.06
Poland	53	3	5.66	2.01	0.00	-3.61
Spain	67	4	5.97	2.32	0.00	-3.61
Lebanon	28	2	7.14	3.49	19.23	15.62
Cambodia	175	13	7.43	3.78	8.33	4.72
Saint Vincent and the Grenadines	322	24	7.45	3.80	9.39	5.78
Belize	191	15	7.85	4.20	7.14	3.53
Luxembourg	60	5	8.33	4.68	0.00	-3.61
Cook Islands	76	7	9.21	5.56	7.02	3.41
Portugal	129	12	9.30	5.65	0.00	-3.61
Togo	81	8	9.88	6.23	12.50	8.89
Sierra Leone	130	15	11.54	7.89	14.75	11.14
Moldova, Republic of	217	26	11.98	8.33	9.69	6.08
Comoros	122	16	13.11	9.46	7.25	3.64
Tanzania, United Republic of	117	17	14.53	10.88	23.08	19.47
Dominica	36	7	19.44	15.79	17.78	14.17

Only flags with 20 and more port State control inspections in 2012 and with a detention percentage exceeding the average percentage of 3.65% are recorded in this graph.



# Detentions per flag in 2012 exceeding average percentage

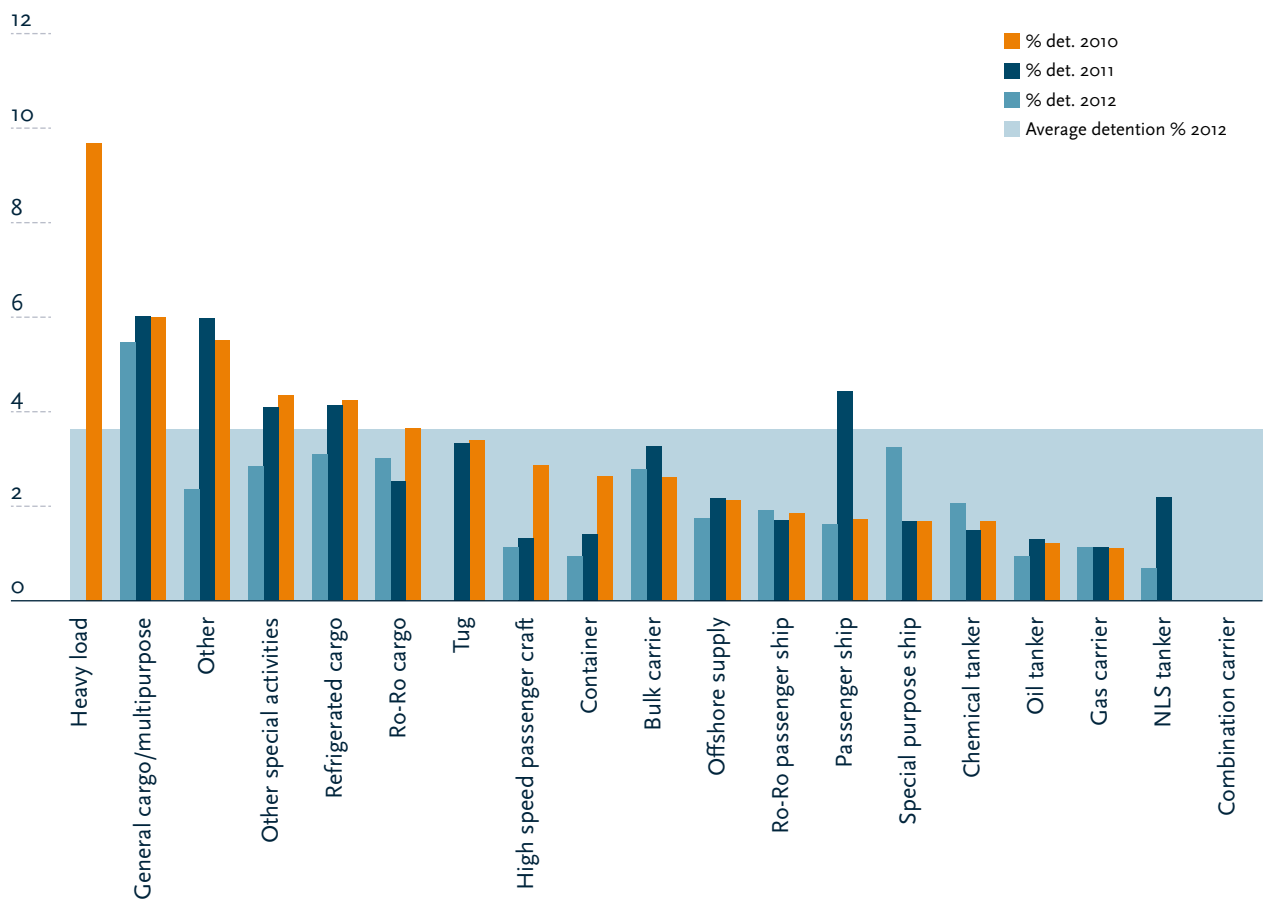


- Only flags with 20 and more port State control inspections in 2012 and with a detention percentage exceeding the average percentage of 3.65% are recorded in this graph. In 2011 the average detentions percentage was 3.61%.
- The grey column represents the 2012 average detention percentage (3.65%).

# Inspections and detentions 2012 PER SHIP TYPE

Ship type	Nr of Inspections	Inspections with deficiencies	% of inspections with deficiencies	Nr of individual ships inspected	Inspections with detentions	% of detentions to inspections 2012	% of detentions to inspections 2011	% of detentions to inspections 2010	+ / - average detention %
Bulk carrier	3,191	1,764	55	2,828	83	2.60	3.25	2.77	2.87
Chemical tanker	1,498	694	46	1,239	25	1.67	1.47	2.06	1.73
Combination carrier	28	18	64	27	0	0.00	0.00	0.00	0.00
Container	1,793	907	51	1,503	47	2.62	1.40	0.94	1.65
Gas carrier	364	167	46	324	4	1.10	1.12	1.12	1.11
General cargo/multipurpose	6,143	4,124	67	4,304	368	5.99	6.02	5.47	5.83
Heavy load	31	17	55	27	3	9.68	0.00	0.00	3.23
High speed passenger craft	70	42	60	43	2	2.86	1.32	1.12	1.77
NLS tanker	113	41	36	98	0	0.00	2.17	0.68	0.95
Offshore supply	425	234	55	395	9	2.12	2.16	1.74	2.01
Oil tanker	1,326	491	37	1,210	16	1.21	1.28	0.93	1.14
Other	109	80	73	84	6	5.50	5.97	2.35	4.61
Other special activities	852	502	59	778	37	4.34	4.08	2.83	3.75
Passenger ship	349	180	52	257	6	1.72	4.42	1.60	2.58
Refrigerated cargo	378	273	72	306	16	4.23	4.12	3.08	3.81
Ro-Ro cargo	797	414	52	669	29	3.64	2.52	3.00	3.05
Ro-Ro passenger ship	545	348	64	293	10	1.83	1.70	1.91	1.81
Special purpose ship	119	71	60	100	2	1.68	1.68	3.23	2.20
Tug	177	93	53	161	6	3.39	3.33	0.00	2.24

Note: Since 2011 ship types are published separate and not longer grouped in categories. The data of 2010 has been regrouped accordingly and is therefore not comparable with the data as published in the Annual Report 2010.



Note: Since 2011 ship types are published separate and not longer grouped in categories. The data of 2010 has been regrouped accordingly and is therefore not comparable with the data as published in the Annual Report 2010.



## Major categories of deficiencies 2010-2012

Def. Main Group	Category of deficiencies	2010		2011		2012	
		Def	Def %	Def	Def %	Def	Def %
<b>Certificates &amp; Documentation</b>	Crew Certificates	1,684	2.59	1,101	2.15	1,005	2.04
	Documents	4,349	6.69	3,491	6.83	3,297	6.69
	Ship Certificates	4,117	6.33	3,046	5.96	2,856	5.80
Structural Condition		2,952	4.54	2,808	5.49	2,216	4.50
Water/Weathertight condition		2,851	4.38	2,597	5.08	2,121	4.31
Emergency Systems		2,191	3.37	1,952	3.82	2,029	4.12
Radio Communication		2,200	3.38	1,704	3.33	1,476	3.00
Cargo operations including equipment		317	0.49	332	0.65	319	0.65
Fire safety		7,687	11.82	6,591	12.89	7,488	15.20
Alarms		497	0.76	464	0.91	398	0.81
<b>Working and Living Conditions</b>	Living Conditions	2,932	4.51	2,313	4.52	2,182	4.43
	Working conditions	7,057	10.85	5,252	10.27	5,067	10.29
Safety of Navigation		8,654	13.30	6,528	12.76	6,816	13.84
Life saving appliances		5,636	8.66	4,782	9.35	4,393	8.92
Dangerous goods		224	0.34	125	0.24	98	0.20
Propulsion and auxiliary machinery		4,239	6.52	2,951	5.77	2,442	4.96
<b>Pollution prevention</b>	Anti Fouling	36	0.06	15	0.03	23	0.05
	Marpol Annex I	1,586	2.44	1,318	2.58	1,127	2.29
	Marpol Annex II	14	0.02	36	0.07	29	0.06
	Marpol Annex III	8	0.01	18	0.04	12	0.02
	Marpol Annex IV	298	0.46	253	0.49	324	0.66
	Marpol Annex V	402	0.62	347	0.68	303	0.62
	Marpol Annex VI	293	0.45	358	0.70	449	0.91
ISM		3,458	5.32	1,644	3.21	1,736	3.52
ISPS		868	1.33	518	1.01	485	0.98
Other		495	0.76	602	1.18	570	1.16

Note: In 2011 a new coding system has taken effect. The data of 2010 has been regrouped accordingly and is therefore not comparable with the data as published in the Annual Report 2010.

## Top 5 categories of deficiencies 2012

Category of deficiencies	Deficiencies	% Deficiencies
Fire safety	7,488	15.12%
Safety of Navigation	6,816	13.77%
Working and Living Conditions - Working Conditions	5,067	10.23%
Life saving appliances	4,393	8.87%
Certificates and Documentation - Document	3,297	6.66%

## Top 5 categories of deficiencies 2012

Deficiencies	Deficiencies	% Deficiencies
ISM	1,736	3.51%
Nautical publications	1,436	2.90%
Charts	1,370	2.77%
Fire doors/openings in fire-resisting divisions	1,124	2.27%
Oil record book	924	1.87%



# Detentions of ships with RO related detainable deficiencies per Recognized Organization 2012

(CASES IN WHICH 10 OR MORE INSPECTIONS ARE INVOLVED)

Recognized Organization*	Total number of inspections	Number of individual ships inspected	Total number of detentions	Detention-% of total number of inspections	+/- Percentage of Average (0.44%)	Detention-% of individual ships	+/- Percentage of Average (0.54%)
American Bureau of Shipping	1,722	1,577	2	0.12	-0.32	0.13	-0.41
Bulgarian Register of Shipping	86	51	5	5.81	5.37	9.80	9.26
Bureau Veritas (France)	3,668	2,852	14	0.38	-0.06	0.49	-0.05
China Classification Society	235	217	0	0.00	-0.44	0.00	-0.54
China Corporation Register of Shipping	14	13	0	0.00	-0.44	0.00	-0.54
Croatian Register of Shipping	58	49	0	0.00	-0.44	0.00	-0.54
Det Norske Veritas	3,504	2,992	3	0.09	-0.35	0.10	-0.44
Dromon Bureau of Shipping	138	83	1	0.72	0.28	1.20	0.66
Germanischer Lloyd	4,383	3,284	18	0.41	-0.03	0.55	0.01
Global Marine Bureau Inc. (Korea, Rep. of)	62	43	2	3.23	2.79	4.65	4.11
Global Shipping Bureau Inc	34	22	3	8.82	8.38	13.64	13.10
Hellenic Register of Shipping	21	17	0	0.00	-0.44	0.00	-0.54
Indian Register of Shipping	24	21	0	0.00	-0.44	0.00	-0.54
INCLAMAR (Cyprus)	30	21	5	16.67	16.23	23.81	23.27
Intermaritime Certification Services, ICS Class (Panama)	20	16	2	10.00	9.56	12.50	11.96
International Naval Surveys Bureau (Greece)	220	147	3	1.36	0.92	2.04	1.50
International Register of Shipping (USA)	153	101	4	2.61	2.17	3.96	3.42
Iranian Classification Society	14	11	0	0.00	-0.44	0.00	-0.54
Isthmus Bureau of Shipping (Panama)	59	44	1	1.69	1.25	2.27	1.73
Korea Classification Society	10	10	0	0.00	-0.44	0.00	-0.54
Korean Register of Shipping	273	252	0	0.00	-0.44	0.00	-0.54
Lloyd's Register (UK)	3,661	3,018	2	0.05	-0.39	0.07	-0.47
Macosnar Corporation (Panama)	24	19	1	4.17	3.73	5.26	4.72
Maritime Bureau of Shipping	38	21	2	5.26	4.82	9.52	8.98
Maritime Lloyd	10	10	0	0.00	-0.44	0.00	-0.54
Maritime Lloyd - Georgia	67	38	2	2.99	2.55	5.26	4.72
Nippon Kaiji Kyokai (Japan)	2,175	1,928	6	0.28	-0.16	0.31	-0.23
Overseas Marine Certification Services (Panama)	36	30	1	2.78	2.34	3.33	2.79
Panama Marine Survey and Certification Services Inc.	20	17	0	0.00	-0.44	0.00	-0.54
Panama Maritime Documentation Services	24	18	1	4.17	3.73	5.56	5.02
Panama Register Corporation	42	36	0	0.00	-0.44	0.00	-0.54
Panama Shipping Registrar Inc.	14	10	0	0.00	-0.44	0.00	-0.54
Phoenix Register of Shipping (Greece)	54	42	2	3.70	3.26	4.76	4.22

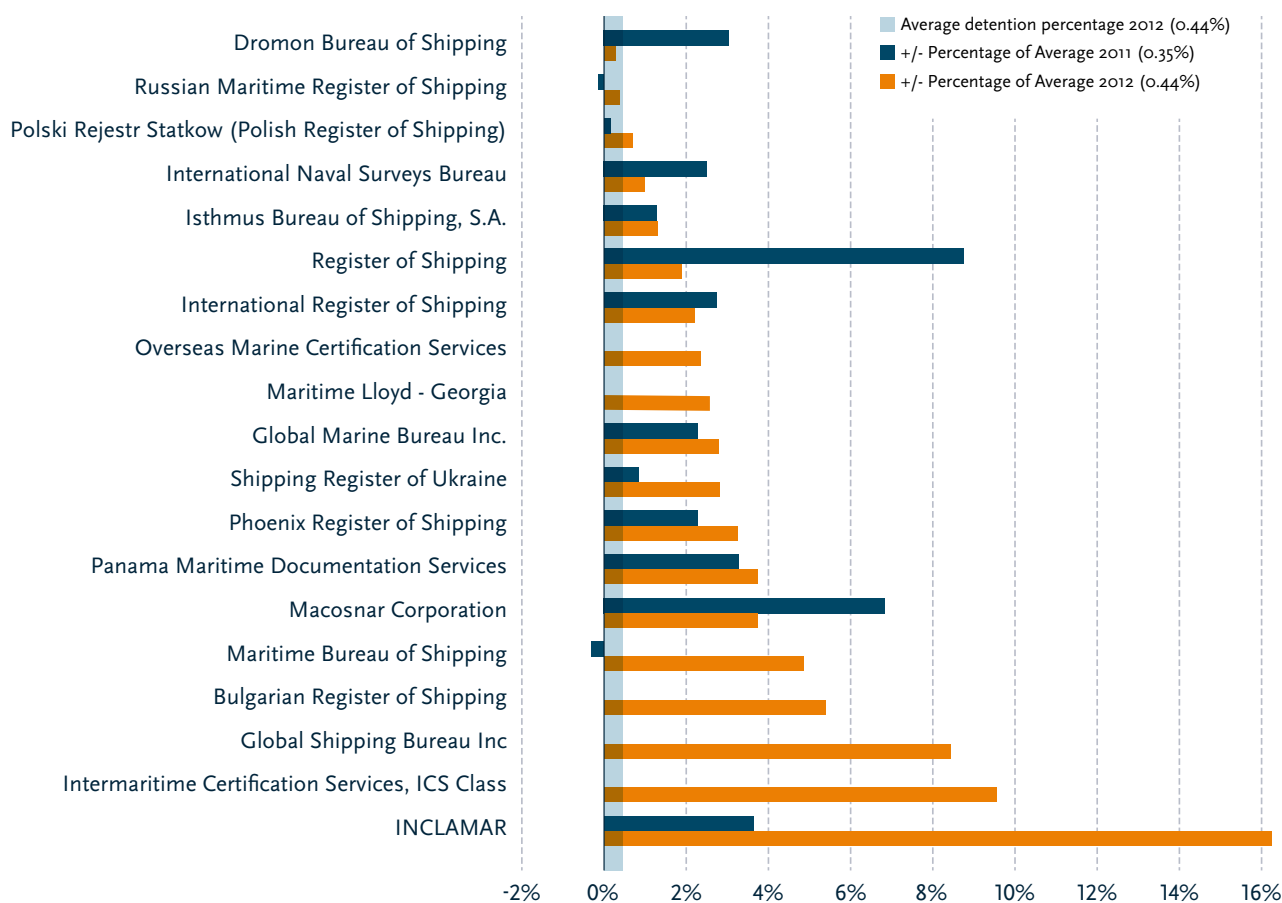


Recognized Organization*	Total number of inspections	Number of individual ships inspected	Total number of detentions	Detention-% of total number of inspections	+/- Percentage of Average (0,44%)	Detention-% of individual ships	+/- Percentage of Average (0,54%)
Polski Rejestr Statkow (Polish Register of Shipping)	183	131	2	1.09	0.65	1.53	0.99
Register of Shipping (Albania)	43	16	1	2.33	1.89	6.25	5.71
Registro Italiano Navale	953	759	0	0.00	-0.44	0.00	-0.54
Russian Maritime Register of Shipping	1,414	1,070	11	0.78	0.34	1.03	0.49
Shipping Register of Ukraine	215	138	7	3.26	2.82	5.07	4.53
Turkish Lloyd	315	244	1	0.32	-0.12	0.41	-0.13
Universal Shipping Bureau Inc. (Panama)	43	36	0	0.00	-0.44	0.00	-0.54
Venezuelan Register of Shipping	31	26	0	0.00	-0.44	0.00	-0.54

\* 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

## % of detentions of ships with RO related detainable deficiencies per Recognized Organization 2011-2012

(CASES IN WHICH MORE THAN 10 INSPECTIONS ARE INVOLVED )



\* Only ROs with 10 and more port State control inspections in 2012 and with a detention percentage exceeding the average percentage of 0.44% are recorded in this graph. In 2011 the average detentions percentage was 0.35%.

\* The grey column represents the 2012 average detention percentage (0.44%).

# Recognized Organization performance table 2010-2012

Recognized Organization		Inspections	Detentions	Low/medium limit	Medium / high limit	Excess Factor	Performance level	
American Bureau of Shipping (USA)	ABS	5,690	3	132	96	-1.92	HIGH	
Det Norske Veritas	DNV	11,602	8	257	207	-1.91		
Lloyd's Register (UK)	LR	12,636	9	279	226	-1.91		
China Classification Society	CCS	816	0	23	9	-1.86		
Korean Register of Shipping (Korea, Rep. of)	KRS	815	0	23	9	-1.86		
Registro Italiano Navale	RINA	3,036	4	74	48	-1.79		
Nippon Kaiji Kyokai (Japan)	NKK	6,726	13	154	115	-1.75		
Germanischer Lloyd	GL	14,495	37	318	262	-1.70		
Bureau Veritas (France)	BV	12,455	32	275	223	-1.69		
Turkish Lloyd	TL	1,219	3	33	16	-1.46		
Russian Maritime Register of Shipping	RMRS	5,151	21	120	86	-1.46		
Polski Rejestr Statkow	PRS	648	4	19	7	-0.54		
Croatian Register of Shipping	CRS	198	1	8	0	0.10		MEDIUM
Indian Register of Shipping	IRS	109	0	5	0	0.12		
Hellenic Register of Shipping (Greece)	HRS	212	2	8	0	0.21		
International Naval Surveys Bureau (Greece)	INSB	782	12	23	9	0.24		
Panama Register Corporation	PRC	125	1	6	0	0.26		
Isthmus Bureau of Shipping (Panama)	IBS	229	3	9	1	0.30		
Dromon Bureau of Shipping	DBS	198	3	8	0	0.37		
Maritime Lloyd -Georgia	MLG	90	2	4	0	0.54		
Universal Shipping Bureau Inc. (Panama)	USB	171	4	7	0	0.58		
Intermaritime Certification Service, S.A. (Panama)	ICS (Panama)	61	2	4	0	0.67		
Global Marine Bureau Inc.	GMB	100	3	5	0	0.68		
Panama Maritime Documentation Services	PMDS	100	3	5	0	0.68		
Shipping Register of Ukraine	SRU	744	19	22	8	0.80		
International Register of Shipping (USA)	IS	757	21	22	8	0.93		
Bulgarski Koraben Registar	BRS	337	15	11	2	1.82	LOW	
Register of Shipping (Albania)	RSA	160	10	7	0	2.54	VERY LOW	
INCLAMAR (Cyprus)	INCLAMAR	93	7	5	0	2.75		
Phoenix Register of Shipping (Greece)	PHRS	138	10	6	0	3.11		

\* 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 2012

Recognized Organization		Certificates	RO detdef	% deficiencies / certificates
American Bureau of Shipping	ABS	11,661	4	0.03
Bulgarian Register of Shipping	BRS	792	15	1.89
Bureau Veritas	BV	23,787	30	0.13
China Classification Society	CCS	1,859	0	0.00
China Corporation Register of Shipping	CCRS	93	0	0.00
Croatian Register of Shipping	CRS	475	0	0.00
Det Norske Veritas	DNV	23,683	5	0.02
Dromon Bureau of Shipping	DBS	1,211	1	0.08
Germanischer Lloyd	GL	34,588	30	0.09
Global Marine Bureau Inc.	GMB	512	5	0.98
Global Shipping Bureau Inc	GSB	275	19	6.91
Hellenic Register of Shipping	HRS	82	0	0.00
Indian Register of Shipping	IRS	62	0	0.00
INCLAMAR	INCLAMAR	242	10	4.13
Intermaritime Certification Services, ICS Class	ICS	112	5	4.46
International Naval Surveys Bureau	INSB	1,522	7	0.46
International Register of Shipping	IS	1,035	10	0.97
Iranian Classification Society	IRCS	78	0	0.00
Isthmus Bureau of Shipping, S.A.	IBS	280	1	0.36
Korea Classification Society	KCS	43	0	0.00
Korean Register of Shipping	KRS	2,422	0	0.00
Lloyd's Register	LR	21,933	4	0.02
Macosnar Corporation	MC	173	3	1.73
Maritime Bureau of Shipping	MBS	378	4	1.06
Maritime Lloyd	ML	86	0	0.00
Maritime Lloyd - Georgia	MLG	591	5	0.85
Nippon Kaiji Kyokai	NKK	18,077	15	0.08
Overseas Marine Certification Services	OMCS	140	3	2.14
Panama Marine Survey and Certification Services Inc.	PMSCS	100	0	0.00
Panama Maritime Documentation Services	PMDS	124	11	8.87
Panama Register Corporation	PRC	162	0	0.00
Panama Shipping Registrar Inc.	PSR	100	0	0.00
Phoenix Register of Shipping	PHRS	374	2	0.53
Polski Rejestr Statkow (Polish Register of Shipping)	PRS	1,124	6	0.53
Register of Shipping	RSA	446	10	2.24
Registro Italiano Navale	RINA	5,636	0	0.00
Russian Maritime Register of Shipping	RMRS	11,236	23	0.20
Shipping Register of Ukraine	SRU	1,700	9	0.53
Turkish Lloyd	TL	1,525	1	0.07
Universal Shipping Bureau Inc.	USB	215	0	0.00
Venezuelan Register of Shipping	VRS	274	0	0.00
<b>Total</b>		<b>170,480</b>	<b>267</b>	<b>0.16</b>



## Number of certificates delivered for RO related detainable deficiencies per ship type and age 2012

Recognized Organization		Bulk Carriers			Chemical Tankers	General Dry Cargo			
		0 - 5	6 - 11	≥ 18		0 - 5	6 - 11	12 - 17	≥ 18
American Bureau of Shipping	ABS		3			1			
Bulgarian Register of Shipping	BRS					2			13
Bureau Veritas	BV			4	1	1	2	2	9
Det Norske Veritas	DNV	2							
Dromon Bureau of Shipping	DBS								1
Germanischer Lloyd	GL					1	5		11
Global Marine Bureau Inc.	GMB								5
Global Shipping Bureau Inc	GSB								19
INCLAMAR	INCLAMAR			8					2
Intermaritime Certification Services, ICS Class	ICS								3
International Naval Surveys Bureau	INSB								2
International Register of Shipping	IS								10
Isthmus Bureau of Shipping, S.A.	IBS								1
Lloyd's Register	LR								2
Maritime Bureau of Shipping	MBS								4
Maritime Lloyd - Georgia	MLG								5
Nippon Kaiji Kyokai	NKK			3			1		8
Overseas Marine Certification Services	OMCS								3
Panama Maritime Documentation Services	PMDS								11
Phoenix Register of Shipping	PHRS								2
Polski Rejestr Statkow (Polish Register of Shipping)	PRS								2
Register of Shipping	RSA								10
Russian Maritime Register of Shipping	RMRS			6			2		11
Shipping Register of Ukraine	SRU					1			6
Turkish Lloyd	TL								1
<b>Total</b>		<b>2</b>	<b>3</b>	<b>21</b>	<b>1</b>	<b>2</b>	<b>6</b>	<b>10</b>	<b>141</b>



Passenger ships/ Ferries	Refrigerated Cargo	Ro - Ro / Container Vehicle			Tankers / Comb. Carriers		Total
		6 - 11	12 - 17	≥ 18	0 - 5	≥ 18	
							4
							15
				10		1	30
2					1		5
							1
		1	3	6		3	30
							5
							19
							10
				2			5
	4			1			7
							10
							1
							4
							4
							5
		2		1			15
							3
							11
							2
4							6
							10
				4			23
				2			9
							1
<b>6</b>	<b>6</b>	<b>3</b>	<b>3</b>	<b>26</b>	<b>1</b>	<b>4</b>	<b>235</b>

## Number of certificates covering RO related detainable deficiencies per flag 2012

Flag / RO	ABS	BRS	BV	DBS	DNV	GL	GMB	GSB	IBS	ICS	INCLAMAR	INSB
Albania												
Antigua and Barbuda	3					9						
Bahamas						1						
Bangladesh												
Barbados			1									
Belize									1	3		1
Cambodia							5					
Comoros		2										6
Cyprus			1		1	2						
Dominica			3								8	
Gibraltar, UK			1			3						
Hong Kong, China					2							
Liberia			8			3						
Malta	1				2							
Moldova, Republic of		10									2	
Netherlands			2			1						
Norway						2						
Panama			13			1		19		2		
Philippines												
Poland						2						
Portugal						1						
Russian Federation												
Saint Kitts and Nevis												
Saint Vincent and the Grenadines						4						
Sierra Leone												
Singapore												
Tanzania, United Republic of		3		1								
Turkey			1									
Ukraine												
United Kingdom						1						
<b>Total</b>	<b>4</b>	<b>15</b>	<b>30</b>	<b>1</b>	<b>5</b>	<b>30</b>	<b>5</b>	<b>19</b>	<b>1</b>	<b>5</b>	<b>10</b>	<b>7</b>



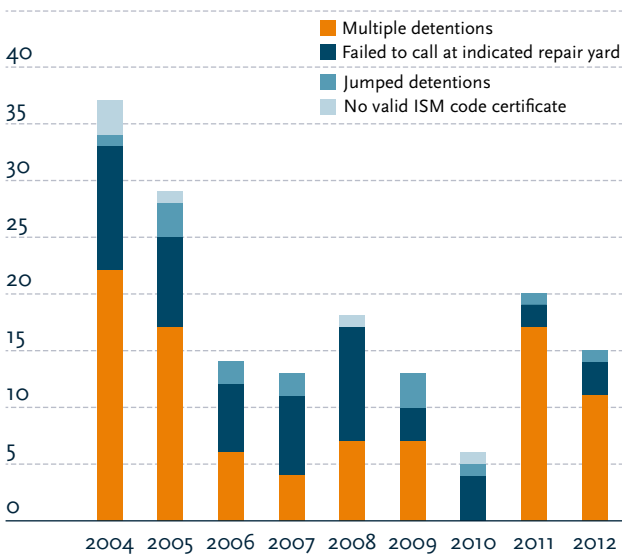


IS	LR	MBS	MC	MLG	NKK	OMCS	PHRS	PMDS	PRS	RMRS	RSA	SRU	TL	Total	%
											10			10	4.20
														12	5.04
														1	0.42
					2									2	0.84
														1	0.42
										4				9	3.78
1												2		8	3.36
												1		9	3.78
									6					10	4.20
														11	4.62
														4	1.68
														2	0.84
	2													13	5.46
					2									5	2.10
		4										4		20	8.40
														3	1.26
														2	0.84
			3		9	3	1	11		2				64	26.89
	2													2	0.84
														2	0.84
														1	0.42
										7				7	2.94
3														3	1.26
										8				12	5.04
6							1							7	2.94
					2									2	0.84
				5										9	3.78
													1	2	0.84
										2		2		4	1.68
														1	0.42
10	4	4	3	5	15	3	2	11	6	23	10	9	1	238	100

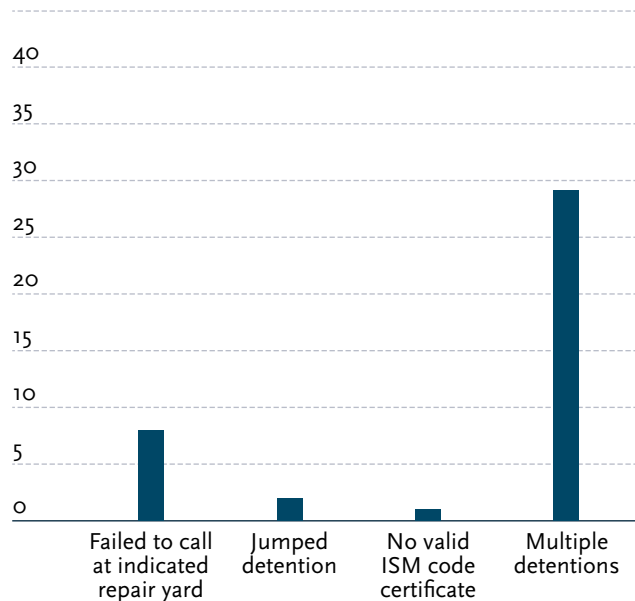
# Refusal of access (banning) per flag 2010-2012

Flag	Failed to call at indicated repair yard	Jumped detention	No valid ISM Certification	Multiple detentions			Total Banned ships
				1 <sup>st</sup> ban	2 <sup>nd</sup> ban	3 <sup>rd</sup> ban	
Albania	0	0	0	1			1
Belize	0	0	0	1			1
Bolivia	0	0	0	1			1
Cambodia	0	1	0	0			1
Comoros	0	0	0	2			2
Curacao	0	0	0	1			1
Dominica	0	0	0	1			1
Libya	0	0	0	1			1
Luxembourg	0	0	1	0			1
Moldova, Republic of	0	0	0	7			7
Mongolia	0	1	0	0			1
Panama	2	0	0	1			3
Saint Kitts and Nevis	0	0	1	2			3
Saint Vincent and the Grenadines	0	0	0	3			3
Sierra Leone	1	0	0	0			1
Tanzania, United Republic of	2	0	0	5			7
Togo	2	0	0	2			4
Turkey	1	0	0	0			1
<b>Total</b>	<b>8</b>	<b>2</b>	<b>2</b>	<b>29</b>	<b>0</b>	<b>0</b>	<b>41</b>

## Refusal of access 2004-2012



## 2010-2012



# CIC 2012 on Fire Safety Systems



Number of individual ships inspected during CIC	Individual ships inspected during CIC	Inspections performed with a CIC questionnaire	Inspections without a CIC questionnaire
Inspections	3,985	4,014	468
Inspections with detentions	160	160	21
Detentions with <i>CIC-topic</i> related deficiencies	103	103	6

Number of inspections during CIC-campaign	# of ships	% of total
1	3,956	98.6%
2	58	1.4%
<b>Total</b>	<b>4,014</b>	<b>100.0%</b>

Ship type	Number of individual ships	Inspections	Detentions	Det. as % of inspections	Det. CIC-topic related	detentions CIC-topic related as % of inspections
Bulk carrier	765	766	31	4.0%	14	1.8%
Chemical tanker	342	343	4	1.2%	0	0.0%
Combination carrier	8	8	0	0.0%	0	0.0%
Container	420	422	12	2.8%	9	2.1%
Dredger	9	9	1	11.1%	1	11.1%
Gas carrier	85	86	2	2.3%	2	2.3%
General cargo/multipurpose	1,329	1,347	78	5.8%	59	4.4%
Heavy load	6	6	0	0.0%	0	0.0%
High speed passenger craft	2	2	0	0.0%	0	0.0%
Livestock carrier	14	14	2	14.3%	1	7.1%
MODU & FPSO	5	5	0	0.0%	0	0.0%
NLS tanker	29	31	0	0.0%	0	0.0%
Offshore supply	78	78	5	6.4%	4	5.1%
Oil tanker	307	308	4	1.3%	2	0.6%
Other special activities	164	165	7	4.2%	3	1.8%
Passenger ship	39	39	0	0.0%	0	0.0%
Refrigerated cargo	95	95	4	4.2%	3	3.2%
Ro-Ro cargo	193	194	8	4.1%	4	2.1%
Ro-Ro passenger ship	28	28	0	0.0%	0	0.0%
Special purpose ship	29	29	1	3.4%	1	3.4%
Tug	38	39	1	2.6%	0	0.0%
<b>Total</b>	<b>3,985</b>	<b>4,014</b>	<b>160</b>	<b>4.0%</b>	<b>103</b>	<b>2.6%</b>



# Explanatory note – “White”, “Grey” and “Black List”

**The normative listing of Flags provides an independent categorization that has been prepared on the basis of Paris MoU port State inspection results over a 3-year period, 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 system, the ‘black to grey’ and the ‘grey to white’ limit, each with its own specific formula:

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

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

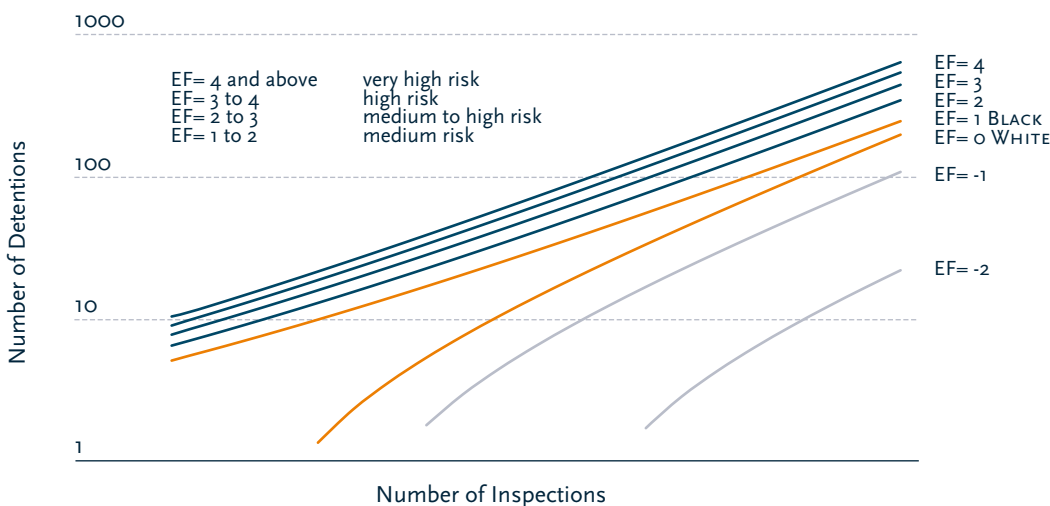
In the formula “N” is the number of inspections, “p” is the allowable detention limit (yardstick), set to 7% by the Paris MoU Port State Control Committee, and “z” is the significance requested (z=1.645 for a statistically acceptable certainty level of 95%). The result “u” is the allowed number of detentions 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 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 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 of the White, Grey or Black list. The target (yardstick) has been set on 7% and the size of the increment and decrement on 3%. The White/Grey/Black lists have been calculated in accordance with the principles above.

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:

$$\begin{aligned}\mu_{blackto\ grey} &= N \cdot p + 0.5 + z \cdot \sqrt{N \cdot p \cdot (1 - p)} \\ \mu_{blackto\ grey} &= 108 \cdot 0.07 + 0.5 + 1.645 \sqrt{108 \cdot 0.07 \cdot 0.93} \\ \mu_{blackto\ grey} &= 12\end{aligned}$$

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’ :

$$\begin{aligned}p + 3,26q &= 0,07 + (3,26 \cdot 0,03) = 0,1678 \\ \mu_{excess\ factor} &= 108 \cdot 0.1678 + 0.5 + 1.645 \sqrt{108 \cdot 0.1678 \cdot 0.8322} \\ \mu_{excess\ factor} &= 25\end{aligned}$$

### 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:

$$\begin{aligned}\mu_{blackto\ grey} &= 141 \cdot 0.07 + 0.5 + 1.645 \sqrt{141 \cdot 0.07 \cdot 0.93} \\ \mu_{blackto\ grey} &= 15\end{aligned}$$

How to determine the grey to white limit:

$$\begin{aligned}\mu_{greyto\ white} &= N \cdot p - 0.5 - z \cdot \sqrt{N \cdot p \cdot (1 - p)} \\ \mu_{greyto\ white} &= 141 \cdot 0.07 - 0.5 - 1.645 \sqrt{141 \cdot 0.07 \cdot 0.93} \\ \mu_{greyto\ white} &= 4\end{aligned}$$

To determine the excess factor the following formula is used:  $ef = \text{Detentions} - \text{grey to white limit} / \text{grey to black limit} - \text{grey to white limit}$

$$\begin{aligned}ef &= (10 - 4) / (15 - 4) \\ ef &= 0,51\end{aligned}$$

### 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:

$$\begin{aligned}\mu_{greyto\ white} &= N \cdot p - 0,5 - z \cdot \sqrt{N \cdot p \cdot (1 - p)} \\ \mu_{greyto\ white} &= 297 \cdot 0.07 - 0.5 - 1.645 \sqrt{297 \cdot 0.07 \cdot 0.93} \\ \mu_{greyto\ white} &= 13\end{aligned}$$

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’ :

$$\begin{aligned}p + (-0.28q) &= 0.07 + (-0.28 \cdot 0.03) = 0.0616 \\ \mu_{excess\ factor} &= 297 \cdot 0.0616 - 0.5 - 1.645 \sqrt{297 \cdot 0.0616 \cdot 0.9384} \\ \mu_{excess\ factor} &= 11\end{aligned}$$

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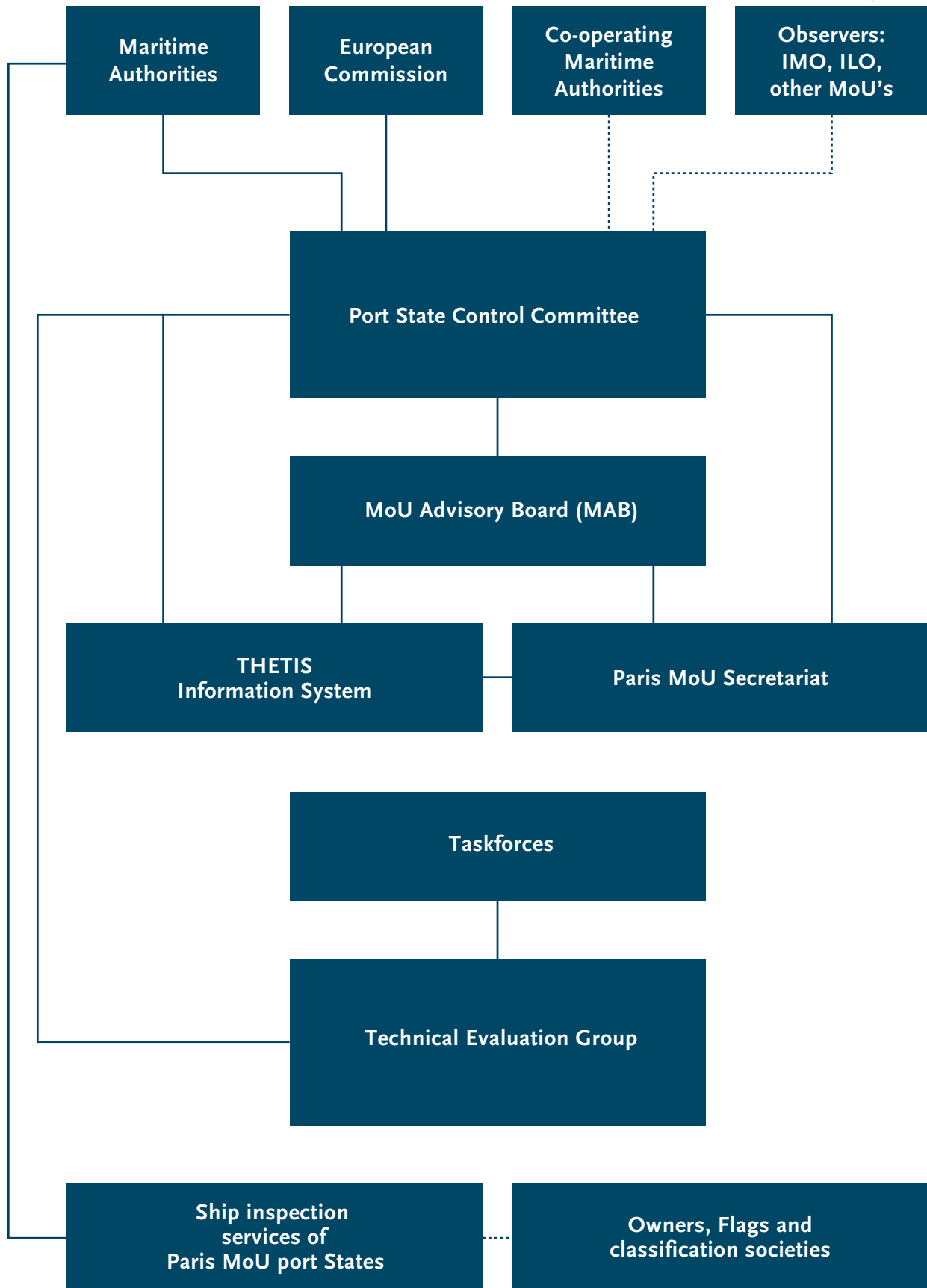
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# Paris MoU fact sheet – organizational structure









THE PARIS MEMORANDUM OF UNDERSTANDING ON PORT STATE CONTROL



**Paris MoU**



30<sup>th</sup> Anniversary

on Port State Control