

**ANNUAL REPORT
ON
PORT STATE CONTROL
IN THE ASIA-PACIFIC REGION**

2021



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FOREWORD

We are pleased to present the **Annual Report on Port State Control in the Asia-Pacific Region 2021**.

The world has been badly affected in all aspects by the COVID-19 pandemic over the last two years. In 2021, the impacts and challenges emanating from the pandemic relating to the shipping industry remain significant and profound.

During the period of review, the Tokyo MOU, directed by its executive body – the Port State Control Committee and supported by all member Authorities and their Port State Control Officers (PSCO), demonstrated its growing potential and resilience during the unprecedented crisis. In 2021, the Port State Control Committee met twice via virtual means to discuss and make decisions on measures and actions relating to the COVID-19 impacts, as well as, routine operation of the Tokyo MOU.

Taking into account the significant impacts to the shipping industry due to the COVID-19 pandemic and the continuing effects of the crisis, the Tokyo MOU adopted and published the interim guidance relating to COVID-19 circumstances for protecting PSCOs and preventing the spread of COVID-19 and for facilitating port State Authorities to apply pragmatic flexibility as required in a harmonized manner under the extraordinary situation.

Recognizing the necessity and importance of maintaining PSC activities under the pandemic circumstances, the Tokyo MOU launched remote PSC inspections as a practical alternative in the interim, where and when a normal physical PSC inspection is not feasible. For that purpose, guidance on remote PSC inspection had been developed and adopted to facilitate member Authorities and PSCOs to carry out remote PSC inspections in the effective and harmonized manner.

This Annual Report highlights port State control activities and developments in the Tokyo MOU in 2021. The report also provides port State control statistics and analysis on the results of inspections carried out by member Authorities during the year.

It is positive that the Tokyo MOU has been able to achieve a nearly 20% increase of inspections in 2021, i.e. 22,730 inspections in 2021 comparing 19,146 in 2020, although there is still a big shortfall to recover to the pre-pandemic level of inspections. It is also positive that the Tokyo MOU, in coordination with the Paris MoU, successfully conducted the concentrated inspection campaign (CIC) on Stability in General during September to

November, 2021, which was postponed from the previous year.

Finally, taking this opportunity, we would like to give our sincere thanks the Port State Control Committee, member Authorities and all PSC officers for the dedicated efforts and good work done. We would also like to convey our appreciations to International Maritime Organization (IMO), International Labour Organization (ILO), regional PSC regimes and the shipping industry for their valuable initiatives and collaboration.



Kenny Crawford
Chair
Port State Control Committee



Kubota Hideo
Secretary
Tokyo MOU Secretariat



CONTENTS

	page
OVERVIEW	
General introduction	1
Review of year 2021	2
The Port State Control Committee	3
Technical Working Group (TWG)	7
The Asia-Pacific Computerized Information System (APCIS)	8
Training and seminars for port State control officers	8
Co-operation with other regional port State control regimes	9
 PORT STATE CONTROL UNDER THE TOKYO MOU, 2021	
Inspections	11
Detentions	11
Deficiencies	12
Deficiency photo of the year	13
Overview of port State control results 2011-2021	13
 ANNEX 1 -- STATUS OF THE RELEVANT INSTRUMENTS	20
 ANNEX 2 -- PORT STATE INSPECTION STATISTICS	23
Statistics for 2021	23
Summary of port State inspection data 2019-2021	34
 ANNEX 3 -- ORGANIZATION STRUCTURE OF THE TOKYO MOU	52
 Explanatory Note on the Black-Grey-White Lists	53

LIST OF FIGURES AND TABLES

	page
Figure 1	Inspection percentage 14
Figure 2	Inspection per ship risk profile 14
Figure 3	Port State inspections - contribution by Authorities 15
Figure 4	Type of ship inspected 15
Figure 5	Detentions per flag 16
Figure 6	Detention per ship type 16
Figure 7	Deficiencies by main categories 17
Figure 8	Most frequent detainable deficiencies 17
Figure 9	No. of inspections 18
Figure 10	Inspection percentage 18
Figure 11	No. of inspections with deficiencies 18
Figure 12	No. of deficiencies 19
Figure 13	No. of detentions 19
Figure 14	Detention percentage 19
Figure 15	Comparison of inspections per ship type 40
Figure 16	Comparison of detentions per ship type 40
Figure 17	Comparison of inspections with deficiencies per ship type 42
Figure 18	Comparison of number of deficiencies by main categories 47
Figure 19	Comparison of most frequent detainable deficiencies 49
Table 1	Status of the relevant instruments 20
Table 1a	Status of MARPOL 73/78 22
Table 2	Port State inspections carried out by Authorities 23
Table 2a	Port State inspections on maritime security 24
Table 2b	Port State inspections by categories (physical & remote) 25
Table 3	Port State inspections per ship risk profile 26
Table 4	Port State inspections per flag 27
Table 5	Port State inspections per ship type 30
Table 6	Port State inspections per recognized organization 31
Table 7	Deficiencies by categories 33
Table 8	Black – Grey – White Lists 34
Table 9	Inspections and detentions per flag 36
Table 10	Inspections and detentions per ship type 41
Table 11	Inspections with deficiencies per ship type 43
Table 12	Inspections and detentions per recognized organization 44
Table 13	Performance of recognized organization 46
Table 14	Comparison of deficiencies by categories 48
Table 15	Comparison of most frequent detainable deficiencies 50
Table 16	List of under-performing ships 51

OVERVIEW

GENERAL INTRODUCTION

The Annual Report on Port State Control in the Asia-Pacific Region is published under the auspices of the Port State Control Committee of the Memorandum of Understanding on Port State Control in the Asia-Pacific Region (Tokyo MOU). This annual report is the twenty-seventh issue and covers port State control activities and developments in the 2021 calendar year.

The Memorandum was signed in Tokyo on 1 December 1993 and came into effect on 1 April 1994. In accordance with the provisions of the Memorandum, Authorities that have signed and formally accepted the Memorandum or that have been accepted by unanimous consent of the Port State Control Committee become full members. Currently, the Memorandum has 21 full members, namely: Australia, Canada, Chile, China, Fiji, Hong Kong (China), Indonesia, Japan, Republic of Korea, Malaysia, Marshall Islands, New Zealand, Panama, Papua New Guinea, Peru, Philippines, Russian Federation, Singapore, Thailand, Vanuatu and Viet Nam. A maritime Authority that has declared its intention to fully adhere to the Memorandum within a three-year period may be accepted as a co-operating member by unanimous consent of the Port State Control Committee. Mexico is participating in the Tokyo MOU as a co-operating member Authority.

The main objectives of the Memorandum are to establish an effective port State control regime in the Asia-Pacific region through co-operation of its members, harmonization of the members' activities, to eliminate substandard shipping, to promote maritime safety and security, to protect the marine environment and to safeguard seafarers working and living conditions on board ships.

The Port State Control Committee established under the Memorandum monitors and controls the implementation and on-going operation of the Memorandum. The Committee consists of representatives from the member Authorities, co-operating member Authorities and observers. Observer status has been granted to the following maritime Authorities and inter-governmental organizations by the Committee: Cambodia, the Democratic People's Republic of Korea, Macao (China), Samoa, Solomon Islands, Tonga, the United States Coast Guard, the International Maritime Organization (IMO), the International Labour Organization (ILO), the Abuja MOU, the Black Sea MOU, the Caribbean MOU, the Indian Ocean MOU, the Paris MoU, the Riyadh MOU and the Viña del Mar Agreement. The Secretariat of the Memorandum is located in Tokyo, Japan. The Asia-Pacific Computerized Information System is established in Russian Federation.

For the purpose of the Memorandum, the following instruments are the basis for port

State control activities in the region:

- the International Convention on Load Lines, 1966, as amended;
- the Protocol of 1988 relating to the International Convention on Load Lines, 1966, as amended;
- the International Convention for the Safety of Life at Sea, 1974, as amended;
- the Protocol of 1978 relating to the International Convention for the Safety of Life at Sea, 1974;
- the Protocol of 1988 relating to the International Convention for the Safety of Life at Sea, 1974;
- the International Convention for the Prevention of Pollution from Ships 1973, as modified by the Protocol of 1978 relating thereto, as amended;
- the International Convention on Standards for Training, Certification and Watchkeeping for Seafarers, 1978, as amended;
- the Convention on the International Regulations for Preventing Collisions at Sea, 1972;
- the International Convention on Tonnage Measurement of Ships, 1969;
- the Merchant Shipping (Minimum Standards) Convention, 1976 (ILO Convention No. 147);
- the Maritime Labour Convention, 2006, as amended;
- the International Convention on the Control of Harmful Anti-fouling Systems on Ships, 2001;
- the Protocol of 1992 to amend the International Convention on Civil Liability for Oil Pollution Damage, 1969; and
- the International Convention for the Control and Management of Ships' Ballast Water and Sediments, 2004.

REVIEW OF YEAR 2021

The world was continuously being dominated by the COVID-19 pandemic during 2021. Noting the continuing effects and impact of the COVID-19 and the practical need for applying flexibility under these special circumstances, the Tokyo MOU adopted and published an interim guidance relating to COVID-19 circumstances so as to facilitate and ensure harmonized approach to be taken throughout the region. The interim guidance focussed on preventive measure to halt the spread of COVID-19, ship certification issues and crew related issues originated by COVID-19 situation.

Considering the significant decrease of the number of inspections in 2020 due to severe restrictions of ship-shore interaction caused by COVID-19 and, the necessity and importance of maintaining PSC activities during such a difficult situation, the Tokyo MOU, after careful exploration and appropriate preparation, decided to launch remote PSC inspections from 1 April 2021 as a practical alternative in the interim, where

and when a normal physical PSC inspection not feasible. The relevant guidance on remote PSC inspections was developed and adopted to facilitate remote PSC inspections being carried out effectively and uniformly.

The concentrated inspection campaign (CIC) on Stability in General was conducted from 1 September to 30 November, 2021 jointly with the Paris MoU. During the CIC period, a total of 6,260 PSC inspections were conducted by the member Authorities, of which 4,984 (79.62%) were with a CIC inspection. A total of 379 CIC related deficiencies were found on 328 ships representing 6.58% of the CIC inspections. The highest number of CIC related deficiencies were relating to the Loading/ Ballast condition 155 (43.54%), followed by Cargo operation 67 (18.82%) and Bridge operation 45 (12.64%). There was a total of 121 detentions over the three-month period, of which 8 ships (6.61%) were detained as a direct result of the CIC. Giving 4,984 ships subject to a CIC inspection, 8 detentions for CIC related deficiencies indicated the CIC related detention rate of 0.16%, which was much lower than the overall

detention rate of 1.93% of the period. The outcome demonstrated a relatively high level of compliance with stability in general by the industry.

Although, in 2021, the COVID-19 still affected the activities in various aspects, the Tokyo MOU, by the efforts and endeavour of the Port State Control Committee, member Authorities and PSC officers, has been able to accomplish its activities and maintain the effective functioning to the most practical extent.

THE PORT STATE CONTROL COMMITTEE

The Port State Control Committee had two meetings in 2021, i.e. PSCC31 and PSCC32, both of which were held remotely via virtual means due to the COVID-19 pandemic. Mr. Kenny Crawford, Deputy Director, Maritime Systems Assurance, Maritime New Zealand, chaired the two meetings.

As informed in the previous Annual Report, the thirty-first meeting of the Port State



The thirty-first Committee meeting via virtual means, January 2021.

Control Committee was organized in the manner of the combination of Written Procedure and Virtual Meeting instead of normal face-to-face meeting due the COVID-19 pandemic. The session of Written Procedure was carried out during November - December 2020. The session of Virtual Meeting of the Committee was convened from 21 to 22 January 2021. The thirty-first meeting of the Port State Control Committee was attended by 21 member Authorities of Australia, Canada, Chile, China, Fiji, Hong Kong (China), Indonesia, Japan, Republic of Korea, Malaysia, Marshall Islands, New Zealand, Panama, Papua New Guinea, Peru, Philippines, Russian Federation, Singapore, Thailand, Vanuatu and Viet Nam; a co-operating member Authority of Mexico; and observers of Macao (China), Samoa, Solomon Islands, Tonga, the United States Coast Guard, the Black Sea MOU (represented by Russian Federation), the Caribbean MOU, the Indian Ocean MOU, the Paris MoU, the Viña del Mar Agreement (represented by Chile) and IMO.

The Committee discussed the impact of the COVID-19 pandemic to PSC activities of the Tokyo MOU as the top agenda item. The Committee considered the work done by the extraordinary intersessional group on impact of the COVID-19 crisis, established to investigate the impact of COVID-19 to the activities of the Tokyo MOU, as well as to identify the relevant areas where actions can be taken to reduce or minimize such influence, and to make proposals and develop appropriate countermeasures as practical and necessary. As a result, the Committee decided and agreed:

- not to change the existing inspection windows for ships per category of ship risk profile (SRP) and not to change the

manner for publishing PSC data and statistics in the Annual Report, although there was a significant decrease of number of inspections due to the pandemic;

- to develop and publicize interim guidance relating to COVID-19 circumstances for facilitating port State Authorities to apply pragmatic flexibility as required in a harmonized manner under the difficult situation;
- to develop guidance on remote PSC inspections, which would be implemented from 1 April 2021 as a practical alternative in the interim, where and when a normal physical PSC inspection not feasible; and
- to implement the relevant technical co-operation programmes which can be realized by utilizing virtual means as far as possible.

The Committee considered the outcome of written procedure carried out in late 2020, by which essential documents and urgent matters were dealt through e-mail correspondences, and endorsed the actions agreed thereof. The Committee considered the application for observer status by Cambodia. In accordance with the provisions of the Memorandum, the Committee unanimously agreed to grant observer status to Cambodia. The Committee considered the results of a trial on remote follow-up inspection procedure and agreed to extend the trial for a longer period in order to gain more experience to validate and improve the procedure.

The Committee considered and agreed to entrust the MOU Standing Working Group

(SWG) to approve the guidelines on the usage of body camera during PSC. Moreover, the Committee decided to share information of the guidelines with the industry. The Committee considered the proposal for preventing fixed carbon dioxide fire-extinguishing system from releasing accidentally on board and established an intersessional group to develop the relevant guidelines. The Committee considered and approved the planned updates of the PSC Manual.

The Committee considered and approved the final report of the 2019 CIC on Emergency Systems and Procedures. The Committee noted the postponement of planned CICs by one year due to COVID-19. The Committee reconfirmed the arrangements and preparations for the joint CIC with the Paris MoU on Stability in General rescheduled for 2021. The Committee was informed of the agreement by the Paris MoU for the joint CIC on Crew Wages and Seafarer Employment Agreement under MLC in 2024. The Committee accepted the proposal by the Paris MoU for a joint CIC on Ballast Water Management (BWM) in 2025. The Committee considered and adopted amendments to the policy on joint CICs.

The Committee considered and adopted the revised Strategic Plan, Strategic Directions and the list of planned actions for a five-year period from 2021 to 2025. The Committee further approved a revised strategic plan for technical co-operation programmes for the period of 2021-2025. The Committee was informed of discussions and tasks carried out by the intersessional groups for review of method for assessment of performance of flag and RO, and PSC on fishing vessels.

Since Mr. Alex Schultz-Altmann, the Chair of

the Committee, who had stepped down in July 2020, the Committee held a by-election and unanimously elected Mr. Kenny Crawford, Deputy Director, Maritime Systems Assurance, Maritime New Zealand, the current Vice-Chair of the Committee as the Chair, and Mr. Chen Kit Jam, Deputy Director, Shipping Division, Maritime and Port Authority of Singapore, as the Vice-Chair of the Committee for the remaining terms of office.

The thirty-second meeting of the Port State Control Committee, which was originally scheduled to be held in Lima, Peru in September 2021, was cancelled due to the ongoing COVID-19 pandemic and was held remotely via virtual means from 21 to 22 October 2021 consequently. The meeting was attended by all the 21 member Authorities of Australia, Canada, Chile, China, Fiji, Hong Kong (China), Indonesia, Japan, Republic of Korea, Malaysia, Marshall Islands, New Zealand, Panama, Papua New Guinea, Peru, Philippines, Russian Federation, Singapore, Thailand, Vanuatu and Viet Nam; a co-operating member Authority of Mexico; and observers of Cambodia, Democratic People's Republic of Korea, Macao (China), Solomon Islands, Tonga, the United States Coast Guard, the Black Sea MOU, the Caribbean MOU, the Indian Ocean MOU, the Paris MoU, the Riyadh MOU and the Viña del Mar Agreement (represented by Chile).

The Committee considered the Co-operating Member status of Mexico and, taking the relevant circumstance into account, agreed to extend the term of Co-operating membership of Mexico for one more year. The Committee considered the results of further trial on remote follow-up inspection procedures and approved to put the remote follow-up inspection procedure and the related

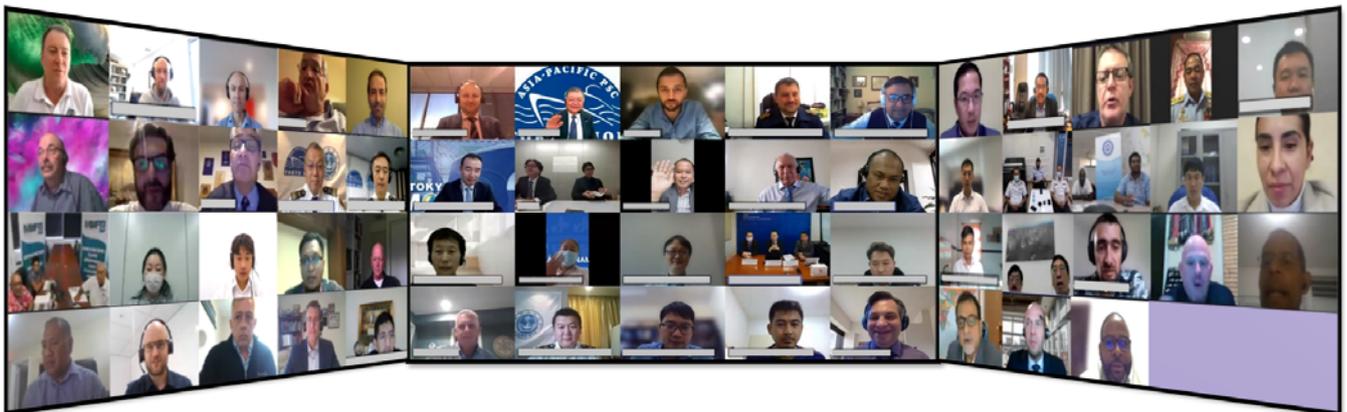
guidelines for formal implementation from 1 January 2022. The Committee considered and adopted amendments to the Ship Risk Profile (SRP) and Selection Scheme under NIR contained in Annex 2 to the Memorandum to further clarify the definition of “Bulk carrier” and inspection priorities, which will become effective from 1 January 2022.

The Committee considered the joint CIC on Crew Wages and Seafarer Employment Agreement under MLC in 2024 and agreed to incorporate the issue of Financial Security for Seafarers under the 2014 amendments to MLC into the CIC in 2024, based on the suggestion stemming from the 7th session of IMO III Sub-Committee (III7). The Committee considered and agreed to a proposal for the

database for PSC regimes and agreed in principle to participate in the development of the overarching database.

Moreover, the Committee also gave consideration and made decisions on the following:

- adoption of the guidelines for PSC related to the fixed CO₂ fire-extinguishing system;
- approval in general of the roadmap for PSC inspections of fishing vessels pending more comprehensive and in-depth discussion intersessionally;
- establishment of new intersessional groups to develop PSC guidelines for



The thirty-second Committee meeting via virtual means, October 2021.

CIC on Cargo Securing in 2026. The Committee also considered and adopted amendments to the policy on joint CICs in the similar manner as adopted by the Paris MoU.

The Committee considered and approved the revision to the advisory information as part of an education campaign aimed at preventing marine casualties caused by cargoes, taking into account the relevant comments from III7. The Committee considered a proposal by the Paris MoU to develop an overarching

inspection of all types of fixed fire-extinguishing system and, the blackout test inspection guidelines;

- approval of guidelines for deficiency writing and sharing the guidelines with other regional PSC regimes;
- development of guidance for PSCOs on inspection of Unmanned Non-Self Propelled (UNSP) barges and, of Statements of Compliance - Fuel Oil

Consumption Reporting, emanating from discussions at III7;

- development of guidelines for use of electronic certificates, taking into account the guidelines adopted by IMO;
- ongoing discussions for review of method for assessment of performance of flag and RO and, for PSC on fishing vessels; and
- awarding the winner of the deficiency photo of the year.

As the terms of office of both the Chair and the Vice-Chair expired at the end of the PSC32 meeting, the Committee unanimously re-elected Mr. Kenny Crawford, Deputy Director, Maritime Systems Assurance, Maritime New Zealand, as the Chair and Mr. Chen Kit Jam, Deputy Director, Shipping Division, Maritime and Port Authority of Singapore, as the Vice-Chair of the Committee for the next three meetings.

In accordance with the new arrangements/scheme adopted by the Committee, a session of forum with the industry was to be organized in conjunction with the PSC32 meeting. Since, due to the continuation of the pandemic, the arrangement of a normal session of the forum was not safe and feasible, an "Extra-ordinary forum with the industry" focusing on sharing the experiences and measures relating to COVID-19 was organized via virtual means immediately after the Committee meeting. Representatives from ACS, IACS, INTERTANKO, ICS, BIMCO and ASA participated in the extra-ordinary forum.

The thirty-third meeting of the Port State Control Committee is tentatively scheduled to be held in Peru in November 2022.

TECHNICAL WORKING GROUP (TWG)

The Technical Working Group (TWG) had two meetings in 2021. The fourteenth and the fifteenth virtual meetings were held from 18 to 19 January and from 18 to 19 October 2021 respectively in conjunction with the relevant PSC Committee meetings. Mr. Hu Ronghua, Deputy Director, Division of Ship Registry and Supervision, Shanghai Maritime Safety Administration (MSA) of China, chaired these meetings.

The TWG meeting discussed and made recommendations to the Committee on matters relating to:

- reports of intersessional groups: advisory group on information exchange (AG-IE), intersessional group on batch protocol (IG-BP), intersessional group on statistics (IG-Statistics), intersessional group on distance learning programmes (IG-DLP) and intersessional group on CO₂ Release (IG-CO₂);
- cases considered by the detention review panel;
- periodical revision of the PSC Manual;
- development and review of PSC guidelines;
- preparation and arrangements for upcoming CICs;
- activities and operation of the Asia-Pacific Computerized Information System (APCIS);

- management and maintenance of the coding system;
- analysis and statistics on PSC; and
- reports and evaluations of technical co-operation activities.

- THETIS of the Paris MOU;
- BSIS of the Black Sea MOU;
- IOCIS of the Indian Ocean MOU;
- CIALA of the Viña del Mar Agreement; and
- CMIC of the Caribbean MOU.

As the terms of office of both the Chair and the Vice-Chair expired at the end of the TWG15 meeting, the meeting unanimously re-elected Mr. Hu Ronghua of China as the Chair and elected Mr. Phan Nguyen Hai Ha, Director, Safety and Security Department, Vietnam Maritime Administration, as the Vice-Chair for the next three sessions of TWG.

Furthermore, the PSC data of the Tokyo MOU are also provided to GISIS and EQUASIS.

TRAINING AND SEMINARS FOR PORT STATE CONTROL OFFICERS

ASIA-PACIFIC COMPUTERIZED INFORMATION SYSTEM (APCIS)

Due to prolongation of the COVID-19 pandemic, the Tokyo MOU had to suspend face-to-face technical co-operation activities, such as the general training course for PSCOs and PSCO exchange programme. However, it is encouraging that the Tokyo MOU has been able to implement certain technical co-operation activities via virtual means to the extent possible in 2021.

For reporting and storing of port State inspection results and facilitating exchange of information in the region, a computerized database system was established. The central site of the APCIS is located in Moscow, under the auspices of the Ministry of Transport of Russian Federation.

The twenty-eighth seminar for PSCOs that was originally scheduled to be organized in Singapore but postponed due to the outbreak of the COVID-19 pandemic in 2020 was subsequently held from 6 to 8 July 2021 remotely via virtual means. The seminar was hosted by the Maritime and Port Authority of Singapore (MPA). Participants from Authorities of Australia, Cambodia, Canada, Chile, China, Fiji, Hong Kong (China), Indonesia, Japan, Republic of Korea, Macao (China), Malaysia, Marshall Islands, Mexico, New Zealand, Panama, Papua New Guinea, Philippines, Peru, Russian Federation, Singapore, Solomon Islands, Thailand, Tonga, Vanuatu and Viet Nam attended the seminar. Representatives from the Secretariat of Abuja MOU, from Georgia and Turkey representing the Black Sea MOU, from Barbados and

The APCIS is connected by member Authorities on-line or by batch protocol for searching ships for inspection and for inputting and transmitting inspection reports. The APCIS also supports on-line publication of PSC data on the Tokyo MOU website (<http://www.tokyo-mou.org>) on a real time basis. Based on data stored in the database, the APCIS produces annual and detailed PSC statistics.

For inter-regional information exchange, the APCIS has established deep hyperlinks with the databases of:



The twenty-eighth seminar for PSC officers via virtual means

Grenada representing the Caribbean MOU, from Bangladesh and Maldives representing the Indian Ocean MOU, from the Secretariat of the Paris MoU, from Bahrain and Saudi Arabia representing the Riyadh MOU and from the United States Coast Guard also participated in the seminar. The topics of the seminar were Activities and recent developments of the Tokyo MOU, Results of CIC on Emergency Systems and Procedures 2019, CIC on Stability in General 2021, Introduction of enforcement of IMO2020 fuel oil sulphur limit by Singapore, Update of IMO requirements for marine environment protection and Remote PSC inspection. Experts from Japan, Republic of Korea, Singapore and the Secretariat made comprehensive and instructive presentations on the relevant topics.

Five expert missions were implemented in virtual mode in 2021. The first mission was hosted by Malaysia from 11 to 13 October 2021 and conducted by experts from Japan. The second mission was hosted by Indonesia from 13 to 14 October 2021 and carried out by experts from Singapore. The third mission was hosted by Papua New Guinea from 16 to 18 November 2021 and delivered by experts from

Australia, China and New Zealand. The fourth mission was hosted by Viet Nam from 29 November to 1 December 2021. The fifth mission was hosted by Thailand from 16 to 17 December 2021. Both the fourth and fifth missions were conducted by experts from Japan. Out of the five missions, missions in Indonesia, Malaysia, Thailand and Viet Nam were dealing with priority conventions under MEPSEAS Project. In accordance with the course of action agreed by the Tokyo MOU for provision of technical co-operation to MEPSEAS Project, participants from other two MEPSEAS Project participating States were also arranged to participate in the missions in Malaysia, Thailand and Viet Nam.

CO-OPERATION WITH OTHER REGIONAL PORT STATE CONTROL REGIMES

Establishment and effective operation of regional co-operation regimes on port State control has formed a worldwide network for elimination of substandard shipping. Currently, there are a total of nine regional port State control regimes (MOUs) covering the major part of the world, namely:

- Abuja MOU
- Black Sea MOU
- Caribbean MOU
- Indian Ocean MOU
- Mediterranean MOU
- Paris MoU
- Riyadh MOU
- Tokyo MOU
- Viña del Mar Agreement

As one of the inter-governmental organizations (IGOs) associated with IMO, the Tokyo MOU has attended meetings of the Flag State Implementation (FSI) Sub-Committee and Implementation of IMO Instruments (III) Sub-Committee since 2006. Due to the continuation of the COVID-19 pandemic, all meetings of IMO bodies (i.e. the Assembly, the Council, the Committees and the Sub-Committees) are organized remotely in 2021. The Tokyo MOU participated in the remote meetings of the seventy-sixth session of the Environment Protection Committee (MEPC) in June 2021 and the seventh session of III Sub-Committee, deferred from last year, in July 2021 respectively.

In support of inter-regional collaboration on port State control, the Tokyo MOU holds observer status within the Paris MoU, the Caribbean MOU, the Indian Ocean MOU, the Viña del Mar Agreement, and the Riyadh MOU. In a similar manner, the Tokyo MOU has granted observer status to the Paris MoU, the Indian Ocean MOU, the Viña del Mar Agreement, the Black Sea MOU, the Riyadh MOU, the Caribbean MOU and the Abuja MOU.

The Tokyo MOU has established, and maintained, effective and close co-operation with the Paris MoU at both administrative and technical levels. Representatives of the two

Secretariats attend the Port State Control Committee meetings of each MOU on a regular basis. During period of 2021, the Tokyo MOU Secretariat attended the 54th meeting of the Paris MoU PSC Committee, held by virtual means, from 17 to 21 May 2021.

In addition, the Tokyo MOU Secretariat participated in the 26th meeting of the Caribbean MOU PSC Committee and the 24th meeting of the Indian Ocean MOU PSC Committee, which were held by virtual means from 5 to 6 October, 2021 and 18 to 19 October, 2021, respectively.

Furthermore, the Tokyo MOU Secretariat also participated in a second virtual meeting of regional PSC regimes Secretaries hosted by the Paris MoU on 14 September 2021 for exchange of views and information regarding measures taken for PSC under the COVID-19 circumstances and some other issues of mutual concerns.

Upon a request by the Riyadh MOU Secretariat, an expert mission for training on the 2021 CIC on Stability in General was conducted remotely by virtual means for the Riyadh MOU on 24 August 2021. An expert from Japan was invited to deliver the lecture on the CIC. A total of 20 participants from the Riyadh MOU member Authorities of Bahrain, Kuwait, Oman, Saudi Arabia and the United Arab Emirates joined in the training.

PORT STATE CONTROL UNDER THE TOKYO MOU, 2021

INSPECTIONS

In 2021, 22,730 inspections, involving 14,951 individual ships, were carried out on ships registered under 97 flags. As shown in Table 2b, 3,728 or 16.40% inspections were remote inspections. Figure 3 and Table 2 show the number of inspections carried out by the member Authorities of the Tokyo MOU. It would be noted that inspections for some member Authorities were still extremely limited due to the actual and potential impact of COVID-19. Out of 22,730 inspections, there were 11,567 inspections where ships were found with deficiencies. Since the total number of individual ships operating in the region was estimated at 26,157*, the inspection rate in the region was approximately 57%** in 2021 (see Figure 1).



Winner of Deficiency Photo of the Year – 2021
(Ship type: Container ship; Date: 21/01/2021;
Port: Shanghai)

* Number of individual ships which visited the ports of the region during the year (the figure was provided by LLI).

** The inspection rate is calculated by: number of individual ships inspected/number of individual ships visited.



Candidate photo for Deficiency Photo of the Year
(Ship type: General cargo/multi-purpose ship;
Date: 21/12/2021; Port: Vladivostok)

Information on inspections according to ships' flag is shown in Table 4.

Figure 2 and Table 3 provide information on inspections per ship risk profile.

Figures summarizing inspections according to ship type are set out in Figure 4 and Table 5.

Inspection results regarding recognized organizations are shown in Table 6.

DETENTIONS

Ships are detained when the condition of the ship or its crew does not correspond substantially with the applicable conventions. Such strong action is to ensure that the ship cannot sail until it can proceed to sea without presenting a danger to the ship or persons on board, or without presenting an unreasonable threat of harm to the marine environment.



Candidate photo for Deficiency Photo of the Year
(Ship type: General cargo/multi-purpose ship;
Date: 19/02/2020; Port: Akitafunagawa)

In 2021, 526 ships registered under 52 flags were detained due to serious deficiencies having been found onboard. The detention rate of ships inspected was 2.31%.

Figure 5 shows the detention rate by flag for flags where at least 20 port State control inspections had been conducted and whose detention rate was above the average regional rate. Figure 6 gives the detention rate by ship type. Figure 8 illustrates the most frequent detainable deficiencies found during inspections in 2021.

The Black-grey-white list (Table 8) indicates levels of performance of flags over a three-year rolling period. Flags, whose ships were involved in 30 or more inspections during the period, are included in the list. The black-grey-white list for 2019-2021 consists of 58 flags. The number of flags in the black list is 3, four flags less than the last year. The number of flags on the grey list remains 18 flags. The white list includes 37 flags, three less than the previous year.

A list of under-performing ships (i.e. ships detained three or more times during previous twelve months) is published monthly. A total of

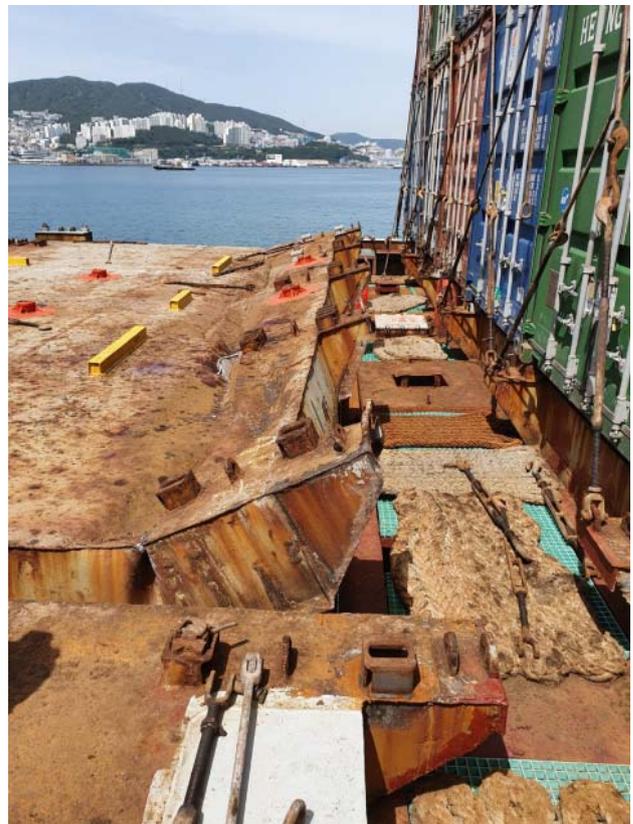
9 vessels, involving 3 individual ships, were identified as under-performing ships in 2021. The list of under-performing ships is provided in Table 16.

DEFICIENCIES

Where conditions on board are found that are not in compliance with the requirements of the relevant instruments by the port State control officers, these are recorded as deficiencies and required to be rectified.

A total of 39,838 deficiencies were recorded in 2021. The deficiencies found are categorized and shown in Figure 7 and Table 7.

It has been noted that fire safety measures, life-saving appliances and safety of navigation continue to be the top three categories of defi-



Candidate photo for Deficiency Photo of the Year
(Ship type: Container ship; Date: 26/05/2021;
Port: Busan)



Candidate photo for Deficiency Photo of the Year
(Ship type: Ro-Ro cargo ship; Date: 01/12/2021;
Port: Vladivostok)

iciencies discovered on ships. In 2021, 5,929 deficiencies related to fire safety measures, 5,192 deficiencies related to life-saving appliances and 4,743 safety of navigation related deficiencies were recorded, representing nearly 40% of the total number of all recorded deficiencies. It is noted that deficiencies related to life-saving appliances and safety of navigation increased 1,015 in number or 24% by percentage and 1,062 or 29% in 2021 respectively. Furthermore, the deficiencies relating to main category of stability, structure and related equipment, as the results of the CIC of the year, has also increased 259 in number or 23% by percentage in 2021.

DEFICIENCY PHOTO OF THE YEAR

The function for collecting and storing deficiency photos taken during PSC inspections in the APCIS has been implemented since 2009. For encouraging and promoting PSC officers to submitting deficiency photos, a prize of deficiency photo of the year has been established to award the PSC officer who took the best photo of deficiency in the year. Deficiency photo of the years are also

published on the Tokyo MOU website.

In 2021, a total of 8,507 photos were submitted by PSC officers. In accordance with the procedures for selection of deficiency photo of the year, the photo taken by PSC officer of the Authority of China was selected as the winner for 2021. Deficiency photo of the year – 2021 and other candidate photos are provided in this section.

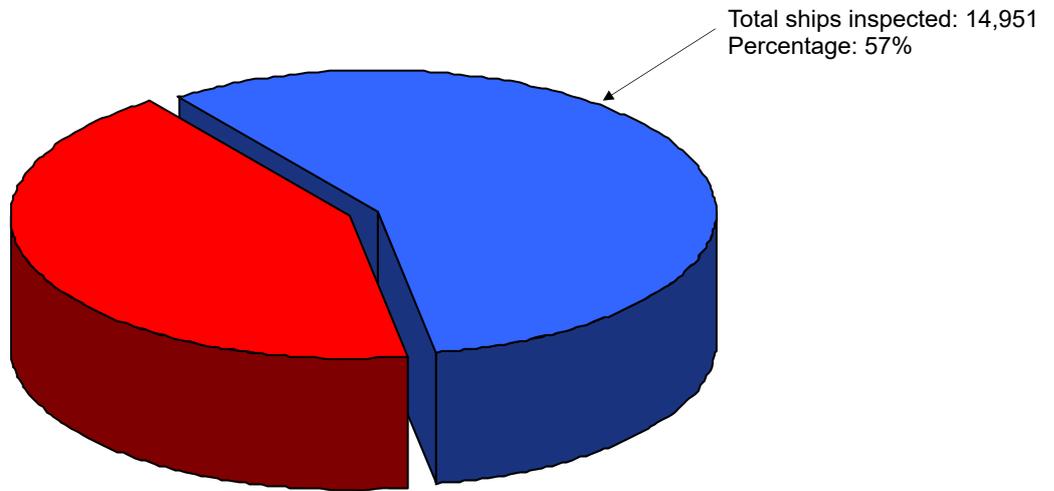
OVERVIEW OF PORT STATE CONTROL RESULTS 2011 – 2021

Figures 9-14 show the comparison of port State inspection results for 2011 - 2021. These figures indicate the trends in port State activities and ship performance over the past eleven years.



Candidate photo for Deficiency Photo of the Year
(Ship type: Bulk carrier; Date: 20/05/2021;
Port: Newcastle, NSW)

Figure 1: INSPECTION PERCENTAGE



Total individual ship visited: 26,157

Figure 2: INSPECTION PER SHIP RISK PROFILE

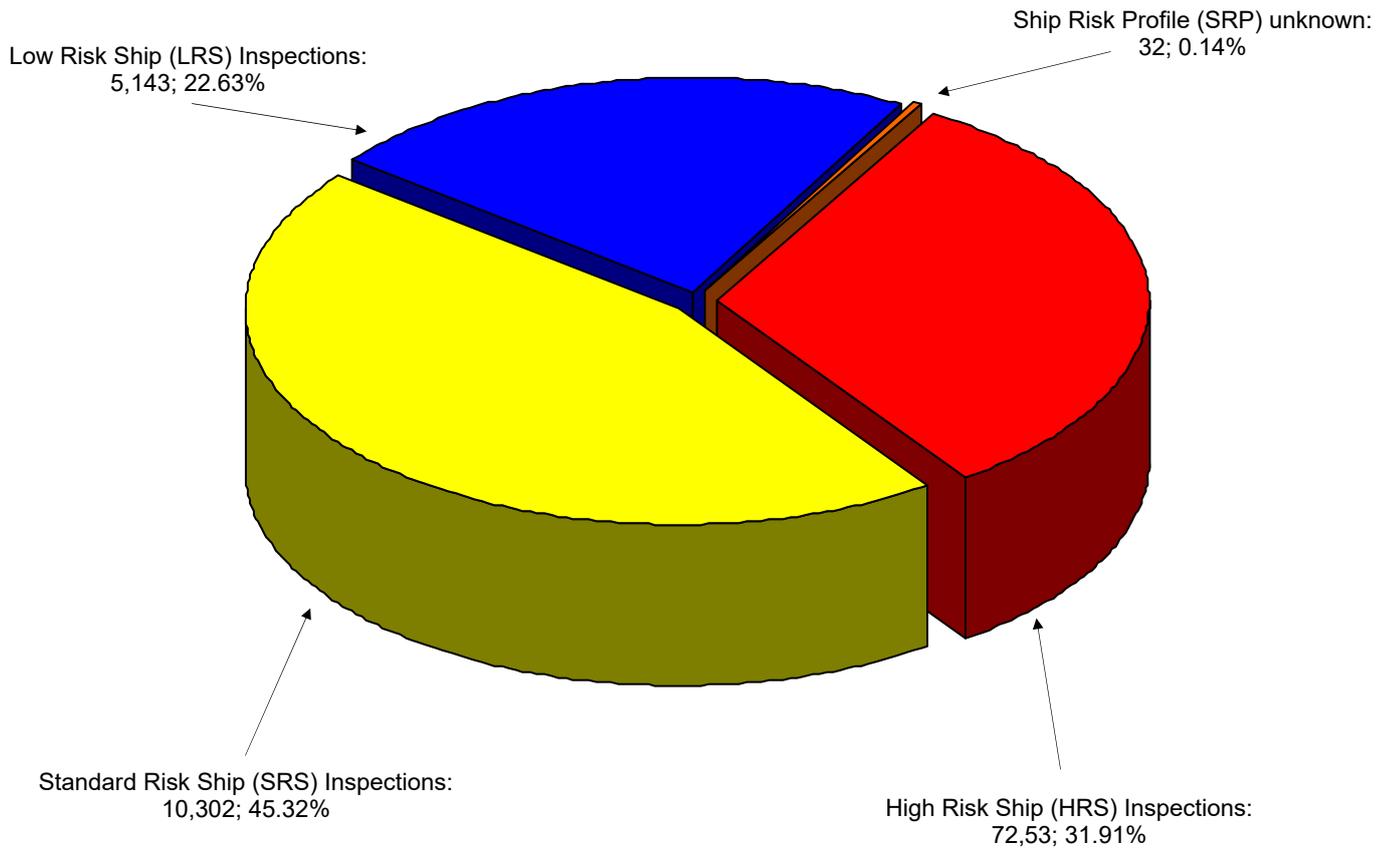


Figure 3: PORT STATE INSPECTIONS - CONTRIBUTION BY AUTHORITIES

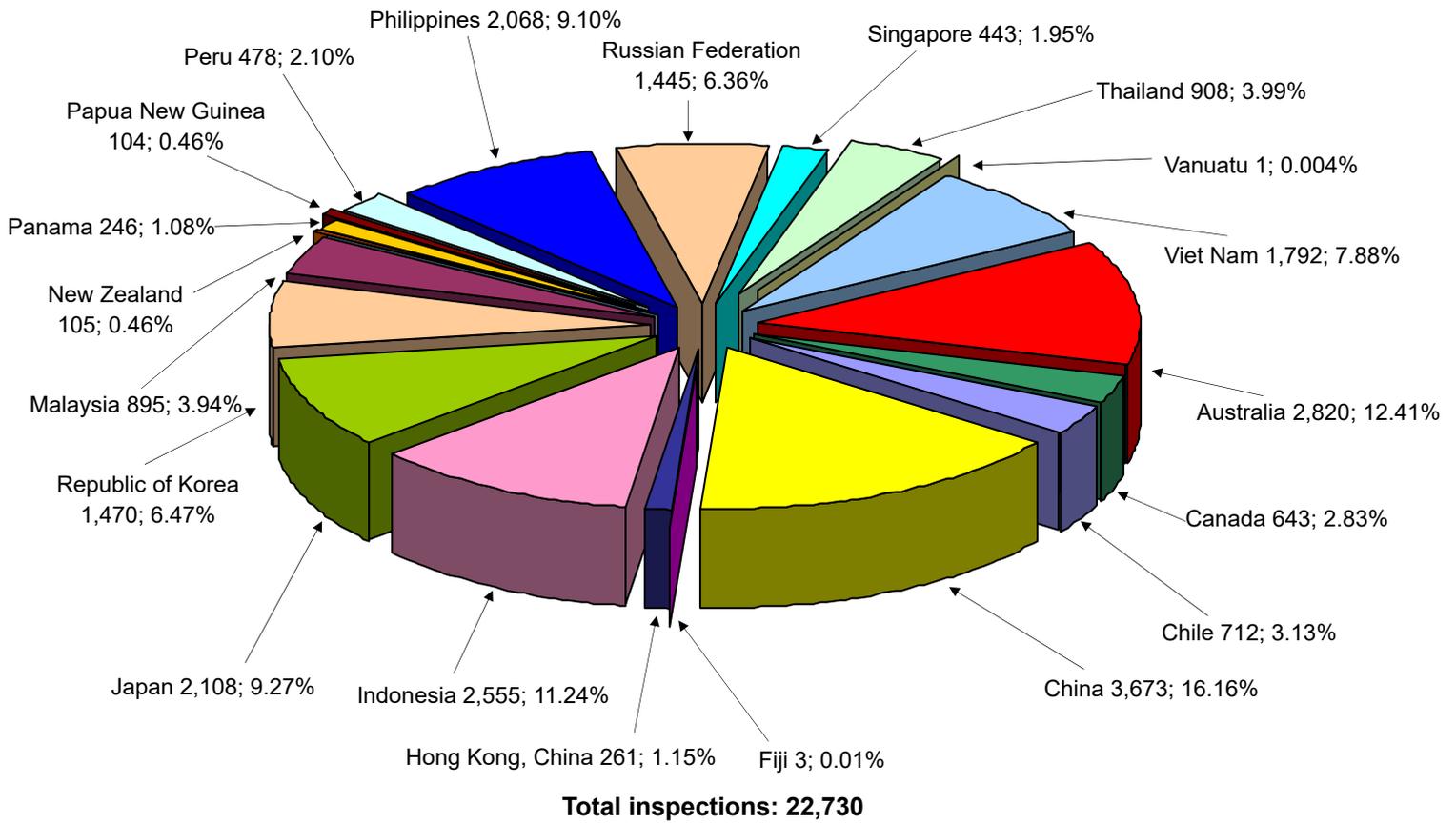


Figure 4: TYPE OF SHIP INSPECTED

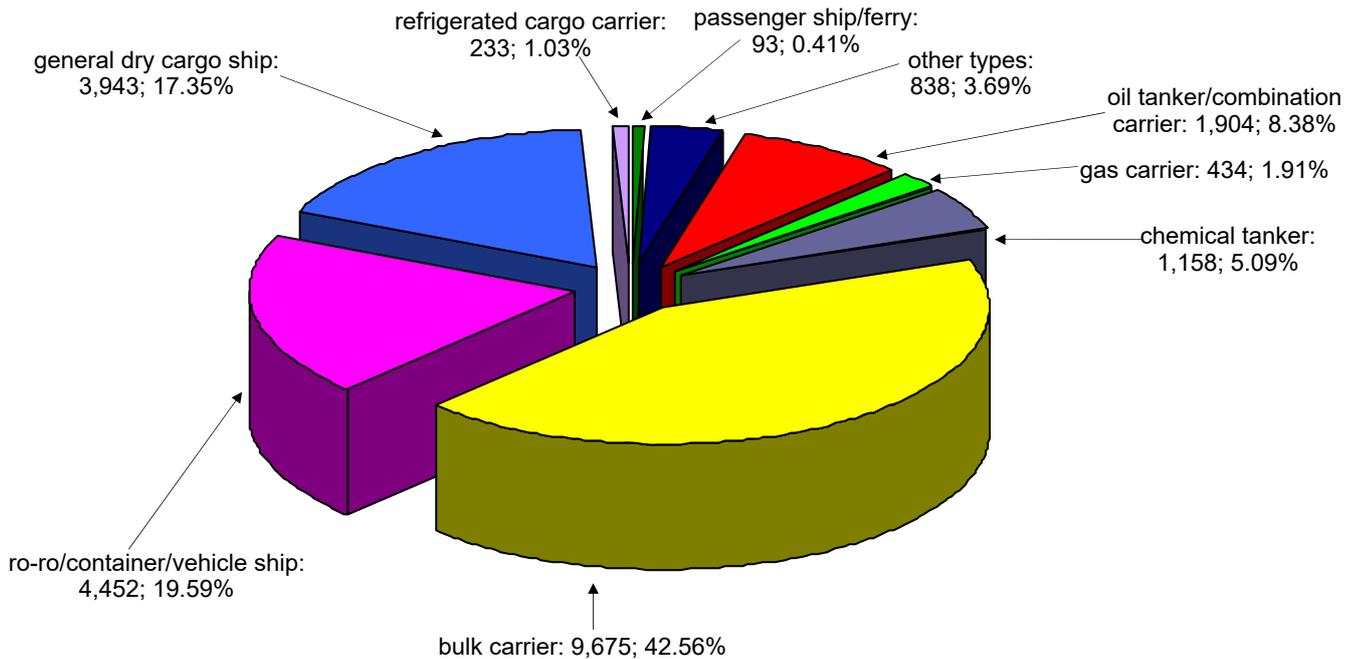
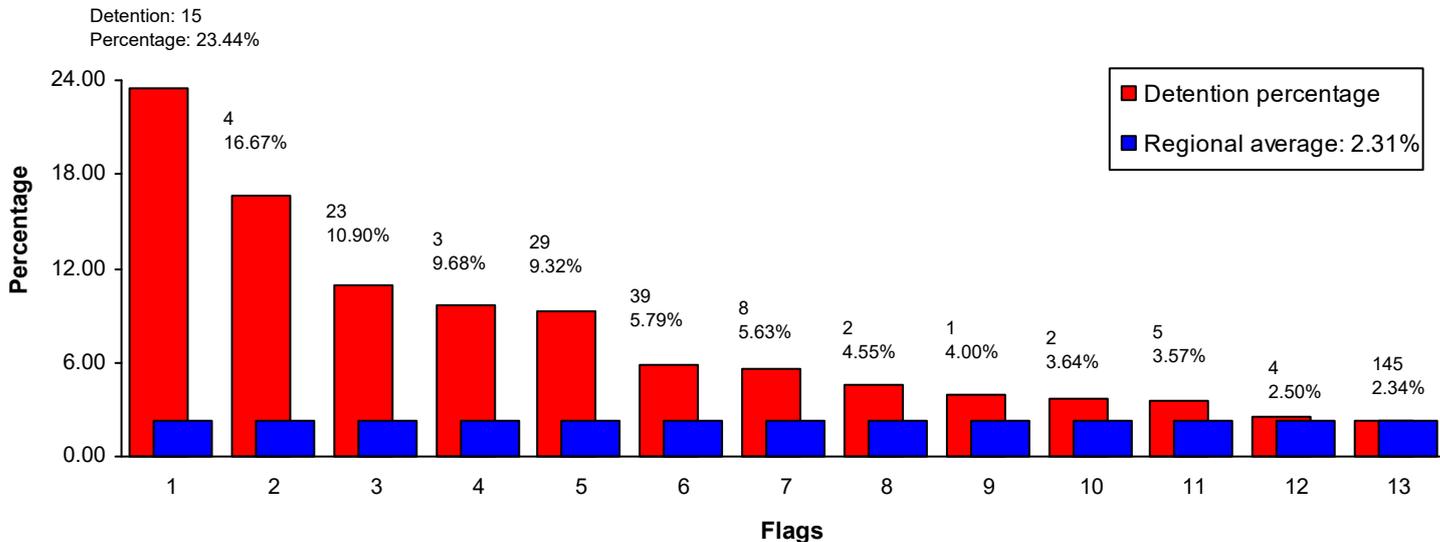


Figure 5: DETENTIONS PER FLAG



Flags:

- | | | | |
|-------------------------------------|-----------------|------------------------|------------|
| 1. Mongolia | 2. Cook Islands | 3. Togo | 4. India |
| 5. Sierra Leone | 6. Belize | 7. Antigua and Barbuda | 8. Italy |
| 9. Saint Vincent and the Grenadines | 10. Netherlands | 11. Indonesia | 12. Greece |
| 13. Panama | | | |

Note: Flags listed above are those flags the ships of which were involved in at least 20 port State inspections and detention percentage of which are above the regional average detention percentage. The complete information on detentions by flag is given in Table 4.

Figure 6: DETENTION PER SHIP TYPE

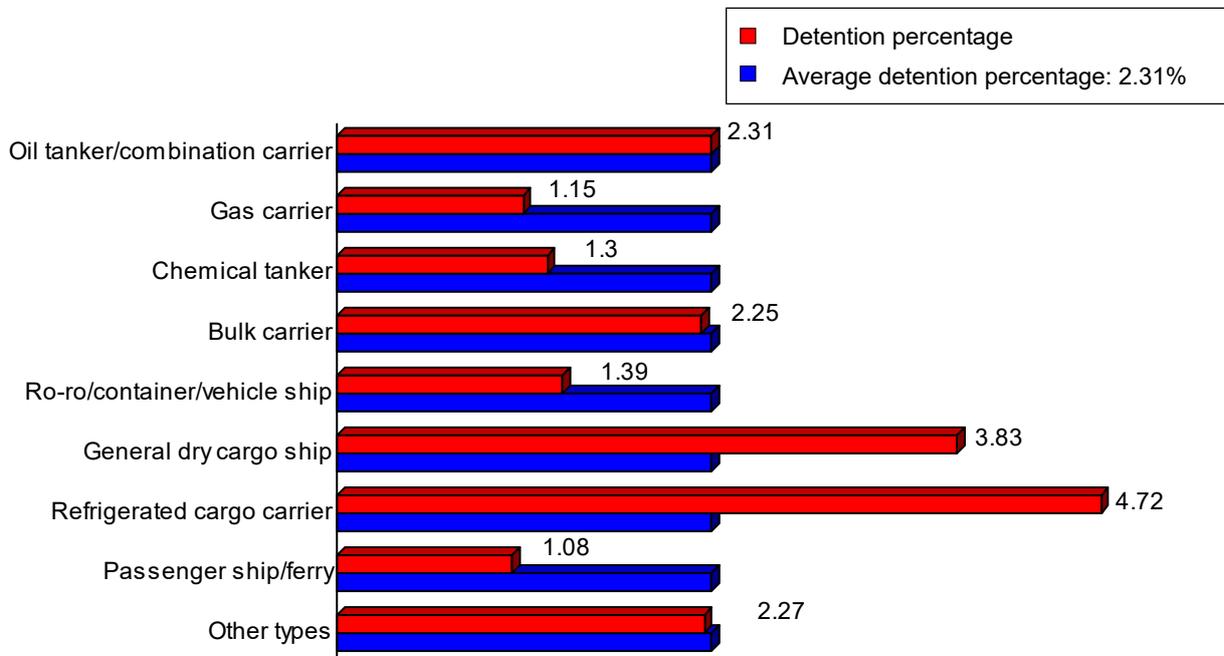


Figure 7: DEFICIENCIES BY MAIN CATEGORIES

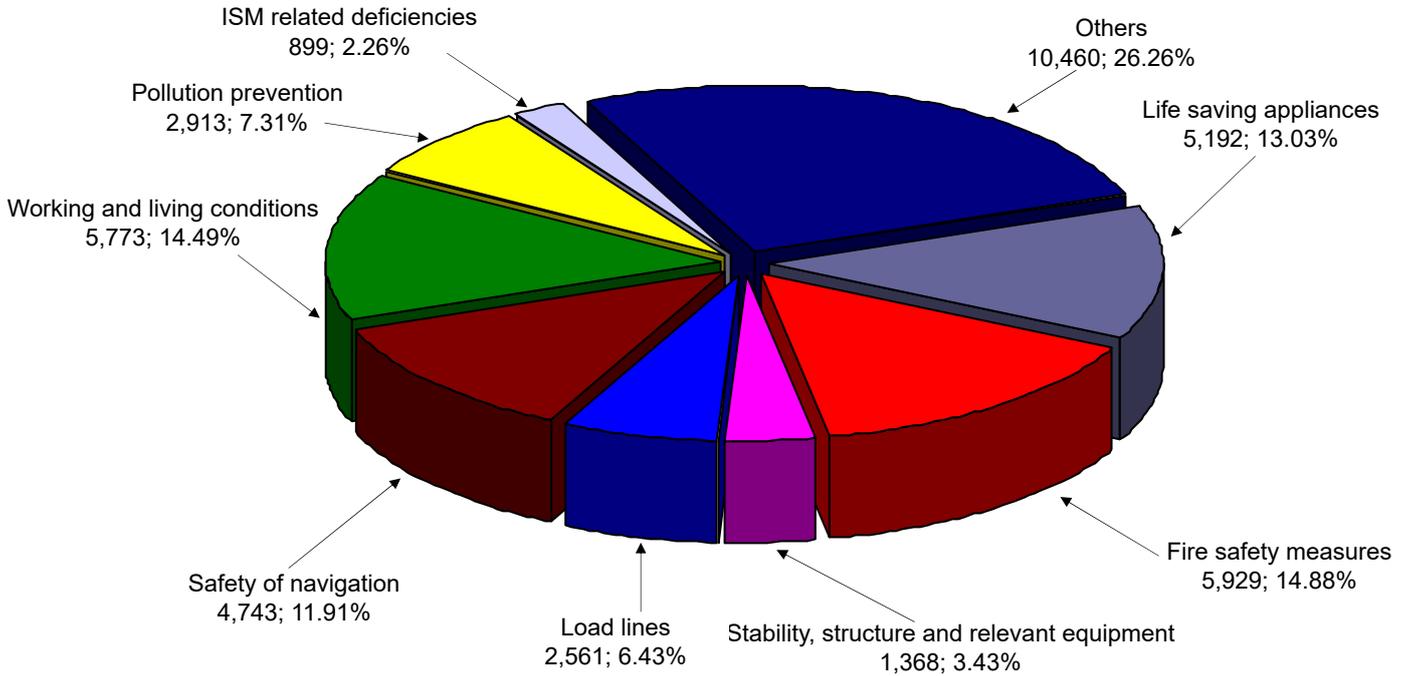
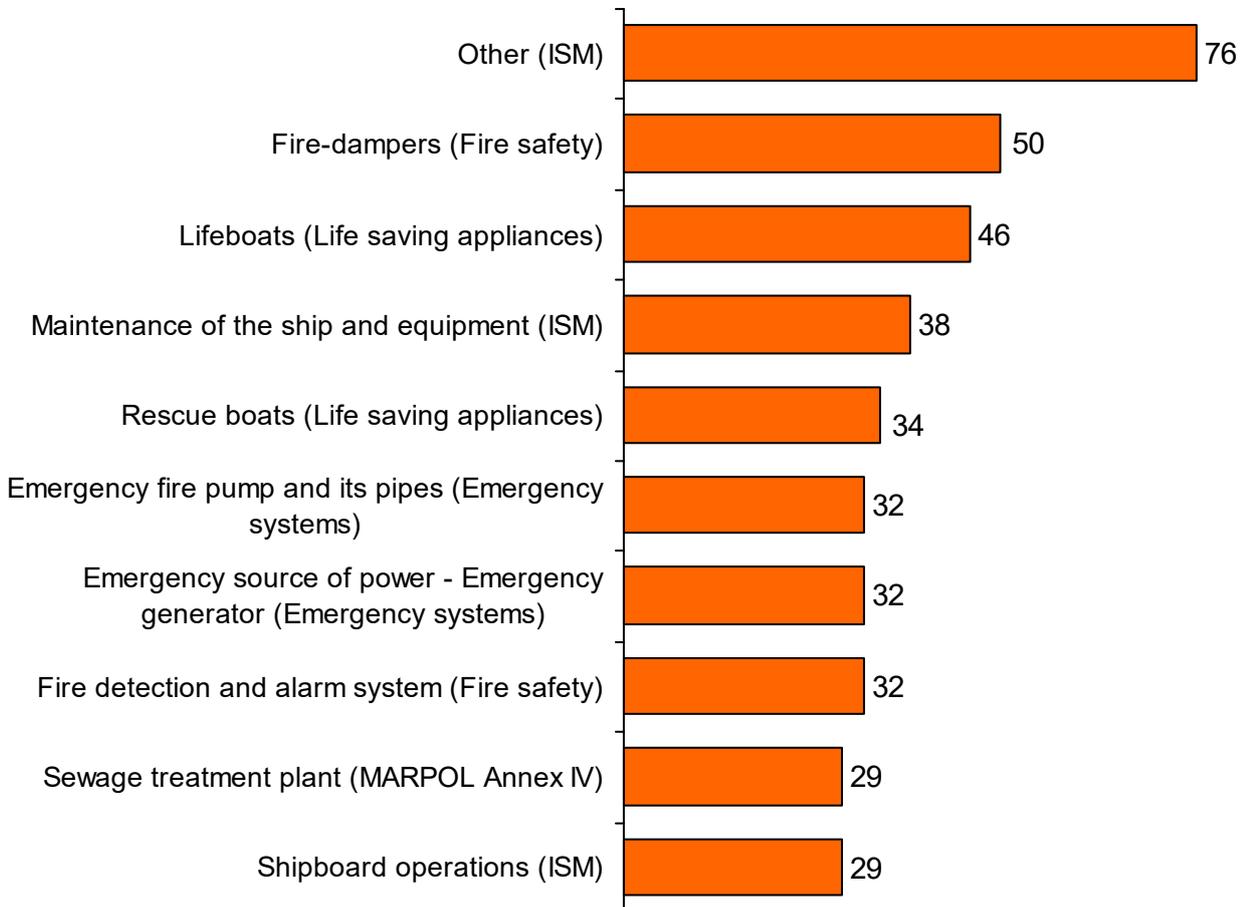


Figure 8: MOST FREQUENT DETAINABLE DEFICIENCIES



OVERVIEW OF PORT STATE CONTROL RESULTS 2011 - 2021

Figure 9: NO. OF INSPECTIONS

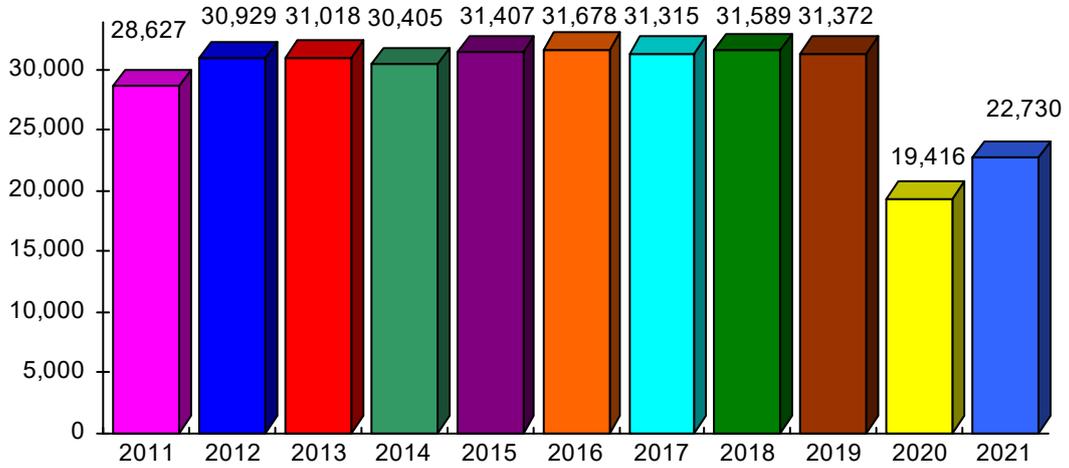


Figure 10: INSPECTION PERCENTAGE

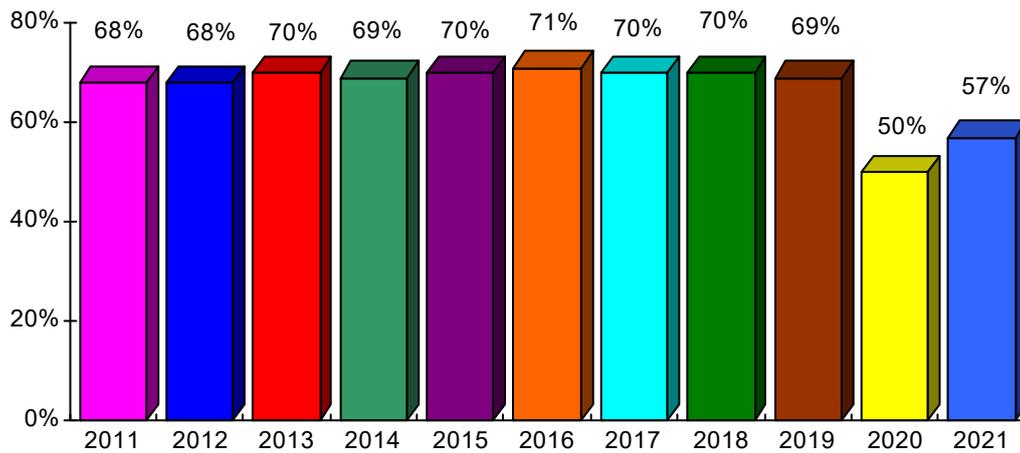


Figure 11: NO. OF INSPECTIONS WITH DEFICIENCIES

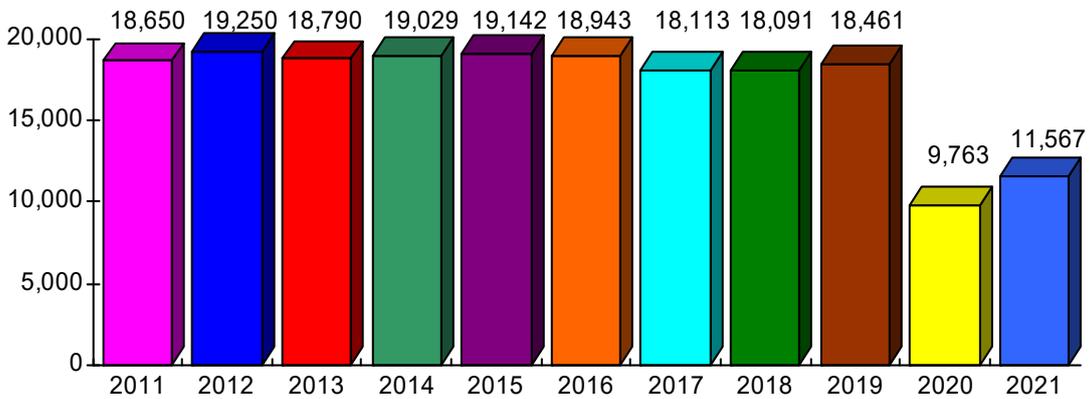


Figure 12: NO. OF DEFICIENCIES

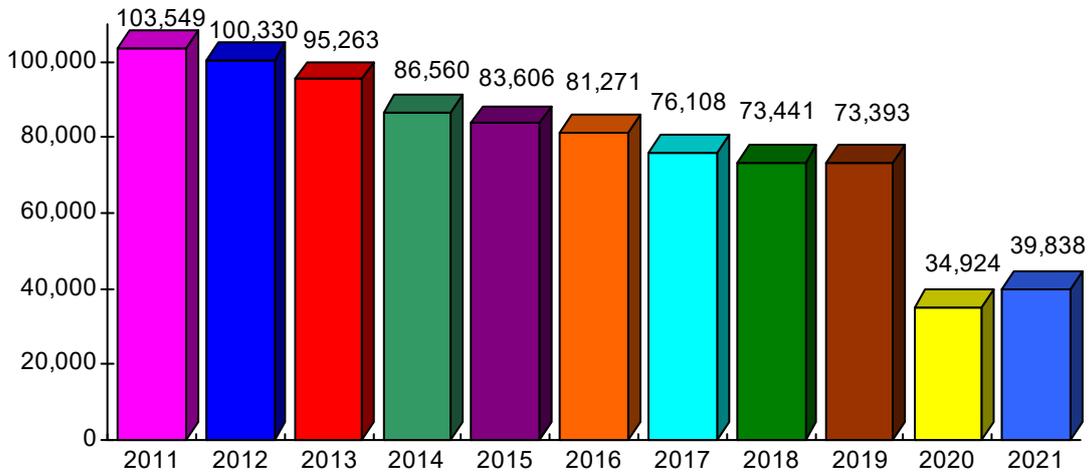


Figure 13: NO. OF DETENTIONS

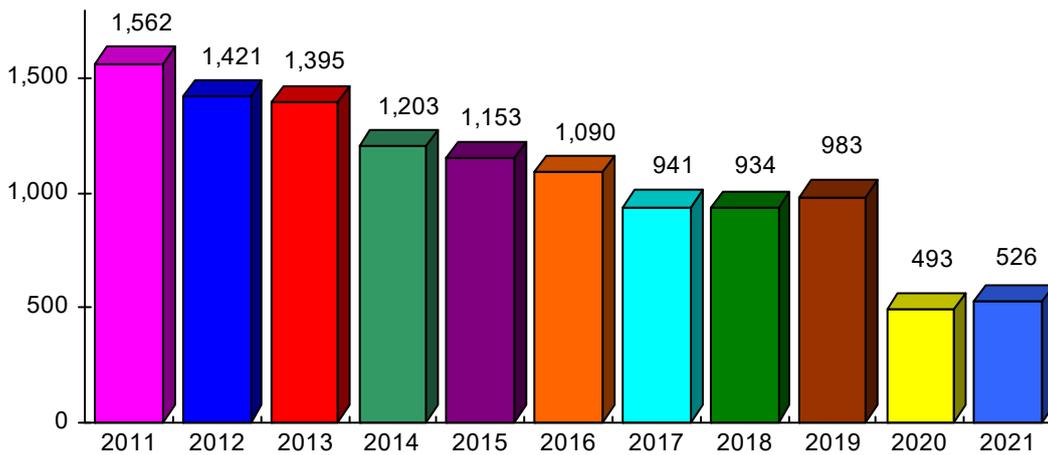
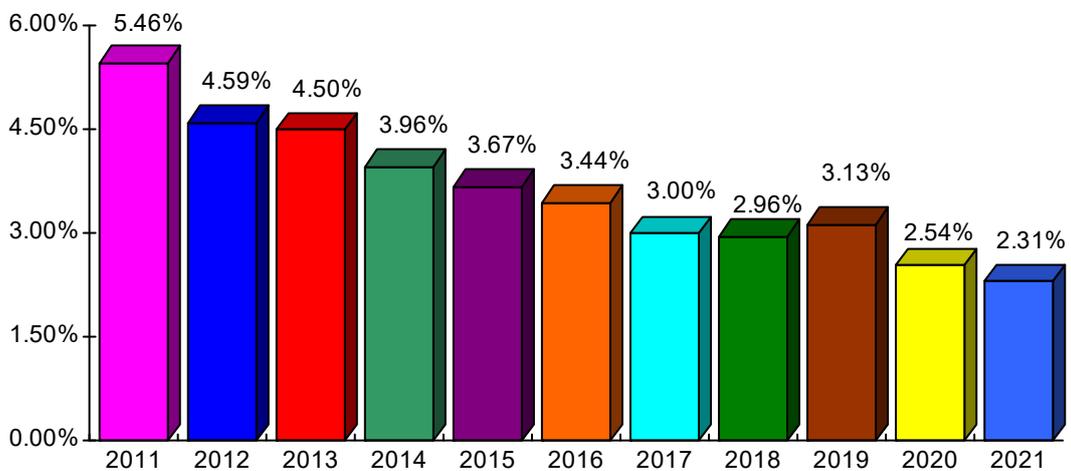


Figure 14: DETENTION PERCENTAGE



ANNEX 1

STATUS OF THE RELEVANT INSTRUMENTS

Table 1: STATUS OF THE RELEVANT INSTRUMENTS

(Date of deposit of instruments)

(as at 31 December 2021)

Authority	LOAD LINES 66	LOAD LINES PROT 88	SOLAS 74	SOLAS PROT 78	SOLAS PROT 88	MARPOL 73/78	STCW 78
Australia	29/07/68	07/02/97	17/08/83	17/08/83	07/02/97	14/10/87	07/11/83
Canada	14/01/70	08/04/10	08/05/78	-	08/04/10	16/11/92	06/11/87
Chile	10/03/75	03/03/95	28/03/80	15/07/92	29/09/95	10/10/94	09/06/87
China	05/10/73	03/02/95	07/01/80	17/12/82	03/02/95	01/07/83	08/06/81
Fiji	29/11/72	28/07/04	04/03/83	28/07/04	28/07/04	08/03/16	27/03/91
Hong Kong, China*	16/08/72	23/10/02	25/05/80	25/11/81	23/10/02	11/04/85	03/11/84
Indonesia	17/01/77	28/11/17	17/02/81	23/08/88	28/11/17	21/10/86	27/01/87
Japan	15/05/68	24/06/97	15/05/80	15/05/80	24/06/97	09/06/83	27/05/82
Republic of Korea	10/07/69	14/11/94	31/12/80	02/12/82	14/11/94	23/07/84	04/04/85
Malaysia	12/01/71	11/11/11	19/10/83	19/10/83	11/11/11	31/01/97	31/01/92
Marshall Islands	26/04/88	29/11/94	26/04/88	26/04/88	16/10/95	26/04/88	25/04/89
New Zealand	05/02/70	03/06/01	23/02/90	23/02/90	03/06/01	25/09/98	30/07/86
Panama	13/05/66	17/09/07	09/03/78	14/07/82	17/09/07	20/02/85	29/06/92
Papua New Guinea	18/05/76	-	12/11/80	-	-	25/10/93	28/10/91
Peru	18/01/67	24/06/09	04/12/79	16/07/82	21/08/09	25/04/80	16/07/82
Philippines	04/03/69	24/04/18	15/12/81	24/04/18	06/06/18	15/06/01	22/02/84
Russian Federation	04/07/66	18/08/00	09/01/80	12/05/81	18/08/00	03/11/83	09/10/79
Singapore	21/09/71	18/08/99	16/03/81	01/06/84	10/08/99	01/11/90	01/05/88
Thailand	30/12/92	-	18/12/84	-	-	02/11/07	19/06/97
Vanuatu	28/07/82	26/11/90	28/07/82	28/07/82	14/09/92	13/04/89	22/04/91
Viet Nam	18/12/90	27/05/02	18/12/90	12/10/92	27/05/02	29/05/91	18/12/90
Mexico	25/03/70	13/05/94	28/03/77	30/06/83	13/05/94	23/04/92	02/02/82
Cambodia	28/11/94	08/06/01	28/11/94	28/11/94	08/06/01	28/11/94	08/06/01
DPR Korea	18/10/89	08/08/01	01/05/85	01/05/85	08/08/01	01/05/85	01/05/85
Macao, China*	18/07/05	11/10/10	20/12/99	20/12/99	24/06/05	20/12/99	18/07/05
Samoa	23/10/79	18/05/04	14/03/97	14/03/97	18/05/04	07/02/02	24/05/93
Solomon Islands	30/06/04	-	30/06/04	-	-	30/06/04	01/06/94
Tonga	12/04/77	15/06/00	12/04/77	18/09/03	15/06/00	01/02/96	07/02/95
Entry into force date	21/07/68	03/02/00	25/05/80	01/05/81	03/02/00	02/10/83	28/04/84

* Effective date of extension of instruments.

(as at 31 December 2021)

Authority	COLREG 72	TONNAGE 69	ILO 147**	MLC 2006***	AFS 2001	CLC PROT 92	BWM 2004
Australia	29/02/80	21/05/82	-	21/12/11	09/01/07	09/10/95	07/06/17
Canada	07/03/75	18/07/94	D	15/06/10	08/04/10	29/05/98	08/04/10
Chile	02/08/77	22/11/82	-	22/02/18	06/10/16	29/05/02	-
China	07/01/80	08/04/80	-	12/11/15	07/03/11	05/01/99	22/10/18
Fiji	04/03/83	29/11/72	-	21/01/13	08/03/16	30/11/99	08/03/16
Hong Kong, China*	15/07/77	18/07/82	-	06/08/18	15/02/16	05/01/99	13/08/20
Indonesia	13/11/79	14/03/89	-	12/06/17	11/09/14	06/07/99	24/11/15
Japan	21/06/77	17/07/80	D	05/08/13	08/07/03	24/08/94	10/10/14
Republic of Korea	29/07/77	18/01/80	-	09/01/14	24/07/08	07/03/97	10/12/09
Malaysia	23/12/80	24/04/84	-	20/08/13	27/09/10	09/06/04	27/09/10
Marshall Islands	26/04/88	25/04/89	-	25/09/07	09/05/08	16/10/95	26/11/09
New Zealand	26/11/76	06/01/78	-	09/03/16	-	25/06/98	09/01/17
Panama	14/03/79	09/03/78	-	06/02/09	17/09/07	18/03/99	19/10/16
Papua New Guinea	18/05/76	25/10/93	-	-	-	23/01/01	-
Peru	09/01/80	16/07/82	06/07/04	-	02/07/19	01/09/05	10/06/16
Philippines	10/06/13	06/09/78	-	20/08/12	06/06/18	07/07/97	06/06/18
Russian Federation	09/11/73	20/11/69	D	20/08/12	19/10/12	20/03/00	24/05/12
Singapore	29/04/77	06/06/85	-	15/06/11	31/12/09	18/09/97	08/06/17
Thailand	06/08/79	11/06/96	-	07/06/16	-	17/07/17	-
Vanuatu	28/07/82	13/01/89	-	-	20/08/08	18/02/99	-
Viet Nam	18/12/90	18/12/90	-	08/05/13	27/11/15	17/06/03	-
Mexico	08/04/76	14/07/72	-	-	07/07/06	13/05/94	18/03/08
Cambodia	28/11/94	28/11/94	-	-	-	08/06/01	-
DPR Korea	01/05/85	18/10/89	-	-	21/08/20	13/07/21	-
Macao, China*	20/12/99	18/07/05	-	-	07/03/11	24/06/05	22/10/18
Samoa	23/10/79	18/05/04	-	21/11/13	-	01/02/02	-
Solomon Islands	12/03/82	30/06/04	-	-	-	30/06/04	-
Tonga	12/04/97	12/04/97	-	-	16/04/14	10/12/99	16/04/14
Entry into force date	15/07/77	18/07/82	28/11/81	20/08/13	17/09/08	30/05/96	08/09/17

* Effective date of extension of instruments.

** Although some Authorities have not ratified the ILO Convention No.147, parts of the ILO conventions referred to therein are implemented under their national legislation and port State control is carried out on matters covered by the national regulations.

*** MLC 2006 will supersede ILO147 if the Authority ratified both of them.

Table 1a: STATUS OF MARPOL 73/78

(Date of deposit of instruments)

(As at 31 December 2021)

Authority	Annexes I & II	Annex III	Annex IV	Annex V	Annex VI
Australia	14/10/87	10/10/94	27/02/04	14/08/90	07/08/07
Canada	16/11/92	08/08/02	26/03/10	26/03/10	26/03/10
Chile	10/10/94	10/10/94	10/10/94	15/08/08	16/10/06
China	01/07/83	13/09/94	02/11/06	21/11/88	23/05/06
Fiji	08/03/16	-	08/03/16	08/03/16	-
Hong Kong, China*	11/04/85	07/03/95	02/11/06	27/03/96	20/03/08
Indonesia	21/10/86	24/08/12	24/08/12	24/08/12	24/08/12
Japan	09/06/83	09/06/83	09/06/83	09/06/83	15/02/05
Republic of Korea	23/07/84	28/02/96	28/11/03	28/02/96	20/04/06
Malaysia	31/01/97	27/09/10	27/09/10	31/01/97	27/09/10
Marshall Islands	26/04/88	26/04/88	26/04/88	26/04/88	07/03/02
New Zealand	25/09/98	25/09/98	-	25/09/98	-
Panama	20/02/85	20/02/85	20/02/85	20/02/85	13/05/03
Papua New Guinea	25/10/93	25/10/93	25/10/93	25/10/93	-
Peru	25/04/80	25/04/80	25/04/80	25/04/80	04/12/14
Philippines	15/06/01	15/06/01	15/06/01	15/06/01	24/04/18
Russian Federation	03/11/83	14/08/87	14/08/87	14/08/87	08/04/11
Singapore	01/11/90	02/03/94	01/05/05	27/05/99	08/10/00
Thailand	02/11/07	-	-	-	-
Vanuatu	13/04/89	22/04/91	15/03/04	22/04/91	15/03/04
Viet Nam	29/05/91	19/12/14	19/12/14	19/12/14	19/12/14
Mexico	23/04/92	-	-	15/07/98	-
Cambodia	28/11/94	28/11/94	28/11/94	28/11/94	-
DPR Korea	01/05/01	01/05/01	01/05/01	01/05/01	-
Macao, China*	20/12/99	20/12/99	02/11/06	20/12/99	23/05/06
Samoa	07/02/02	07/02/02	07/02/02	07/02/02	18/05/04
Solomon Islands	30/06/04	30/06/04	30/06/04	30/06/04	-
Tonga	01/02/96	01/02/96	01/02/96	01/02/96	20/03/15
Entry into force date	02/10/1983	01/07/1992	27/09/2003	31/12/1988	19/05/2005

* Effective date of extension of instruments.

ANNEX 2

PORT STATE INSPECTION STATISTICS

STATISTICS FOR 2021

Table 2: PORT STATE INSPECTIONS CARRIED OUT BY AUTHORITIES

Authority	No. of individual ships inspected (a)	No. of initial and follow-up inspections (b+c)	No. of initial inspections (b)	No. of follow-up inspections (c)	No. of inspections with deficiencies (d)	No. of deficiencies ¹⁾ (e)	No. of detentions ¹⁾ (f)	No. of individual ships visited ²⁾ (g)	Inspection rate (a/g%)	Detention percentage (f/b%)
Australia ³⁾	2,567	4,275	2,820	1,455	1,447	6,238	159	6,212	41.32	5.64
Canada ⁴⁾	634	643	643	0	478	2,900	24	2,001	31.68	3.73
Chile	681	1,304	712	592	415	1,246	5	1,867	36.48	0.70
China	3,361	5,389	3,673	1,716	2,584	7,355	102	17,396	19.32	2.78
Fiji	3	5	3	2	2	7	1	153	1.96	33.33
Hong Kong, China	255	361	261	100	202	733	9	3,080	8.28	3.45
Indonesia	1,968	2,755	2,555	200	837	2,560	54	8,020	24.54	2.11
Japan	1,788	2,581	2,108	473	1,053	4,038	52	7,603	23.52	2.47
Republic of Korea	1,308	1,823	1,470	353	1,044	3,445	49	10,790	12.12	3.33
Malaysia	801	1,036	895	141	398	1,787	9	7,733	10.36	1.01
Marshall Islands	0	0	0	0	0	0	0	66	0	0
New Zealand	96	144	105	39	47	164	0	962	9.98	0
Panama ⁴⁾	217	260	246	14	54	141	3	3,862	5.62	1.22
Papua New Guinea	90	144	104	40	63	271	2	507	17.75	1.92
Peru	464	517	478	39	66	89	2	1,793	25.88	0.42
Philippines	1,700	2,472	2,068	404	545	1,381	5	4,324	39.32	0.24
Russian Federation ⁴⁾	985	2,786	1,445	1,341	1,175	4,819	41	2,050	48.05	2.84
Singapore	437	469	443	26	58	86	0	14,604	2.99	0
Thailand	743	980	908	72	266	617	6	3,790	19.60	0.66
Vanuatu	1	1	1	0	0	0	0	31	3.23	0
Viet Nam	1,468	1,971	1,792	179	833	1,961	3	4,982	29.47	0.17
Total	14,951	29,916	22,730	7,186	11,567	39,838	526	Regional 26,157	Regional 57%	Regional 2.31%

1) Numbers of deficiencies and detentions do not include those related to security.

2) LLI data for 2021.

3) Data for Australia is also provided to Indian Ocean MOU.

4) Data is only for the Pacific ports.

Table 2a: PORT STATE INSPECTIONS ON MARITIME SECURITY

Authority	No. of inspections	No. of inspections with security related deficiencies	No. of security related deficiencies	No. of security related detentions	Detention percentage (%)
Australia	2,820	4	4	0	0
Canada	643	11	11	0	0
Chile	712	8	8	0	0
China	3,673	63	64	0	0
Fiji	3	1	1	1	33.33
Hong Kong, China	261	13	13	0	0
Indonesia	2,555	22	26	0	0
Japan	2,108	57	61	0	0
Republic of Korea	1,470	152	160	1	0.07
Malaysia	895	39	40	0	0
Marshall Islands	0	0	0	0	0
New Zealand	105	2	2	0	0
Panama	246	2	2	1	0.41
Papua New Guinea	104	3	3	0	0
Peru	478	5	5	0	0
Philippines	2,068	73	90	1	0.05
Russian Federation	1,445	62	67	2	0.14
Singapore	443	1	1	0	0
Thailand	908	50	52	0	0
Vanuatu	1	0	0	0	0
Viet Nam	1,792	22	22	0	0
Total	22,730	590	632	6	Regional 0.03%

Note: Security related data showing in the above table and the tables of deficiency by category are excluded from all other statistical tables and figures in this report.

Table 2b: PORT STATE INSPECTIONS BY CATEGORIES (PHYSICAL & REMOTE)

Authority	Initial inspections					Follow-up inspections				
	Physical		Remote		Total	Physical		Remote		Total
	#	%	#	%		#	%	#	%	
Australia	2,820	100.00	0	0	2,820	1,321	90.79	134	9.21	1,455
Canada	643	100.00	0	0	643	0	0	0	0	0
Chile	712	100.00	0	0	712	459	77.53	133	22.47	592
China	595	16.20	3,078	83.80	3,673	500	29.14	1,216	70.86	1,716
Fiji	3	100.00	0	0	3	2	100.00	0	0	2
Hong Kong, China	257	98.47	4	1.53	261	53	53.00	47	47.00	100
Indonesia	2,555	100.00	0	0	2,555	199	99.50	1	0.50	200
Japan	2,040	96.77	68	3.23	2,108	451	95.35	22	4.65	473
Republic of Korea	1,466	99.73	4	0.27	1,470	339	96.03	14	3.97	353
Malaysia	895	100.00	0	0	895	131	92.91	10	7.09	141
Marshall Islands	0	0	0	0	0	0	0	0	0	0
New Zealand	105	100.00	0	0	105	34	87.18	5	12.82	39
Panama	246	100.00	0	0	246	8	57.14	6	42.86	14
Papua New Guinea	104	100.00	0	0	104	39	97.50	1	2.50	40
Peru	478	100.00	0	0	478	16	41.03	23	58.97	39
Philippines	2,068	100.00	0	0	2,068	404	100.00	0	0	404
Russian Federation	1,445	100.00	0	0	1,445	1,284	95.75	57	4.25	1,341
Singapore	129	29.12	314	70.88	443	2	7.69	24	92.31	26
Thailand	908	100.00	0	0	908	72	100.00	0	0	72
Vanuatu	1	100.00	0	0	1	0	0	0	0	0
Viet Nam	1,532	85.49	260	14.51	1,792	178	99.44	1	0.56	179
Total	19,002	83.60	3,728	16.40	22,730	5,492	76.43	1,694	23.57	7,186

Table 3: PORT STATE INSPECTIONS PER SHIP RISK PROFILE

Authority	Ship Risk Profile (SRP)				Total No. of inspections
	HRS	SRS	LRS	SRP Unknown	
Australia	505	1,450	859	6	2,820
Canada	149	337	157	0	643
Chile	117	427	166	2	712
China	1,147	1,678	848	0	3,673
Fiji	1	1	1	0	3
Hong Kong, China	96	116	49	0	261
Indonesia	776	1,067	712	0	2,555
Japan	646	980	476	6	2,108
Republic of Korea	565	643	261	1	1,470
Malaysia	310	391	184	10	895
Marshall Islands	0	0	0	0	0
New Zealand	44	48	13	0	105
Panama	40	135	71	0	246
Papua New Guinea	40	50	12	2	104
Peru	97	250	130	1	478
Philippines	747	917	403	1	2,068
Russian Federation	888	448	107	2	1,445
Singapore	12	257	174	0	443
Thailand	260	414	234	0	908
Vanuatu	1	0	0	0	1
Viet Nam	812	693	286	1	1,792
Total	7,253	10,302	5143	32	22,730

Table 4: PORT STATE INSPECTIONS PER FLAG

Flag	No. of inspections	No. of inspections with deficiencies	No. of deficiencies	No. of detentions	Detention percentage %
Algeria	1	1	2	0	0
Antigua and Barbuda	142	67	241	8	5.63
Australia	1	1	3	1	100.00
Bahamas	441	171	470	8	1.81
Bahrain	1	1	1	0	0
Bangladesh	93	67	163	1	1.08
Barbados	18	6	26	1	5.56
Belgium	16	6	7	0	0
Belize	674	643	2,672	39	5.79
Bermuda (UK)	24	3	15	0	0
Bolivia	2	2	41	0	0
Brunei Darussalam	4	1	5	0	0
Cameroon	7	5	36	1	14.29
Cayman Islands (UK)	68	28	92	1	1.47
Chile	4	0	0	0	0
China	523	202	594	3	0.57
Colombia	1	1	1	0	0
Comoros	2	2	9	1	50.00
Cook Islands	24	15	92	4	16.67
Croatia	17	9	41	0	0
Curacao	5	2	7	0	0
Cyprus	340	140	498	4	1.18
Denmark	139	43	131	1	0.72
Djibouti	4	4	24	1	25.00
Dominica	10	10	77	3	30.00
Ecuador	5	2	4	0	0
Egypt	3	2	3	0	0
Equatorial Guinea	1	1	26	0	0
Ethiopia	1	1	1	0	0
Falkland Islands (UK) (Malvinas)	1	1	4	0	0
Finland	1	1	4	0	0
France	24	10	14	0	0
Gabon	5	1	4	0	0
Germany	38	16	46	0	0
Gibraltar (UK)	18	10	44	1	5.56
Greece	160	45	107	4	2.50
Guyana	3	2	29	1	33.33
Hong Kong, China	2,586	1,099	3,247	31	1.20

Flag	No. of inspections	No. of inspections with deficiencies	No. of deficiencies	No. of detentions	Detention percentage %
India	31	19	48	3	9.68
Indonesia	140	92	432	5	3.57
Iran	13	9	49	0	0
Isle of Man (UK)	143	60	149	2	1.40
Italy	44	19	79	2	4.55
Jamaica	15	14	52	0	0
Japan	148	67	179	1	0.68
Jordan	1	0	0	0	0
Kiribati	16	12	28	0	0
Korea, Democratic People's Republic	1	1	20	0	0
Korea, Republic of	644	353	1,236	11	1.71
Kuwait	7	3	4	0	0
Liberia	2,512	1,097	3,697	57	2.27
Libya	2	1	1	0	0
Luxembourg	16	8	15	0	0
Malaysia	143	65	180	1	0.70
Malta	726	292	979	13	1.79
Marshall Islands	2,353	942	3,103	47	2.00
Mauritius	1	1	2	0	0
Micronesia, Federated States of	1	1	5	1	100.00
Moldova	1	0	0	0	0
Mongolia	64	60	421	15	23.44
Montenegro	6	5	17	0	0
Myanmar	5	5	25	1	20.00
Netherlands	55	33	108	2	3.64
New Zealand	2	2	3	0	0
Niue	15	12	92	0	0
Norway	188	78	236	1	0.53
Pakistan	6	4	25	1	16.67
Palau	51	48	202	1	1.96
Panama	6,195	3,481	11,807	145	2.34
Peru	2	2	28	1	50.00
Philippines	107	51	192	2	1.87
Portugal	210	80	284	4	1.90
Qatar	12	7	13	0	0
Russian Federation	26	17	67	0	0
Saint Kitts and Nevis	5	4	23	1	20.00
Saint Vincent and the Grenadines	25	14	74	1	4.00
Samoa	1	0	0	0	0

Flag	No. of inspections	No. of inspections with deficiencies	No. of deficiencies	No. of detentions	Detention percentage %
Saudi Arabia	19	5	10	0	0
Sierra Leone	311	301	1,836	29	9.32
Singapore	1,590	613	1,785	15	0.94
Solomon Islands	1	1	16	0	0
South Africa	1	0	0	0	0
Spain	6	1	1	0	0
Sri Lanka	6	3	7	1	16.67
Sweden	8	2	2	0	0
Switzerland	9	6	26	0	0
Taiwan, China	95	23	50	1	1.05
Tanzania	7	6	56	5	71.43
Thailand	188	108	296	3	1.60
Togo	211	202	1,119	23	10.90
Turkey	23	13	29	0	0
Tuvalu	93	69	181	2	2.15
Ukraine	5	5	17	0	0
United Kingdom (UK)	102	47	133	2	1.96
United States of America	25	9	18	0	0
Vanuatu	29	14	38	0	0
Viet Nam	660	558	1,558	12	1.82
Ship's registration withdrawn	1	1	4	1	100.00
Total	22,730	11,567	39,838	526	Regional 2.31

Table 5: PORT STATE INSPECTIONS PER SHIP TYPE

Type of ship	No. of inspections	No. of inspections with deficiencies	No. of deficiencies	No. of detentions	Detention percentage %
NLS tanker	61	26	57	1	1.64
Combination carrier	22	8	17	0	0
Oil tanker	1,821	630	2,026	43	2.36
Gas carrier	434	175	423	5	1.15
Chemical tanker	1,158	452	1,227	15	1.30
Bulk carrier	9,675	4,937	16,888	218	2.25
Vehicle carrier	495	188	499	5	1.01
Container ship	3,896	1,561	4,776	52	1.33
Ro-Ro cargo ship	61	42	170	5	8.20
General cargo/multi-purpose ship	3,943	2,866	10,887	151	3.83
Refrigerated cargo carrier	233	142	590	11	4.72
Woodchip carrier	231	104	316	2	0.87
Livestock carrier	45	27	80	3	6.67
Ro-Ro passenger ship	55	45	147	0	0
Passenger ship	38	30	83	1	2.63
Factory ship	4	4	12	1	25.00
Heavy load carrier	77	41	141	4	5.19
Offshore service vessel	83	30	101	2	2.41
MODU & FPSO	1	1	8	0	0
High speed passenger craft	4	2	12	0	0
Special purpose ship	44	22	100	1	2.27
Tugboat	142	83	295	3	2.11
Others	207	151	983	3	1.45
Total	22,730	11,567	39,838	526	2.31

Table 6: PORT STATE INSPECTIONS PER RECOGNIZED ORGANIZATION

Recognized organization (RO)	No. of overall inspections	No. of overall detentions	No. of RO responsible detentions	Detention percentage%	RO responsible detention percentage%	Percentage of RO responsible detentions%
Alpha Ship Classification	33	0	0	0	0	0
American Bureau of Shipping	3,061	56	0	1.83	0	0
Asia Classification Society	8	0	0	0	0	0
Asia Shipping Certification Services	31	3	1	9.68	3.23	33.33
Azure Naval Architects BV	1	0	0	0	0	0
Biro Klasifikasi Indonesia	118	4	0	3.39	0	0
Bulgarski Koraben Registar	2	0	0	0	0	0
Bureau Veritas	3,190	73	3	2.29	0.09	4.11
China Classification Society	2,167	23	0	1.06	0	0
Columbus American Register	1	0	0	0	0	0
Cosmos Marine Bureau	117	14	0	11.97	0	0
CR Classification Society	138	2	0	1.45	0	0
Croatian Register of Shipping	32	1	0	3.13	0	0
Cyprus Bureau of Shipping	9	0	0	0	0	0
DNV AS	5,602	107	1	1.91	0.02	0.93
Dromon Bureau of Shipping	77	2	0	2.60	0	0
Emirates Classification Society TASNEEF	1	0	0	0	0	0
Foresight Ship Classification	35	2	1	5.71	2.86	50.00
Hellas Naval Bureau of Shipping S.M.P.C	2	1	0	50.00	0	0
Hellenic Register of Shipping	2	0	0	0	0	0
Indian Register of Shipping	44	3	0	6.82	0	0
Intermaritime Certification Services, S.A.	699	31	4	4.43	0.57	12.90
International Maritime Register	15	1	0	6.67	0	0
International Naval Surveys Bureau	10	1	0	10.00	0	0
International Register of Shipping	107	8	0	7.48	0	0
International Ship Classification	39	1	0	2.56	0	0
Iranian Classification Society	13	1	0	7.69	0	0
Isthmus Bureau of Shipping	336	10	0	2.98	0	0
Isthmus Maritime Classification Society S.A.	1	0	0	0	0	0
Korea Classification Society (former Joson Classification Society)	21	0	0	0	0	0
Korea Ship Safety Technology Authority	1	0	0	0	0	0
KOREAN REGISTER	2,037	41	4	2.01	0.20	9.76
Limdal Marine Services	5	0	0	0	0	0
Lloyd's Register	3,414	61	4	1.79	0.12	6.56
M&P Surveyors, S. de R.L. de C.V.	2	0	0	0	0	0
Macosnar Corporation	34	0	0	0	0	0
Maritime Bureau of Shipping	3	0	0	0	0	0

Recognized organization (RO)	No. of overall inspections	No. of overall detentions	No. of RO responsible detentions	Detention percentage%	RO responsible detention percentage%	Percentage of RO responsible detentions%
Maritime Lloyd Ltd, Georgia	2	0	0	0	0	0
Maritime Technical Systems and Services	8	0	0	0	0	0
National Shipping Adjusters Inc	17	0	0	0	0	0
Nautx, Ltd	3	0	0	0	0	0
New United International Marine Services Ltd	49	2	0	4.08	0	0
Nippon Kaiji Kyokai	8,337	135	4	1.62	0.05	2.96
Novel Classification Society S.A.	5	2	0	40.00	0	0
Overseas Marine Certification Services	435	18	0	4.14	0	0
Panama Bureau of Shipping	8	0	0	0	0	0
Panama Maritime Documentation Services	457	25	2	5.47	0.44	8.00
Panama Shipping Registrar Inc.	39	4	0	10.26	0	0
Phoenix Register of Shipping	10	0	0	0	0	0
Polski Rejestr Statkow	54	2	1	3.70	1.85	50.00
Qualitas Register of Shipping S.A.	26	1	0	3.85	0	0
Registro Brasileiro de Navios de Aeronaves	2	0	0	0	0	0
RINA Services S.p.A.	1,013	17	0	1.68	0	0
Royal Bureau of Shipping	1	1	1	100.00	100.00	100.00
RS Classification Services MON IKE	1	0	0	0	0	0
Russian Maritime Register of Shipping	125	1	0	0.80	0	0
Ship Classification Malaysia	10	0	0	0	0	0
Shipping Register of Ukraine	5	0	0	0	0	0
SingClass International Pte Ltd	8	1	0	12.50	0	0
Sing-Lloyd	18	4	0	22.22	0	0
Union Bureau of Shipping	193	28	5	14.51	2.59	17.86
United Maritime Survey	1	1	0	100.00	0	0
Universal Maritime Bureau	146	10	0	6.85	0	0
Universal Shipping Bureau	1	0	0	0	0	0
Vega Register Inc.	1	0	0	0	0	0
Veritas Register of Shipping	4	0	0	0	0	0
Vietnam Register	696	14	4	2.01	0.57	28.57
Other	34	12	0	35.29	0	0

Note: The number of overall inspections and overall detentions is calculated corresponding to each recognized organization (RO) that issued statutory certificate(s) for a ship. In case that ship's certificates were issued by more than one ROs, the inspection and detention would be counted to each of them.

Table 7: DEFICIENCIES BY CATEGORIES

Nature of deficiencies		No. of deficiencies
Certificate & Documentation	Crew Certificates	803
	Documents	1,955
	Ship Certificates	880
Structural Conditions		1,368
Water/Weathertight conditions		2,561
Emergency Systems		2,897
Radio Communications		831
Cargo operations including equipment		436
Fire safety		5,929
Alarms		254
Safety of Navigation		4,743
Life saving appliances		5,192
Dangerous goods		38
Propulsion and auxiliary machinery		2,050
Working and Living Conditions	Living Conditions	380
	Working Conditions	1,321
Labour Conditions	Minimum requirements for seafarers	34
	Conditions of employment	441
	Accommodation, recreational facilities, food and catering	1,221
	Health protection, medical care, social security	2,376
Pollution prevention	Anti Fouling	13
	Ballast Water	563
	MARPOL Annex I	712
	MARPOL Annex II	7
	MARPOL Annex III	9
	MARPOL Annex IV	366
	MARPOL Annex V	920
MARPOL Annex VI	323	
ISM		899
Other		316
Total		39,838
ISPS		632
Grand total		40,470

SUMMARY OF PORT STATE INSPECTION DATA 2019 – 2021

Table 8: BLACK – GREY – WHITE LISTS *

Flag	Inspections 2019-2021	Detentions 2019-2021	Black to Grey Limit	Grey to White Limit	Excess Factor
BLACK LIST					
Mongolia	224	33	22		2.36
Togo	771	100	66		2.35
Sierra Leone	892	89	75		1.47
GREY LIST					
Korea, Democratic People's Republic	65	8	8	1	0.94
Dominica	48	6	7	0	0.89
Croatia	61	6	8	0	0.73
Palau	162	14	17	5	0.73
Jamaica	55	5	7	0	0.66
Niue	48	4	7	0	0.59
Cook Islands	79	6	10	1	0.56
Kiribati	68	5	9	1	0.53
Qatar	35	2	5	0	0.42
India	141	9	15	4	0.42
Barbados	68	4	9	1	0.40
Saint Vincent and the Grenadines	96	5	11	2	0.31
Belize	2,039	130	162	123	0.17
Gibraltar (UK)	56	1	8	0	0.10
Iran	61	1	8	0	0.07
Saudi Arabia	84	2	10	2	0.05
Turkey	85	2	10	2	0.05
Luxembourg	67	1	9	1	0.03
WHITE LIST					
Switzerland	36	0		0	0
Italy	211	8		8	-0.04
Antigua and Barbuda	532	23		27	-0.30
Netherlands	211	6		8	-0.44
United States of America	91	1		2	-0.48
United Kingdom (UK)	330	11		15	-0.49
Indonesia	589	22		31	-0.56
Bangladesh	272	7		12	-0.70
Russian Federation	413	12		20	-0.76
Vanuatu	112	1		3	-0.81
Philippines	368	9		17	-0.89
Cayman Islands (UK)	257	5		11	-0.94

Flag	Inspections 2019-2021	Detentions 2019-2021	Black to Grey Limit	Grey to White Limit	Excess Factor
Belgium	87	0		2	-0.98
Cyprus	1,205	36		69	-1.02
Tuvalu	311	6		14	-1.04
Thailand	634	16		33	-1.05
Greece	638	16		34	-1.06
Viet Nam	1,929	57		116	-1.11
France	96	0		2	-1.14
Isle of Man (UK)	449	9		22	-1.16
Denmark	391	7		19	-1.21
Liberia	7,730	217		504	-1.29
Panama	19,780	579		1,325	-1.29
Germany	161	1		5	-1.30
Malta	2,604	65		160	-1.32
Portugal	677	13		36	-1.32
Taiwan, China	308	4		14	-1.34
Bermuda (UK)	113	0		3	-1.35
Norway	626	11		33	-1.37
Malaysia	474	7		24	-1.41
Japan	503	7		25	-1.47
Bahamas	1,585	30		94	-1.49
Marshall Islands	7,363	164		479	-1.49
Hong Kong, China	7,634	88		497	-1.88
Singapore	5,109	56		327	-1.88
Korea, Republic of	2,472	22		152	-1.91
China	1,574	8		93	-2.09

- Note:** 1) Flags listed above are those of ships which were involved in 30 or more port State inspections over the 3-year period.
2) According to the decision by the Port State Control Committee, flags involving 30-49 port State inspections with nil detentions are listed on top of the White List.

* See explanatory note on page 53.

$p=7\%$

$Z_{95\%}=1.645$

$q=3\%$

Table 9: INSPECTIONS AND DETENTIONS PER FLAG

Flag	Number of inspections				Number of detentions				3-year rolling average detention %
	2019	2020	2021	Total	2019	2020	2021	Total	
Algeria	3	2	1	6	2	0	0	2	33.33
Antigua and Barbuda	247	143	142	532	11	4	8	23	4.32
Argentina	0	1	0	1	0	0	0	0	0
Australia	9	1	1	11	0	0	1	1	9.09
Bahamas	727	417	441	1,585	11	11	8	30	1.89
Bahrain	1	0	1	2	0	0	0	0	0
Bangladesh	91	88	93	272	3	3	1	7	2.57
Barbados	26	24	18	68	2	1	1	4	5.88
Belgium	46	25	16	87	0	0	0	0	0
Belize	832	533	674	2,039	65	26	39	130	6.38
Bermuda (UK)	59	30	24	113	0	0	0	0	0
Bolivia	0	0	2	2	0	0	0	0	0
Brazil	10	1	0	11	0	0	0	0	0
Brunei Darussalam	5	2	4	11	0	0	0	0	0
Cambodia	1	2	0	3	1	0	0	1	33.33
Cameroon	1	6	7	14	1	2	1	4	28.57
Cayman Islands (UK)	112	77	68	257	4	0	1	5	1.95
Chile	9	9	4	22	0	0	0	0	0
China	646	405	523	1,574	3	2	3	8	0.51
Colombia	1	0	1	2	0	0	0	0	0
Comoros	19	3	2	24	1	1	1	3	12.50
Cook Islands	28	27	24	79	2	0	4	6	7.59
Croatia	20	24	17	61	4	2	0	6	9.84
Curacao	13	9	5	27	0	0	0	0	0
Cyprus	551	314	340	1,205	24	8	4	36	2.99
Denmark	169	83	139	391	2	4	1	7	1.79
Djibouti	0	1	4	5	0	0	1	1	20.00
Dominica	27	11	10	48	1	2	3	6	12.50
Ecuador	3	3	5	11	2	2	0	4	36.36
Egypt	2	2	3	7	0	1	0	1	14.29
Equatorial Guinea	0	0	1	1	0	0	0	0	0
Ethiopia	4	2	1	7	0	1	0	1	14.29
Falkland Islands (UK) (Malvinas)	3	0	1	4	0	0	0	0	0
Fiji	4	1	0	5	1	0	0	1	20.00
Finland	0	0	1	1	0	0	0	0	0

Flag	Number of inspections				Number of detentions				3-year rolling average detention %
	2019	2020	2021	Total	2019	2020	2021	Total	
France	53	19	24	96	0	0	0	0	0
Gabon	2	4	5	11	0	0	0	0	0
Germany	89	34	38	161	1	0	0	1	0.62
Gibraltar (UK)	19	19	18	56	0	0	1	1	1.79
Greece	309	169	160	638	9	3	4	16	2.51
Guyana	0	0	3	3	0	0	1	1	33.33
Honduras	0	2	0	2	0	0	0	0	0
Hong Kong, China	3,141	1,907	2,586	7,634	22	35	31	88	1.15
India	77	33	31	141	5	1	3	9	6.38
Indonesia	298	151	140	589	11	6	5	22	3.74
Iran	42	6	13	61	1	0	0	1	1.64
Isle of Man (UK)	211	95	143	449	6	1	2	9	2.00
Israel	5	1	0	6	0	0	0	0	0
Italy	110	57	44	211	5	1	2	8	3.79
Jamaica	24	16	15	55	3	2	0	5	9.09
Japan	212	143	148	503	4	2	1	7	1.39
Jordan	0	0	1	1	0	0	0	0	0
Kiribati	35	17	16	68	3	2	0	5	7.35
Korea, Democratic People's Republic	51	13	1	65	6	2	0	8	12.31
Korea, Republic of	1,270	558	644	2,472	5	6	11	22	0.89
Kuwait	16	5	7	28	1	0	0	1	3.57
Liberia	3,146	2,072	2,512	7,730	94	66	57	217	2.81
Libya	3	1	2	6	0	0	0	0	0
Lithuania	1	0	0	1	0	0	0	0	0
Luxembourg	37	14	16	67	1	0	0	1	1.49
Malaysia	205	126	143	474	4	2	1	7	1.48
Maldives	3	0	0	3	0	0	0	0	0
Malta	1,180	698	726	2,604	37	15	13	65	2.50
Marshall Islands	2,995	2,015	2,353	7,363	68	49	47	164	2.23
Mauritius	3	0	1	4	0	0	0	0	0
Mexico	1	0	0	1	0	0	0	0	0
Micronesia, Federated States of	0	1	1	2	0	0	1	1	50.00
Moldova	2	1	1	4	0	0	0	0	0
Mongolia	91	69	64	224	13	5	15	33	14.73
Montenegro	4	5	6	15	1	0	0	1	6.67
Myanmar	8	5	5	18	1	0	1	2	11.11

Flag	Number of inspections				Number of detentions				3-year rolling average detention %
	2019	2020	2021	Total	2019	2020	2021	Total	
Nauru	3	3	0	6	0	0	0	0	0
Netherlands	104	52	55	211	2	2	2	6	2.84
New Zealand	3	2	2	7	0	0	0	0	0
Niue	25	8	15	48	4	0	0	4	8.33
Norway	271	167	188	626	5	5	1	11	1.76
Pakistan	13	4	6	23	1	1	1	3	13.04
Palau	76	35	51	162	9	4	1	14	8.64
Panama	8,212	5,373	6,195	19,780	295	139	145	579	2.93
Papua New Guinea	0	1	0	1	0	0	0	0	0
Peru	1	2	2	5	0	0	1	1	20.00
Philippines	170	91	107	368	5	2	2	9	2.45
Portugal	294	173	210	677	7	2	4	13	1.92
Qatar	13	10	12	35	1	1	0	2	5.71
Russian Federation	313	74	26	413	8	4	0	12	2.91
Saint Kitts and Nevis	3	2	5	10	0	0	1	1	10.00
Saint Vincent and the Grenadines	43	28	25	96	4	0	1	5	5.21
Samoa	0	0	1	1	0	0	0	0	0
Saudi Arabia	51	14	19	84	2	0	0	2	2.38
Sierra Leone	363	218	311	892	44	16	29	89	9.98
Singapore	2,131	1,388	1,590	5,109	24	17	15	56	1.10
Solomon Islands	0	0	1	1	0	0	0	0	0
South Africa	2	3	1	6	1	0	0	1	16.67
Spain	14	4	6	24	0	1	0	1	4.17
Sri Lanka	12	2	6	20	1	0	1	2	10.00
Sweden	13	3	8	24	0	0	0	0	0
Switzerland	18	9	9	36	0	0	0	0	0
Taiwan, China	119	94	95	308	2	1	1	4	1.30
Tanzania	2	1	7	10	0	0	5	5	50.00
Thailand	244	202	188	634	9	4	3	16	2.52
Togo	342	218	211	771	60	17	23	100	12.97
Turkey	37	25	23	85	2	0	0	2	2.35
Tuvalu	131	87	93	311	4	0	2	6	1.93
Ukraine	6	3	5	14	1	2	0	3	21.43
United Arab Emirates (UAE)	1	0	0	1	0	0	0	0	0
United Kingdom (UK)	150	78	102	330	8	1	2	11	3.33
United States of America	49	17	25	91	1	0	0	1	1.10

Flag	Number of inspections				Number of detentions				3-year rolling average detention %
	2019	2020	2021	Total	2019	2020	2021	Total	
Vanuatu	55	28	29	112	1	0	0	1	0.89
Viet Nam	774	495	660	1,929	39	6	12	57	2.95
Ship's registration withdrawn	2	0	1	3	2	0	1	3	100.00
Total	31,372	19,416	22,730	73,518	983	493	526	2,002	2.72

Figure 15: COMPARISON OF INSPECTIONS PER SHIP TYPE

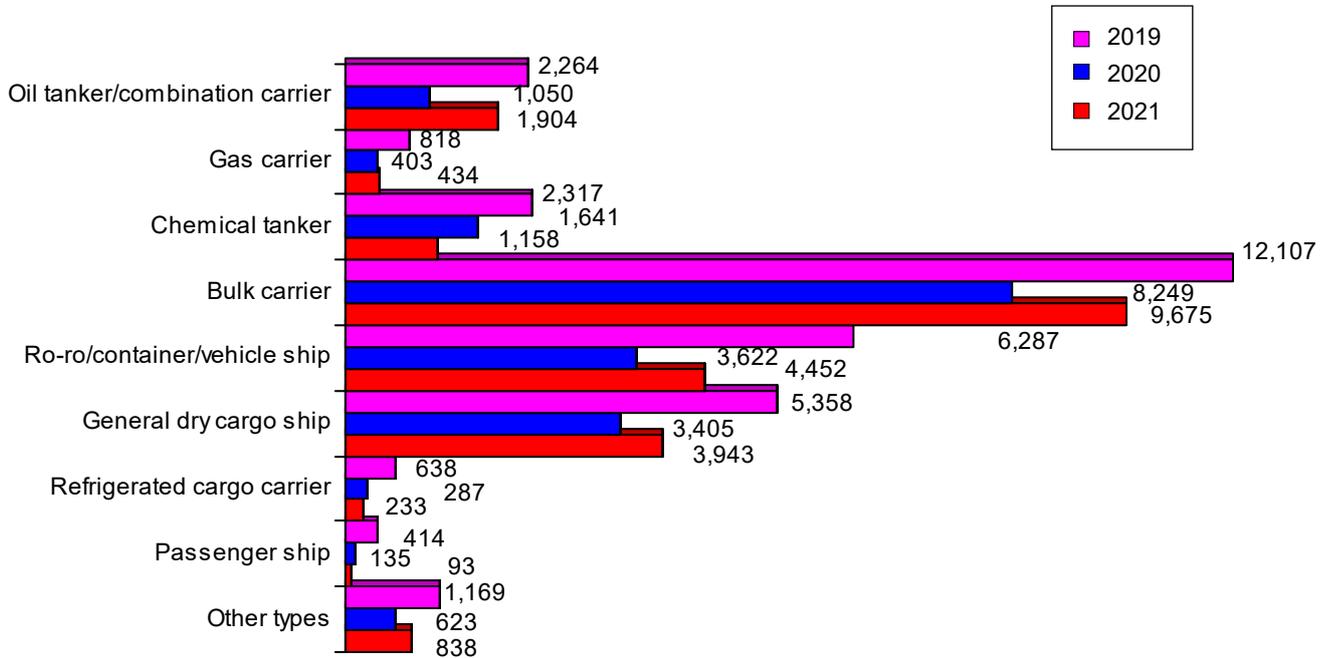


Figure 16: COMPARISON OF DETENTIONS PER SHIP TYPE

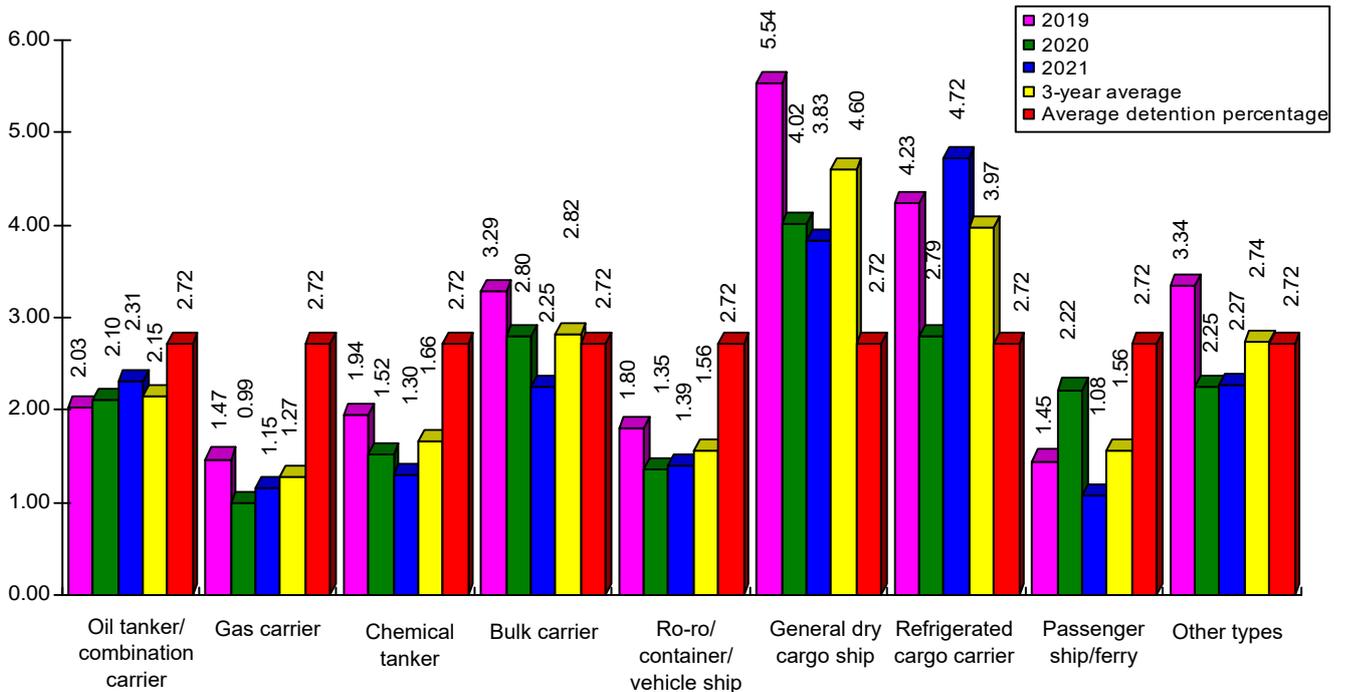
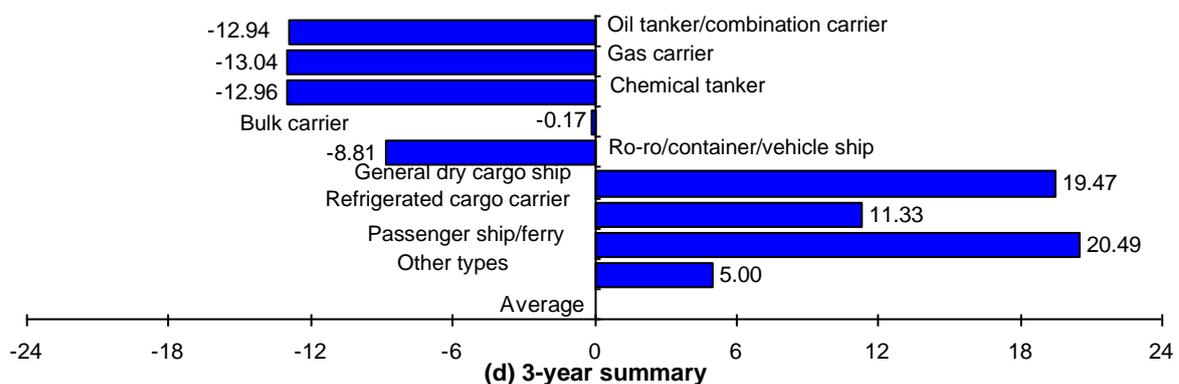
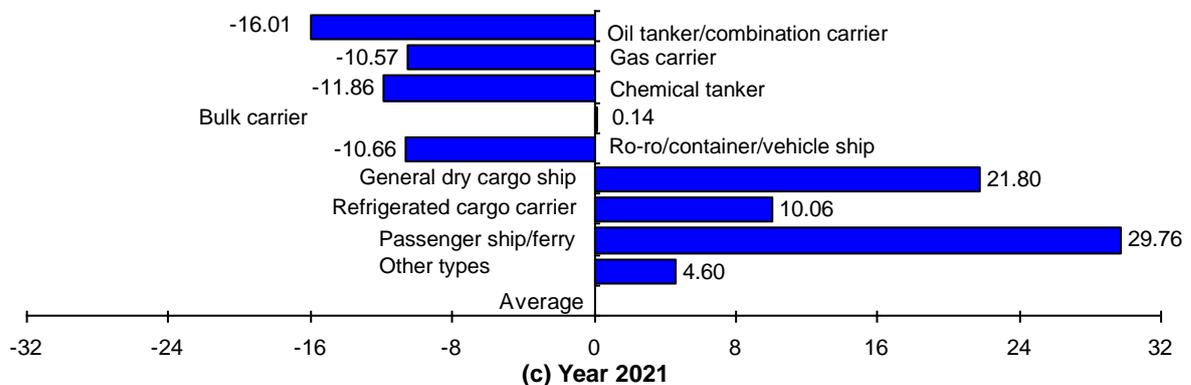
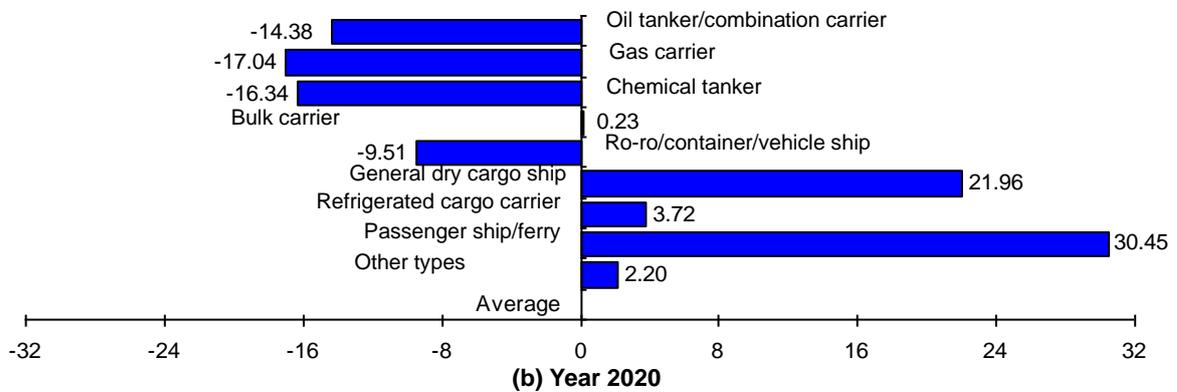
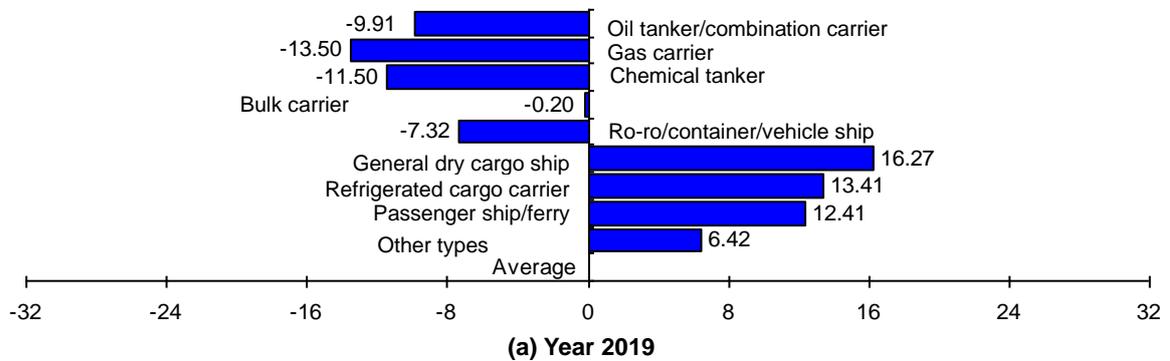


Table 10: INSPECTIONS AND DETENTIONS PER SHIP TYPE

Type of ship	Number of inspections				Number of detentions				Average detention percentage %
	2019	2020	2021	Total	2019	2020	2021	Total	
NLS tanker	60	56	61	177	2	1	1	4	2.26
Combination carrier	37	14	22	73	1	0	0	1	1.37
Oil tanker	2,167	980	1,821	4,968	43	21	43	107	2.15
Gas carrier	818	403	434	1,655	12	4	5	21	1.27
Chemical tanker	2,317	1,641	1,158	5,116	45	25	15	85	1.66
Bulk carrier	12,107	8,250	9,675	30,032	398	231	218	847	2.82
Vehicle carrier	717	465	495	1,677	8	6	5	19	1.13
Container ship	5,481	3,097	3,896	12,474	98	41	52	191	1.53
Ro-Ro cargo ship	89	60	61	210	7	2	5	14	6.67
General cargo/multi-purpose ship	5,358	3,405	3,943	12,706	297	137	151	585	4.60
Refrigerated cargo carrier	638	287	233	1,158	27	8	11	46	3.97
Woodchip carrier	250	174	231	655	3	4	2	9	1.37
Livestock carrier	70	38	45	153	2	2	3	7	4.58
Ro-Ro Passenger ship	100	37	55	192	1	0	0	1	0.52
Passenger ship	314	98	38	450	5	3	1	9	2.00
Factory ship	5	2	4	11	0	1	1	2	18.18
Heavy load carrier	120	63	77	260	4	3	4	11	4.23
Offshore service vessel	98	50	83	231	2	0	2	4	1.73
MODU & FPSO	6	2	1	9	0	0	0	0	0.0
High speed passenger craft	49	11	4	64	0	0	0	0	0.0
Special purpose ship	78	31	44	153	2	0	1	3	1.96
High speed cargo craft	2	0	0	2	0	0	0	0	0.0
Tugboat	204	134	142	480	6	1	3	10	2.08
Others	287	118	207	612	20	3	3	26	4.25
Total	31,372	19,416	22,730	73,518	983	493	526	2,002	2.72

Figure 17: COMPARISON OF INSPECTIONS WITH DEFICIENCIES PER SHIP TYPE



* % over [+] or under [-] average

Table 11: INSPECTIONS WITH DEFICIENCIES PER SHIP TYPE

Type of ship	Number of inspections				Number of inspections with deficiencies				3-year average percentage %
	2019	2020	2021	Total	2019	2020	2021	Total	
Oil tanker/combination carrier	2,264	1,050	1,904	5,218	1,108	377	664	2,149	41.18
Gas carrier	818	403	434	1,655	371	134	175	680	41.09
Chemical tanker	2,317	1,641	1,158	5,116	1,097	557	452	2,106	41.16
Bulk carrier	12,107	8,250	9,675	30,032	7,101	4,167	4,937	16,205	53.96
Ro-ro/container/vehicle ship	6,287	3,622	4,452	14,361	3,240	1,477	1,791	6,508	45.32
General dry cargo ship	5,358	3,405	3,943	12,706	4,025	2,460	2,866	9,351	73.60
Refrigerated cargo carrier	638	287	233	1,158	461	155	142	758	65.46
Passenger ship	414	135	93	642	295	109	75	479	74.61
Other types	1,169	623	838	2,630	763	327	465	1,555	59.13
Total	31,372	19,416	22,730	73,518	18,461	9,763	11,567	39,791	54.12

Table 12: INSPECTIONS AND DETENTIONS PER RECOGNIZED ORGANIZATION

Recognized organization (RO)	No. of overall inspections 2019-2021	No. of overall detentions 2019-2021	No. of RO responsible detentions 2019-2021	3-year average detention percentage%	3-year average RO responsible detention percentage%	3-year average of RO responsible detentions%
Aegean Register of Shipping	2	0	0	0	0	0
Alpha Ship Classification	33	0	0	0	0	0
American Bureau of Shipping	9,572	177	2	1.85	0.02	1.13
Asia Classification Society	37	3	2	8.11	5.41	66.67
Asia Shipping Certification Services	47	4	1	8.51	2.13	25.00
Azure Naval Architects BV	4	1	0	25.00	0	0
Biro Klasifikasi Indonesia	373	15	0	4.02	0	0
Bolivian Register of Shipping	1	1	0	100.00	0	0
Bulgarski Koraben Registrar	9	0	0	0	0	0
Bureau Veritas	9,969	281	7	2.82	0.07	2.49
China Classification Society	6,376	74	0	1.16	0	0
Columbus American Register	4	1	0	25.00	0	0
Cosmos Marine Bureau	341	37	4	10.85	1.17	10.81
CR Classification Society	505	7	0	1.39	0	0
Croatian Register of Shipping	97	7	0	7.22	0	0
Cyprus Bureau of Shipping	17	0	0	0	0	0
Danforth Marinesurvey & Certification Services	2	0	0	0	0	0
DNV AS	17,619	383	8	2.17	0.05	2.09
Dromon Bureau of Shipping	240	14	3	5.83	1.25	21.43
Emirates Classification Society TASNEEF	1	0	0	0	0	0
Foresight Ship Classification	74	5	2	6.76	2.70	40.00
Hellas Naval Bureau of Shipping S.M.P.C	2	1	0	50.00	0	0
Hellenic Register of Shipping	10	0	0	0	0	0
Honduras International Surveying and Inspection Bureau	1	0	0	0	0	0
Indian Register of Shipping	163	11	0	6.75	0	0
Intermaritime Certification Services, S.A.	2,165	113	11	5.22	0.51	9.73
International Marine Survey Association	2	1	0	50.00	0	0
International Maritime Register	31	1	0	3.23	0	0
International Naval Surveys Bureau	56	6	0	10.71	0	0
International Register of Shipping	328	32	2	9.76	0.61	6.25
International Ship Classification	185	10	3	5.41	1.62	30.00
Iranian Classification Society	52	4	0	7.69	0	0
Isthmus Bureau of Shipping	1,067	48	2	4.50	0.19	4.17
Isthmus Maritime Classification Society S.A.	3	0	0	0	0	0
Korea Classification Society (former Joson Classification Society)	160	8	0	5.00	0	0
Korea Ship Safety Technology Authority	22	0	0	0	0	0
KOREAN REGISTER	6,807	118	8	1.73	0.12	6.78
Limdal Marine Services	7	0	0	0	0	0
Lloyd's Register	11,187	238	17	2.13	0.15	7.14
M&P Surveyors, S. de R.L. de C.V.	2	0	0	0	0	0
Macosnar Corporation	125	5	0	4.00	0	0
Maritime Bureau of Shipping	6	0	0	0	0	0
Maritime Lloyd Ltd, Georgia	2	0	0	0	0	0
Maritime Technical Systems and Services	18	1	0	5.56	0	0
Mediterranean Shipping Register	1	0	0	0	0	0

Recognized organization (RO)	No. of overall inspections 2019-2021	No. of overall detentions 2019-2021	No. of RO responsible detentions 2019-2021	3-year average detention percentage%	3-year average RO responsible detention percentage%	3-year average percentage of RO responsible detentions%
National Shipping Adjusters Inc	57	5	1	8.77	1.75	20.00
Nautx, Ltd	3	0	0	0	0	0
New United International Marine Services Ltd	142	8	0	5.63	0	0
Nippon Kaiji Kyokai	26,891	588	19	2.19	0.07	3.23
Novel Classification Society S.A.	9	2	0	22.22	0	0
Overseas Marine Certification Services	1,223	87	8	7.11	0.65	9.20
Panama Bureau of Shipping	23	0	0	0	0	0
Panama Maritime Documentation Services	1,280	82	4	6.41	0.31	4.88
Panama Shipping Registrar Inc.	126	9	0	7.14	0	0
Phoenix Register of Shipping	23	0	0	0	0	0
Polski Rejestr Statkow	160	6	1	3.75	0.63	16.67
Qualitas Register of Shipping S.A.	60	1	0	1.67	0	0
Registro Brasileiro de Navios de Aeronaves	4	0	0	0	0	0
RINA Services S.p.A.	2,902	86	0	2.96	0	0
RINAVE Portuguesa	2	0	0	0	0	0
Royal Bureau of Shipping	1	1	1	100.00	100.00	100.00
RS Classification Services MON IKE	1	0	0	0	0	0
Russian Maritime Register of Shipping	727	24	0	3.30	0	0
Russian River Register	2	0	0	0	0	0
Ship Classification Malaysia	39	2	0	5.13	0	0
Shipping Register of Ukraine	14	3	0	21.43	0	0
SingClass International Pte Ltd	95	11	2	11.58	2.11	18.18
Sing-Lloyd	122	15	1	12.30	0.82	6.67
Turkish Lloyd	1	0	0	0	0	0
Union Bureau of Shipping	659	99	18	15.02	2.73	18.18
United Maritime Survey	1	1	0	100.00	0	0
Universal Maritime Bureau	483	42	3	8.70	0.62	7.14
Universal Shipping Bureau	2	0	0	0	0	0
Vega Register Inc.	3	0	0	0	0	0
Veritas Register of Shipping	6	0	0	0	0	0
Vietnam Register	2,009	60	6	2.99	0.30	10.00
Other	128	17	0	13.28	0	0

See also the note in page 32.

Table 13: PERFORMANCE OF RECOGNIZED ORGANIZATION

Recognized organization (RO)	No. of overall inspections 2019-2021	No. of RO responsible detentions 2019-2021	Low/medium Limit	Medium/high Limit	Excess factor	Performance level
Union Bureau of Shipping	659	18	20	7	0.88	Medium
Foresight Ship Classification	74	2	4	0	0.60	
SingClass International Pte Ltd	95	2	5	0	0.52	
International Ship Classification	185	3	7	0	0.40	
Dromon Bureau of Shipping	240	3	9	1	0.28	
Sing-Lloyd	122	1	5	0	0.26	
Cosmos Marine Bureau	341	4	12	2	0.20	
Polski Rejestr Statkow	160	1	7	0	0.18	
International Register of Shipping	328	2	11	2	0.01	
Universal Maritime Bureau	483	3	15	4	-0.33	
Overseas Marine Certification Services	1,223	8	33	16	-0.80	
Biro Klasifikasi Indonesia	373	0	12	3	-1.12	
Intermaritime Certification Services, S.A.	2,165	11	55	32	-1.18	
Panama Maritime Documentation Services	1,280	4	34	17	-1.35	
Vietnam Register	2,009	6	51	29	-1.49	
Isthmus Bureau of Shipping	1,067	2	29	13	-1.53	
CR Classification Society	505	0	16	4	-1.64	
Lloyd's Register	11,187	17	249	199	-1.81	
Russian Maritime Register of Shipping	727	0	21	8	-1.82	
KOREAN REGISTER	6,807	8	156	117	-1.84	
Bureau Veritas	9,969	7	223	176	-1.91	
Nippon Kaiji Kyokai	26,891	19	576	500	-1.92	
DNV AS	17,619	8	383	321	-1.94	
American Bureau of Shipping	9,572	2	214	168	-1.97	
RINA Services S.p.A.	2,902	0	71	45	-1.98	
China Classification Society	6,376	0	146	109	-1.99	

- Note:** 1) In this table, only recognized organizations (RO) that had more than 60 inspections are taken into account. The formula used is identical to the one used for the Black-Grey-White List. However, the values for P and Q are adjusted to P=2% and Q=1%.
- 2) ROs involving 60-179 inspections with zero detention are not included in this table.

Figure 18: COMPARISON OF NUMBER OF DEFICIENCIES BY MAIN CATEGORIES

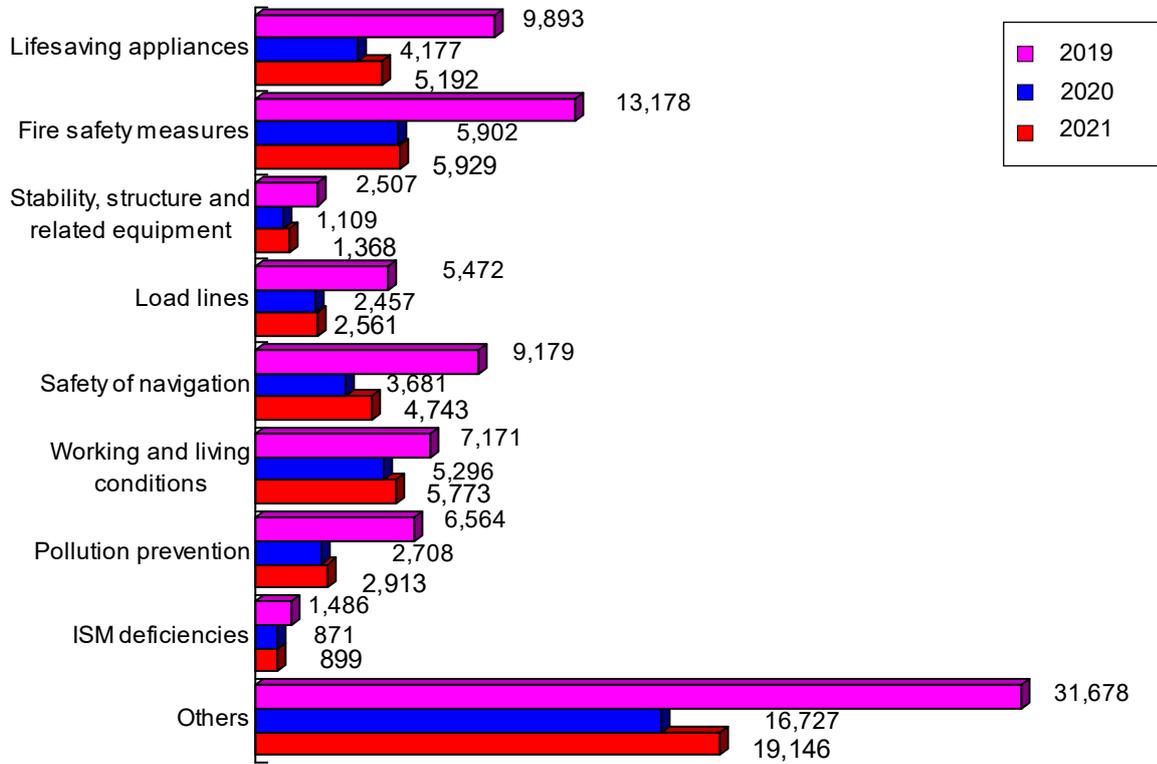


Table 14: COMPARISON OF DEFICIENCIES BY CATEGORIES

Nature of deficiency		Number of deficiencies		
		2019	2020	2021
	Crew Certificates	1,026	765	803
Certificate & Documentation	Documents	2,943	1,427	1,955
	Ship Certificates	1,594	601	880
	Structural Conditions	2,507	1,109	1,368
Water/Weathertight conditions		5,472	2,457	2,561
Emergency Systems		5,157	2,278	2,897
Radio Communications		1,382	578	831
Cargo operations including		645	403	436
Fire safety		13,178	5,902	5,929
Alarms		537	259	254
Safety of Navigation		9,179	3,681	4,743
Life saving appliances		9,893	4,177	5,192
Dangerous goods		151	36	38
Propulsion and auxiliary		4,015	2,073	2,050
Working and Living Conditions	Living Conditions	334	303	380
	Working Conditions	1,913	1,311	1,321
Labour Conditions	Minimum requirements for seafarers	31	37	34
	Conditions of employment	444	523	441
	Accommodation, recreational facilities, food and catering	1,426	1,032	1,221
	Health protection, medical care, social security	3,023	2,090	2,376
Pollution prevention	Anti Fouling	8	6	13
	Ballast Water	1,522	384	563
	MARPOL Annex I	1,514	723	712
	MARPOL Annex II	25	11	7
	MARPOL Annex III	10	11	9
	MARPOL Annex IV	1,350	456	366
	MARPOL Annex V	1,181	745	920
	MARPOL Annex VI	954	372	323
ISM		1,486	871	899
Other		493	303	316
Total		73,393	34,924	39,838
ISPS		1,157	623	632
Grand total		74,550	35,547	40,470

Figure 19: COMPARISON OF MOST FREQUENT DETAINABLE DEFICIENCIES

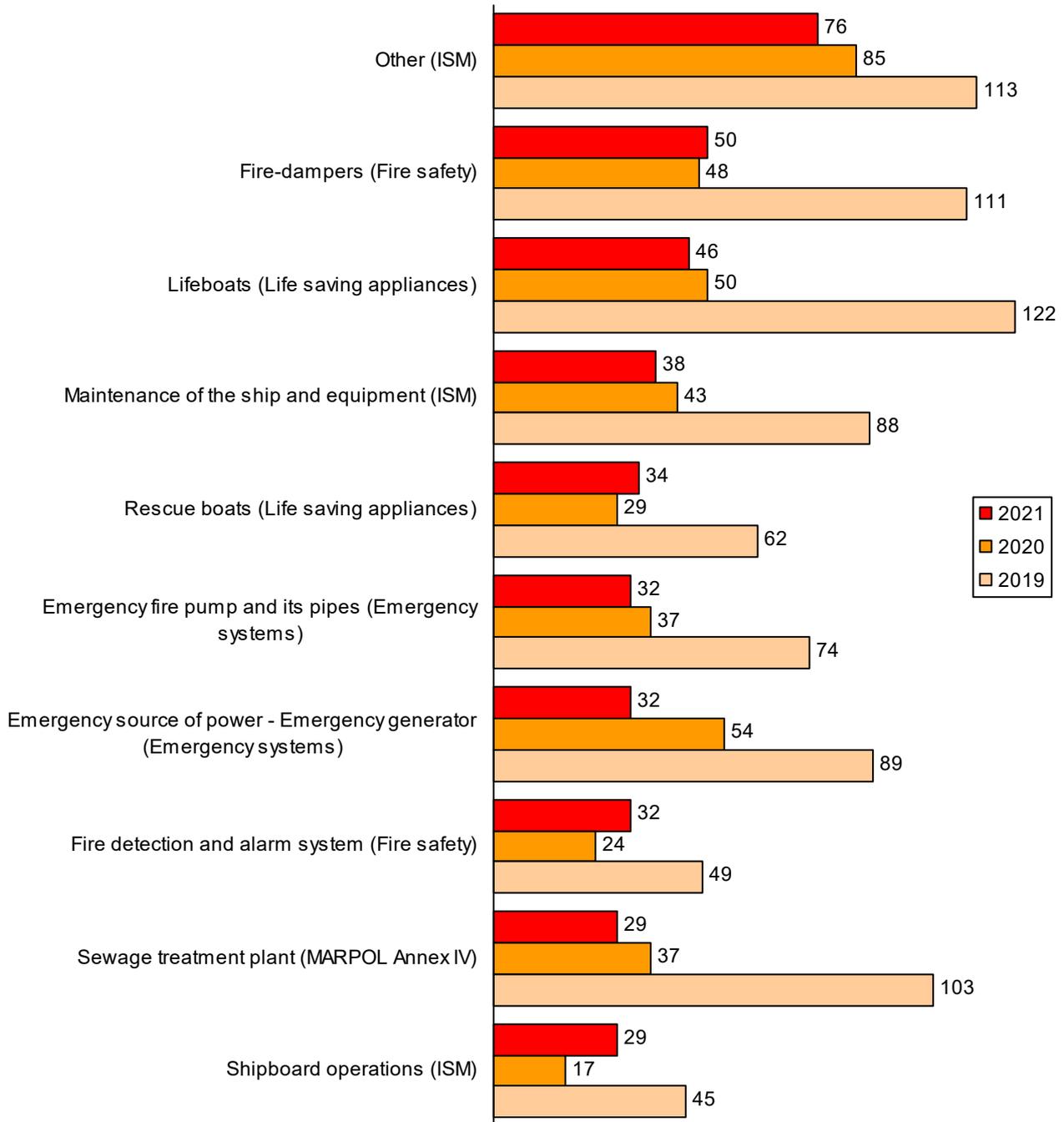


Table 15: COMPARISON OF MOST FREQUENT DETAINABLE DEFICIENCIES

No.	Most frequent deficiencies	Year		
		2019	2020	2021
1	Other (ISM)	113	85	76
2	Fire-dampers (Fire safety)	111	48	50
3	Lifeboats (Life saving appliances)	122	50	46
4	Maintenance of the ship and equipment (ISM)	88	43	38
5	Rescue boats (Life saving appliances)	62	29	34
6	Emergency fire pump and its pipes (Emergency systems)	74	37	32
7	Emergency source of power - Emergency generator (Emergency systems)	89	54	32
8	Fire detection and alarm system (Fire safety)	49	24	32
9	Sewage treatment plant (MARPOL Annex IV)	103	37	29
10	Shipboard operations (ISM)	45	17	29

Table 16: LIST OF UNDER-PERFORMING SHIPS

IMO No.	Ship name (at the day of detention)	Flag	IMO company No.	No. of times on the list
9146247¹	SILVER STAR 1	Sierra Leone	6101282	1
9146247¹	GOLD STAR	Cameroon	6101282	1
9512434	SUNGARI	Togo	5519245	5
9153745	ELGA	Togo	5707873	3

1. The ship changed name and flag.

EXPLANATORY NOTE ON THE BLACK – GREY – WHITE LISTS

The Port State Control Committee adopted the same method as used by the Paris MOU for assessment of performance of flags. Compared to the calculation method of previous year, this system has the advantage of providing an excess percentage that is significant and also reviewing the number of inspections and detentions over a 3-year period at the same time, based on binomial calculus.

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

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

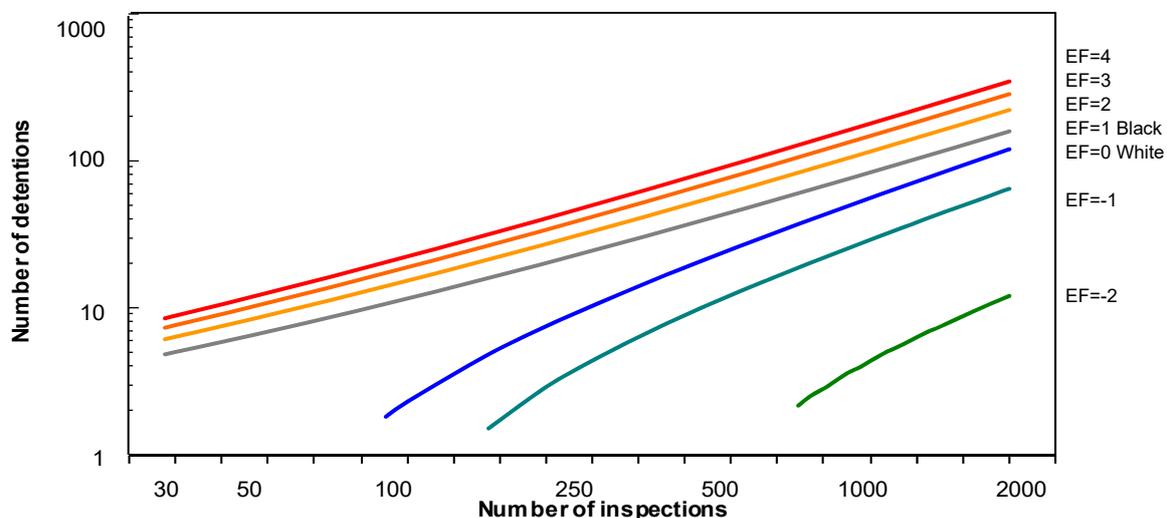
$$u_{white - to - grey} = N \cdot p - 0.5 - z \cdot \sqrt{N \cdot p \cdot (1 - p)}$$

In the formula "N" is the number of inspections, "p" is the allowable detention limit (yardstick), set to 7% by the Tokyo 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 as the 'black to grey' or the 'grey to white' limit. A number of detentions above this 'black to grey' limit means significantly worse than average, where a number of detentions below the

'grey to white' limit means significantly better than average. When the amount of detentions for a particular flag State is positioned between the two, the flag State will find itself on the grey list. The formula is applicable for sample sizes of 30 or more inspections over a 3-year period.

To sort results on the black or white list, simply alter the target and repeat the calculation. Flags which are still significantly above this second target are worse than the flags which are not. This process can be repeated, to create as many refinements as desired. (Of course the maximum detention rate remains 100%!) To make the flags' performance comparable, the excess factor (EF) is introduced. Each incremental or decremental step corresponds with one whole EF-point of difference. Thus the excess factor EF is an indication for the number of times the yardstick has to be altered and recalculated. Once the excess factor is determined for all flags, the flags can be ordered by EF. The excess factor can be found in the last column the black, grey or white list. The target (yardstick) has been set on 7% and the size of the increment and decrement on 3%. The Black – Grey – White lists have been calculated in accordance with the above principles.

The graphical representation of the system, below, is showing the direct relations between the number of inspected ships and the number of detentions. Both axis have a logarithmic character.



TOKYO MOU SECRETARIAT

The Secretariat (Tokyo MOU Secretariat) of the Memorandum of Understanding on Port State Control in the Asia-Pacific Region is located in Tokyo, Japan. The Secretariat may be approached for further information or inquiries on the operation of the Memorandum.

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