

Port State Control

Seafarers matter

Annual Report

2016

THE PARIS MEMORANDUM OF UNDERSTANDING ON PORT STATE CONTROL



Paris MoU



on Port State Control



Annual Report

2016

Contents

Statement by Paris MoU chairman	4
Statement by the Secretary General	6
Executive summary	8
Paris MoU developments	10
Facts & Figures 2016	16
Statistical Annexes Annual Report 2016	21
White list	33
Grey List	35
Black List	37
Explanatory note - “White”, “Grey” and “Black List”	60
Secretariat Paris Memorandum of Understanding on Port State Control	61



During 2016 the Paris MoU continued with its work of inspecting ships in accordance with the relevant instruments of The Memorandum. This annual report contains details of the main work and developments within the Paris MoU for the year. The annexes and tables contain details of the outcomes of the inspections carried out by our Member Authorities. The Paris MoU website continued to be a reliable source for information and tools which assist in providing inspection details to its users.

Statement by the

Paris MoU chairman

In 2016 the Paris MoU carried out a Concentrated Inspection Campaign, CIC, on the Maritime Labour Convention, 2006. This is a very important area and very significant given the recent entry into force of this significant convention. The Paris MoU is in a good position to carry out such a CIC as many of its members have ratified the convention. There is very strong interest in the CIC and particularly on how it is working in practice. It is hoped that the CIC will also provide a source of information on the implementation of the Convention. By carrying out this CIC the Paris MoU will also raise awareness of the importance of this issue. The Paris MoU will share the results of this CIC and believes that



issues with the implementation will be increased.

The Paris MoU held its annual 49th Port State Control Committee Meeting in Haugesund, Norway, in May 2016. 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. Norway are to be complimented on the hosting and organisation for our meeting.

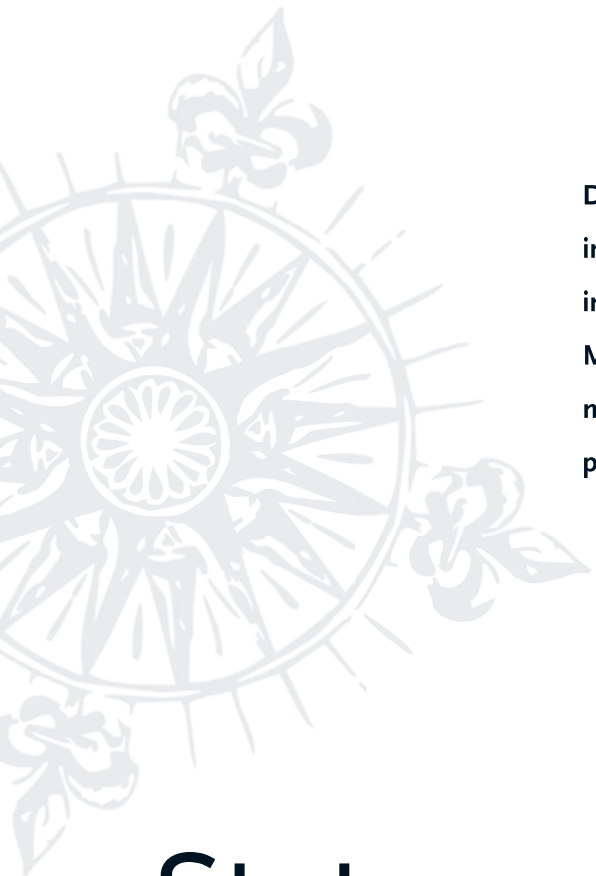
The Paris MoU relationship with other regional port State control agreements and with the United States Coast Guard continues to develop. We place great importance on the role played by

all of the observers to the Paris MoU including the ILO and the industry partners, as well as the IMO and we look forward to growing co-operation in this area.

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; all of the contributors to our Task Forces; and finally 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 (PSCOs) and administrators in the Member Authorities of the Paris MoU are the people who ensure the success of our endeavours. They are the ones who are the core of the Paris MoU and continue to deliver on our common objectives. They deserve our special thanks and appreciation.

Brian Hogan



Despite the difficult economic circumstances the shipping industry is facing, the overall results of port State control inspections in the Paris MoU region are encouraging. Most flags have maintained a position on the “White List” and most recognized organizations have also shown an overall good performance.

Statement by the Secretary General

Seafarers matter

Unfortunately there are still shipping companies which have made a deliberate choice to operate sub-standard ships. The southern part of the Paris MoU region is their preferred area of operation. Perhaps the risk of being detained and rectifying deficiencies outweigh the costs of running a “bonafide operation”. Unfortunately the seafarers on these ships have to live under often horrendous working and living conditions. Filthy living quarters, unsanitary conditions and rotting food are a few examples. Sometimes crew are waiting for months to get paid or they are not allowed their leave on time. These conditions are



unacceptable and will be enforced rigorously. Some of these ships are published on our web site in “caught in the net”.

It is not surprising that the overall detention percentage has increased this year, for the first time since 2013. Under the rising economic pressures, ship owners may chose to cut corners in areas where this is possible, in order to reduce the operating costs of their ships and to remain competitive. Often manning and maintenance are the areas of choice. Although the overall detention percentage is still low when compared with years ago, the Paris MoU will remain vigilant and ensure that sub-standard shipping will not be able to flourish. This is supported by the number of banned ships, which has almost doubled when compared with 2015. For a number of years the flags which have sheltered

these ships are very low on the “Black List” and are reported to the IMO every year, together with their recognized organizations. It could be argued that such flags (Comoros, Congo, Moldova, Palau, Sierra Leone, Tanzania and Togo) are subject to the IMO IMSAS audit with priority.

Credit should be given to the Port State Control Officers inspecting ships on a daily basis under often challenging circumstances. With new international requirements (MLC2006, MARPOL, STCW, Polar Code, IGF Code) entering into force, they need to be trained and instructed to keep up-to-date. In co-operation with EMSA a range of training programmes are in place to ensure this. Above all, the Paris MoU has always taken a pragmatic and practical approach when enforcing new requirements. With

the forthcoming entry into force of the Ballast Water Management Convention this will be our approach again.

Richard W.J. Schiferli

Refusal of access (banning) has been used 52 times since 2014. This year shows a large increase from 11 bans in 2015 to 20 bans. The detention percentage has increased as well to 3.83% (from 3.41%). The number of detainable deficiencies has increased by 7.3% to 3,769. The increase from 2014 to 2015 was 11.3%. The number of inspections carried out was 17,840, slightly fewer than 2015 (17,877).

Executive summary

Over the past 3 years most ships have been banned for multiple detentions (46). Five ships have been banned a second time.

A significant number of ships (5) were banned for failing to call at an indicated repair yard. The one remaining case involved a ship which “jumped the detention”, by sailing without authorization. Over a 3 year period the flags of the Republic of Moldova, the United Republic of Tanzania and Togo have recorded the highest number of bannings.

Looking at the Paris MoU “White, Grey and Black Lists” the overall situation regarding the quality of shipping seems to be stabilizing. Although some flag States have changed lists, the total amount of 42 flags on the “White list” is similar to 2015 (43).

This year there were no new entries to the “White List”. The Republic of Korea moved from the “White List” to the “Grey List”. Saint Vincent and the Grenadines moved from the “Black List” to the “Grey List”. Palau and Vanuatu moved from the “Grey List” to the “Black





List". In 2016 there were 12 flags on the "Black List" (11 in 2015), with the Republic of the Congo having the worst performance.

Recognized Organizations (ROs) are delegated by flag States to carry out statutory surveys on their behalf. For this very reason, it is important to monitor their performance.

For several years a joint submission with the Tokyo MoU to IMO has addressed the correlation between flags and ROs working on their behalf. The results are published in the Annual Report as well. It is useful information for the industry that would like to stay clear of the risk of sub-standard shipping.

After a slight decrease of the total number of inspections in 2015 to 17,877 the number has decreased again very slightly in 2016 to 17,840. Since 2011 (the start of the NIR) the average detention percentage had slightly increased annually until 2013 (3.78%), after which a significant decrease has been recorded for 2014 (3.38%) with a same level in 2015 (3.41%). This year, however, an increase to 3.83% has been recorded.

The highest level since the introduction of NIR. The level of detainable deficiencies is increasing as well to 3,769, a 7.3% increase compared to 2015.

Spain, Italy, United Kingdom, the Netherlands, Russian Federation, Germany and France contributed most to the overall inspection efforts in terms of percentage, together over 51%. High Risk Ships have been operating mostly in the southern part of the region, while Low Risk Ships have been calling in the north-western part of the region.

With 1,213 inspections and 227 detentions the ships flying a "black listed flag" score a detention rate of 18.7%, which is considerably higher than the 11.2% in 2015 and 11.7% in 2014. For ships flying a "grey listed flag" the detention rate is 5.5%, which is significantly lower than 8.6% in 2015. For ships flying a "white listed flag" the detention rate is 2.6% which is at the same level as 2015 (2.5%) and 2014 (2.4%).

The 5 most frequently recorded deficiencies in 2016 were "ISM"

(4.4%, 1838), "fire doors/openings in fire-resisting divisions" (2.6%, 1078), "nautical publications" (2.5%, 1049), "charts" (2.2%, 922) and "oil record book" (1.7%, 706). These are consistent with 2015.

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 10 were active in 2016, 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 composed of participants from Canada, Iceland, Estonia, the United Kingdom and the European Commission in 2016.

Port State Control Committee

The Port State Control Committee held

its 49th meeting in Haugesund, Norway from 23-27 May 2016. The MoU is comprised of 27 member States.

High importance was given to the Concentrated Inspection Campaign (CIC) on MLC, 2006 which is scheduled from September to November 2016. Living and working conditions for seafarers continue to be a priority.

The Committee recognized the importance of the IMO requirements for stricter limits on air pollution from ships and this has led to the decision to have a CIC on MARPOL Annex VI in 2018.

The current methodology of calculation of Flag performance has been reviewed by the Committee. The Committee has instructed a Task Force to present detailed views and criteria on a possible future

methodology of Flag performance, taking into account transparency and statistical fair treatment to any Flag.

Another important subject has been the discussion on the recognized organization (RO) responsibility which resulted in the decision to carry out a fundamental review on the approach to assigning RO responsibility in the framework of the Paris MoU.

The report of the CIC on Crew Familiarisation on Enclosed Space Entry, carried out in September to November of 2015, was discussed. Although the results showed a good level of compliance the Committee agreed that both flag States and industry should continue to pay attention to the correct execution of enclosed space entry drills. The results will be published and submitted to the IMO. The Committee adopted the 2015 Annual Report,



including the new White, Grey and Black List and the performance list of Recognized Organizations. This year Portugal and Spain have moved from the “Grey List” to the “White List”. The number of ships which are refused access to the region after multiple detentions is declining for 2015.

Canada informed the Committee that they will host the 3rd Joint Ministerial Conference in Vancouver on 3 and 4 May 2017 and all Ministers responsible for port State control in the Paris and Tokyo MoU region have been invited.

Technical Evaluation Group

The TEG convened in Southampton, United Kingdom in December 2016. Ten Task Forces submitted reports to the TEG for evaluation before submission to the Port State Control Committee. Issues considered by the TEG included:

- RO responsibility;
- Information System Developments;
- Operational controls;
- Evaluation of Paris MOU Statistics;
- New Inspection Policy within the Paris MoU;

- Training Policy;
- International Working Group on ILO Consolidated Convention Guidelines;
- CIC Safety of Navigation in 2017;
- Inspection Campaign on MARPOL ANNEX VI;
- IMO Polar Code.

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 than Expert and Specialised Training 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. Since 2012 the IMO has been sponsoring PSCOs from other PSC agreements to attend the Paris MoU Expert training programmes. In 2016, 16 PSCOs from other MoUs and the US Coast Guard attended Paris MoU training programmes and PSC seminars.

PSC Seminar 61

The 61st Port State Control Seminar was held in June 2016 in St. Malo, France. The main topic of discussion was the train the trainer course for the CIC on MLC,2006. EMSA presented the first version of the DLP for the CIC. Furthermore Paris MoU procedures and specific inspection issues were discussed. The Secretariat presented an overview of developments in the Paris MoU. EMSA gave a presentation on the developments in EMSA end the EU.

PSC Seminar 62

The 62nd Port State Control Seminar was held in November 2016 in Helsinki, Finland. PSCOs from the Paris MoU member States and the United States Coast Guard attended the Seminar. The main topics of discussion were the Polar Code and the Ballast Water Management Convention. The Secretariat presented an overview of developments in the Paris MoU and presented cases on several subjects for discussion. EMSA presented an overview of the developments within the EMSA and the EU.

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 changes every year. The training programmes are intended for experienced PSCOs. Using that experience, the participants can work together to establish a higher degree

of harmonization and standardization of their inspection practice. Lecturers for the training programmes are invited from the Paris MoU Authorities and the maritime industry.

The 12th Expert Training “Safety and Environment”

The twelfth Expert Training programme was held in The Hague, the Netherlands, in March 2016. Important issues during this training were the new requirements added to the MARPOL Annexes, SOLAS life saving appliances and the use of Operational Drills during a PSC inspection. The IMDG Code was also discussed. Participants from the Black Sea MoU and EMSA took part in the training.

The 5th Specialized Training on the Inspection of Passenger Ships

The fifth Specialized Training programme on the inspection of Passenger Ships was held in Trieste, Italy, in April 2016. Participants from the Paris MoU members States as well

as Montenegro, the US Coast Guard, the Riyadh MoU, the Mediterranean MoU and EMSA took part in the training. During the training, the construction, certification and vetting of passenger ships were discussed. The expanded inspection on passenger ships and the US Coast Guard approach to the inspection of passenger ships were highlighted. There was also a presentation on the issues for inspections resulting from the investigation of the accident with the Costa Concordia.

The 16th Expert Training “The Human Element”

The sixteenth Expert Training programme on the Human Element was held in The Hague, the Netherlands in October 2016. The programme was dedicated to the MLC,2006 and STCW Conventions. As an introduction to the program the participants were asked to complete a questionnaire that would give insight into their personal “enforcement



style". At the end of the program a communication and interaction exercise was conducted. Participants from member States as well as from Black Sea MoU, the Indian Ocean MoU, the Caribbean MoU, the Abuja MoU, the Mediterranean MoU, Riyadh MoU, the Vina del Mar Agreement and the US Coast Guard took part in the training.

Training in cooperation with EMSA

The Paris MoU also assists EMSA in the "PSC Seminar for Port State Control Officers". The PSC Seminars are delivered to PSCO's from all Member States. In 2016 the fully established Professional Development Scheme (PDS) of the Paris MoU encompassed 4 EMSA/Paris MoU Seminars for PSCOs.

The Paris MoU inspection regime focuses on eradication of sub-standard shipping and on rewarding good performing ships in terms of the inspection frequency. It translates to "less, but better inspections". The regime is underpinned by an elaborate set of procedures, all aimed at providing more guidance for better inspections.

Ongoing improvements and performance measurement through inspection results require strict adherence to the established procedures. For the seminars organized for PSCOs during 2016 the earlier adopted approach was followed in order to maximize familiarisation with the procedures governing port State control inspections.

The overarching goal for the seminars remained the establishment of a harmonized approach towards Port State Control in the geographical working 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, had been achieved. The constantly evolving methodology of delivering the lectures during the seminars is deemed effective in achieving the objectives set for the seminars.

All seminars were organised by EMSA and held at its premises in Lisbon, Portugal. Lecturers were provided both by EMSA and the Paris MoU Secretariat. The 168 participants attending these seminars during 2016 originated from all Paris MoU Member States.

Detention Review Panel

Flag States or ROs which cannot resolve a dispute concerning a detention with the port State may submit their case for review. The detention review panel is comprised of representatives of four different MoU Authorities, on a rotating basis, and the Secretariat.

In 2016 the Secretariat received five requests for review. One case was withdrawn during the process of gathering the information to be provided to the panel.

The other four cases met the criteria for the Detention Review Panel and were submitted to MoU members for review. In one case the detention review panel concluded that the port State's decision to detain was not justified. On request of the panel, the port State reconsidered the detention. In three cases the panel concluded that the detaining port State would not have to reconsider the decision to detain.

Quality management

Since 15 March 2011 the Paris MoU Secretariat has been ISO9001:2008 certified for its services and products.

During 2016, the Secretariat continued to improve the services and products and prepared for the new requirements of ISO9001:2015. The Quality Management System was successfully audited. The Secretariat will have to be recertified for the 2015 requirements early 2017 at the latest.

Paris MoU on the Internet

The several new statistical instruments and tools that were published on the website in 2015 also raised a lot of attention in 2016. In particular the "inspection results" and "KPI's" enjoyed an ever increasing demand. Flag and port States, government agencies, charterers, insurers and classification societies are continuously looking for data and information. They were able to monitor their performance and the performance of others on a continuous basis. Validated port State control data can be accessed and offered visitors more detailed information.

Last year a survey was conducted among the visitors of the Paris MoU website regarding the navigation and information. In total 468 visitors responded to the survey:

- 84% found it easy to very easy to navigate,
- 73% found the information they were looking for easy to find,
- 87% rated the website good to very excellent.

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

In 2016 details were published of:

- m/v "Arfetisalle", flag Democratic Republic of Congo (IMO 8509038),
- m/v "Huanghai Developer" flag Hong Kong (IMO 9458444),
- g/c "Ali B", flag Belize (IMO 8418253).

The annual award for best contribution to the 'Caught in the Net' has been presented to port State of Germany.

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

Concentrated Inspection Campaigns

Concentrated Inspection Campaigns (CICs) have been held annually in the Paris MoU region over the past years. These campaigns focus on a particular area of compliance with international regulations with the aim of raising awareness, gathering information and enforcing the level of compliance. Each campaign is prepared by experts and identifies a number of specific items for inspection.

CIC 2016 MLC,2006

PSCOs in the Paris MoU region have performed a Concentrated Inspection Campaign (CIC) on MLC,2006 from 1 September through 30 November 2016.

In general the results of the CIC indicate that the elements inspected during the MLC,2006 CIC, show a proper implementation of the requirements on board ships.

Results on MLC,2006 show that 3674 inspections have been performed using the CIC questionnaire. Of those inspections 42 detentions have CIC topic related deficiencies. The total number of detentions in the 3-month period was 171.

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 have observer status at the Paris MoU. Regional agreements with observer status must demonstrate that their member Authorities invest demonstrably in training of PSCOs, publish inspection data, have a code of good practice, have been granted official IGO-status at IMO and have a similar approach in terms of commitment and goals to that of the Paris MoU.

All regional agreements have obtained official observer status to the Paris MoU: the Tokyo MoU, Caribbean MoU, Mediterranean MoU, Black Sea MoU, Riyadh MoU, Acuerdo de Viña del Mar, Abuja MoU and Indian Ocean 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 3rd session of the Sub-Committee on Implementation of IMO Instruments (III-3) in July 2016.

The 2014 Annual Report, including inspection data; the performance of flag Administrations and Recognized Organizations; a combined list of flags targeted by the Paris MoU, Tokyo MoU and USCG; the results of the 2014 joint CIC on Hours of Work and Rest and information on the improvement of flag performance, was submitted to III-3.

Membership of the Paris MoU

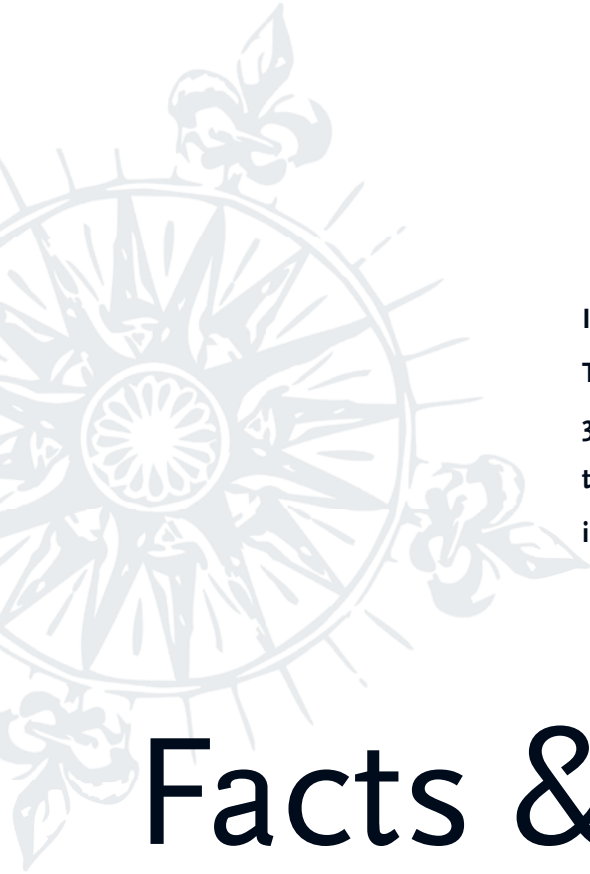
In preparation for prospective new members of the Paris MoU, the Port State Control Committee has adopted criteria for co-operating status for non-member States and observer/associate status for other PSC regions.

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: 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. France and the Netherlands are members of the Caribbean MoU, whilst France is also a member of the Indian Ocean MoU.





In the following pages the facts and figures of 2016 are listed. The detention percentage in 2016 has increased; 3.83% from 3.41% in 2015. The numbers on refusal of access have increased this year; 20 compared to 11 in 2015. Detainable deficiencies increased by 7.3%.

Facts & Figures

2016

Inspections

With a total number of 17,840 inspections performed in 2016, the inspection figures are similar to 2015 (17,877). The average of number of inspections per ship of 1.17 times per year, equals 2015.

Ever since the introduction of the New Inspection Regime in January 2011 figures have decreased, with the exception of 2014.

Deficiencies

In 2014 the number of deficiencies was 46,224. In 2015 the number of deficiencies decreased significantly to 41,777. 2016 shows a minor increase to 41,857. During 52% of all inspections performed, one or more deficiencies were recorded. In 2015 this figure was 53%. The average number of

deficiencies per inspection 2.3 equals 2015.

Detainable deficiencies

The detainable deficiencies show an increasing trend over 3 years. From 3,155 in 2014, to 3,513 in 2015 and 3,769 in 2016. Increases of 11.3% (2015) and 7.3% (2016) respectively.

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 to 2015, the number of detentions has increased from 610

to 683 detentions, an increase of 12%.

The average detention rate in 2016 is 3.83%. The highest percentage since the introduction of the NIR in 2011. In 2015 the detention rate was 3.41%.

“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 2016, a total number of 73 flags are listed: 42 on the “White List”, 19 on the “Grey List” and 12 on the “Black list”. In 2015 the number of flags listed totalled 73 flags also; 43 on the “White List”,



19 on the “Grey List” and 11 on the “Black List”.

The “White List” represents quality flags with a consistently low detention record. Compared to 2015, the number of flags on the “White List” has decreased by one.

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” also recorded 19 flags. New on the “Grey List” is the Republic of Korea, which last year was on the “White List”. Moved from the Black list to the Grey list this year is Saint Vincent and the Grenadines.

Palau and Vanuatu have fallen from the “Grey List” to the “Black List”.

A graph of the distribution of listed and non listed flags indicates that only 0.8% of the ships inspected are from flags not listed on the WGB list.

Ship type

In 2016 the top 5 detention rates are for: general cargo/multipurpose ships at 7.2% (up from 5.9% in 2015); High Speed Passenger Craft (up from 3.6% to 3.7%); refrigerated cargo ships at 3.5% (down from 4.6%); bulk carrier at 3.3% (down from 3.6%) and tugs at 2.9% (down from 4.7%).

Although “other” is not a specific type, the detention rate is high with 6% (down from 7% in 2015).

Best performing ship types are combination carriers with a zero detention rate and gas carrier (1.1%).

Performance of Recognized Organizations

For several years the Committee has closely monitored the performance of

classification societies acting as ROs for flags. 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 is needed before the performance is taken into account for the list. In 2016 33 ROs are recorded on the performance list.

Compared with last year’s performance level, a small shift in RO performance in 2016 can be noticed. This year none of the organizations have been placed in the very low performing parts. Four organizations have been placed in the low performing parts (from 1 last year) and 19 ROs have been placed in the medium part of the list (from 22 last year).

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 683 detentions recorded in 2016, 91 or 13.3% were considered RO related.

Refusal of access of ships

A total of 20 ships were refused access (banned) from the Paris MoU region in 2016 for reasons of multiple detentions (19), and failure to call at an indicated repair yard (1). A number of ships remain banned from previous years. Several ships have been banned a second time after multiple detentions, resulting in a minimum banning period of 12 months. The number of 20 is up from 11 in 2015.

Deficiencies per major category

The number of deficiencies in the following six areas accounted for

approximately 67% of the total number of deficiencies. The trends in these areas are clarified below.

Certificates & Documentation

The number of deficiencies recorded as related to ships' certificates, crew certificates and documents show a significant increase of 7.7% from 6,295 in 2015 to 6,779 in 2016. The relative part regarding the total deficiencies has increased from 15.1% in 2015 to 16.2% in 2016.

Safety of navigation

In 2016, deficiencies in Safety of Navigation accounted for 12.5% of all deficiencies recorded (similar to 12.4% in 2015). The number of deficiencies in Safety of Navigation increased from 5,179 in 2015 to 5,220 in 2016.

Fire safety

In 2016 deficiencies in fire safety accounted for 12.9% of all deficiencies recorded, compared to 13.4% in 2015. The number of deficiencies decreased from 5,585 in 2015 to 5,390 in 2016.

Pollution prevention

The total number of deficiencies recorded in the several pollution prevention areas in 2016 are 2,056, a decrease from 2,259 in 2015. The relative part of the deficiencies regarding the total was 4.9% in 2016, a decrease from 5.4% in 2015. The decrease relates to all MARPOL annexes.

Working and living conditions

Most deficiencies on working and living conditions have been found in the following areas. Health and safety and accident prevention (area 11)



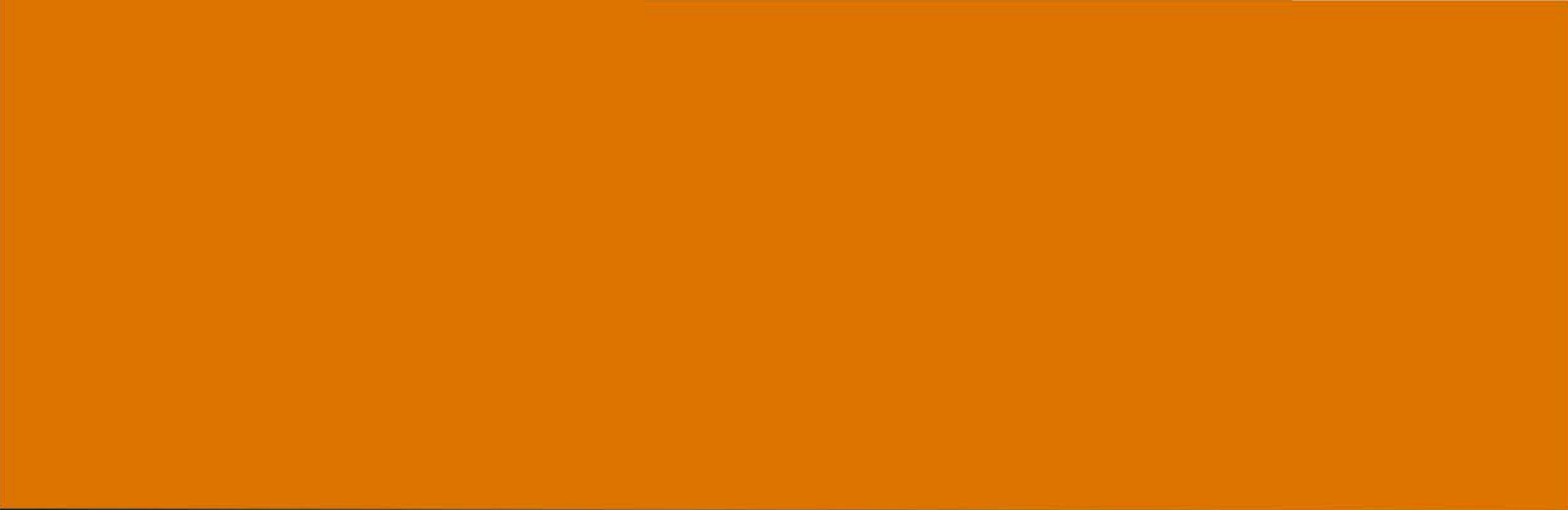


2,883 (36.8% of all MLC deficiencies); food and catering (area 10) 1,201 (15.6%); hours of work and rest (area 6) 815 (10.7%); accommodation (area 8) 751 (9.5%) and seafarer's employment agreements (area 4) 7498 (9.1%) deficiencies.

The percentage of deficiencies regarding working and living conditions, related to the total of deficiencies is 16.1%, an increase from 14.9% in 2015. The total number of deficiencies in 2016 was 6,755, an increase from 6,244 in 2015.

Management

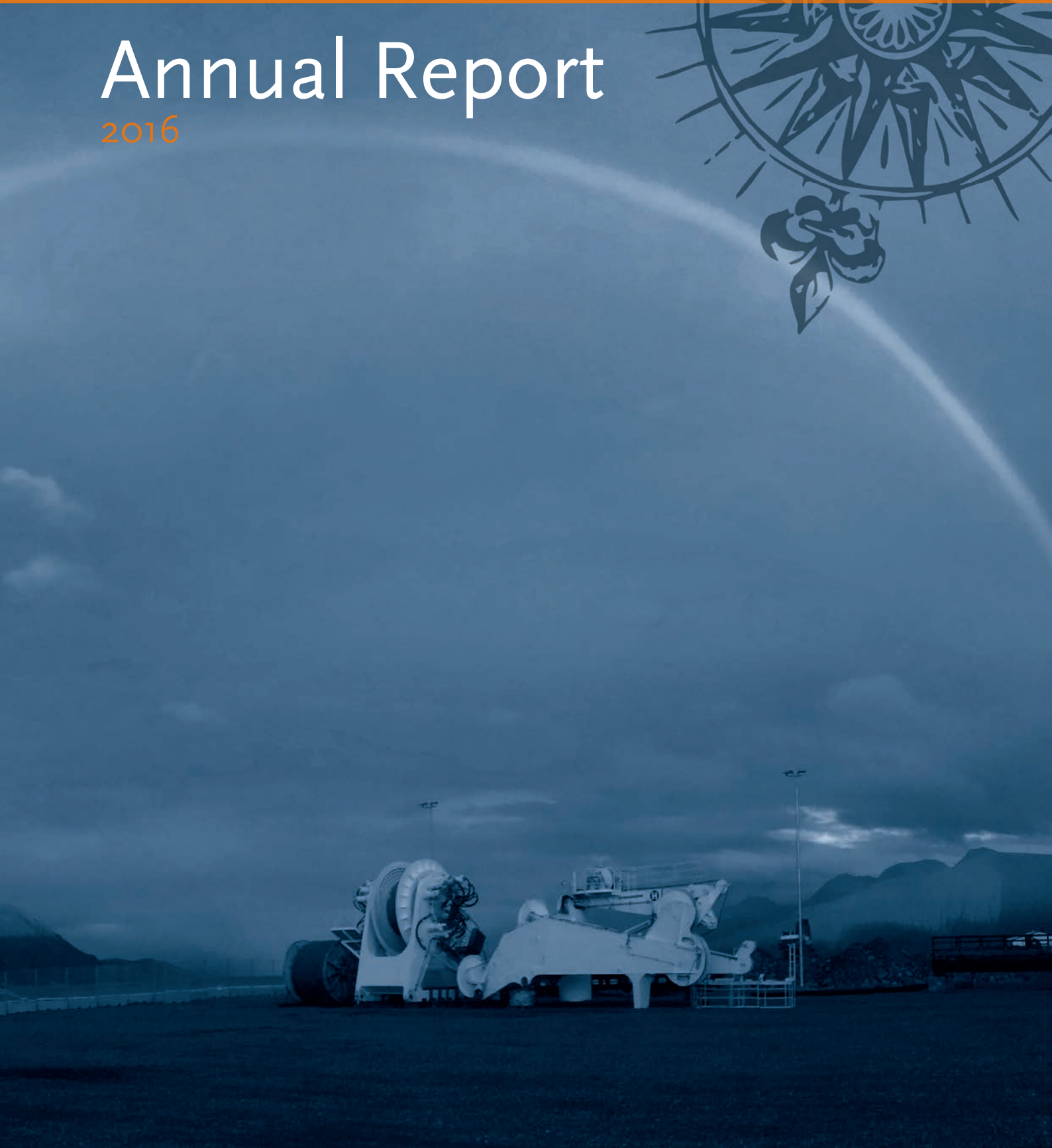
The number of ISM related deficiencies was similar in 2016 (1838) to 2015 (1809). The percentage regarding the total deficiencies remained similar as well 4.4% (2016) and 4.3% (2015).



Statistical Annexes

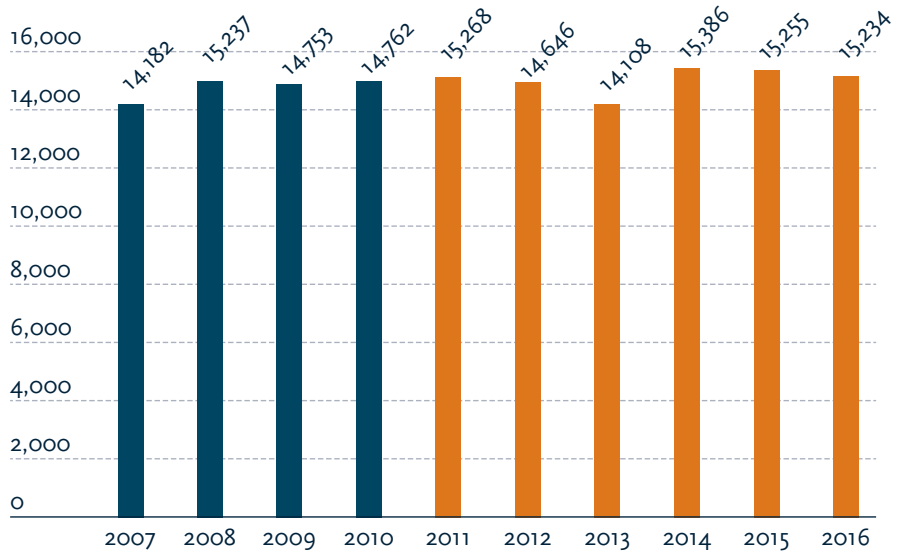
Annual Report

2016

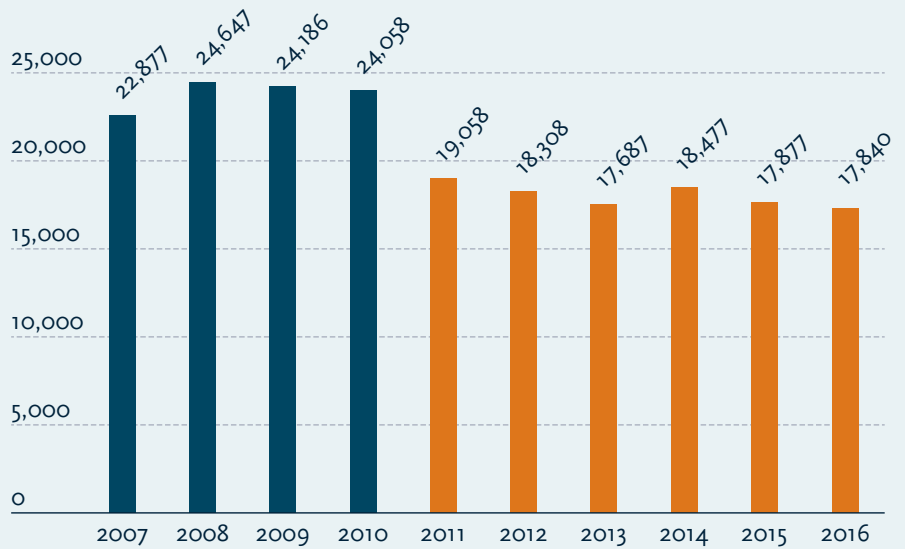


Basic port State control figures 2016

Number of individual ships inspected

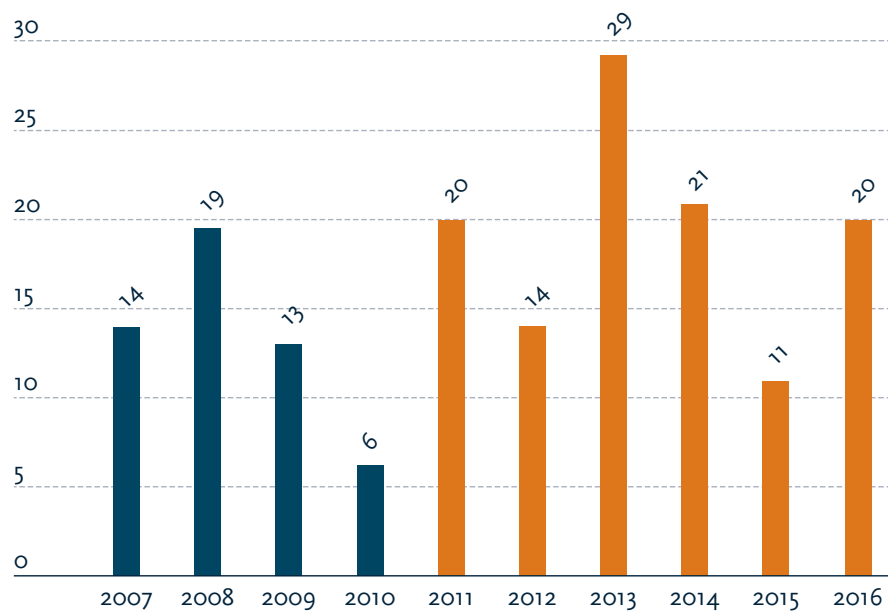


Number of inspections

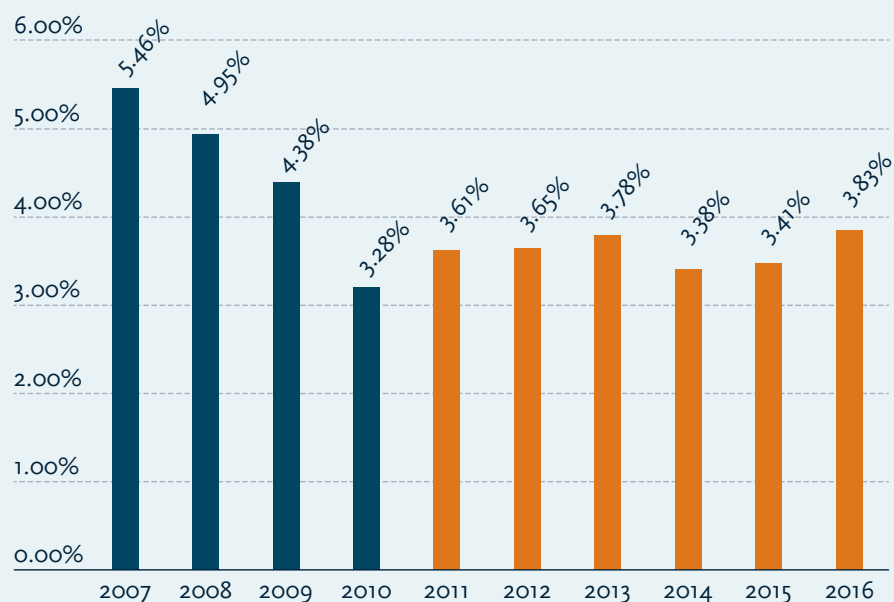


Note: The New Inspection Regime entered into force on the 1st of January 2011. Consequently the targeting of ships for inspection has changed; inspection figures from 2011 onwards should not be compared to the ones from 2010 and before.

Number of refusal of access

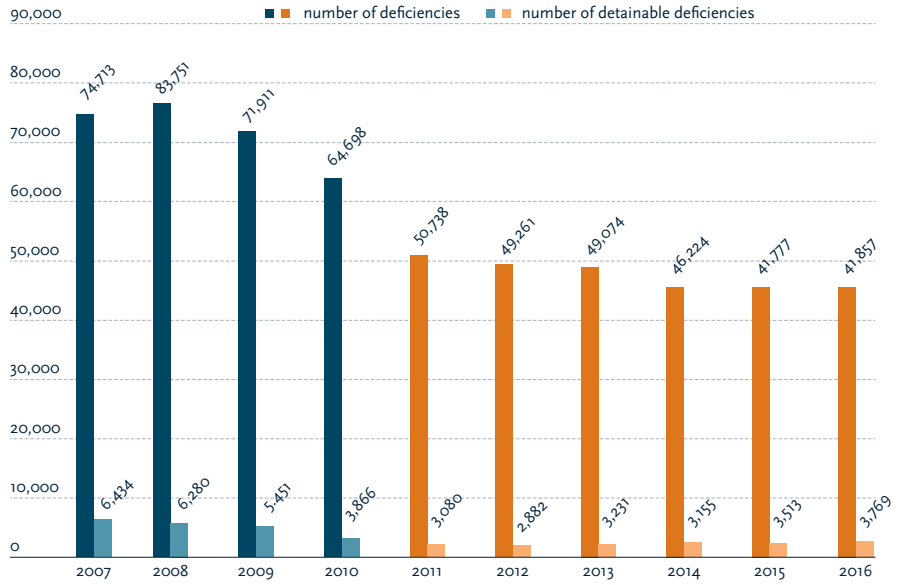


Detentions in % of inspections

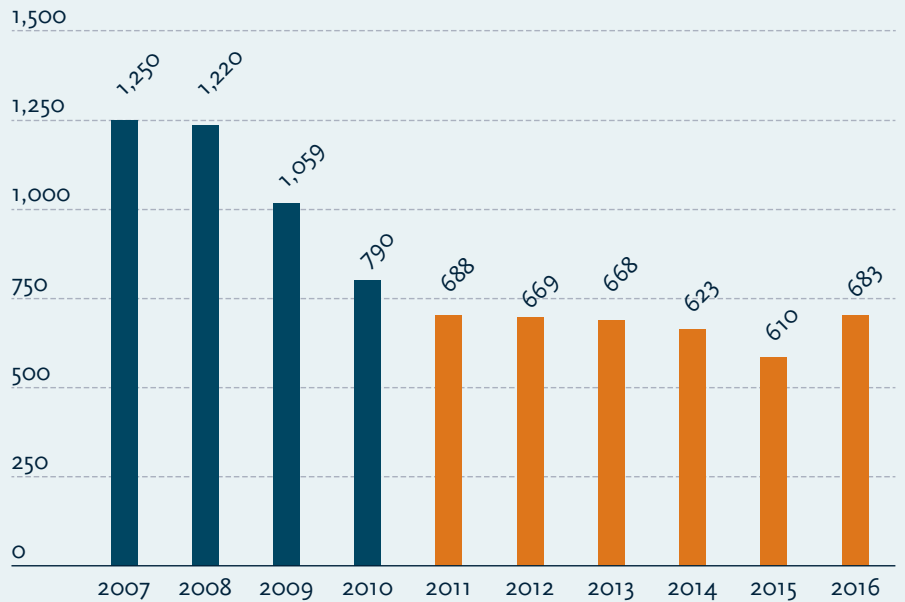


Note: The cut-off date for inspection data to be included in the Annual Report 2016 was 29-05-2017. Changes to inspection data after this date have as a rule not been taken into account. Due to PSC50 decision the Annual Report data will, from now on, include the current annual year and all amended data in previous years back to 3 calendar years.

Number of deficiencies and number of detainable deficiencies



Number of detentions







16_M

8
6
4

15_M

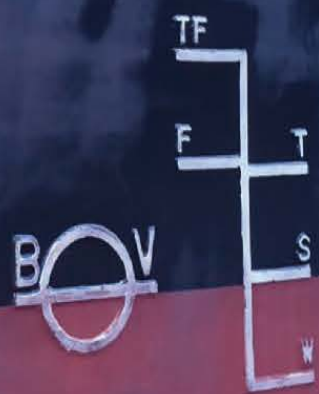
2
8
6
4

14_M

2
8
6
4

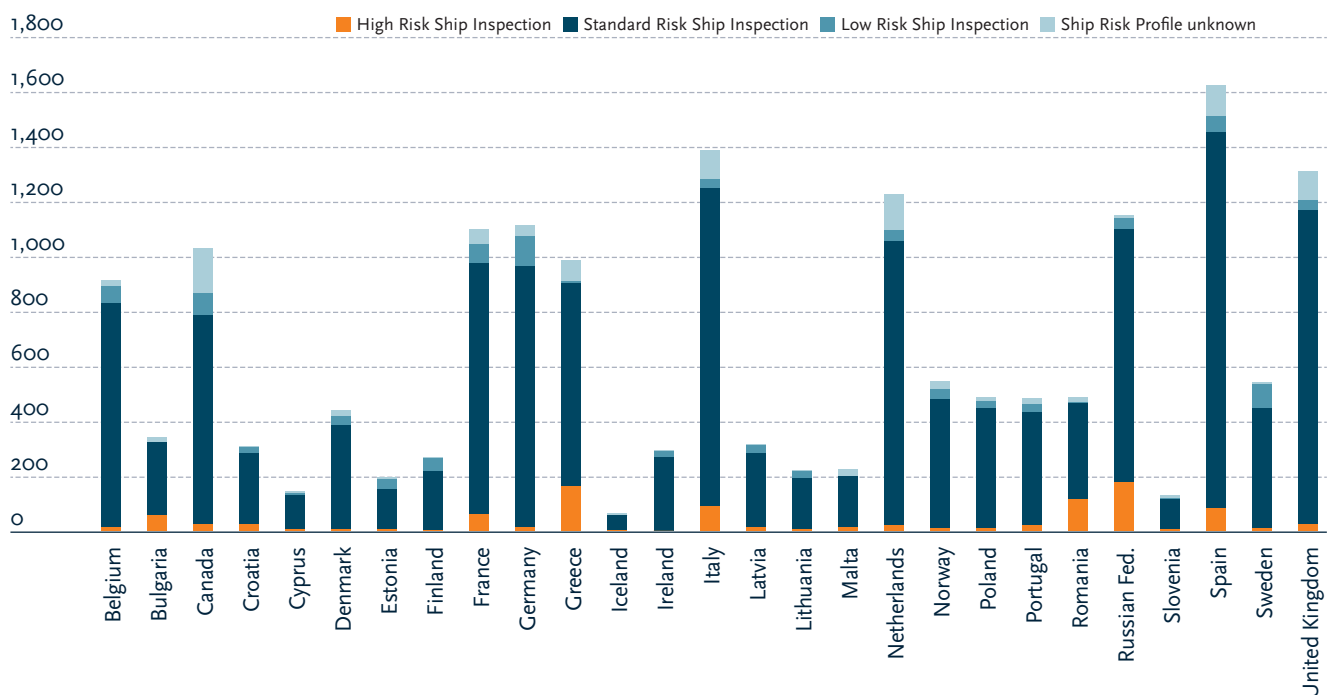
13_M

2
8
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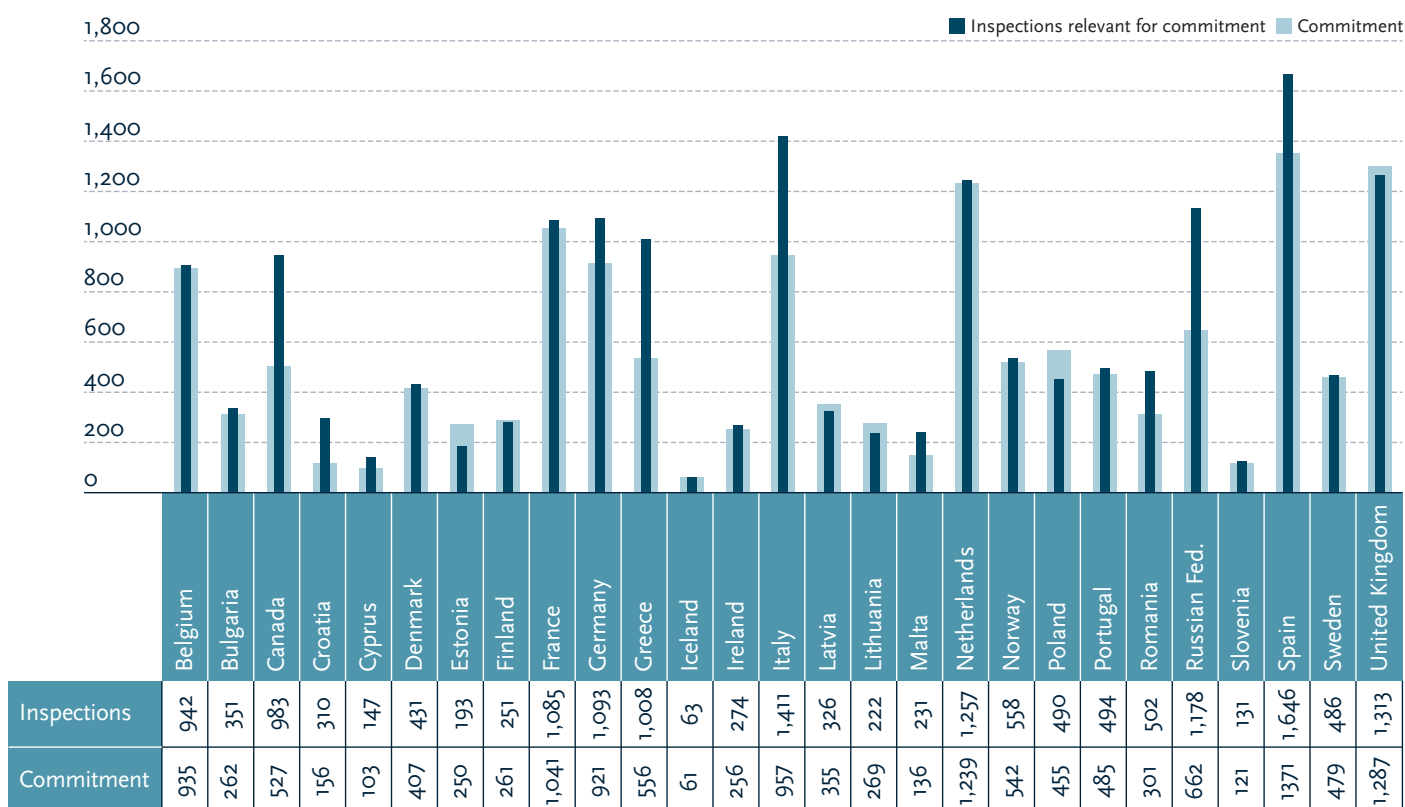


Inspection efforts 2016

HRS, SRS and LRS inspections per member state

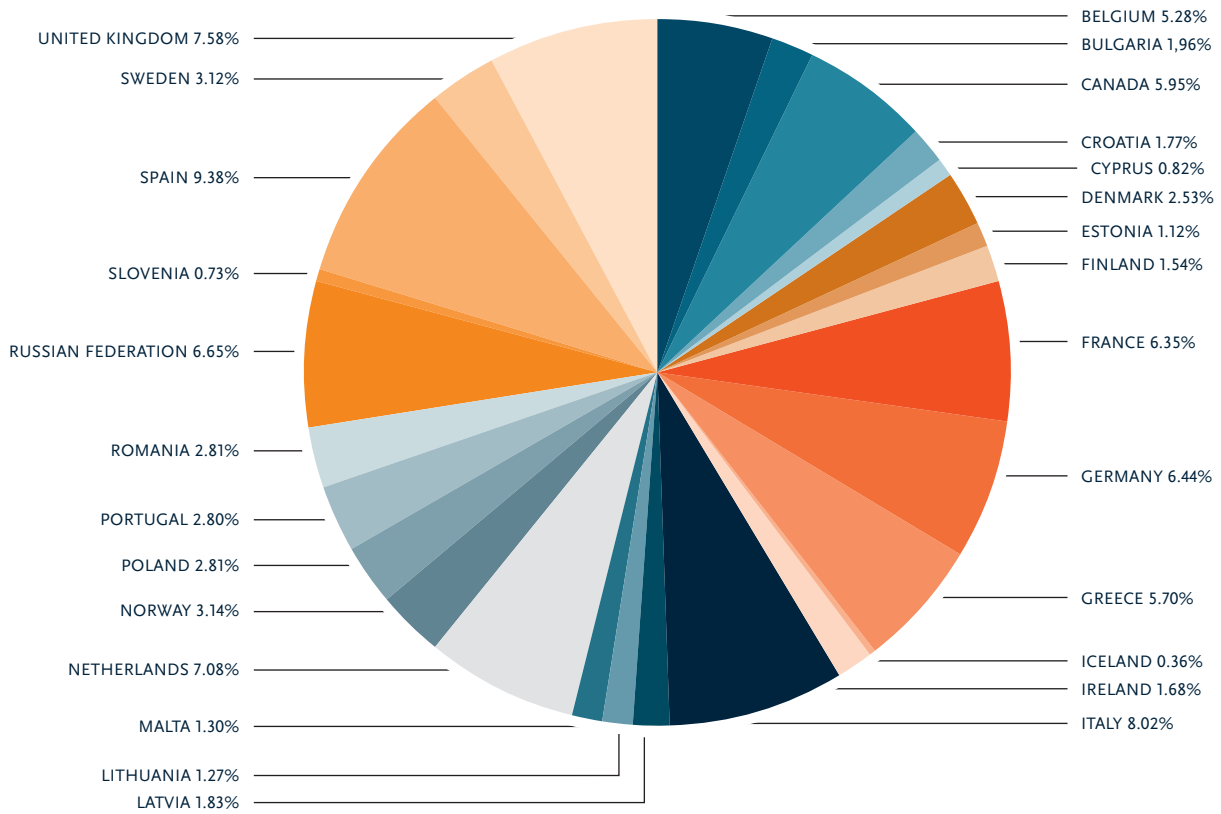


Commitment



Note: The number of inspections relevant for the commitment of MoU Port States differs from the total number of inspections used in other graphs and tables. See www.parismou.org/publications-category/annual-reports for explanatory notes.

Inspection efforts of members as percentage of Paris MoU Total





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

MoU port State	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	942	522	23	3	55.41	2.44	5.28	1.27	89.38	6.79	2.55
Bulgaria	350	228	14	2	65.14	4.00	1.96	16.29	78.29	0.57	4.86
Canada	1,061	533	16	2	50.24	1.51	5.95	2.17	73.99	8.01	15.83
Croatia	315	154	4	1	48.89	1.27	1.77	7.94	83.81	7.62	0.63
Cyprus	147	97	13	1	65.99	8.84	0.82	4.76	85.03	4.76	5.44
Denmark	452	149	2	0	32.96	0.44	2.53	1.11	86.73	7.08	5.09
Estonia	199	60	2	0	30.15	1.01	1.12	2.01	76.38	17.59	4.02
Finland	274	43	1	0	15.69	0.36	1.54	0.73	80.29	18.61	0.36
France	1,132	565	24	0	49.91	2.12	6.35	5.39	83.48	6.10	5.04
Germany	1,149	567	51	14	49.35	4.44	6.44	1.04	85.47	9.57	3.92
Greece	1,016	608	63	11	59.84	6.20	5.70	16.34	75.10	0.79	7.78
Iceland	65	30	0	0	46.15	0.00	0.36	3.08	83.08	0.00	13.85
Ireland	300	165	7	1	55.00	2.33	1.68	0.00	92.00	6.67	1.33
Italy	1,430	758	65	10	53.01	4.55	8.02	6.50	83.36	2.45	7.69
Latvia	326	56	2	0	17.18	0.61	1.83	3.68	85.58	8.59	2.15
Lithuania	226	111	2	0	49.12	0.88	1.27	3.10	83.63	11.50	1.77
Malta	232	90	5	2	38.79	2.16	1.30	6.47	81.03	1.29	11.21
Netherlands	1,263	695	34	3	55.03	2.69	7.08	1.50	84.56	3.48	10.45
Norway	560	198	7	1	35.36	1.25	3.14	1.79	86.43	6.61	5.18
Poland	501	352	21	1	70.26	4.19	2.81	1.80	89.82	5.79	2.59
Portugal	499	116	13	1	23.25	2.61	2.80	3.81	85.17	6.01	5.01
Romania	502	364	59	13	72.51	11.75	2.81	23.71	71.71	0.20	4.38
Russian Federation ¹	1,186	880	128	18	74.20	10.79	6.65	15.35	80.19	3.37	1.10
Slovenia	131	82	1	1	62.60	0.76	0.73	5.34	85.50	2.29	6.87
Spain	1,673	876	68	5	52.36	4.06	9.38	5.08	84.28	3.77	6.87
Sweden	556	148	8	0	26.62	1.44	3.12	1.80	81.12	16.19	0.90
United Kingdom	1,353	841	50	4	62.16	3.70	7.58	1.70	87.21	3.03	8.06
Total	17,840	9,288	683	94	52.06	3.83	100.00	5.53	83.03	5.48	5.96

¹ Only inspections in the Russian ports of the Baltic, Azov, Caspian and Barents Seas are included.

Current detentions as per 31-12-2016 per port State Authority since 2011

Excluded detentions Annual figures 2011-2016

Detaining Authority	Interval	
	< 12 Months	> 12 Months
Belgium	-	2
Bulgaria	-	1
Canada	-	3
Cyprus	-	1
France	-	1
Greece	2	2
Ireland	-	1
Italy	1	4
Malta	-	1
Netherlands	1	3
Spain	1	4
United Kingdom	2	-
Grand Total	7	23

Flag	< 12 Months	> 12 Months
Bolivia	-	2
Cambodia	-	1
Cook Islands	-	1
Curacao	-	1
Honduras	-	1
Indonesia	-	1
Malta	-	3
Moldova, Republic of	-	4
Panama	4	4
Russian Federation	-	1
Saint Vincent and the Grenadines	-	1
Togo	-	3
Turkey	1	-
India	1	-
Portugal	1	-
Grand Total	7	23

Full details on all currently detained ships in the Paris MoU region is available on the Paris MoU Website.



White list

RANK	FLAG	INSPECTIONS 2014-2016	DETENTIONS 2014-2016	BLACK TO GREY LIMIT	GREY TO WHITE LIMIT	EXCESS FACTOR
WHITE LIST						
1	Cayman Islands, UK	393	1	36	19	-1.91
2	France	266	0	26	11	-1.91
3	Denmark	1,201	9	99	69	-1.90
4	Netherlands	3,103	35	241	193	-1.84
5	Bahamas	2,291	27	181	140	-1.80
6	Italy	1,164	13	96	67	-1.75
7	Hong Kong, China	1,921	25	153	116	-1.73
8	Marshall Islands	3,704	54	285	233	-1.73
9	United Kingdom	1,260	15	104	73	-1.73
10	Norway	1,450	18	118	85	-1.73
11	Isle of Man, UK	747	8	64	40	-1.70
12	Sweden	331	2	31	15	-1.69
13	Singapore	1,816	26	146	109	-1.68
14	Belgium	219	1	22	9	-1.59
15	Germany	629	8	55	33	-1.58
16	Ireland	124	0	14	4	-1.45
17	Greece	917	18	77	51	-1.37
18	Finland	407	6	37	20	-1.36
19	Cyprus	1,965	47	157	118	-1.32
20	Luxembourg	213	2	22	8	-1.32
21	Bermuda, UK	241	3	24	10	-1.24
22	Gibraltar, UK	770	17	66	42	-1.23
23	Malta	4,586	135	350	292	-1.21
24	Liberia	4,170	128	320	264	-1.15
25	China	207	3	21	8	-1.04
26	Latvia	85	0	10	2	-0.96
27	Philippines	151	2	16	5	-0.87
28	Estonia	79	0	10	1	-0.86
29	Barbados	325	8	31	15	-0.84
30	Portugal	582	18	51	30	-0.80
31	Faroe Islands, DK	256	6	25	11	-0.77
32	Antigua and Barbuda	3,160	129	245	197	-0.76
33	Saudi Arabia	73	0	9	1	-0.75
34	Kazakhstan	72	0	9	1	-0.73
35	Japan	94	1	11	2	-0.54
36	United States of America	194	5	20	7	-0.50
37	Panama	6,082	313	459	393	-0.45
38	Iran, Islamic Republic of	89	1	11	2	-0.44
39	Russian Federation	1,258	61	103	73	-0.34
40	Croatia	108	2	12	3	-0.31
41	Spain	173	5	18	6	-0.28
42	Turkey	1,237	65	102	71	-0.19



Grey list

RANK	FLAG	INSPECTIONS 2014-2016	DETENTIONS 2014-2016	BLACK TO GREY LIMIT	GREY TO WHITE LIMIT	EXCESS FACTOR
GREY LIST						
43	Korea, Republic of	90	2	11	2	0.02
44	Poland	123	4	14	3	0.05
45	Kuwait	36	0	6	0	0.08
46	Lithuania	137	6	15	4	0.17
47	Switzerland	126	6	14	4	0.23
48	Libya	33	1	5	0	0.27
49	Morocco	43	2	6	0	0.34
50	Algeria	74	4	9	1	0.36
51	Thailand	72	4	9	1	0.37
52	India	71	4	9	1	0.38
53	Azerbaijan	31	2	5	0	0.47
54	Egypt	52	4	7	0	0.55
55	Bulgaria	38	3	6	0	0.56
56	Curacao	149	12	16	5	0.64
57	Albania	68	6	9	1	0.66
58	Saint Vincent and the Grenadines	647	50	56	34	0.71
59	Tunisia	41	5	6	0	0.83
60	Lebanon	74	8	9	1	0.84
61	Ukraine	129	14	14	4	0.97



Black list

RANK	FLAG	INSPECTIONS 2014-2016	DETENTIONS 2014-2016	BLACK TO GREY LIMIT	GREY TO WHITE LIMIT	EXCESS FACTOR	RISK
BLACK LIST							
62	Belize	488	47	44	24	1.19	Medium Risk
63	Cook Islands	404	40	37	19	1.20	
64	Vanuatu	277	31	27	12	1.43	
65	Saint Kitts and Nevis	299	34	29	13	1.52	
66	Cambodia	293	36	28	13	1.78	
67	Sierra Leone	260	39	25	11	2.52	Medium to High Risk
68	Palau	123	23	14	3	3.09	High Risk
69	Comoros	228	40	23	9	3.20	
70	Moldova, Republic of	515	85	46	26	3.30	
71	Togo	399	70	37	19	3.51	
72	Tanzania United Rep.	211	40	21	8	3.57	
73	Congo, Republic of the	86	24	10	2	5.40	Very High Risk

Flags meeting criteria for Low Risk Ships 2016

Flags meeting criteria for Low Risk Ships (as per 31 December 2016)		
Antigua and Barbuda	Germany	Marshall Islands
Bahamas	Gibraltar, UK	Netherlands
Belgium	Greece	Norway
Bermuda, UK	Hong Kong, China	Panama
Cayman Islands, UK	Ireland	Portugal
China	Isle of Man, UK	Russian Federation
Croatia	Italy	Singapore
Cyprus	Japan	Spain
Denmark	Korea, Republic of	Sweden
Estonia	Latvia	Turkey
Faroe Islands, DK	Liberia	United Kingdom
Finland	Luxembourg	United States of America
France	Malta	

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 (V)IMSAS Audit.

Non listed flags having undergone IMO VIMSAS Audit		
Australia	Canada	Georgia
Slovenia		

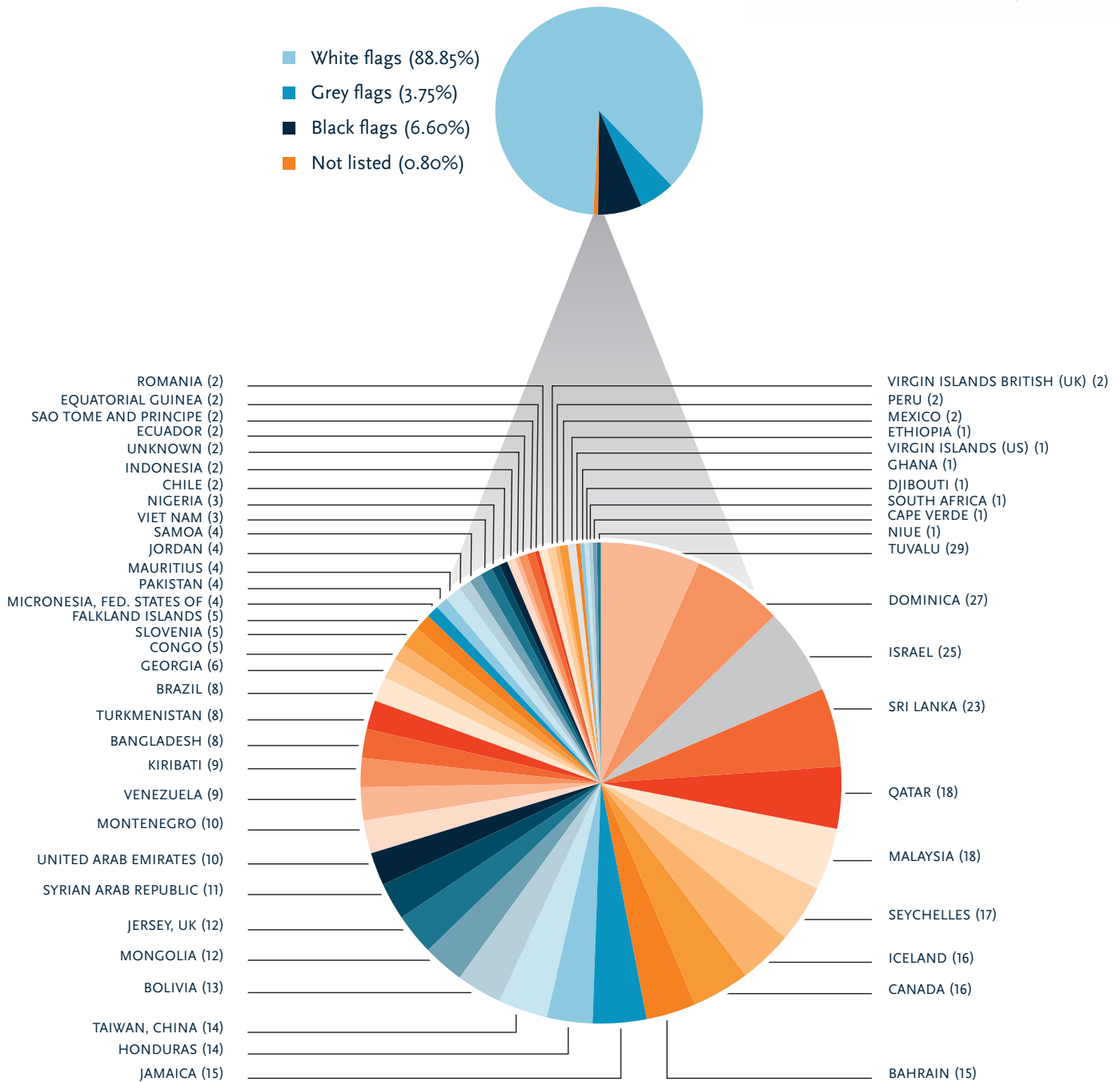
Flags who's total number of inspections over a 3-years rolling period do not meet the minimum of 30 are not included in the Paris MoU White list. Consequently some flags cannot meet the criteria for their ships to qualify as Low Risk Ships under the Paris MoU, despite having undergone the IMO VIMSAS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

Non listed flags with no detentions 2014-2016*			
Brazil (8)	Jamaica (15)	Pakistan (4)	South Africa (1)
Canada (16)	Jersey, UK (12)	Peru (2)	Taiwan, China (14)
Chile (2)	Mauritius (4)	Qatar (18)	Turkmenistan (8)
Equatorial Guinea (2)	Mexico (2)	Romania (2)	United Arab Emirates (10)
Ethiopia (1)	Micronesia, Fed. States of (4)	Samoa (4)	Venezuela (9)
Falkland Islands (5)	Montenegro (10)	Seychelles (17)	Virgin Islands British (UK) (2)
Georgia (6)	Niue (1)	Slovenia (5)	

Flags who's total number of inspections over a 3-years rolling period do 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 mentioned period.

* Note: The flags are listed in alphabetical order. The number of inspections over the mentioned period 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 2014-2016



Inspections, detentions and deficiencies 2016

Flag	Nr of Inspections	Inspections with deficiencies	Inspections with detentions	Nr of detainable deficiencies	% of Inspections with deficiencies	% of Inspections with detentions
Albania	23	20	2	12	87.0	8.7
Algeria	30	24	1	2	80.0	3.3
Antigua and Barbuda	950	544	31	148	57.3	3.3
Azerbaijan	17	15	1	5	88.2	5.9
Bahamas	759	370	8	48	48.7	1.1
Bahrain	7	5	2	13	71.4	28.6
Bangladesh	3	1	-	-	33.3	-
Barbados	105	46	2	10	43.8	1.9
Belgium	77	40	1	5	51.9	1.3
Belize	137	120	12	78	87.6	8.8
Bermuda (UK)	93	33	2	10	35.5	2.2
Bolivia	7	7	5	66	100.0	71.4
Brazil	6	2	-	-	33.3	-
Bulgaria	10	10	1	7	100.0	10.0
Cambodia	44	44	11	58	100.0	25.0
Canada	8	3	-	-	37.5	-
Cayman Islands (UK)	141	69	-	-	48.9	-
Chile	1	1	-	-	100.0	-
China	56	17	1	9	30.4	1.8
Comoros	99	94	20	121	94.9	20.2
Congo	4	4	1	5	100.0	25.0
Congo, the Democratic Republic of the	80	77	22	128	96.3	27.5
Cook Islands	158	129	16	79	81.6	10.1
Croatia	33	11	1	1	33.3	3.0
Curacao	38	16	1	1	42.1	2.6
Cyprus	606	315	11	54	52.0	1.8
Denmark	401	139	4	23	34.7	1.0
Djibouti	1	1	1	7	100.0	100.0
Dominica	9	4	-	-	44.4	-
Egypt	16	13	-	-	81.3	-
Estonia	32	7	-	-	21.9	-
Falkland Islands (UK) (Malvinas)	2	-	-	-	-	-
Faroe Islands	75	41	3	4	54.7	4.0
Finland	136	47	4	23	34.6	2.9
France	86	41	-	-	47.7	-
Georgia	2	2	-	-	100.0	-
Germany	182	78	4	27	42.9	2.2
Gibraltar (UK)	238	105	5	21	44.1	2.1
Greece	304	120	8	50	39.5	2.6

Flag	Nr of Inspections	Inspections with deficiencies	Inspections with detentions	Nr of detainable deficiencies	% of Inspections with deficiencies	% of Inspections with detentions
Honduras	4	4	-	-	100.0	-
Hong Kong, China	652	308	11	62	47.2	1.7
Iceland	7	6	1	7	85.7	14.3
India	26	13	2	7	50.0	7.7
Iran, Islamic Republic of	37	31	1	1	83.8	2.7
Ireland	40	20	-	-	50.0	-
Isle of Man (UK)	235	89	-	-	37.9	-
Israel	12	8	1	5	66.7	8.3
Italy	357	166	6	41	46.5	1.7
Jamaica	5	3	-	-	60.0	-
Japan	43	15	-	-	34.9	-
Jersey (UK)	5	2	-	-	40.0	-
Jordan	1	1	-	-	100.0	-
Kazakhstan	25	12	-	-	48.0	-
Korea, Republic of	26	11	1	8	42.3	3.8
Kuwait	8	-	-	-	-	-
Latvia	38	19	-	-	50.0	-
Lebanon	31	29	4	25	93.5	12.9
Liberia	1,390	638	43	208	45.9	3.1
Libya	12	6	-	-	50.0	-
Lithuania	38	14	-	-	36.8	-
Luxembourg	67	28	-	-	41.8	-
Malaysia	3	1	-	-	33.3	-
Malta	1,534	761	37	138	49.6	2.4
Marshall Islands	1,335	567	22	91	42.5	1.6
Mauritius	1	1	-	-	100.0	-
Micronesia, Federated States of	4	4	-	-	100.0	-
Moldova, Republic of	159	153	32	209	96.2	20.1
Mongolia	10	10	3	19	100.0	30.0
Montenegro	3	2	-	-	66.7	-
Morocco	21	19	2	10	90.5	9.5
Netherlands	991	454	11	22	45.8	1.1
Niue	1	1	-	-	100.0	-
Norway	465	204	7	31	43.9	1.5
Pakistan	1	1	-	-	100.0	-
Palau	52	50	15	90	96.2	28.8
Panama	1,992	1,133	110	649	56.9	5.5
Philippines	51	29	2	8	56.9	3.9
Poland	29	15	1	8	51.7	3.4

Flag	Nr of Inspections	Inspections with deficiencies	Inspections with detentions	Nr of detainable deficiencies	% of Inspections with deficiencies	% of Inspections with detentions
Portugal	262	130	8	47	49.6	3.1
Qatar	8	3	-	-	37.5	-
Romania	1	1	-	-	100.0	-
Russian Federation	410	246	19	132	60.0	4.6
Saint Kitts and Nevis	103	88	15	56	85.4	14.6
Saint Vincent and the Grenadines	189	115	8	43	60.8	4.2
Saudi Arabia	22	5	-	-	22.7	-
Seychelles	6	-	-	-	-	-
Sierra Leone	95	92	21	156	96.8	22.1
Singapore	607	259	9	28	42.7	1.5
Slovenia	2	-	-	-	-	-
South Africa	1	-	-	-	-	-
Spain	48	20	1	6	41.7	2.1
Sri Lanka	9	6	1	7	66.7	11.1
Sweden	101	38	2	2	37.6	2.0
Switzerland	46	30	3	9	65.2	6.5
Syrian Arab Republic	1	-	-	-	-	-
Taiwan, Province of China	2	-	-	-	-	-
Tanzania, United Republic of	65	62	16	125	95.4	24.6
Thailand	16	9	-	-	56.3	-
Togo	146	141	35	227	96.6	24.0
Tunisia	15	13	1	7	86.7	6.7
Turkey	415	289	21	95	69.6	5.1
Turkmenistan	3	2	-	-	66.7	-
Tuvalu	10	7	1	15	70.0	10.0
Ukraine	27	25	6	31	92.6	22.2
United Arab Emirates	2	2	-	-	100.0	-
United Kingdom	395	161	9	32	40.8	2.3
United States	65	39	2	22	60.0	3.1
Vanuatu	75	57	12	75	76.0	16.0
Venezuela	4	3	-	-	75.0	-
Virgin Islands British (UK)	2	2	-	-	100.0	-
Grand Total	17,840	9,288	683	3,769	52.06	3.83



R-401A
R-22
R-134A

R-401A

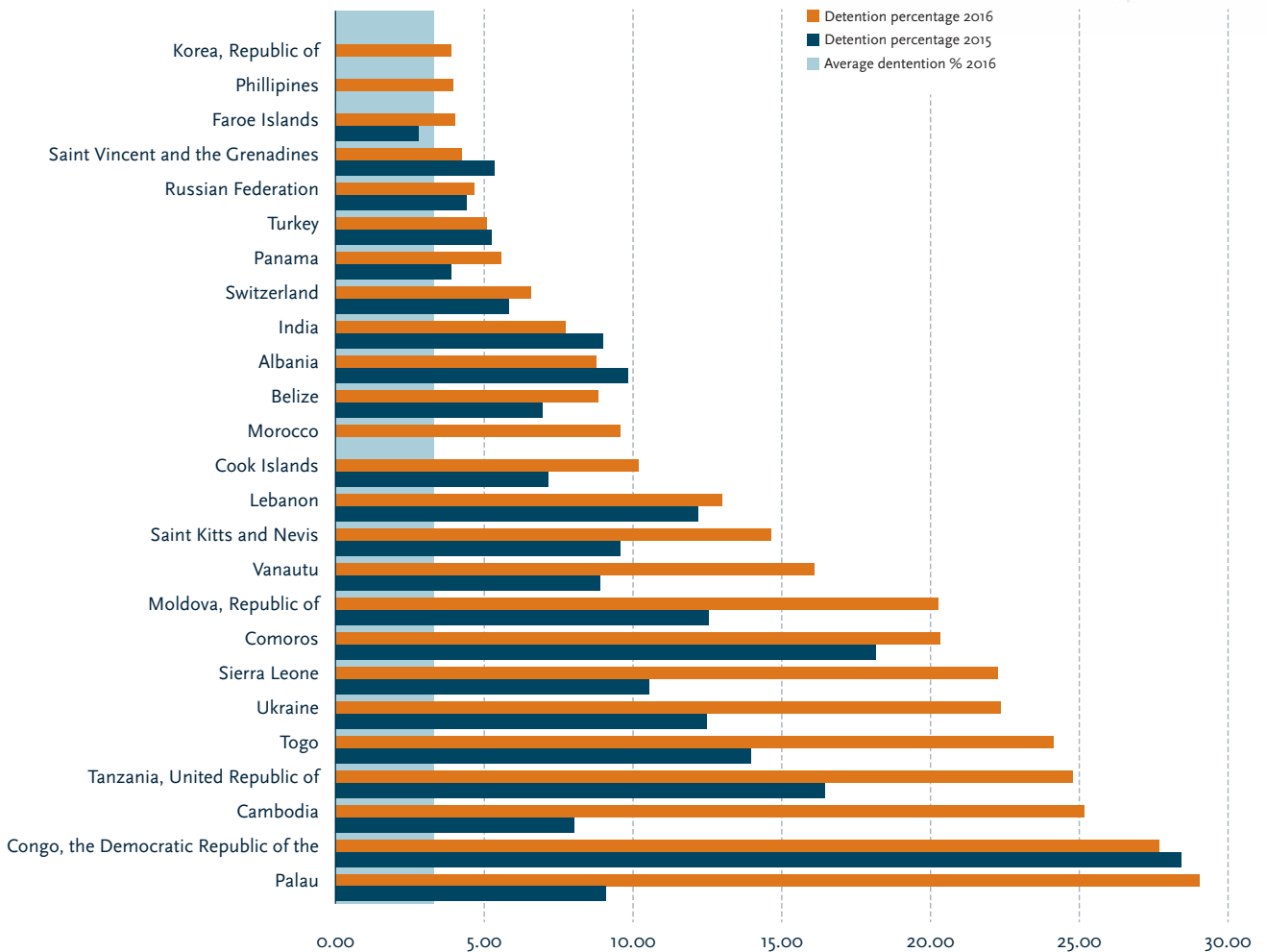
THE REFRIGERATION SYSTEM IN THIS UNIT HAS BEEN CONVERTED TO R-401A (DUPONT MP 391) DO NOT MIX WITH R-12

2016 detentions per flag, exceeding average percentage

Flag	Nr of Inspections	Inspections with detentions	% of Inspections with detentions	Excess of average 2016	Detentions % 2015	Excess of average 2015
Palau	52	15	28.8	25.0	10.6	7.2
Congo. the Democratic Republic of the	80	22	27.5	23.7	33.3	29.9
Cambodia	44	11	25.0	21.2	9.4	6.0
Tanzania. United Republic of	65	16	24.6	20.8	19.3	15.9
Togo	146	35	24.0	20.1	16.4	13.0
Ukraine	27	6	22.2	18.4	14.6	11.2
Sierra Leone	95	21	22.1	18.3	12.3	8.9
Comoros	99	20	20.2	16.4	21.3	17.9
Moldova. Republic of	159	32	20.1	16.3	14.7	11.3
Vanuatu	75	12	16.0	12.2	10.4	7.0
Saint Kitts and Nevis	103	15	14.6	10.7	11.2	7.8
Lebanon	31	4	12.9	9.1	14.3	10.9
Cook Islands	158	16	10.1	6.3	8.4	5.0
Morocco	21	2	9.5	5.7	-	-3.4
Belize	137	12	8.8	4.9	8.2	4.8
Albania	23	2	8.7	4.9	11.5	8.1
India	26	2	7.7	3.9	10.5	7.1
Switzerland	46	3	6.5	2.7	6.8	3.4
Panama	1,992	110	5.5	1.7	4.6	1.2
Turkey	415	21	5.1	1.2	6.1	2.7
Russian Federation	410	19	4.6	0.8	5.2	1.8
Saint Vincent and the Grenadines	189	8	4.2	0.4	6.3	2.9
Faroe Islands	75	3	4.0	0.2	3.3	-0.2
Philippines	51	2	3.9	0.1	-	-3.4
Korea. Republic of	26	1	3.8	0.0	-	-3.4

Only flags with 20 and more port State control inspections in 2016 and with a detention percentage exceeding the average percentage of 3.83% are recorded in this graph (last year the average was 3.41%).

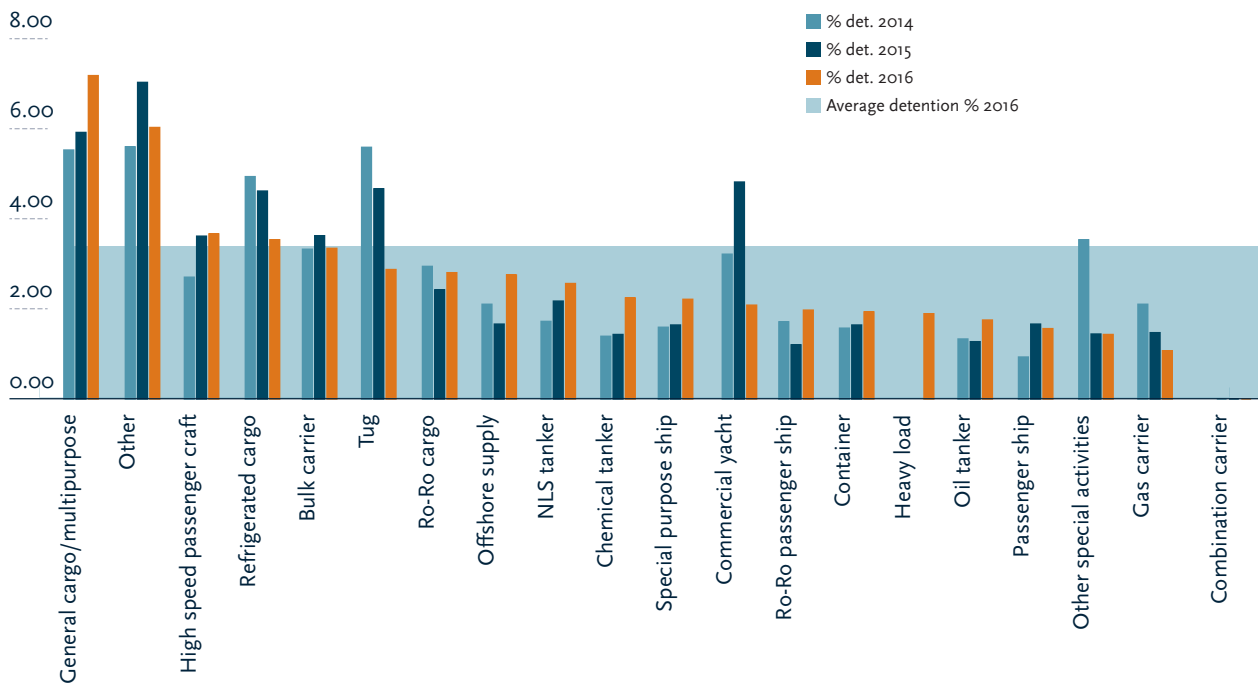
2016 detentions per flag, exceeding average percentage



- Only flags with 20 and more port State control inspections in 2016 and with a detention percentage exceeding the average percentage of 3.83% are recorded in this graph. In 2015 the average detentions percentage was 3.41%.
- The grey column represents the 2016 average detention percentage (3.83%).

Inspections and detentions 2016 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 2016	% of detentions to inspections 2015	% of detentions to inspections 2014	+ / - average detention 2016
Bulk carrier	3,619	1,934	53.4	3,301	121	3.3	3.6	3.3	-0.5
Chemical tanker	1,607	721	44.9	1,399	36	2.2	1.4	1.4	-1.6
Combination carrier	9	3	33.3	9	-	0.0	0.0	0.0	-3.8
Commercial yacht	240	122	50.8	237	5	2.1	4.8	3.2	-1.7
Container	1,814	791	43.6	1,603	35	1.9	1.6	1.6	-1.9
Gas carrier	469	191	40.7	434	5	1.1	1.5	2.1	-2.8
General cargo/multipurpose	5,048	3,243	64.2	3,875	362	7.2	5.9	5.5	3.3
Heavy load	53	18	34.0	50	1	1.9	0.0	0.0	-1.9
High speed passenger craft	82	51	62.2	47	3	3.7	3.6	2.7	-0.2
NLS tanker	39	14	35.9	36	1	2.6	2.2	1.7	-1.3
Offshore supply	473	241	51.0	451	13	2.7	1.7	2.1	-1.1
Oil tanker	1,368	468	34.2	1,278	24	1.8	1.3	1.3	-2.1
Other	216	152	70.4	185	13	6.0	7.0	5.6	2.2
Other special activities	561	250	44.6	542	8	1.4	1.4	3.5	-2.4
Passenger ship	321	169	52.6	256	5	1.6	1.7	0.9	-2.3
Refrigerated cargo	283	189	66.8	237	10	3.5	4.6	4.9	-0.3
Ro-Ro cargo	751	278	37.0	677	21	2.8	2.4	2.9	-1.0
Ro-Ro passenger ship	507	270	53.3	278	10	2.0	1.2	1.7	-1.9
Special purpose ship	136	59	43.4	129	3	2.2	1.6	1.6	-1.6
Tug	244	124	50.8	235	7	2.9	4.7	5.6	-1.0



Major categories of deficiencies 2014-2016

Deficiencies Main Group	Category of deficiencies	2014		2015		2016	
		Def	Def %	Def	Def %	Def	Def %
Certificates & Documentation	Crew Certificates	1,557	3.4	1,286	3.1	1,575	3.8
	Documents	3,507	7.6	2,614	6.3	2,871	6.9
	Ship Certificates	2,688	5.8	2,395	5.7	2,333	5.6
Structural Condition		1,920	4.2	1,920	4.6	1,821	4.4
Water/Weathertight condition		2,020	4.4	1,916	4.6	2,037	4.9
Emergency Systems		2,101	4.5	2,504	6.0	2,167	5.2
Radio Communication		1,242	2.7	1,015	2.4	976	2.3
Cargo operations including equipment		234	0.5	208	0.5	220	0.5
Fire safety		6,192	13.4	5,585	13.4	5,390	12.9
Alarms		394	0.9	391	0.9	332	0.8
Working and Living Conditions (ILO 147)**	Living Conditions	761	1.6	198	0.5	193	0.5
	Working conditions	2,198	4.8	967	2.3	781	1.9
Working and Living Conditions (MLC, 2006)*	MLC, 2006 Title 1	58	0.1	62	0.1	121	0.3
	MLC, 2006 Title 2	330	0.7	402	1.0	548	1.3
	MLC, 2006 Title 3	1,367	3.0	1,779	4.3	2,045	4.9
	MLC, 2006 Title 4	2,235	4.8	2,836	6.8	3,067	7.3
Safety of Navigation		6,217	13.4	5,179	12.4	5,220	12.5
Life saving appliances		4,034	8.7	3,727	8.9	3,623	8.7
Dangerous goods		107	0.2	69	0.2	62	0.1
Propulsion and auxiliary machinery		2,246	4.9	2,042	4.9	1,994	4.8
Pollution prevention	Anti Fouling	17	0.0	10	0.0	13	0.0
	Marpol Annex I	875	1.9	810	1.9	708	1.7
	Marpol Annex II	27	0.1	16	0.0	16	0.0
	Marpol Annex III	4	0.0	5	0.0	4	0.0
	Marpol Annex IV	346	0.7	338	0.8	336	0.8
	Marpol Annex V	598	1.3	609	1.5	551	1.3
	Marpol Annex VI	459	1.0	471	1.1	428	1.0
ISM		1,813	3.9	1,809	4.3	1,838	4.4
ISPS		338	0.7	339	0.8	378	0.9
Other		339	0.7	275	0.7	209	0.5

* On 20 August 2013 the Maritime Labour Convention 2006 entered into force. Only Member States of the Paris MoU that had ratified the MLC,2006 on or before 20 August 2012 were entitled to conduct PSC inspections on MLC,2006 requirements from 20 August 2013.

** For Member States of the Paris MoU that have not ratified the MLC,2006, enforcement of the Merchant Shipping Convention (ILO 147) and the protocol of 1996 to the Merchant Shipping Convention (ILO P147) will initially continue.

Top 5 categories of deficiencies 2016

Category of deficiencies	2015		2016	
	Deficiencies	% Deficiencies	Deficiencies	% Deficiencies
Fire safety	5,585	13.37%	5,390	12.88%
Safety of Navigation	5,179	12.40%	5,220	12.47%
Life saving appliances	3,727	8.92%	3,623	8.66%
Labour conditions-Health protection, medical care, social security	2,836	6.79%	3,067	7.33%
Certificate & Documentation-Documents	2,614	6.26%	2,871	6.86%

Top 5 deficiencies 2016

Deficiencies	2015		2016	
	Deficiencies	% Deficiencies	Deficiencies	% Deficiencies
ISM	1,809	4.33%	1,838	4.39%
Fire doors/openings in fire-resisting divisions	1,047	2.51%	1,078	2.58%
Nautical publications	1,020	2.44%	1,049	2.51%
Charts	999	2.39%	922	2.20%
Oil record book	647	1.55%	706	1.69%



Maritime Labour Convention, 2006

MLC Deficiencies per Area	Nr MLC Deficiencies	% of Total of Nr. MLC deficiencies	Nr Detainable MLC Deficiencies	% of Detainable deficiencies of MLC deficiencies
MLC,2006 Ship's certificates and documents	183	2.4%	14	7.7%
Area 1 Minimum age of seafarers	2	0.0%	1	50.0%
Area 2 Medical certification of seafarers	205	2.7%	15	7.3%
Area 3 Qualifications of seafarers	34	0.5%	4	11.8%
Area 4 Seafarers' employment agreements	748	9.1%	56	7.5%
Area 5 Use of any licensed or certified or regulated private recruitment and placement service for seafarers	44	0.6%	0	0.0%
Area 6 Hours of Works or rest	815	10.7%	23	2.8%
Area 7 Manning levels for the ship	89	1.1%	20	22.5%
Area 8 Accommodation	751	9.5%	41	5.5%
Area 9 On-board recreational facilities	21	0.3%	1	4.8%
Area 10 Food and catering	1,201	15.6%	58	4.8%
Area 11 Health and safety and accident prevention	2,883	36.8%	101	3.5%
Area 12 on-board medical care	266	3.5%	14	5.3%
Area 13 On-board complaint procedure	294	3.9%	26	8.8%
Area 14 Payment of wages	268	3.4%	91	34.0%
Grand Total	7,804	100.00%	465	6.0%

MLC deficiencies top 5

Deficiencies	2015		2016	
	Detainable deficiencies	Total % Deficiencies	Detainable deficiencies	Total % Deficiencies
Seafarers' employment agreement (SEA)	298	4.6%	623	8.0%
Records of seafarers' daily hours of work or rest	360	5.5%	415	5.3%
Electrical	335	5.1%	361	4.6%
Cleanliness of engine room	247	3.8%	317	4.1%
Sanitary Facilities	221	3.4%	274	3.5%

MLC detainable deficiencies top 5

Deficiencies	2015		2016	
	Detainable deficiencies	Total % detainable deficiencies	Detainable deficiencies	Total % detainable deficiencies
Wages	46	11.8%	61	13.1%
Seafarers' employment agreement (SEA)	35	9.0%	56	12.0%
Calculation and payment of wages	13	3.3%	30	6.5%
Procedure for complaint under MLC,2006	4	1.0%	26	5.6%
Cleanliness of engine room	33	8.5%	24	5.2%



Detentions of ships with RO related detainable deficiencies per Recognized Organization 2016

(CASES IN WHICH 10 OR MORE INSPECTIONS ARE INVOLVED)

Recognized Organization	Abbr	Total number of inspections	Number of individual ships inspected*	Total number of detentions**	Detention % of total number of Inspections	+/- Percentage of Average (0.39)	Detention % of individual ships	+/- Percentage of Average Indiv. (0.45)
American Bureau of Shipping	ABS	1,899	1,781	-	-	-0.39	-	-0.45
ASIA Classification Society	ASIA	12	12	-	-	-0.39	-	-0.45
Bulgarian Register of Shipping	BRS	87	55	3	3.45	3.06	5.45	5.00
Bureau Veritas	BV	3,784	3,178	5	0.13	-0.26	0.16	-0.30
China Classification Society	CCS	271	263	-	-	-0.39	-	-0.45
Columbus American Register	COLAMREG	25	18	2	8.00	7.61	11.11	10.66
Croatian Register of Shipping	CRS	49	39	-	-	-0.39	-	-0.45
DNV GL AS	DNVGL	5,604	4,915	8	0.14	-0.25	0.16	-0.29
Dromon Bureau of Shipping	DBS	158	115	5	3.16	2.77	4.35	3.89
Hellenic Register of Shipping	HRS	11	9	-	-	-0.39	-	-0.45
Indian Register of Shipping	IRS	38	28	-	-	-0.39	-	-0.45
Intermaritime Certification Services, ICS Class	ICS	42	33	-	-	-0.39	-	-0.45
International Naval Surveys Bureau	INSB	192	142	-	-	-0.39	-	-0.45
International Register of Shipping	IS	99	65	3	3.03	2.64	4.62	4.16
Iranian Classification Society	IRCS	17	16	-	-	-0.39	-	-0.45
Isthmus Bureau of Shipping, S.A.	IBS	42	35	1	2.38	1.99	2.86	2.40
Korean Register of Shipping	KRS	372	350	1	0.27	-0.12	0.29	-0.17
Lloyd's Register	LR	4,181	3,684	2	0.05	-0.34	0.05	-0.40
Macosnar Corporation	MC	36	24	-	-	-0.39	-	-0.45
Maritime Bureau of Shipping	MBS	35	22	1	2.86	2.47	4.55	4.09
Maritime Lloyd	ML	45	27	1	2.22	1.83	3.70	3.25
Mediterranean Shipping Register	MSR	27	13	2	7.41	7.02	15.38	14.93
National Shipping Adjuster Inc.	NASHA	57	40	4	7.02	6.63	10.00	9.55
Nippon Kaiji Kyokai	NKK	2,760	2,502	9	0.33	-0.07	0.36	-0.09
Novel Classification Society S.A.	NCS	15	14	1	6.67	6.28	7.14	6.69
Other	OTHER	114	97	3	2.63	2.24	3.09	2.64
Overseas Marine Certification Services	OMCS	26	23	-	-	-0.39	-	-0.45
Panama Maritime Documentation Services	PMDS	48	43	-	-	-0.39	-	-0.45
Panama Register Corporation	PRC	25	22	-	-	-0.39	-	-0.45
Panama Shipping Registrar Inc.	PSR	21	14	-	-	-0.39	-	-0.45
Phoenix Register of Shipping	PHRS	119	85	-	-	-0.39	-	-0.45
Polski Rejestr Statkow (Polish Register of Shipping)	PRS	145	101	-	-	-0.39	-	-0.45
Register of Shipping (Albania)	RSA	22	17	-	-	-0.39	-	-0.45
RINA Services S.p.A.	RINA	1,331	1,103	6	0.45	0.06	0.54	0.09

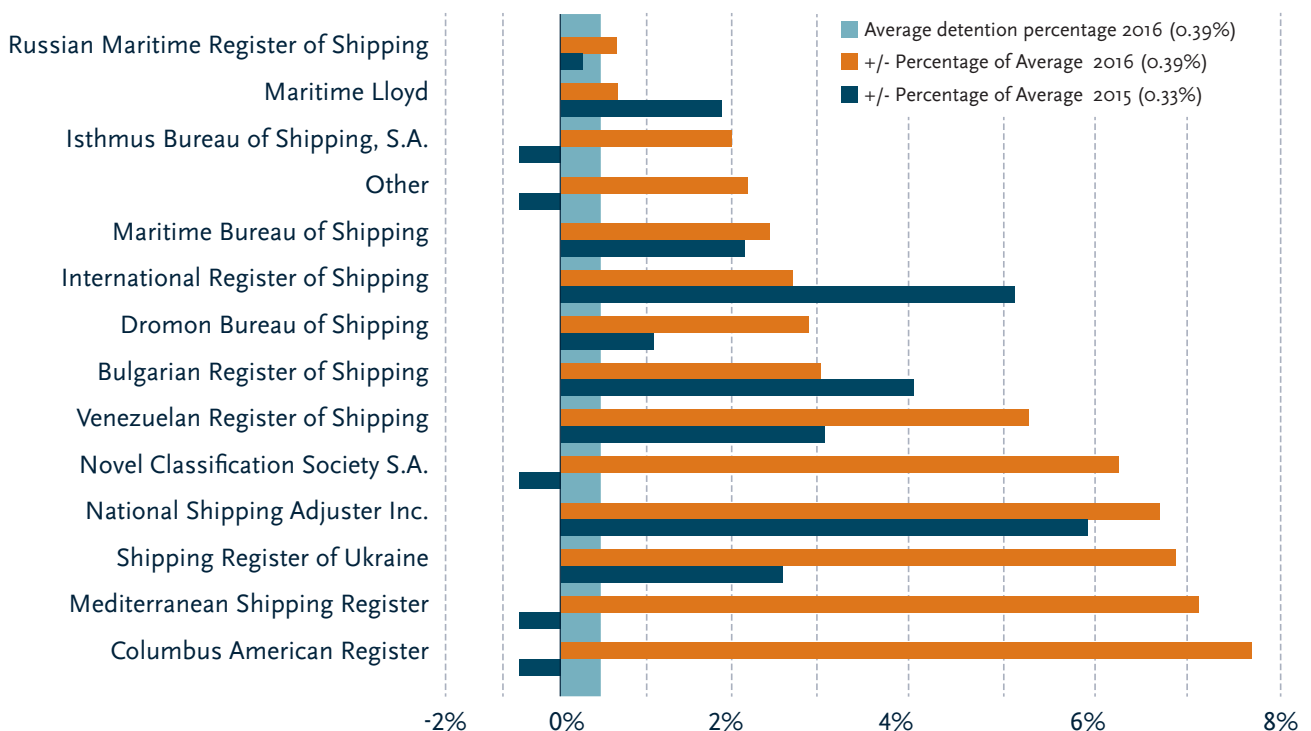
Recognized Organization	Abbr	Total number of inspections	Number of individual ships inspected**	Total number of detentions**	Detention % of total number of Inspections	+/- Percentage of Average (0.39)	Detention % of individual ships	+/- Percentage of Average Indiv. (0.45)
Russian Maritime Register of Shipping	RMRS	1,012	814	10	0.99%	0.60%	1.23%	0.78%
Shipping Register of Ukraine	SRU	211	110	15	7.11%	6.72%	13.64%	13.18%
Turkish Lloyd	TL	193	154	-	-	-0.39%	-	-0.45%
Universal Shipping Bureau Inc.	USB	13	11	-	-	-0.39%	-	-0.45%
Venezuelan Register of Shipping	VRS	52	37	3	5.77%	5.38%	8.11%	7.65%

* As more than one Recognized Organization might have issued or endorsed statutory certificates with regard to the same ship, an inspection can be relevant for more than one RO and might appear multiple times in this column.

** Only detentions with RO related detainable deficiencies are taken into account.

% of detentions of ships with RO related detainable deficiencies per Recognized Organization 2015-2016

(CASES IN WHICH MORE THAN 10 INSPECTIONS ARE INVOLVED)



* Only ROs with 10 and more port State control inspections in 2016 and with a detention percentage exceeding the average percentage of 0.39% are recorded in this graph. In 2015 the average detentions percentage was 0.33%.

* The grey column represents the 2016 average detention percentage (0.39%).

Recognized Organization performance table 2014-2016

Recognized Organization		Inspections	Detentions	Low / medium limit	Medium / high limit	Excess Factor	Performance level
American Bureau of Shipping	ABS	5,703	1	132	96	-1.97	HIGH
Lloyd's Register	LR	12,500	4	276	224	-1.96	
DNV GL AS	DNVGL	11,600	10	257	207	-1.89	
Bureau Veritas	BV	11,453	23	254	204	-1.76	
Korean Register of Shipping	KRS	1,091	1	30	14	-1.73	
Registro Italiano Navale	RINA	3,743	9	89	60	-1.65	
China Classification Society	CCS	818	1	23	9	-1.57	
Nippon Kaiji Kyokai	NKK	7,965	28	180	138	-1.56	
Turkish Lloyd	TL	591	1	18	6	-1.22	
Russian Maritime Register of Shipping	RMRS	3,368	24	81	53	-0.99	
Polski Rejestr Statkow (Polish Register of Shipping)	PRS	454	4	14	4	0.03	MEDIUM
Croatian Register of Shipping	CRS	147	0	6	0	0.05	
International Naval Surveys Bureau	INSB	589	7	18	6	0.11	
Indian Register of Shipping	IRS	79	0	4	0	0.19	
Phoenix Register of Shipping	PHRS	241	3	9	1	0.28	
Other	OTHER	337	5	11	2	0.32	
Macosnar Corporation	MC	80	1	4	0	0.38	
Maritime Lloyd - Georgia	ML	133	2	6	0	0.40	
Register of Shipping (Albania)	RSA	67	1	4	0	0.43	
Panama Maritime Documentation Services	PMDS	117	2	5	0	0.44	
Universal Shipping Bureau Inc.	USB	63	1	4	0	0.44	
Dromon Bureau of Shipping	DBS	479	9	15	4	0.45	
Isthmus Bureau of Shipping, S.A.	IBS	149	3	6	0	0.50	
Panama Register Corporation	PRC	94	2	5	0	0.52	
Overseas Marine Certification Services	OMCS	79	2	4	0	0.58	
Intermaritime Certification Services, ICS Class	ICS	118	3	5	0	0.61	
Maritime Bureau of Shipping	MBS	109	3	5	0	0.64	
Bulgarian Register of Shipping	BRS	266	9	10	1	0.93	
Columbus American Register	COLAMREG	77	4	4	0	0.99	
Venezuelan Register of Shipping	VRS	187	8	7	0	1.24	LOW
National Shipping Adjuster Inc.	NASHA	129	7	6	0	1.70	
Shipping Register of Ukraine	SRU	559	22	17	5	1.72	
International Register of Shipping	IS	323	15	11	2	1.94	

In this table only Recognized Organizations that had 60 or more inspections in a 3-year period are taken into account. The formula is identical to the one used for the White, Grey and Black list. However, the values for P and Q are adjusted to $P=0.02$ and $Q=0.01$.

Performance of recognized organizations is measured over a 3-year rolling period. In 2014 DNV GL was included for the time, while DNV and GL certificates were still recorded as separate entities. In the 2016 report DNV and GL will no longer be listed as separate entities.

Number of certificates covering RO responsible detainable deficiencies 2016

Recognized Organization		Certificates	Nr of RO detainable deficiencies	% deficiencies / certificates
American Bureau of Shipping	ABS	16,144	0	0.00
Bulgarian Register of Shipping	BRS	808	7	0.87
Bureau Veritas	BV	30,848	18	0.06
China Classification Society	CCS	2,438	0	0.00
Croatian Register of Shipping	CRS	478	0	0.00
DNV GL AS	DNVGL	35,591	11	0.03
Dromon Bureau of Shipping	DBS	1,724	17	0.99
Indian Register of Shipping	IRS	319	0	0.00
Intermaritime Certification Services, ICS Class	ICS	189	0	0.00
International Naval Surveys Bureau	INSB	1,610	0	0.00
International Register of Shipping	IS	971	7	0.72
Isthmus Bureau of Shipping, S.A.	IBS	216	4	1.85
Korean Register of Shipping	KRS	3,351	1	0.03
Lloyd's Register	LR	29,002	4	0.01
Macosnar Corporation	MC	264	0	0.00
Maritime Bureau of Shipping	MBS	391	7	1.79
Maritime Lloyd	ML	467	4	0.86
National Shipping Adjuster Inc.	NASHA	538	9	1.67
Nippon Kaiji Kyokai	NKK	27,279	21	0.08
Other	OTHER	586	20	3.41
Panama Maritime Documentation Services	PMDS	152	0	0.00
Phoenix Register of Shipping	PHRS	936	0	0.00
Polski Rejestr Statkow (Polish Register of Shipping)	PRS	1,056	0	0.00
RINA Services S.p.A.	RINA	9,725	19	0.20
Russian Maritime Register of Shipping	RMRS	9,705	30	0.31
Shipping Register of Ukraine	SRU	2,157	35	1.62
Turkish Lloyd	TL	910	0	0.00
Venezuelan Register of Shipping	VRS	482	20	4.15

Flags on the “Black List” in combination with Recognized Organizations that act on their behalf with a combined lower performance 2014-2016

“Black” flags with corresponding RO with an excess factor ≥ 0.50 detentions period 2014-2016

Flag State	Recognized Organization	Nr of Inspections	Inspections with detentions	Detentions %	(+/-) Average det % 5-76
Cambodia	Shipping Register of Ukraine	29	1	3.4%	-2.31%
Comoros	Bulgarian Register of Shipping	11	1	9.1%	3.33%
	Shipping Register of Ukraine	16	0	0.0%	-5.76%
	Venezuelan Register of Shipping	13	1	7.7%	1.93%
Congo, the Democratic Republic of the	Maritime Bureau of Shipping	15	0	0.0%	-5.76%
	Shipping Register of Ukraine	44	5	11.4%	5.60%
Moldova, Republic of	Bulgarian Register of Shipping	29	1	3.4%	-2.31%
	Maritime Bureau of Shipping	20	1	5.0%	-0.76%
	Shipping Register of Ukraine	48	5	10.4%	4.66%
Palau	International Register of Shipping	26	0	0.0%	-5.76%
	Shipping Register of Ukraine	14	0	0.0%	-5.76%
Saint Kitts and Nevis	International Register of Shipping	48	3	6.3%	0.49%
Tanzania, United Republic of	Venezuelan Register of Shipping	14	1	7.1%	1.38%
Togo	Columbus American Register	25	2	8.0%	2.24%
	Shipping Register of Ukraine	20	2	10.0%	4.24%
	Venezuelan Register of Shipping	18	0	0.0%	-5.76%
Vanuatu	Bulgarian Register of Shipping	27	1	3.7%	-2.06%

Note: Criteria were developed to identify flag States and Recognized Organizations acting on their behalf that jointly have a lower performance. The targeted flags are the flags placed on the “Black List”. The targeted Recognized Organizations are ROs which act on behalf of a flag on the “Black List” and have an excess factor of ≥ 0.50 on the RO performance list in combination with ≥ 10 inspections for this flag.

ROs with corresponding “Black” flags with an average detention % > 5.76% period 2014-2016

Recognized Organization	Flag State	Nr of Inspections	Inspections with detentions	Detentions %	(+/-) Average det % 5.76
Bulgarian Register of Shipping	Comoros	11	1	9.09%	3.33%
Columbus American Register	Togo	25	2	8.00%	2.24%
International Register of Shipping	Saint Kitts and Nevis	48	3	6.25%	0.49%
Shipping Register of Ukraine	Moldova, Republic of	48	5	10.42%	4.66%
Shipping Register of Ukraine	Togo	20	2	10.00%	4.24%
Shipping Register of Ukraine	Congo, the Democratic Republic of the	44	5	11.36%	5.60%
Venezuelan Register of Shipping	Comoros	13	1	7.69%	1.93%
Venezuelan Register of Shipping	Tanzania, United Republic of	14	1	7.14%	1.38%

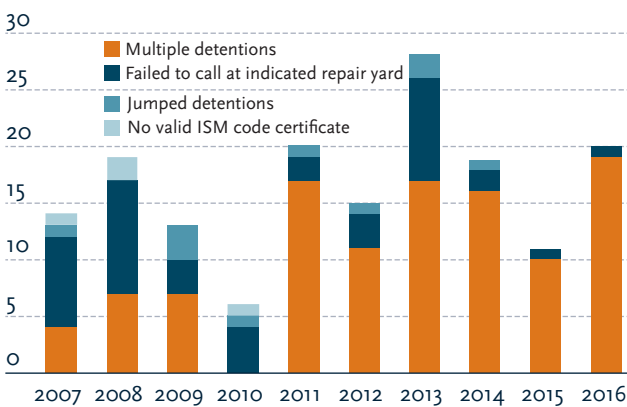
Note: To identify the poorest performing Recognized Organizations the average detention rate (5.76%) of the lower performing combinations of flags and ROs has been used as a limit. The outcome is a list of Recognized Organizations which performance on behalf of a flag on the Black list is poorer than the average performance of ROs performing below average.



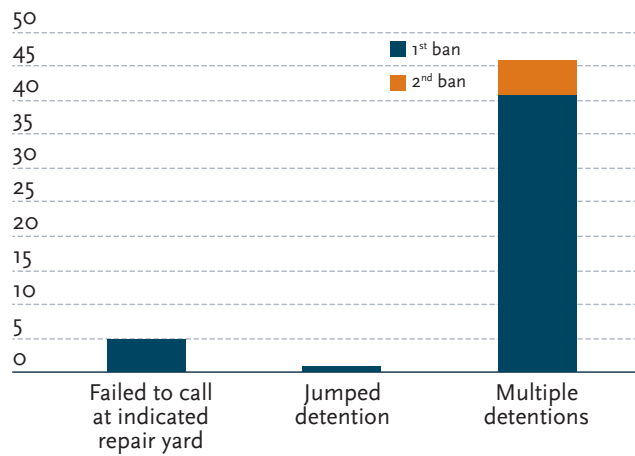
Refusal of access (banning) per flag 2014-2016

Flag	Failed to call at indicated repair yard	Jumped detention	Multiple detentions			Total Banned
			1 st ban	2 nd ban	3 rd ban	
Antigua and Barbuda	1	-	-	-	-	1
Belize	-	-	-	1	-	1
Cambodia	1	-	2	-	-	3
Comoros	-	-	2	-	-	2
Liberia	1	-	-	-	-	1
Moldova, Republic of	-	-	10	1	-	11
Panama	1	1	-	-	-	2
Saint Kitts and Nevis	1	-	4	-	-	5
Saint Vincent and the Grenadines	-	-	2	1	-	3
Sierra Leone	-	-	2	1	-	3
Tanzania, United Republic of	-	-	10	-	-	10
Togo	-	-	8	1	-	9
Vanuatu	-	-	1	-	-	1
Total	5	1	41	5	0	52

Refusal of access 2007-2016



2014-2016



CIC 2016 Maritime Labour Convention, 2006

Number of ships inspected during CIC	Nr of individual ships inspected during CIC	Nr of inspections performed with a CIC questionnaire	Nr of inspections without a CIC questionnaire
Inspections	3,904	3,674	325
Inspections with detentions	177	161	16
Detentions with <i>CIC-topic</i> related deficiencies	42	42	0

Number of inspections performed per ship during CIC	Nr of ships	% of total
1	3,666	99.89%
2	4	0.11%
3	0	0.00%
Total	3,670	100.00%

Ship type	Nr of inspections	Nr of detentions	detention as % of inspections	detentions <i>CIC-topic</i> related	detentions <i>CIC-topic</i> related as % of inspections
Bulk carrier	789	21	2.7%	3	0.4%
Chemical tanker	367	14	3.8%	0	0.0%
Combination carrier	3	0	0.0%	0	0.0%
Commercial yacht	32	0	0.0%	0	0.0%
Container	364	9	2.5%	0	0.0%
Gas carrier	107	2	1.9%	2	1.9%
General cargo/multipurpose	1,062	89	8.4%	31	2.9%
Heavy load	15	1	6.7%	0	0.0%
High speed passenger craft	9	0	0.0%	0	0.0%
NLS tanker	13	1	7.7%	1	7.7%
Offshore supply	103	2	1.9%	0	0.0%
Oil tanker	318	4	1.3%	1	0.3%
Other	29	3	10.3%	1	3.4%
Other special activities	89	2	2.2%	0	0.0%
Passenger ship	41	1	2.4%	0	0.0%
Refrigerated cargo	76	5	6.6%	1	1.3%
Ro-Ro cargo	162	3	1.9%	0	0.0%
Ro-Ro passenger ship	23	3	13.0%	2	8.7%
Special purpose ship	20	0	0.0%	0	0.0%
Tug	52	1	1.9%	0	0.0%
Total	3,674	161	4.4%	42	1.1%

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:

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

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

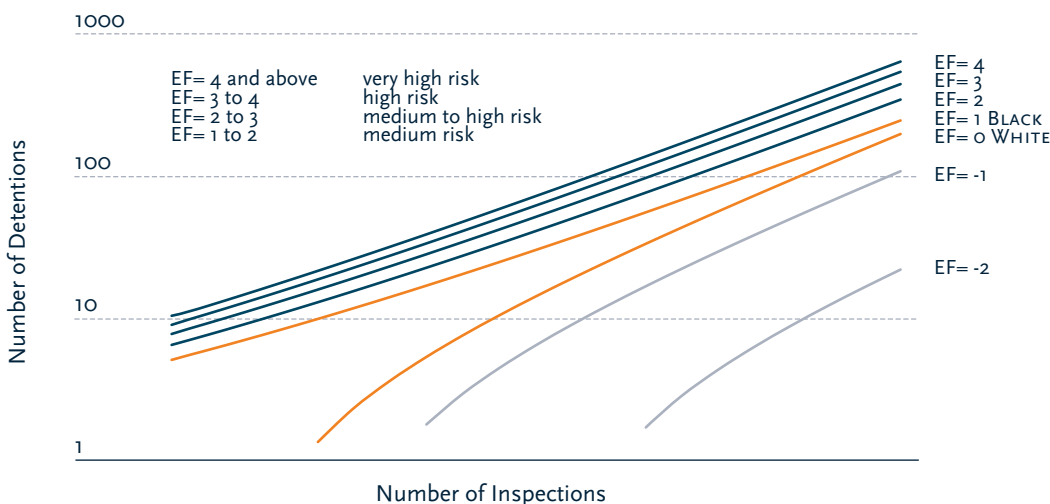
In the formula “N” is the number of inspections, “p” is the allowable detention limit (yardstick), set to 7% by the Paris MoU Port State Control Committee, and “z” is the significance requested (z=1.645 for a statistically acceptable certainty level of 95%). The result “u” is the allowed number of detentions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



* Explanatory notes can be found on www.parismou.org/publications

Secretariat Paris Memorandum of Understanding on Port State Control



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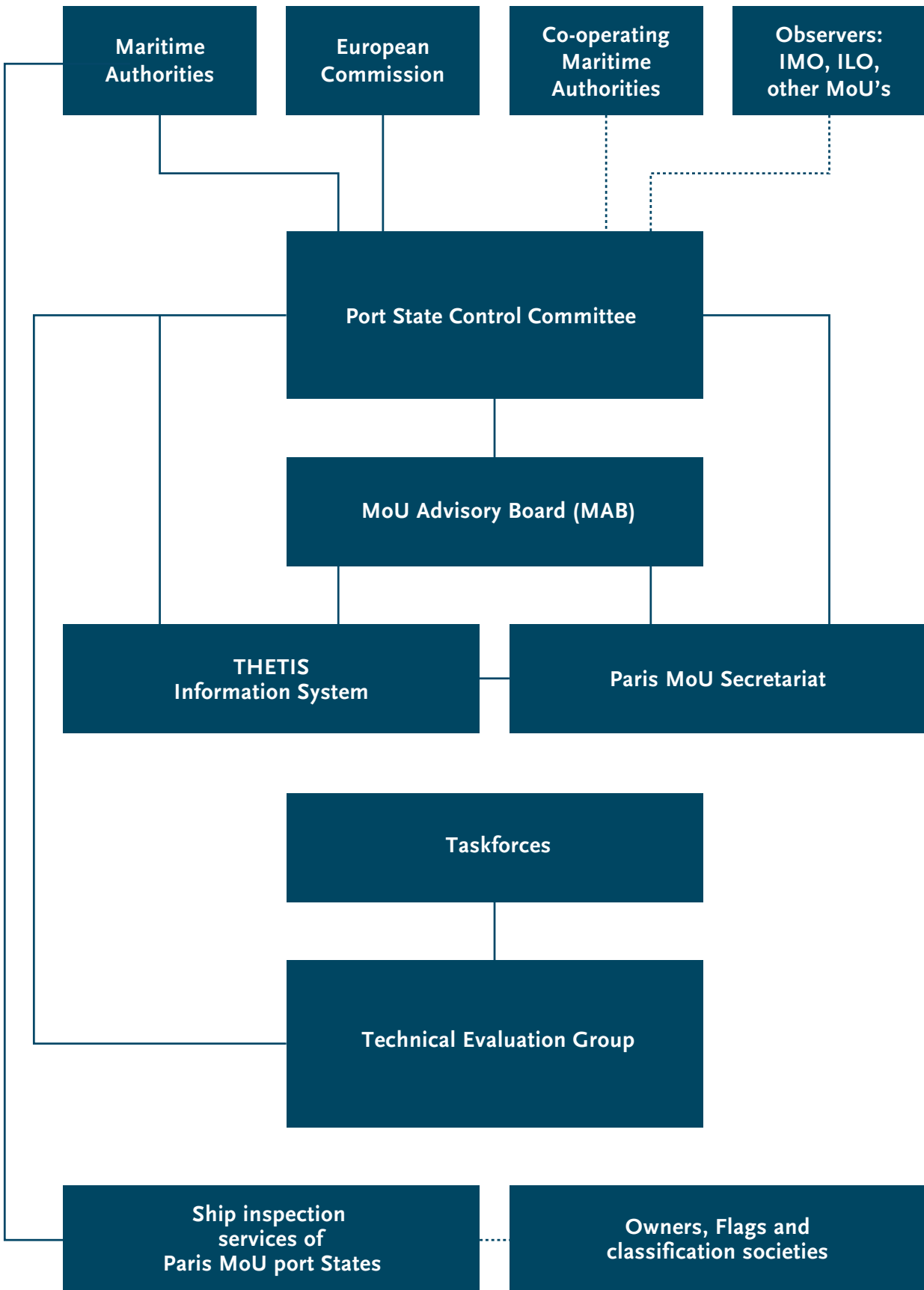
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Paris MoU fact sheet – organizational structure





THE PARIS MEMORANDUM OF UNDERSTANDING ON PORT STATE CONTROL

